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Edible Wealth, Edible Health: Managing Risky Food Ecologies in Guatemala

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ABSTRACT

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Ioulia Evgenyevna Fenton

This dissertation draws on mixed-methods research carried out during 16 months of ethnographic fieldwork in the city of Quetzaltenango. I interviewed and participated in the activities of diverse groups promoting environmentally sustainable, healthy, and just food in the region. To contrast their “alternative” projects with mainstream food systems, I interviewed “conventional” farmers and consumers, mapped the availability, price, and advertising of food in the city, and participant observed in restaurants.

I argue that contemporary food economies propagate environmental injustices that disproportionately affect marginalized populations. Smallholder adoption of agrichemicals and corporate spread of industrialized foods and drinks have occurred without parallel developments in protective regulations or public health infrastructures. The result is what I call the supertoxification of Guatemala’s food ecologies, defined as the compounding of biological and chemical risks to food safety. The poor, indigenous majority suffers its worst health effects, especially women and girls.

Yet, as people increasingly become attuned to food’s role in local disease burdens, some engage in self-protective strategies. They do this by managing multiple material and social risks and rewards of a competitive food sector in which powerful global players, national oligarchic food companies, and local food purveyors all promote their causes. Several of Guatemala’s local food initiatives, like organic markets, appeal to the wealthier classes. However, I show how participants in the CORO program in Quetzaltenango challenge traditional, intersectional race-class-gender hierarchies by engaging in food-related acts of solidarity across difference.

The main contribution of this research is to position the political ecology of food as a critical, but often missing or underdeveloped, link in theories of socially-stratified changes in health, environment, and development during late capitalism. The work interrogates theoretical explanations of the nutritional and epidemiological transitions through the lens of power dynamics in human-environment relations.

The research thus brings into conversation debates about the ecological and human consequences of economic systems that greatly rely on agriculture and food. It foregrounds human-nature linkages rather than relying on their ontological separation. It does so by positioning human chronic diseases as symptoms of broader planetary metabolic dysfunction.

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INTRODUCTION

What makes for a modern food system? For most people living in wealthy countries, it can seem as though the rest of the world is playing catch up to arrangements that rely on industrial, large-scale, and mechanized agriculture, on food retail dominated by American and European supermarket chains, and on processed and fresh foods sourced, processed, and supplied by global corporations. It is a food system that makes tropical fruit like bananas available year-round on the shelves of stores located in temperate climates. It is a food system that provides endless options, inviting shoppers to choose from hundreds of brands of cereal or ketchup. It is a food system that brings numerous cuisines within reach through frozen meals, specialized restaurants, and food-delivery services.

It is also a food system that people increasingly connect with expanding waistlines and the rise of associated diseases like diabetes, polluting toxins like pesticides, and the economic plight of hard-working farmers in poor countries. Few would have missed the recent spread of health, organic, and ethically-traded foods that seem to offer answers to food-system worries. Both long-standing mainstream grocery chains and rapidly-spreading specialty farmers markets and farm-to-home delivery services offer such alternatives. They seem to point to a transformation of the food system towards something better. Although, not everyone currently takes part; organic, healthy, and Fair-Trade demarcations signal higher prices that seem to attract mostly wealthier consumers who pay a price premium to avoid some of the risks of modern food. At the same time, Fair Trade and organics only involve some farmers, not all.

This is the kind of food environment that many people know and inhabit. It tells a story of a loss of traditional agricultures and cooking skills in favor of contemporary eating habits

supplied by well-oiled food businesses that have amassed great wealth from the edible commodities they sell. It also tells a story of how food connects people across national borders, but also how it sorts them within any given place according to their income or social group. It further tells a story of how negative effects of contemporary foodways incite a shift—at least for some—towards healthier edible alternatives; healthier for human bodies, healthier for the environment, healthier for the economic equality of the global community.

This dissertation tests whether the trajectory of linear change holds true in all places and at all times. Food systems around the world are complex. Getting to know a city, a village, or even a supermarket through the available food options can reveal a great deal about a place's history, its local social milieus, and its cross-border economic ties. Those details do not always fit the ideas of change from food systems that are traditional to those that are modern or from conventional foodways that are unhealthy, unsustainable, and unjust to alternative ones that have the opposite effects. They might not mirror experiences of lives lived in wealthier countries that are typically considered “developed” or “advanced,” like the United States that, in 2019, ranked eighth in its GDP per capita, or the UK, which ranked twentieth (IMF 2019).

This dissertation details the complexity of food systems from a place much lower on the global economic totem pole, place 102 out of 186, to be precise (IMF 2009). “Edible Wealth, Edible Health” considers what farming and eating practices look like in the Central American country of Guatemala, documenting the kinds of transnational, national, and local relationships that have brought them into being. It argues that Guatemala's experience both reflects and departs from the story of global restructuring of agriculture and food, making it an important case study in the pursuit of accurate theories of food system changes and of ideas for how to minimize their negative effects. It shows that local power relations, as much as transnational

ones, have significantly dominated the country's agricultural and consumer economies. It details how this has produced extra risky food ecologies of high biological, pathogenic, and chemical loads within a broader precarious society. I contend that people manage these multiple risks through diverse, hybrid forms of growing, distributing, and eating food that crisscross traditional, modern, and alternative foodways. To begin to unpack how they do this, let us travel in space and time to Guatemala's highland city of Quetzaltenango in October of 2016.

WE VALUE *TODO DE AFUERA*

The stage was set. The dates were arranged. The speakers were booked. For two days in October of 2016, the National Organic Agriculture Convention was coming to the city of Quetzaltenango, aka Xela (shay-la), for the first time. All earlier summits took place in or close to Guatemala City, the country's capital. The Ministry of Agriculture's (MAGA) Department of Organic Agriculture maneuvered national marketing and logistics from the metropolis. However, for over a year, farmer, consumer, and NGO groups affiliated with the Western Regional Organic Collective (CORO) in Xela led local organization of the seventh event of its kind in 14 years.

A change in location would not be the only first for the convention. Lamenting the export orientation of previous meetings, the 2016 summit also aimed to forge new paths. Its diverse speakers of foreign and Guatemalan men and women of indigenous and non-indigenous descent would explore how environmentally-sustainable farming, traditional production systems, and local food sovereignty can nourish people inside—not outside—the nation's borders.

To reinforce the new orientation of the convention, CORO organized a promotional organic market on day one of the event. The organizers envisaged the conference's participants buying fresh and prepared local products between attending speaker sessions. The market would

feature the collective's producers who also supply food for Xela's monthly Organic Day markets and the Las Hojitas project that entails an organized group of a couple dozen families picking up vegetable boxes from CORO's farmers every two weeks. As per usual, some indigenous K'iche' producers would bring native greens from their polyculture gardens, while others would sell organic tomatoes from their monocrop greenhouses. Some would bring eggs from industrially hatched but backyard raised chickens. One female producer who does not identify as indigenous would make artisanal cheese from the milk supplied by her neighbors' cows. Another would prepare low-sugar banana bread with flour and sweetener sourced from their local grocery store. One woman would travel three hours by bus from the city of Chimaltenango to sell boxes of teas grown, dried, and packaged by Mayan women belonging to her local cooperative.

Day two would entail a local twist during the scheduled all-day field tour. Along with a few other stops, the participants would visit a commercial, urban organic farm in Xela run by a youth from a prominent local family who sells his produce to middle-class Guatemalans and foreigners working in the city. It would then move on to a rural organic plot in the nearby town of Cantel before seeing an example of a rainwater capturing system in the garden of a CORO smallholder in the municipality of Concepción Chiquirichapa, 10 miles outside the city. There was even talk of breaking up the visits with a lunch at Tacorazon, a small restaurant located in the central park of the historic center of Quetzaltenango, across the street from McDonald's and a block down the road from Guatemala's largest fast food chain, Pollo Campero. Tacorazon's focus on sustainability and fair employment practices would be an appropriate choice for the organic congress; for its Chipotle-style menu, the foreigner-owned eatery sources organic vegetables from a local middle-class farmer.

Another piece of the strategy to shift the orientation of the event was a plan to wow the conference's delegates with the venue's head chef's take on modern and traditional-Guatemalan fare. He would mix the kinds of healthy food options that could be found in specialty cafes and restaurants in the city with his variations of *comida típica*, typical food featuring native ingredients that people still enjoy in their homes, in small, informal eateries, and in more upscale restaurants throughout the country's highlands and beyond. The morning and afternoon breaks would serve empanadas made with *chaya*, a highly nutritious native green. Various organizations are working to reintroduce the food, which they also call "Mayan tree spinach," into Guatemalan diets to fight malnutrition, which disproportionately affects the children of rural, poor, indigenous communities, especially their girls (FAO 2018b). To wash down the *chaya* empanadas, the chef would prepare a *refresco*, a refreshment, made with the equally native and equally nutritious chia, a seed that has become known as a superfood in foreign markets. Lunch would offer an organic salad and pastries filled with eggplants, oyster mushrooms, and güisquil (pronounced whiskil). The pear-sized and shaped, spiny squash has for centuries been a stable feature in Mayan agriculture, a polyculture built around the three sisters of maize, beans, and squash.

The organizers hit a few snags when sourcing ingredients for the menu. A member of CORO's Board of Directors explained to me that, initially, a leader within the MAGA-directed, public-private partnership, the National Commission for Ecological Agriculture (CNAE), was slated to supply the necessary products from his own farm. However, when he failed to come through with the order a few weeks before the event, MAGA's organizers presented CORO with the list of needed ingredients. The Xela-based group took on the task of sourcing the foods for the menu from producers belonging to the collective. It would be no small feat to hurriedly

organize the ingredients order for the dishes between dozens of tiny-scale farmers who do not typically synchronize their production schedules. But organize the leaders did, coordinating with the producers to supply the goods.

Despite carefully-laid plans for speeches, tours, and menus that emphasized local foods, the convention proved less trailblazing on all three accounts than its local organizers had hoped. The final conference program, for example, divided the presenters along class-race-gender lines. Most of the non-indigenous male professionals took center stage in the main, large-capacity ballroom. Speakers included: an academic from the University of San Carlos in Guatemala City; the German representative of the country's aid arm, GIZ; the American agricultural attaché in Guatemala; and a Cuban agricultural scientist. Their talks mixed in national-level statistics, projects with local smallholders, and new, simplified steps to gaining the USDA Organic certification.

There were only two exceptions to the male presence on the main stage. During the opening remarks, six Guatemalan organizers of the event sat side by side behind a table, five men and one woman. All five men spoke for a few minutes to launch the event. The woman did not. The other exception came when a Mayan woman arrived to speak instead of her male boss about the work of her employer, the national Network for the Defense of Food Sovereignty in Guatemala (REDSAG). Her presence and voice on the stage was incidental rather than planned.

Meanwhile, most of the female and indigenous speakers presented in a small, windowless room in a different part of the building. A Spanish female transplant spoke about her commitment to recuperating traditional indigenous knowledge of animal husbandry. An indigenous woman presented the results of her undergraduate thesis on the perception of organics among Xela's consumers. A well-known K'iche' business man discussed the need to

establish an organic law in the country to codify the organic standard into a fixed set of allowable inputs and practices.

The activities around the congress mirrored the divisions in who got to speak where. Although CORO's producers did not have to pay to sell their products, their market was relegated to an outside location that few summit participants made the effort to visit. Full-price-paying businesses and NGOs, on the other hand, displayed their goods and services from branded booths located inside the central presentation hall. Conference participants perused the stalls at their leisure throughout the day. The groups populating the booths included a local CORO-associated NGO, ADAM, and a regional coffee roaster. However, most of the expo spaces were taken up by companies selling inputs compatible with certified organic agriculture. These included, DISAGRO, Guatemala's largest distributor of chemical fertilizers and pesticides that has begun to enter the organic-inputs markets. The company established an agrichemicals plant in Guatemala in 1976, when groups like USAID and the World Bank vigorously promoted smallholder production of input-heavy, non-traditional export crops, namely vegetables, like snow peas and broccoli. Today, DISAGRO distributes more than one trillion tons of chemical fertilizer throughout Central America. This includes contracts worth Q891 million (US\$119 million) with political parties in Guatemala that swap fertilizers for political votes from farmers (Olmstead 2015).¹ Another convention booth promoted Timorex, a broad-based fungicide whose active ingredient is derived from a tea-tree plant. The pesticide is sold by Syngenta, a leading global agricultural company headquartered in Switzerland that derives more than half its global revenue from "emerging market" countries like Guatemala. The Chinese state-owned enterprise, ChemChina, famously purchased Syngenta for \$43 billion in 2017 (Shields 2017).

¹ Q denotes Guatemala's currency of Quetzal. Throughout the dissertation, local prices will first be presented in Quetzals, followed by their US dollar conversion at the rate of 7.5 Quetzals to one dollar.

The second day of the convention continued apace. The production tour was amended last minute, with word of the changes reaching CORO's producers only a few days before the start of the event. Citing dubious concerns over time constraints and vehicle accessibility, Ministry of Agriculture representatives removed the three local farms from the agenda. Instead, the coach filled with field-day participants made two new stops. The first was a visit to a large-scale coffee processor. English-language world maps of coffee production and coffee-related educational posters decorated the building's roasting and grinding rooms. One print, "The Art of Perception in Coffee," delineated tasting notes that few Guatemalans would have experienced; maple syrup and blackcurrants are not local staples. The second stop on the tour was to a regional honey aggregator. Both of these last-minute additions were cooperatives focused on organic and Fair-Trade products for export markets. The tour ended with a pre-planned visit to an experimental potato plot of a corporate maker of organic pesticides. For lunch, MAGA organizers passed around industrially made ham-filled croissants, packets of cookies made by a Costa Rican brand, and a can of Del Frutal sweetened fruit juice from the Guatemalan company, Alimentos Maravilla that has operated in the country and wider region since 1983 and that now has more than 100 beverage brands (De Leon 2013).

The final about turn of the day was the convention's menu. The venue's more typical European-style fare replaced locally inspired and sourced meals. Uniformed servers dressed in crisp white shirts and black waistcoats passed around chicken in a cream sauce with a potato gratin for lunch, and a ham sandwich and cake for the two scheduled recesses that the event's program listed in English as "coffee breaks." When asked about it later, MAGA representatives reasoned that the Q200 (\$27) attendance price tag could not be justified otherwise. "The orders came from above," explained one Ministry of Agriculture organizer after quipping that "in

Guatemala, we value *todo de afuera* [everything from the outside].” His sentiment paralleled the pride of place that the convention’s poster flyer gave to highlighting “International Speakers [from] the United States, Germany, Spain, and Costa Rica.”

To those with high hopes for the convention, the last-minute changes signaled business as usual, demonstrating the priorities of the powerful, the focus of those with money. The CORO organizers and producers saw the organization of the events surrounding the conference as a clear signal of the primacy that MAGA placed on export oriented, corporate, and large-scale organic enterprise. Small-scale projects dominated by poor, indigenous rural producers, especially women, took a back seat.

The events also confirmed the perception of the Xela-based CORO organizers that those from the capital city harbor hierarchical attitudes towards those from Guatemala’s regions, especially from Quetzaltenango. The Guatemala City-Xela antagonism goes back to the creation of Los Altos, the sixth state of the Federal Republic of Central America. The 1838 successful, but short-lived, independent, liberal state included eight present-day Guatemala departments and was headquartered in Xela. However, the then-president, Rafael Carrera, violently and forcibly annexed Los Altos back into conservative Guatemala two years later, in 1840. Quetzaltecos, those originally from Quetzaltenango, still keenly feel the historical rift between their region and Guatemala City. The changes that capital-based MAGA representatives made to the 2016 convention underscored for their Quetzalteco organizing partners that their goals and visions were unaligned. After the conference, one Xela leader sent a curt email to the CORO listserv—which included MAGA and other capital-city-based members—calling on the collective to sever formal ties with the Ministry of Agriculture and its partners who “use us as [an example of their] success but support us little.” CORO followed by creating its own logo, thus abandoning an

earlier one that attached the CORO acronym to the symbol of MAGA's National Commission for Ecological Agriculture (CNAE).

FIVE THEMES OF "EDIBLE WEALTH, EDIBLE HEALTH"

The unfolding of Guatemala's Seventh National Organic Agriculture Convention represents a microcosm of the story that this dissertation sets out to tell. It shows how food systems changes in the country have taken on and continue to take on a particularly Guatemalan flavor. That is, the changes crisscross local forms of social stratification that emerge from historical contestations over land and human bodies. The chapters that follow communicate five interconnected ideas that attest to the central theme: 1) Guatemala's food systems are more multiple, diverse, and hybrid than encompassed by the binary forms of traditional versus modern or conventional versus alternative; 2) the wealth and health benefits and drawbacks within these food systems are unevenly distributed along historical race-class-gender hierarchies; 3) the different food system projects emerge from the intersections of global and local movements of people, resources, and ideas; 4) bodies are enrolled in food system projects through both social and corporeal (sensory) mechanisms; and 5) violence and precarity play an important role in food-system changes in Guatemala.

The first theme shows that rather than transitioning from traditional to modern to organic agricultures, from traditional to industrial diets, and from infectious to chronic diseases, Guatemala has thus far experienced a relative combining of the associated agriculture, food, and health projects and outcomes. These have not merely multiplied to exist side by side. They have also intersected and hybridized in interesting ways.

Some of these combinations were visible during the Xela convention. Many smallholders practice both subsistence and commercial farming, using chemical inputs in both production

systems, inputs that political parties help supply through large Guatemalan companies like DISAGRO. Producers in alternative groups like CORO vary in their production methods and crop choices so that some produce monocrops of tomatoes, while others grow polycultures centered on native crops. Meanwhile, alternative restaurants like Tacorazon buy vegetables from local organic farmers but meats from industrial suppliers. As the following chapters will document, few individuals live lives exclusively in one system over another; few are food-system purists. Instead, most people are food-system omnivores, participating as producers, professionals, and eaters in multiple projects at the same time and throughout their lives. The multiplicity, diversity, and hybridity of food projects are key to understanding food-system changes in Guatemala.

The second theme takes up the position that the economic and health benefits and negative outcomes of different food projects have distributed within Guatemala's population according to historical lines of social stratification. The interactions between the cast of characters that populated the rooms and events of Xela's convention show as much. The event brought together representatives of global agribusiness, Guatemalan NGOs, commercial organic farmers, and Mayan smallholders. Foreigners, non-indigenous Guatemalans, and indigenous people occupied the same conference spaces. The capital-based Ministry of Agriculture shared organizational duties with the regional grassroots collective, CORO. Yet, the power dynamics within this social diversity were laid bare by how MAGA organizers divided speaker sessions, changed the menus, and rerouted the field trips. Foreign foods, export-oriented projects, organics businesses, and non-indigenous men topped the hierarchy. Native crops, smallholder initiatives, local markets, women, and indigenous people were sidelined. CORO organizers interpreted the move as a MAGA power play reminiscent of the country's 200-year-old capital-region

antagonism. In other words, on the one hand, the convention signaled progress. Diverse groups of people came together because of a shared interest in creating organic agriculture. Yet, the event also represented a split based on differing visions for how “organic agriculture” can be achieved and by whom. This dissertation pays attention to how the multiple agriculture and food projects it describes follow, reproduce, or subvert these social dynamics.

The third theme of the dissertation takes up tensions between the global and the local in who gets to profit from food and agriculture and through what kinds of practices. It shows that this is not a simple equation of the replacement of traditional foodways by transnational businesses, headquartered in the United States or Europe. Yes, globally-recognizable brands like McDonald’s and Syngenta are present in Guatemala and, in many ways, the country’s history reveals it to be deserving of its nickname, “the backyard of the US” (Way 2012, x). Yet, the market segments these companies operate in are dominated by Guatemalan brands, like Pollo Campero and DISAGRO, respectively. These companies show that domestic capitalists resist, appropriate, and mimic powerful international projects when accumulating wealth from agriculture and food at home. This includes entering commercial and export-oriented organic markets. At the same time, the regional organic collective, CORO, shows that transnational networks of development professionals work with local groups in Guatemala on promoting not only alternative practices but alternative social interests, the wealth and health of poor people, smallholders, and consumers. This dissertation repeatedly returns to such nuances between relationships of foreign and domestic players in Guatemala’s diverse food projects.

The fourth theme that resonates throughout the dissertation is the role of bodies in the unfolding of Guatemala’s food systems. Food is different from many other commodities because it is ingested directly into bodies as it is needed for their physical reproduction. Yet, food is also

important in the reproduction of social relations between bodies. The decisions around catering at the Seventh Convention on Organic Agriculture showed some of these dynamics. Chaya and chia are slated as highly nutritious, ancestrally-Mayan foods that should be recuperated to fight malnutrition in the country. Foreigners value the crops as superfoods. Yet, chaya and chia were sidelined along with other ingredients because they sent the wrong signals about the status of the event to its participants. Foods associated with expensive foreign tastes were prioritized over options associated with indigeneity, rurality, and affordability. The chapters that follow take up the question of how different food projects mobilize bodies to their causes by harnessing and harvesting linkages between tastes, identities, and the senses.

The final theme of the dissertation highlights the everyday struggle of a precarious existence that many Guatemalans face, another topic that was explored during the Xela convention when speakers referenced rural poverty and inequality. While Guatemala is typically considered a “developing country” or an “emerging market” economy, its food retail and on-farm inputs market segments are highly developed. Several of the sectors’ leading Guatemalan businesses began and grew their operations from the 1970s onwards. They flourished during Guatemala’s 1960-1996 Civil War and genocide against indigenous people. Those decades saw state-perpetrated violence, widespread destruction of rural livelihoods, and massive dislocation of people who fled the conflict to urban areas and to neighboring countries. Major natural disasters, like the 1976 earthquake that internally displaced more than one million Guatemalans, compounded the trends. Despite these events, the country’s population grew more than two and a half times, from 4.2 million people in 1960 to 10.6 million in 1996. Several of Guatemala’s current leading food and agriculture corporations kickstarted during the war decades. From violence, destruction, dislocation, and population growth came opportunity. The times were hard,

but people still had to eat, whether they grew that food themselves or, increasingly, bought it from others. People needed new sources of livelihoods and resources for rebuilding their lives. People also needed to feel alive, especially when experiencing sustained duress, when tomorrow was anything but a sure thing. From violence, destruction, dislocation, and population growth came opportunity, but not only for domestic businesses. The seventies also inserted Guatemalan farmers into the organic coffee export economy, birthed the *campesino-a-campesino* movement in the country, and brought institutions focused on “appropriate technologies” to its soils. The signing of the Peace Accords has seen Guatemala further open its borders to trade with regional neighbors, with the United States as its primary trading partner. Yet, while trade and the economy have grown (from a little over \$1 billion dollars in 1960 to more than \$15 billion in 1996 and \$78 billion in 2018)—as has a large international development sector—poverty, inequality, and crime and violence have not seen a proportional decline. The final theme of the dissertation focuses on the role that precarity has and continues to play in driving production and consumption in Guatemala. It shows that precarity is another risk, like health or ecological hazards, that people manage and seek to overcome as they go about securing wealth and health through food. The dissertation shows that the risks Guatemalans face are higher than in richer nations and they are unevenly distributed among the population.

FOLLOWING THIS DISSERTATION

The sequence of chapters in this dissertation follow multiple, overlapping schemas of organization. This is because the work deals with the complexity of food systems in Guatemala. As a result, rather than focusing on one sector, one supply chain, or one set of actors, it provides a cross-sectional account of the coexistence of multiple food projects in Quetzaltenango and around the country.

The dissertation describes food systems and their change in Guatemala in three sections. From the beginning to end, the sections follow the story from the kinds of food projects that currently exist, to what effects they have, to how people resist or overcome their negative aspects. The first section describes diverse ways that people in Guatemala produce, distribute, and consume foods. The second details the negative effects associated with local food systems, such as health risks posed by bacterial or agrichemical contamination. The third shows how people manage the risks when seeking wealth and/or health through food.

The second organizational schema of the dissertation concerns the interplay between food-system parts and the food-system as a whole. Section one considers food-system complexity by looking at global changes that academic literature has theorized, to changes across time in Guatemala, to the complexity of food options in the city of Quetzaltenango today. Section two then looks at the part of the food system that might be called conventional by considering the rise and the positive and negative effects of chemical, export agriculture and factory farmed and fast chicken. Section three shows how people relate to the food system, focusing most of its analysis on the part of the food system that might be called alternative.

Each section holds chapters that dissect the specifics of certain food sectors or projects while providing system-wide overviews that consider the co-existence, intersection, and effects of various kinds of food initiatives. The second section's first two chapters, for example, look at the place of agrichemicals in smallholder agriculture and the industrialization of poultry in Guatemala. Its third chapter shows how these industries link to broader shifts in nutrition and health in the country.

The third organizational schema of the dissertation follows different food-system actors along different points of food supply chains. The first half of the dissertation details the forces

that have shaped the production and distribution of food in Guatemala. The latter half focuses more on the consumer end and the role of the development sector. Nevertheless, each chapter also attends to the relationships between the promoters of different food projects and how their envisioned beneficiaries receive them, and between the initiatives' intended and unintended consequences. Overlaying this organizational principle is a transition from national to regional to local-level action, although many chapters also attend to multiple scales of activity.

The organizational schemas of food-system effects, the interplay between the parts and the whole, and the relationships between different food-system actors along the supply chain map onto three sections divided into a total of 12 chapters. Section I, "Historical and Contemporary Agri-food Landscapes," engages in theoretical, methodological, historical, and ethnographic scene-setting for the work. It emphasizes multiplicity, diversity, and hybridity of projects rather than their binary (i.e. traditional/modern, conventional/alternative) representations.

Chapter one, "Theorizing Food-System Changes," introduces the Food Regimes theoretical foundations for the dissertation. Food Regimes scholarship has done a great deal to shed light on macro-level forces in global food systems and to reinvigorate critical agrarian studies by centering the political economy of food in larger academic debates about the sources of and inner workings of capitalism. This first chapter argues that the Guatemalan example helps to both nuance and further the theoretical framework. It nuances the temporal, spatial, and relational dimensions of Food-Regimes analysis, highlighting the co-existence of multiple projects of food-system domination, resistance, and transformation. It also furthers Food-Regimes theory by extending its critical lens to nutrition and diet-related disease, an analysis that I argue is pivotal to understanding the mechanisms of food-systems change in Guatemala.

Chapter two, “Field Site and Methods,” outlines the process of selecting Xela as the field site from multiple other places with sustainable production projects around Guatemala. It argues that the unique social diversity and geographical density of the city’s alternative food networks made it an important case to study. The chapter ends by outlining the methodologies behind the research project. It discusses the data collected on conventional and alternative supply chains and practices, among different social strata, in the physical world and online. It also describes the data that did not make it into the dissertation, although it informed its overall trajectory.

Chapter three, “*Aré’s Journey: A Life Lived at the Intersections of Guatemala’s Food Systems*,” orients the reader to the history of food and agriculture in Guatemala. It does so by following the life of a man called Juan José, a fictional person also known as Aré, whose story combines real events from the lives of multiple people who participated in the research on which this dissertation is based. Born to a poor, rural, K’iche’ family, Aré works hard to get an education, becoming an agronomist. Throughout his life, he engages in production and consumption practices across traditional/modern, subsistence/market, conventional/alternative, domestic/export binaries. The composite character demonstrates the key point that food-system dichotomies often break down when examined through the ethnographic lens. The example demonstrates the complexity of lives lived at the intersections of overlapping structural factors, value systems, and physical, material, and social needs. His story also shows that there has not been a linear trajectory from traditional to industrial to alternative food systems. Instead, various projects began, arrived, and spread throughout Guatemala around the same historical time and have depended on the specific configuration of social relations within and outside the country.

Chapter four, “A Walk Around Xela,” moves in for a closer examination of what food and agriculture look like in Guatemala today. The walk around a small park in the historic center

of Quetzaltenango details the coexistence of home made and processed foods, formal and informal eateries, street foods and restaurants, and national, regional, and global brands. The foods are variably made with global and native ingredients, produced with or without chemicals, served fresh or packaged. They involve producers, vendors, and clients of different economic levels, ages, ethnicities, and nationalities. The chapter thus shows the multiple sites of contact and hybridity between ostensibly different food systems and the social and ecological relations that underpin them. A close look at Xela's food options thus troubles the analytical dichotomies that are often employed in food-systems research, while complicating the presumed, temporal progression from traditional through industrial to alternative food projects. It shows that it can be hard to say where one food system begins and another one ends by analyzing only the involved food production, preparation, and distribution practices, or the ingredients that foods contain. It is somewhat easier to see the city's geographies of consumption because people belonging to different social groups tend to congregate in similar places when shopping for food or eating out. The second part of the chapter thus shows that the food systems of a place like Xela cannot be understood outside of a broader analysis of local forms of social differentiation. The chapter concludes by zooming out to national level statistics to show that Guatemalan, rather than American, brands dominate different industrial food sectors in the country, sectors like supermarkets, processed snacks, and fast-food restaurants.

Chapter five, "*Feeding Your Love for Guatemala: Disciplining Tastes, Building a Nation*," concludes the first section by continuing the argument that Guatemala's corporate agri-food sector has been dominated by domestic, rather than international, capital. It analyzes corporate promotional materials to show some of the mechanisms by which Guatemala's chip brand, Tortrix, and fast-food chain, Pollo Campero, came to dominate their sectors. The chapter

also builds the theme of bodies in the dissertation. It shows how companies build and harvest wealth through edible commodities by enlisting the senses, affect, and memories.

Section II, “The Supertoxification of Guatemala’s Food Ecology,” argues that while contemporary agricultural and food processing practices have introduced new toxins into food systems around the world, the risks from them are higher in places like Guatemala compared with wealthier countries. The effect is what I call the supertoxification of food ecologies. The section makes the case by following recent decades’ changes in different food supply chains before considering their intended and unintended effects in the wider society.

Chapter six, “*More is Better: Vegetable Farming and Chemically Risky Food Ecologies*,” details the spread of the use of chemical fertilizers and pesticides among smallholders in Guatemala in the latter part of the twentieth century, especially among farmers who adopted the production of non-traditional agricultural crops, like broccoli and lettuce. Focusing on the famous community of Almolonga, one of Xela’s neighboring towns, the chapter shows that farmers differentially accrued the benefits of producing export vegetables. It also shows that insufficient training and unenforced regulations on the use of the toxins have meant that they are likely harming producers and farming communities, farm workers, and end consumers, and more so than in countries with safer agrichemical-use practices. The chapter makes the case that the overuse and misuse of dangerous chemicals, some of which are banned in many places in the world, render the food ecologies surrounding marginalized communities extra risky compared with the ecologies surrounding better-protected populations. It renders them supertoxified.

Chapter seven, “*Trusted Chicken: Industrial Poultry in Biologically Risky Ecologies*,” continues the supertoxification thesis by showing how poorly regulated and opaque production of industrial poultry inserts additional risks into Guatemala’s food ecologies. Those join a

biologically-hazardous food retail environment due to the lack of public health infrastructures to effectively manage pathogenic contamination.

Chapter 8, “Compounding Diet-Related Disease Risks,” concludes the section by showing how the supertoxification of local food ecologies has coincided with changes in diets and disease. But, it argues that, rather than experiencing nutritional and epidemiological transitions, Guatemala has seen a diversification of diets and a compounding of health problems. This section thus contributes to one of the key aims of the dissertation: to complicate linear, transitionist representations of development, diets, and disease.

Section III, “Managing Guatemala’s Risky Food Ecologies,” moves more firmly into the realm of consumption to argue that people trade off multiple risks and rewards when making decisions about food. Chapter nine, “Healthy Eating to *Superar* a Supertoxified Food Ecology,” begins by showing that another super-risk of Guatemala’s food ecology is the wider context of post-war economic and physical precarity in which people live. The chapter picks up the cultural trope of *superar*, a word that means both to overcome a difficulty and to get ahead in life, to further show how consumption of status foods is intertwined with the project of neoliberal self-making of people on the insecure margins of late capitalism. The chapter then moves on to show the logics underlying people’s shopping and eating decisions when they are faced with competing temporalities of food-system risks and rewards. In this system, choosing between a bag of chips and fruit is not a simple calculus of unhealthy versus healthy foods. Instead, the immediate biological risk of fruit contamination might have to be weighed up against a future cumulative risk of diet-related chronic disease. Meanwhile, food choices also do not follow a simple logic of economic cheapness. Instead, precarity encourages maximizing enjoyment of the immediate moment over maximizing financial savings in anticipation of an uncertain future. The

chapter ends by refocusing on the body as a site through which struggles for edible wealth and edible health are worked out. It shows the centrality of the quality of *rica*, tastiness, in food choices.

Chapter ten, “*Organic Distinction: Class-Based Alternatives and CORO’s Solidarity Economies*,” expands the theme of food decision-making to show how people around Guatemala are addressing the negative effects of mainstream food production and consumption through their own projects that I collectively term alternative food networks. It argues that sustainable agriculture requires large investments of time, money, and knowhow, which can explain why many projects involve protagonists who are higher up on the socioeconomic ladder. The chapter then considers how the CORO project in Xela is similar to and different from those initiatives, explaining some of the foundations of its underlying principle of a solidarity economy. It focuses in on the core role of foreign charismatic leaders in establishing the initiative.

Chapter 11, “*The Flavor Premium: Mobilizing the Senses to Do Food Otherwise*,” takes a closer look at the motivations of the consumer and producer participants of CORO’s markets. It continues to highlight the body as an active site of food-system change, delineating several corporeal mechanisms involved. I argue that many people in Guatemala can remember the tastes of food before agrichemicals moved into the countryside, chicken production moved into factories, and food everywhere moved into packages. This makes their bodies allies of alternative food projects because they can act as gauges for recuperating lost flavors, textures, and other sensory qualities of foods. At the same time, the project of social transformation within CORO’s ethic of solidarity economies is partly realized by consumers and producers training their senses to like each other’s’ foods.

Chapter 12, “*Acts of Translation: Navigating Xela’s Agroecological Development Networks*,” shows that CORO-leaders’ goals of a solidarity economy cannot be achieved without the external support of a vast aid sector that finances transitions towards sustainable farming and food projects. This creates its own hierarchies and power imbalances as farmers become beneficiaries of non-profit groups and their associated professional classes. It also imposes rigid international development bureaucracies that rub up against dynamic local realities. The chapter argues that many actors enmeshed in these organizational webs rely on acts of translation to accrue desired benefits. The chapter thus zooms back out to a system-wide level to help contextualize alternative food networks, like CORO’s markets, within broader, transnational flows of resources, ideas, and people, while continuing to highlight their diverse and hybrid natures. The Conclusion recaps the dissertation’s central themes in order to connect the Food Regimes and nutritional and epidemiological transition literatures. It positions the political ecology of food as a critical, but often missing or underdeveloped, link in theories of socially-stratified changes in health, environment, and development in late capitalism.

**SECTION I: HISTORICAL AND CONTEMPORARY AGRI-FOOD LANDSCAPE IN
GUATEMALA**

CHAPTER 1: THEORIZING FOOD-SYSTEM CHANGES

“All progress in capitalist agriculture is a progress in the art, not only of robbing the worker but of robbing the soil.”

Karl Marx (1976, 637-8).

Several decades of social science research now exist on projects like local farmers markets, organic community-supported agriculture schemes (CSAs), farm-to-table restaurants, and Fair-Trade certifications. Collectively, these and other initiatives are called short food supply chains, direct market sales, or alternative food systems, economies, movements, and, most commonly, networks. This nomenclature conveys central assumptions about the goals and structural makeup of the projects: that they are a) market-based but are better “alternatives” to a conventional system and its negative ecological and social effects; that b) part of their alterity is a shorter distance, physically and/or socially, between producers and consumers; and that c) the alternatives form somewhat cohesive and distinctive chains, systems, or networks of actors to the conventional system. This dissertation tests these assumptions in Guatemala.

Whereas much scholarship engages one side of the conventional-alternative binary, typically in the Global North, this study considers the panorama of food projects and the people who engage in them a country of the Global South. The theoretical framework of the political economy and ecology of food and agriculture lends itself well to a project such as this one that aims to understand system-level dynamics, while an ethnographic orientation facilitates testing them against everyday discourses and practices.

This dissertation engages Food Regimes analysis, one of the most influential theories grappling with powerful global forces that shape food and agriculture, with their repercussions, and with how alternatives are envisaged and enacted. Food Regimes is a particularly useful framework because it attempts to explain historical declines of traditional forms of cultivation,

the spread of global, industrial and corporate food chains, and the emergence of alternatives in the Global North and the Global South.

I begin by outlining the genealogy of Food Regimes analysis and its critics. I then demonstrate that Food Regimes theorizing has been fruitfully applied to Climate Change and other negative ecological effects associated with corporate and industrial food production. However, I show, that, with the exception of the political economy of hunger and of obesity, Food Regimes analysis has been less visible in the study of negative effects on human health. I argue that the dynamics between food systems and human health, including the stratification of diets and disease along race-class-gender hierarchies, are vital to understanding how food system change unfolds in a place like Guatemala.

ALTERNATIVE FOOD NETWORKS AND THEIR CONVENTIONAL COUNTERPARTS

Applying Polanyian (Polanyi 1957; 1944) and Marxist (Marx and Engels 1967; 1963) concepts of the double movement of markets and society, scholars have debated whether and how alternative food networks (Alternative Food Networks), like organic and Fair Trade markets and Community-Supported Agriculture (CSA) schemes, impact society. Some have argued that they re-embed an impersonal, capitalist agri-food market in face to face producer-consumer relations of reciprocity, trust, and regard (Kloppenborg, Henrickson, and Stevenson 1996; Lyon, Gillespie, and Hilchey 1995; Ostrom 1997; Sage 2003). Others have contended that they make visible labor and ecological relations of production, defetishizing commodities in the process (De Neve et al. 2008). Others still have detailed how some projects sideline profit and price considerations in favor of values of fairness, justice, and community (Cone and Kakaliouras 1995; DeLind and Ferguson 1999; Grasseni 2013; Lyon 2007; Lyon and Moberg 2010).

These studies consider the inner workings of alternatives. But the central question remains of what exactly they are alternative to. As Fuller, Jonas, and Lee (2010) point out, the use of the word “alternative” posits some mainstream other against which the alternative is defined. Typically, the alternatives are juxtaposed against a conventional food system. Sometimes explicitly, sometimes by implication, the results suggest that the values, practices, and implications of alternatives are non-existent or lacking in the conventional system they oppose. In other words, the conventional system is deemed impersonal, as not based in reciprocity, trust, and regard, as making invisible labor and ecological relations of production, and as sidelining values of fairness, justice, and community in favor of profit and price considerations. Important recent work, mainly in the Global North (e.g. Fuller, Jonas, and Lee 2010; Freidberg 2004), but some from the Global South (e.g. Freidberg and Goldstein 2011), challenges such a binary reading of conventional-alternative food dynamics, opting instead for examinations of diversity, overlap, hybridity, and compatibility in food systems (Besky and Brown 2015; Janssen 2017; Rissing 2019; Sonnino and Marsden 2006). The Guatemala case study on which this dissertation is based shows not only multiplicity and interconnectivity between food projects that can be deemed conventional or alternative, but that these overlay and intersect with other practices that can be deemed more traditional. Moreover, these hybridities cannot be understood outside of global, national, and local economic and social dynamics, nor apart from the health effects resulting from the interactions between human bodies and food-connected, non-human entities, like food advertisements, agricultural chemicals, and bacterial pathogens. I thus propose the application of Food Regimes analysis to the study of local food systems change, with particular attention to how people respond to health risks in food ecologies.

FOOD REGIMES THEORY

One of the most influential theories shaping our understanding of the spread of conventional food systems and the emergence of food alternatives is Harriett Friedmann's and Philip McMichael's Food Regimes Theory. In their 1989 essay, Friedmann and McMichael laid out a world-historical perspective on the centrality of agriculture to international expansion of capitalism since the 1870s. The work was employed critical political economic analysis to argue against prevailing linear accounts of food systems history as based on continuous development and expansion (McMichael 2009).

Building on Regulation Theory and World-Systems perspectives of Aglieti, Arrighi, and Wallerstein, among others, the sociologists argued for three distinctive food regimes, which they define as entailing global-scale production and consumption systems governed by rules set by a dominating set of state-capital relations (Friedmann 1993, 30-31). British hegemony in the world economy marked the period of 1870 to 1914. Europe's industrialization was underwritten by the continent's reliance on imports of relatively cheap wheat and meat from settler states of Argentina, Canada, the USA, Australia and New Zealand.

The post-world-war two independence of many Asian and African countries saw the consolidation of the nation-state system around the world between 1945 to 1973. This was also a period of rapid expansion of Green Revolution technologies and spread of food aid to redistribute US grain surpluses. The latter move weakened domestic production of staple foods, creating import dependences in many poorer countries.

Running from the 1980s to now is the neoliberal corporate food regime. It is marked by greater liberalization, deregulation, and concentration of food production and distribution in the hands of a few agri-food businesses. The third regime's break from the second regime is posited to be evidenced by the relative shift in control over food systems and their regulation from nation

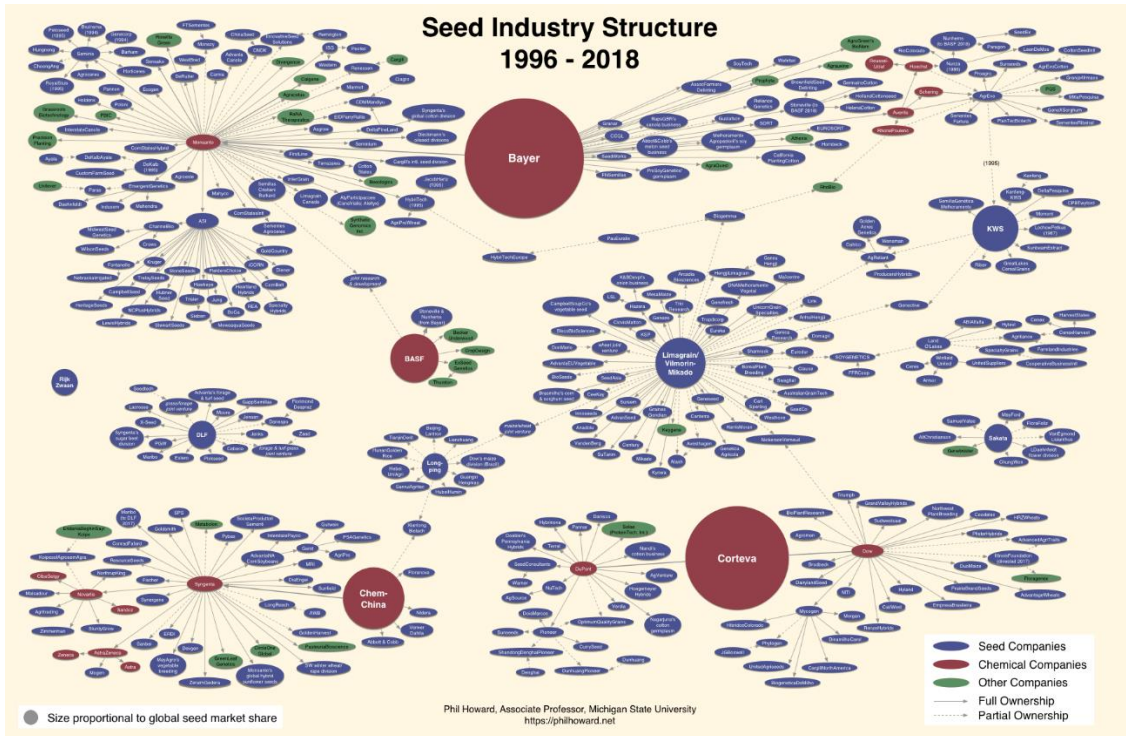


Figure 1: Global Seed Industry Structure in 2018
 Source: <https://philhowardnet.files.wordpress.com/2018/12/Seed2018-1.png>

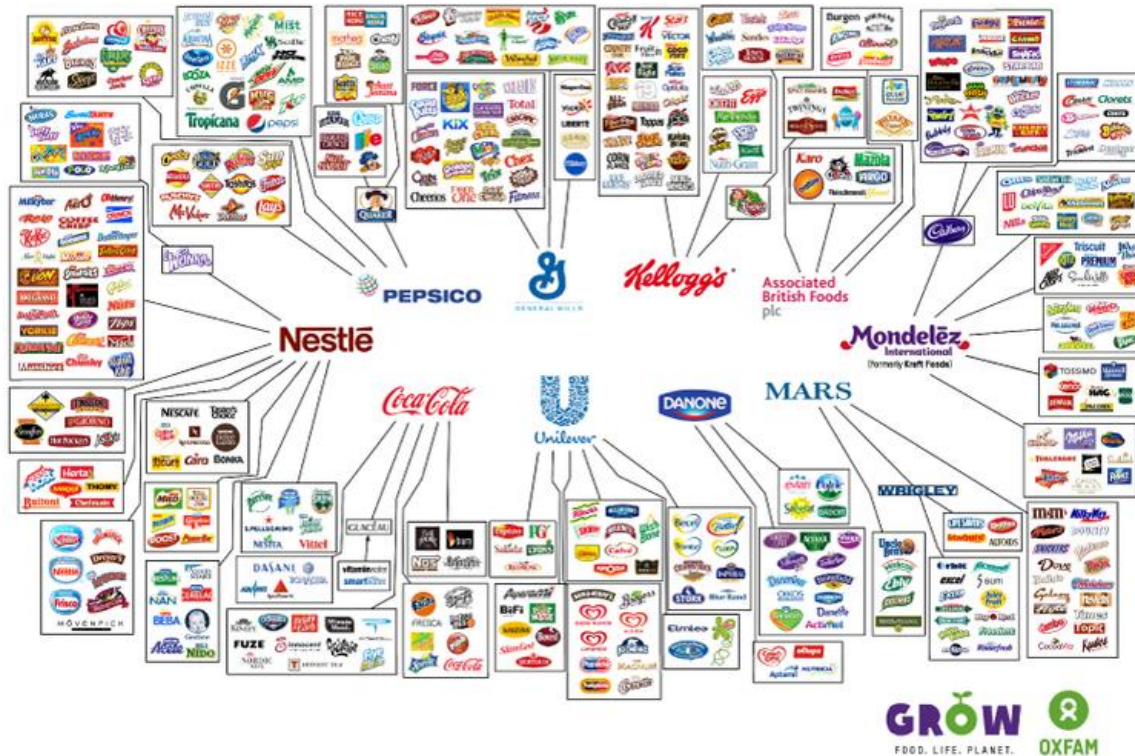


Figure 2: The 10 Companies That Own Most of The World's Food and Beverage Brands
 Source: Oxfam America

states to corporations. The businesses concentrated their power upstream and downstream of production; feed, agrichemical inputs and other technologies on one end and ingredients for processed foods on the other. Today, the monopolization of the sectors is typically illustrated by two similar charts. The first illustration below shows the concentration of the global seed companies. The second demonstrates the power of the 10 food companies that “control everything you buy” (Taylor 2016).

Of biggest concern to our discussion of alternative food networks is the third and current neoliberal corporate food regime, its contradictions, and the societal responses to its self-generated crises. Friedmann and McMichael end their original piece by proposing that the answer to the global orientation and tendencies of corporate-led agri-food restructuring lies in the relocalization of food systems. That is to say that projects that oriented towards local economies can counteract the tendencies of the current food regime. The authors go on to propose that the localization projects can only succeed if they collaborate and coordinate at higher levels, otherwise successes are likely to be swallowed up by capital and re-oriented globally. They also speculate that the nation states’ “strategic locations” in the state system and world economy can be harnessed for the good of relocalization initiatives. The authors concluded the argument by saying that “[i]f renationalization was the protective movement of the 19th century, relocalization combined with global co-ordination may be the protective movement of our times” (Friedmann and McMichael 1989, 114).

The pendulum-like relationship posited between the working of global capital and resistance has its roots in Marx’s theorization of capital as engendering its own crises of overproduction and overexploitation before a restructuring occurs to develop new pathways for capital accumulation. The restructuring can also occur in order to deal with resistance to the

social and ecological contradictions capitalism creates. The process involves creating or offering up different temporal, spatial, social, and ecological fixes that ensure the continuation of capital accumulation. In this theorization, capital seeks a path of least resistance to maximizing profits, leading to the increasing drive to marketize and commodify all social relations. Karl Polanyi theorized this as one side of the double movement of the creation of a market society (Polanyi 1944). The other movement occurs when capitalist relations exert a greater toll than is tolerable by society, so that resistance trickles up to the regulatory layer, such as creating labor laws, environmental regulations, taxes, and tariffs. Both theorists' insights undergird Food Regimes theorization.

Since its initial publication, Food Regimes Theory has been widely influential, generating a corpus of research, not least by Friedmann and McMichael themselves. Food regimes thinking has been expanded and nuanced in that it a) refocuses the analysis away from periods of relative regime stability to the inherent contradictions that galvanize processes of transition; b) highlights environmental change as central to those contradictions, crises, and transitions; and c) posits as resistance to the globalizing corporate food-regime project the contemporary movements to stabilize, via agroecology and food sovereignty, the countryside and the planet (Bernstein 2015).

The original authors have updated and diverged in their work to theorize the current historical moment as the “corporate food regime” (McMichael 2013) and corporate-environmental food regime (Friedmann 2005). In a 2005 essay, Harriet Friedmann proposed that a new food regime might be afoot at the turn of the millennium, that which has moved from colonial to green capitalism (Friedmann 2005). For her, the rise of quality-audited supermarket supply chains—which includes sales of alternatively branded foods, like organic, fair trade, or place-based—is evidence of the incorporation of the eco-social critique of food regime effects

into its mainstream operations. McMichael has gone on to engage with different forms of resistance, particularly through the relocalization of food systems. For him, calls for food sovereignty and other movements, set up a key opposition between global food that is consumed far from its place of production—"food from nowhere"—and food eaten close to its place of origin where it is produced in harmony with local ecology, a "food from somewhere" (McMichael 2009). Capitalist enterprises have appropriated increasing concern over placeless foods into quality-audited food-regime relations through the sale of place-marked foods, including those giving product origin and quality guarantees through the European Union's Protected Designation of Origin (PDO) status.

FOOD REGIMES THEORY PROPONENTS AND CRITICS

Food Regimes Theory has met two lines of critique. The first challenged the foundations and assumptions on which the theory was built. Goodman and Watts (1994) led the charge, arguing that it is inappropriate to apply arguments from literature on industrial restructuring to the political economy of agrarian restructurings, given that the latter are subject to different socioecological forces to the former. The claim of exceptionalism of the agri-food system because of its land base and its role in providing for the absolute physical and important cultural needs of humans went to reverberate into later arguments that "food is different" and thus should not be subject to the vagrancies of global free markets but taken out of WTO regulation and reclaimed for food sovereignty (Rosset 2006). In their original critique, Goodman and Watts pressed the additional point that rather than representing singular or dominating regimes, market-based agri-food systems are massively segmented, vertically and horizontally, and while rural spaces are undergoing transitions they do so in diverse ways. In this critique, they take aim at the macro view of Food Regimes Theory, positing that it does not adequately deal with the

important question of *how* the various processes of accumulation, crisis, and resistance unfold in different times, places, and social groupings. They thus argued against rigid core-periphery conceptualizations of capitalist relations, calling instead for attention to the lines of continuities within agri-food systems change and the multiple nature of both capitalist relations and resistances to them, what Goodman and Watts call polyvalent responses. The work anticipated additional approaches that seek to dethrone the capital-centric theoretical models of human productive activities and social interactions. These include Gibson-Graham's diverse economies reframing (Dixon 2011; Gibson-Graham 2008) and David Graeber's contention of the primacy of communistic relations in daily life, including in paid work (Graeber 2011).

After rejecting much of Food Regimes Theory theorizing and the dualisms it implied, Goodman and Watts experimented with ground-up approaches like actor-network theory that are more attuned to place-specific relations between markets, governments, and people. They and their collaborators have gone on to attend to the links between global and local, rural and urban, production and consumption, and conventional and alternative food systems. They see these binaries as problematic foundational assumptions of food regimes theory-style thinking and much social science of food and agriculture (D. Goodman 2004; M. K. Goodman 2010; D. Goodman and DuPuis 2002; D. Goodman, DuPuis, and Goodman 2012; D. Goodman and Watts 1997).

For commentators, like Mark Tilzey, however, this line of external Food Regimes Theory critique has generated its own dualistic rift in theorizing about the role of food and agriculture in capitalist processes, the rift of Food Regimes Theory's "abstract globalism" versus Goodman and Watts' "abstract localism" (Tilzey 2019). On the thirtieth anniversary of Friedmann and McMichael's original essay, he offered up a "critique from within" that seeks to take insights

from both positions, and from different lines of thought within Food Regimes Theory itself, in order to reform the theory and analysis (ibid). Tilzey offers up an alternative count and periodization of food regimes and reverses the arrow of causation between agri-food systems and larger capitalist processes. He sees six different food regimes rather than three and reframes changes in food and agriculture into the dependent rather than the independent variable. Of note is his suggestion that the present moment, the sixth food regime, starting from around 2010 is the “Post-Neoliberal” food regime in which “states have emerged from the shadows” to mitigate (but not resolve) the socioecological contradictions of neoliberal capitalism. He argues that this has come about because of a) the desperation of most people on the planet, concentrated in the Global South, arising out of inability to secure even basic needs and services in an inequality-based positions of precarity and b) the increasing inability of the planet itself to supply resources and absorb wastes (Tilzey 2019, 243). While all food regimes are unstable because they offer only partial fixes to their contradictions, Tilzey predicts that the current food regime “may prove unprecedentedly [unstable, perhaps marking] the end game of capitalism in general, as it encounters an epochal crisis defined by spiraling political and ecological turmoil” (Tilzey 2019, 248). Like Friedmann, McMichael, and many others, Tilzey concludes by hoping that the world will be saved from ecological apocalypse by the adoption of a non-capitalist food regime based out of the anti-imperialist, counter-hegemonic ideas of good living through radical food sovereignty.

Tilzey’s final thoughts mirror many analysts’ proposals that place food sovereignty at the top of a hierarchy of projects that have been elaborated and enacted with the goals of addressing food system problems. For instance, Holt Giménez and Shattuck (2011) typologize and rank according to their transformative potential the different alternatives that have been proposed (and

variably enacted) to deal with multiple ecological, economic and social crises of the current state of affairs. They see the kind of Green Capitalism called out by Friedmann as a subordinate reformist bend within the neoliberal food regime itself. They posit that if the latter is marked by transnational institutions and actors like the WTO, WB, and IMF, then the weaker offices of the same and partner institutions, like large philanthropic organizations, seek ostensibly weak reforms. These include voluntary corporate social responsibility mechanisms, consumer-driven market niches like for local, slow, and organic foods, and social safety nets in the forms of micro-finance and social enterprise. These reforms are weak, the authors posit, because they promote *individualized consumer politics* that fall short of political organizing (Holt-Giménez and Shattuck 2011). In other words, the current food regime—whether it is called corporate, green capitalist, or post-neoliberalist—remains fundamentally unchallenged because market niches change production and consumption options piecemeal and only for the lucky few rather than on the systemic level and equally for all. Meanwhile, food safety nets seek to address food security and hunger as a Band-Aid on the problems rather than addressing their root causes of global class hierarchies and divisions of labor.

Turning their analytical lens onto food movements around the world, Holt Giménez and Shattuck further split efforts into two camps: progressive and radical. The former create practical alternatives to industrial agri-foods while remaining within the economic and political framework of existing capitalist food systems. These include sustainable, agroecological and organic agriculture and farmer-consumer community networks, such as community-supported agriculture schemes. These might also call for food justice and the right to food for marginalized groups. In the radical and most transformative camp, Holt Giménez and Shattuck (2011) place what they call “movements of movements.” Organized groups that focus on changing not local

level practices, but on structural reforms to market and property regimes, and class-based, anti-imperialist, anti-capitalist or anti-corporatist redistributive demands for land, water and resources. These include farmer groups, labor organizers, immigrant rights groups, the food sovereignty movement writ large, and other organizations favoring militant, national and political advocacy and a discourse of entitlement and distribution of wealth and power in favor of regional and local control over agriculture and food systems.

FOOD REGIMES AND THEIR CRISES

Food Regimes theorists often separately mention the political and ecological crises of capitalism. This formulation separates humans and nature by painting a social crisis as separate to the planetary one. In his 2018 book, “Political Ecology, Food Regimes and Food Sovereignty,” for example, Tilzey describes that multiple contradictions of the neoliberal capitalist regime have “come home to roost” at the same time. He mentions two major contradictions: compromising the biophysical fabric of Planet Earth by challenging its ability to continue to supply resources and absorb waste and the inability of the world order to supply the basic needs for the globe’s majority, “perhaps most notably food” (Tilzey 2018: 197). As Tilzey emphasizes, agriculture and food are, of course, central to this dynamic and many authors have explored both sides of its double edge: the contradiction of persisting hunger amid seeming global plenty (Perry and Calarco 2017; Vanhaute 2011) and capitalism’s role in environmental overexploitation and damage that have led to the current climate change crisis (Bellamy Foster 1999; 2013; Wishart, Jonna, and Besek 2013). Yet, less Food Regimes Theory attention has gone to exploring the rise of chronic disease burdens that I argue more thoroughly connect today’s human and ecological crises.

John Bellamy Foster, for example, has applied Marx's metabolic rift analysis to contemporary environmental crises. The Metabolic Rift hypothesis came from the linking of early to mid-19th century capitalist agriculture to the loss of soil nutrients in Britain, leading the country to seize global supplies of natural fertilizers like guano (Bellamy Foster 1999). For Marx, the Rift represented an irreconcilable contradiction of capitalism, the erosion of its ecological base (Bellamy Foster 2013). Other approaches, like environmental history, have also confirmed Marx's contention that capitalist agriculture robs the soil (Rogers 2010). Nevertheless, Bellamy Foster's revitalization of the Metabolic Rift concept has led to hundreds of fertile analyses examining everything from global land grabs to climate change (Wishart, Jonna, and Besek 2013).

For critics like Jason Moore, however, the Metabolic Rift theorizing does not go far enough as it is still based on an ontological assumption of the separation of society from nature. The very word "rift" suggest the dichotomy that grants acting power only to humans who have done untold damage to nature (Moore 2017). Moore instead proposes the framing of a metabolic shift instead that suggest that embeds humans as part of nature.

There is evidence of the nature/society split in Metabolic Rift theorizing in its uneven application across the two ontological domains. While Metabolic Rift theorizing has been prolifically applied to various environmental contradictions, it has made fewer inroads into thinking about the contemporary manifestations of capitalism's contradictions in the human organism. This is partly because in much Marxist theorizing, human beings are abstracted into their respective class positions. Those subordinate to the capitalists are further abstracted to the category "worker" or mentioned only as "labor," as in the quote that opened this chapter: "All

progress in capitalist agriculture is a progress in the art, not only of robbing the *worker* but of robbing the soil” (Marx 1976, 637-8, *emphasis added*).

This rhetorical parsing out is necessary in order to analyze processes of capitalist accumulation and class struggle. However, it obscures the natural, biological, indeed ecological, nature of human beings. Increasingly, though, the biggest issue of our time reminds us of our own metabolic links to the rest of the planet.

Climate change is increasingly on the minds of the scientific community, the media, and the general population. So are its possible solutions, with people seeking answers to what they can personally do to help mitigate or reverse the projected planetary catastrophe. Food and agriculture are central to global carbon cycles. For example, as this dissertation is undergoing its final revisions, the British broadsheet newspaper, *The Guardian*, published the conclusions of a “leaked” IPCC report that warn that climate change will not be solved without major changes to global agri-food systems, including changing agricultural production and drastically reducing meat consumption (McKie 2019). And animal food consumption is linked not only to Climate Change but also to changes in human health. The rise of chronic diseases like diabetes, heart disease, and cancers around the world point to another contradiction of contemporary food supply chains, that they play a role in around a fifth of global deaths (Afshin et al. 2019). Obesity is the most talked about, studied, and intervened in among the diet-related chronic diseases.

THE POLITICAL ECONOMY OF OBESITY

The American Medical Association (AMA) classified the condition a disease in 2013 (Pollack 2013). The label is controversial because the body mass index, the standard measure of obesity (BMI of 30 or greater) and overweight (BMI of 25 or greater), is a flawed instrument and

because obesity has no pathology but is a risk factor for chronic illnesses like diabetes and heart disease. On the opposite side of the debate is the view that calling obesity a disease opens more room for medical maneuver in terms of it being taken seriously by doctors and it being covered for treatment by insurance. While AMA's definition is not legally-binding it does add legitimacy to the classification.

The United States is closely associated with expanding global waistlines. During the 1980s, it was the only country considered to have an obesity problem (Gordon-Larsen, Adair, and Popkin 2003). By the 1990s, obesity in developing countries had become “an emerging crisis” (Popkin 1994). At the turn of the new millennium it was called a “global pandemic” (Popkin, Adair, and Ng 2012). With seventy percent of the population counted as overweight or obese, Mexico surpassed US levels in 2013 (Al Jazeera 2013). Today, America ranks 16th in the world. Overall, the rate of the preventable condition has tripled since 1975, affecting more than a third of the global population. In 2016, 1.9 billion adults (18 years +), 340 million children and adolescents (five to 19 year-olds) and 41 million under-fives were classified as overweight or obese (WHO 2018). The World Health Organization points out that “most of the world's population live in countries where overweight and obesity kills more people than underweight” (ibid.).

Two inter-linked theories attempt to explain the global spread of obesity. The Nutrition Transition hypothesis posits that global changes in retail have created obesogenic environments that have caused shifts in diets that have, in turn, caused obesity and other “western” diseases of affluence. This contemporary Nutrition Transition and its effects are the second Epidemiological Transition that human beings have faced: the move away from infectious and towards chronic disease. The first Epidemiological Transition towards infectious diseases occurred when humans

settled around agriculture. Just as Food Regimes Theory, the Nutrition and Epidemiological Transition hypotheses thus posit global shifts from one state of agri-food relations, diets, and disease burdens to another. These transitionist literatures all in one way or another predict a flattening out of the world due to contemporary forces of globalization.

DIVERSITY IN FOOD SYSTEMS

Anthropologists have offered important correctives to theories of homogenization by showing the great diversity of human food production, distribution, and consumption activities. For example, there have been multiple capitalist trajectories in food and agriculture, including across different commodities due to their varying organic properties, local conditions, and seasonality (Friedland 2005; Wells 1996); across and within different corporate organizations, such as seen in the frequently changing strategies and practices of Dole Food and Chiquita Brand multinationals in the Dominican Republic (Raynolds 1997); and in distinct forms of capitalism that have emerged “from the bottom up,” like by the Gounder caste of peasants-turned-global-garment-manufacturers in India (Chari 1997) and the global, ethnically-closed circuits of fresh produce that supply New York City’s Chinatown, which operate entirely outside corporate food trade channels (Imbruce 2006). As Wilk notes, these and other examples (Blim 2000; D. Miller 1997) demonstrate that even in the centers of industrial power, we need to be thinking about “capitalisms in the plural rather than capitalism in the singular” (Wilk 2006, 18).

This work adds a reversed agentive arrow, showing that variable ecologies, human bodies, and forms of social organization shape, limit, bypass, resist and appropriate the trajectories of profit accumulation. For instance, while corporations might generate profits by appropriating (and diluting the standards of) market niches created by alternative practitioners, such as organics (Guthman 2004), smallholder farmers from Guatemala (Isakson 2009) to

Indonesia (Schneider 1995 in Dove 2011, 256) have used their participation in industrial agricultural production of export commodities to bolster their own production of local subsistence, non-capitalist alternatives. Finally, while there have been many transformations from artisanal to mass production—from craft to Kraft cheese (Paxson 2012), from tomatillo to tomato (Barndt 2008), from maize to corn (Baker 2013), and from taco to Taco Bell (Pilcher 2006)—there have been opposites too. For example, the Dayak people of Borneo have long appropriated genetic material destined for commercially-focused plantation monocultures—from the first Brazilian rubber tree seeds of colonial seedlings to the latest clones—incorporating them instead into culturally-embedded swidden polycultures (Dove 2011, 36).

There is also considerable variation in how farms operate, whether or not the agriculture has been scaled up, mechanized, and chemicalized. What form a farm unit takes is locally and historically contingent. They vary and change according to outcomes of political processes (Edelman 1992), politics of local labor relations, specifics of the locality (climate, soil profile, topography), and commodity-specific attributes (Wells 1996), as well as culture, such as ethnic heritage and associated values (Salamon 1992). In her study of the effects of the American farm crisis in Georgia, for example, Barlett (1993) found that whether a farm weathered the crisis was linked to their style of farm management. Georgia's conventional farmers were less likely to stay in operation if they adopted an ambitious management style, characterized by high debt-to-asset ratios, an industrial ideal of a middle-class urban lifestyle and social mobility, and an orientation to farming as a job. Coming out ahead on the other side of the crisis were farming households with a cautious management style with low debt-to-asset ratios and a more agrarian ideal of a multigenerational cooperation and work ethic, frugality, non-financial measures of success, and an orientation to farming as a lifestyle (Barlett 1993).

While based on a homogenization hypothesis that is troubled through ethnographic studies of food and farming, the nutrition transition and the obesogenic environment theories advance public health and medical thought. They do so by including environmental factors in human behavior and disease pathologies, rather than focusing only individual responsibility in failing to stay healthy. This is particularly important for research on obesity since weight gain tends to be seen by the general public and treated by the medical community as a moral failure. Such an ecological perspective has gained traction for understanding chronic diseases and health in general, especially in the unequal distribution of disease burdens across and within populations.

For example, one field shifting the conversation towards looking at broader environmental factors in changing health and disease patterns is population and public health, more commonly known as epidemiology. The social determinants of health work has linked social inequity and relative deprivation to health inequalities. Gaining traction since the 1970s and 1980s, the social determinants of health language have been adopted into policy approaches of various country governments, including the UK and the US, and the WHO (Irwin and Scali 2007; Lucyk and McLaren 2017). One of the more famous of the policy documents was the 2010 review by Sir Michael Marmot in which his team concluded that to improve health outcomes in the UK would require interventions to make the society fairer and less unequal. Commenting on the third consecutive annual drop in life expectancy in the United States in the year 2018, Marmot called the declines in longevity a health crisis, writing that “[h]ealth is supposed to be improving all the time. Something is going badly wrong” (Marmot 2019).

Paul Farmer’s application of Galtung’s concept of structural violence to clinical medicine goes a step further in highlighting the link between human social arrangements and health

inequalities. He argues that “the arrangements are *structural* because they are embedded in the political and economic organization of our social world; they are *violent* because they cause injury to people (typically, not those responsible for perpetuating such inequalities)” (Farmer et al. 2006, 3). Others are beginning to reassess urban food environments through the structural violence lens (Lane et al. 2008), and one panel at the 2018 American Anthropological Association conference aimed at rethinking chronic disease as structural violence.

While the latter broadens the theoretical catchment to chronic diseases in general, obesity still reigns as a focus on documentation, analysis, and critique. For example, in her 2011 book, “Weighing In: Obesity, Food Justice and the Limits of Capitalism,” Julie Guthman takes on the prevailing attitudes that obesity is an individual problem or that adding supermarkets or healthy food options will solve the problem.² She credits governmentality of neoliberalism for shifting the responsibility for care from the public to the private spheres (Guthman 2011). She also seeks to debunk much of the prevailing literature and attitudes on the topic. She calls out what she terms “healthism,” a moralizing discourse about health that paints healthy citizens as good and unhealthy citizens as bad. She also continues her earlier critiques of the alternative food movement (Guthman 2004), which she sees as feel-good but ineffective. For her, they propagate neoliberal ideologies by focusing on market-based, consumerist solutions to systemic, capitalism-generated problems, where bodies have become variably sick and thus turned into “sites for commodifiable cures.”

In her subsequent work (Guthman 2015), Guthman builds on David Harvey’s reading of Marx on the human body as an accumulation strategy (Harvey 1998). She views industrial food

² Others have pushed back against the environmental determinism of structural explanations like the obesogenic environment to re-examine the ways social spaces are constructed so as to make fat bodies problematic (e.g. Colls and Evans 2013).

production and marketing as treating the human body as a socioecological fix. The industry pushes up against bodily limits through foods that harm it and attempts to transcend them by “metabolism-defying” foods, such as diet and zero calorie options, which in turn create new problems that are only partially resolved (Guthman 2015, 2522). In this sense, she developed her earlier argument that the contradictions of capitalism are literally embodied, bringing into question the idea of bodily sovereignty (Guthman 2009; Guthman and DuPuis 2006). Yet, here the body still remains rather passive. Guthman does not follow through with the second part of Marx’s analysis, that of the body also as an important site of resistance (Harvey 1998).

BODIES AS SITES OF ACCUMULATION AND RESISTANCE

Obesity is just one in a suite of chronic diseases affecting the world’s populations that is associated with changes in what people eat. It is notable that, except critical geographers following in Julie Guthman’s steps, political economy and political ecology scholarship in the traditions of food regime theory and its critics has had less to say about overnutrition and chronic diseases than about hunger and Climate Change. This dissertation argues that Food Regimes and associated resistance literature (whether focused on Alternative Food Networks or Food Sovereignty) scholarship can benefit by more closely attending to the nexus of diet and health. Seeing alternative food networks as consumerist, individualistic, and neoliberal activities is understandable. They seem to lack collective action and operate through the market, both of which are deemed perfect bedfellows to the individualizing and fragmenting forces of late capitalism. However, this view can sometimes conflate consumption with consumerism and markets with capitalist markets. People have to eat and they have to engage in exchange with others to do so. Whether those activities are capitalist, in the Marxist sense, depends on the social and ecological relations that underpin them. While Julie Guthman has critiqued individual-

focused “alternatives” for naturalizing neoliberalism by reproducing the logic of consumerism, she also admits that it is difficult to know what something outside of neoliberalism might look like when one sees everything as neoliberalism (in Harris 2009). If we instead see eating and exchange as normal parts of human sociality and sustenance we can attempt to break through the tendency to see all such activity as feeding into the neoliberal trope.

I thus take all eating to be a social act (Douglas 2008; Murcott 1983; Poulain 2017). Food and eating are inseparable from wider social and symbolic structures that humans inhabit and create in all societies, no matter how simple or complex they are deemed to be (Farb and Armelagos 1980). Some community (Navarro et al. 2007) and population (Delormier, Frohlich, and Potvin 2009) approaches to health aim to unpack how the environmental context (both material and social) affects human attitudes and practices around eating (e.g. Liburd 2003) and healthy bodies (Scheper-Hughes and Lock 1987). Yet eating is also an ecological act. Eating serves a daily reminder of the nature part of our human nature. It reveals our place as part of nature and not outside or above it.

Similarly, this dissertation sees chronic disease as another part of the ecological contradictions of the processes of capital accumulation. It treats its emergence as another form of the metabolic changes entailed in the capitalist restructuring of agri-food systems. In doing so it interrogates how capitalism’s penetration of different parts of the food system changes the food ecology within which human bodies eat, socialize, and differentiate. It recasts seemingly individual responses of seeking healthy eating as an essential, a necessary but perhaps not sufficient, step in fomenting human bodily resistance. And it shows how the changing fault lines of social difference across race, class and gender lines help to create continuity with and resistance to industrial food.

I try not to use the term food environment because of its connotation with the built environment in formulations like the “obesogenic environment.” Because I assume all human activity to be part of nature, I prefer to use the term “food ecology” to encompass all socioecological processes that condition the kinds of foods that are available, promoted, valued, and consumed in any given place. The term “food ecology” is a better fit for contexts where consumers encounter foods outside of large corporations, supermarkets, gas stations, and restaurants.

I also use uneven and combined development as a useful heuristic with which to examine patterns not only of economic activity, but of other human endeavors as well. Uneven and combined development was first theorized by Trotsky against Stalinist theory that social development proceeded in a linear fashion. Basing his theory on the study of the Russian Empire, Trotsky observed that most technologically advanced areas co-existed with what he saw as primitive and superstitious hinterlands. He argued that geographical areas, different countries, or separate sectors did not necessarily move along the same path but that some could compress development to jump ahead through modernization that took others years to achieve and, conversely, that progress could be stalled or undone.

Uneven and combined development has seen a resurgence in international relations, political sciences, and critical political economy thinking. The 1970s work of Latin American dependency theorists has also been re-energized in recent years (Oliveira 2019). It includes the work of Ruy Mauro Marini, a Brazilian economist who theorized that periphery countries underwent conditioned development in unique ways. This includes the superexploitation of labor defined as “the greatest exploitation of the physical strength of the worker ... and it normally tends to express itself in the fact that labor power is paid below its value” (Marini 1991, 92-93). I

employ the “super“ trope to show that industrialization of food production and processing has toxified most food ecologies, the effect has been more intense in countries like Guatemala. Both accumulation and resistance occur today in Guatemala within a context of what I call a supertoxified food ecology whose effects are unevenly distributed.

Since my goal is to subsume human activity as part of, rather than apart from, nature, I employ the uneven and combined development trope in a wider sense to examine uneven and combined processes within and across human bodies in their food ecologies. Throughout, I will examine processes of unevenness, diversity, hybridity, and combination in the growth of different agri-food chains, in the development of public health infrastructures, and in spread of different kinds of risks across core-periphery relations and along race-class-gender social hierarchies.

WHY GUATEMALA

Much of the preceding discussion on global food regimes and historical and current trends has focused on countries like the United States rather than on Guatemala, the subject of this dissertation. The reality is that a disproportionate amount of theorizing about health disparities, nutrition transitions, and alternative food networks comes from research on wealthy, that is, “core,” countries. This includes Friedmann and McMichael’s original formulation of the Food Regimes Theory and its reformulation by scholars like Tilzey. This is with good reason. The authors seek to explain the dominant forces shaping agri-food systems around the world, so it makes sense to spend more time in the places where those forces originate. Plus, as noted earlier, some of the trends were initially observed in wealthy nations, so it also makes sense that scholars spend more time researching the phenomena in those places. A notable exception is that food sovereignty is typically poised as the vital corrective to capitalist relations of agri-food

provision, a movement that originates from the unification of resistances of peasants and other disadvantaged groups of the Global South (Wittman, Desmarais, and Wiebe 2010).

Yet, Guatemala is an important case study from which to examine core theorizing about agri-food change, bodily contradictions of capital accumulation, and forms of resistance. That is because scholarly theories are not passive actors that simply reside in esoteric tomes that a small group of academics read. Instead, the ideas they entail travel across space and time and affect people's lives when they become the basis of public or private projects and interventions. I witnessed various such interventions, some based on political theories of food systems change, others on economic ones. My time researching, living, and working in Guatemala showed me that although the theories I was familiar with resonated with portions of the lived experience I observed, they did not fully explain the dynamics of change around agriculture, food, diets, and health. In a sense, Guatemala spoke up against my own background and it is her voice that this dissertation aims to foreground.

As this dissertation will show, Guatemala has in many ways been a perfect exemplar of a peripheral link in global agri-food regimes. For example, from the 1870s through to 1944 it was inserted into global agricultural chains as an exporter of tropical crops like coffee, sugar, bananas, and cacao. Later, many smallholders joined global horticultural commodity trade as producers of non-traditional vegetables from the 1970s and 1980s onwards. The elites of Guatemala have also been peripheral emulators *par excellence*. As this dissertation will demonstrate, they have sought to follow the example of other nations by modernizing the country in their image. The links have earned the country the nickname of “the backyard of the US” (Way 2012, x).

Guatemala has bred various forms of resistance as well. Guatemala's independence from Spain occurred in 1821, before making possible the start of the first, Britain-led regime. As mentioned in the introduction, in 1838 a portion of Guatemala briefly broke away as El Sexto Estado de los Altos in a highland region uncharacteristically marked by K'iche' Maya political power and wealth. Meanwhile, the indigenous groups of Guatemala have proven particularly unruly for the ruling elites, who have variably exploited, ignored, and exterminated Mayan communities, not least through the genocide most acutely perpetrated in the 1980s

Indigenous activists often talk of the three invasions of the Maya people that fit with political economic analyses that underpin Food Regimes Theory. First came colonialism, then the state coffee economy, and now the hydroelectric industries. All have proceeded by processes of accumulation by dispossession of community lands for the purposes of natural resource extraction. All have led to ecological contradictions and have been variably resisted on the ground (Alonso-Fradejas 2017; Grandia 2017).

Yet, there has been a more subtle and quieter fourth invasion that has received much less political resistance and critical scholarly attention but which this dissertation sheds light on. It shows that Guatemala has seen big changes in its food ecologies. Food production, retail, and consumption have markedly changed, and Guatemalans have been good consumers of industrial agri-food products.

At the same time, I will show in detail how Guatemalan people shoulder more than their fair share of food-ecology-related problems. Only in two other countries do more children go chronically malnourished. Adults are in the midst of a rapidly growing diabetes epidemic. Babies continue to die from preventable infections and diarrheal diseases. These conditions are unevenly distributed along long-standing race-class-gender hierarchies. The indigenous and the poor,

especially the women and the girls, are the worst affected. Their bodies degrade at the periphery of the periphery.

This has not been a story only of domination by foreign corporate powers. I will argue that Guatemala's experience of the proposed neoliberal food regime has been different to what Food Regimes theory predicts. The transformations towards industrial food processes have been more recent and thus faster, gathering pace from the 1970s onwards while Guatemala was in the midst of a Civil War. Yet, to date, the transformations have been less global and less complete than in wealthier nations. Only 20 percent of food is sold through supermarkets, the other 80 through traditional municipal markets. National, not foreign, brands dominate many sectors of industrial food provisioning. Meanwhile, non-corporate, traditional food-provisioning pathways persist, but in hybrid forms, that require further explanation. Those intersect with alternatives like organic farmers' markets and farm-to-table vegetable delivery services in ways that make it hard to tell where one food system begins and another ends. There is less by way of a split between food from nowhere and food from somewhere than Food Regimes posits.

Different food options attract farmers, consumers, and support workers for different reasons. Yet, many of the same mechanisms operate across the presumed separate spheres of traditional, conventional, and alternative food provisioning, bringing into question their ontological separation, opposition, and transition from one to another. Those seeking out so-called alternatives are not always in direct opposition to so-called conventional systems. Meanwhile, bodies are active agents in shaping food choices, steering people through sensory memory towards tasty, flavorful foods. Sometimes that means choosing fast foods, sometimes it means choosing organically-grown vegetables or backyard-reared creole chicken. They are sites of both, accumulation and resistance, of edible wealth and edible health.

Guatemala thus raises important questions about what food regimes look like in different places, the type and scale of locally-felt contradictions of food systems, and what resistance and acquiescence looks like at the level of community, family, and individual human bodies. This dissertation takes on the task of answering some of these questions.

CHAPTER 2: FIELD SITE AND METHODS

CHOOSING XELA

This dissertation began with the Seventh National Organic Agriculture Convention because of the microcosm that it represents of the diversity and multiplicity of Guatemala's agriculture and food arrangements and the struggles they entail. The event is additionally a good place to start this dissertation because it also, somewhat serendipitously, kicked off my longest research stint in Guatemala, my 2016-2017 doctoral fieldwork. The 13 months of data collection joined six weeks of 2015 pilot research and another six weeks of preliminary work in 2014. These periods were underpinned by years of scholastic and practical engagement with Guatemala. I had conducted my Master's fieldwork in the town of Sololá on Lake Atitlán in the summer 2011, after which I continued to live in the lake region until October of 2012 before starting my anthropology Ph.D. program at Emory University in August of 2013. During my subsequent pilot work I visited as many projects focused on organic, permaculture, or other more sustainable farming practices as I could before settling on Quetzaltenango as my field site. The following details my research trajectory in order to contextualize the study before outlining the research methods that underpin the data that informs the chapters of this dissertation.

For a long time I had trouble articulating why I chose to study food and farming in Xela. I did know that I wanted to better understand the so-called alternative food movements in a place that was so different from the European and North American case studies that dominate the literature. So, in preparation for my 13 months of fieldwork between 2016 and 2017, during two summers I had visited and interviewed the founders of organic CSA and market projects in Xela, Guatemala City, Antigua, and in the San Juan and Santiago communities of Lake Atitlán. Antigua and Lake Atitlán would have made for an easy transition. The former is a touristy

colonial city that is very foreigner-friendly and the latter had been home to me for two years when I studied, lived, and worked in Panajachel. While I was least familiar with Quetzaltenango as a place to live, I sensed that it offered the most interesting example. Its organic and CSA projects were unlike the individual efforts by entrepreneurial farmers to secure a client base that I saw in other places. Instead, they are linked into the regional collective, CORO, in the city of Quetzaltenango. The collective manages to bring together and keep bringing together a diverse group of indigenous, non-indigenous, and foreign producers, consumers, and NGO workers of varied economic means and educational levels. There were plenty of other initiatives too run by both Guatemalan and foreign residents. Their health food, vegetarian, and fair-trade shops, cafes, and restaurants concentrated within a few blocks of Zone One of the city. .

I used two summers before my main period of fieldwork (September 2016 – November 2019) to also carry out pre-pilot scoping of a good place to do my own dissertation fieldwork. I visited every sustainable food project I could find on lake Atitlan, Antigua, Guatemala City, and other places. The projects used different words to describe what they do. They had different levels of online presence. They relied on various forms of collaboration between Guatemalan and foreign residents. I used my summer 2015 pilot work to visit them all again and to travel further afield to all the other projects my participants told me about.

In total, I visited 10 different projects whose organizers were variably motivated to create sustainable food projects, projects I describe in more detail in chapter ten. What was striking about many of the initiatives, however, was that they were started by and catered to wealthier residents of or visitors to Guatemala. An American couple moved to Guatemala for a better quality of life, starting an organic farm, training, and volunteer center for tourists in the Lake Atitlán area. A German-descended Guatemalan man returned from studying business at an

American University to start a commercial farm in Antigua to supply hip restaurants with trendy organic microgreens, lettuces, and kales. A Mayan anthropologist ran a prestigious permaculture training center catering mainly to well-paying foreign students while running food sovereignty projects in local communities.

Any one of the 10 initiatives I identified would have made for a good case study on the role of transnational connections, capital, and wealth inequality in producing alternative food projects in Guatemala. However, they were relatively spread out and were only loosely connected. I had heard of several projects based in Quetzaltenango, including a monthly organic market in its center. I visited the city and the market in the summer of 2014 to find a more diverse and more densely connected set of participants, including poorer and wealthier farmers, foreign, indigenous, and non-indigenous consumers, representatives of organizations of producers, state actors, businesses, and non-profit groups. I returned in the summer of 2015 for a pilot investigation. The market was the project of the CORO collective of organizations connected through the common cause of establishing sustainable food systems in the region. Meanwhile, the city was home to various stores, restaurants, and cafes also focused on healthy and/or organic foods. Word spread of my interest in the community, so I was able to interview more than 20 of its leaders in a short space of time. How such a diverse set of activities was maintained became the central question in my study, making Xela a better choice than Antigua, Guatemala City, or Lake Atitlán.

STUDYING XELA'S ALTERNATIVE FOOD NETWORKS

The Seventh National Convention on Organic Agriculture happened around a month after I arrived for my doctoral fieldwork in Quetzaltenango on Guatemala's Independence Day, September 15, 2016. My fieldwork was bookended by a similar event: I left Guatemala one day

after attending the October 2017 National Congress on Organic Agriculture in Guatemala City. I watched all the presentations, talked to as many of the businesses at the event's expo as I could, and caught up with some familiar faces whom I had met over the previous year. I noted that the male dominated summit focused almost exclusively on expanding commercial and export-oriented production.

Such events made up the participant observation part of my fieldwork. I attended four large-scale conventions and expos in total, but the bulk of my ethnographic work occurred in actively participating in the activities of CORO and its member groups in Xela. I wanted to understand how alternative food projects came to existence in Guatemala. Over the course of my preparatory and full fieldwork between 2014 and 2017, I participated in 15 of CORO's monthly Organic Day markets that took place in and around the Central Park in Xela's historic zone one. I also attended 14 of its smaller Las Hojitas markets where families picked up their regular shares of vegetables from the producers who gathered on the rooftop of a CORO-member NGO. I helped out on three days at a smaller market that CORO set up in a residential portion of the city. My market day activities were rounded out with comparative visits to non-CORO affiliated projects, such as multiple attendances of Lake Atitlán and Antigua projects I described above.

The markets went a long way to informing my understandings of producer and consumer dynamics in the sector. Yet, the Xela convention made it clear that the markets were just one outward manifestation of a much wider set of social relations that needed unpacking. To capture the complexity, I aimed to observe and participate in the activities of the major sets of involved actors: the producers, the consumers, the development sector workers, and government employees. I accepted most invitations to participate, contributed my labor where possible, and asked to be included in activities when the opportunity arose.

Attending gatherings of stakeholders was an important part of understanding Xela's and Guatemala's so-called alternative food projects. In the end, I attended 52 meetings: 12 between CORO leaders and their producers, 19 meetings of the Board of Directors and some of CORO's organizational members, one annual gathering of Xela's consumer collective, Las Hojitas, and 20 meetings of different state offices working in food and agriculture. The latter involved participating in meetings and workshops of MAGA's regional department and its two-person Office of Ecological Agriculture in Quetzaltenango. I accompanied CORO's representatives to several capital-city based sessions of the National Commission for Ecological Agriculture (CNAE). I contributed to the planning sessions that involved MAGA representatives, like developing Guatemala's first Certificate in Agroecology at the Technical Institute for Training and Productivity (INTECAP). The formal in-door meetings were complemented with 10 field trips that leaders organized to visit CORO producers and other alternative agri-food projects in the region.

I invited many stakeholders to privately tell me about their work, motivations, and goals. Between my preliminary research and extended fieldwork, I conducted in-depth interviews with a total of 121 people, some more than once in conversations lasting anywhere from one to four hours. When it came to producers, I made it a point to visit them in their homes to both demonstrate my commitment to their work and to providing a space where they could speak freely, on their own turf. We often split our time between sharing some food and refreshments and walking and talking as they proudly showed me their fields and gardens. I met some consumers in their homes and others in restaurants. I typically interviewed government and NGO workers in their offices or coffee shops and owners of organic stores and restaurants in their

places of business. The first column in Table 1 shows the final in-depth interview tallies sorted by the group to which each interviewee primarily belonged.

The table's second column shows the number of people with whom I had shorter conversations. These included talking with consumers and producers as they attended different organic markets. It also included more structured, shorter interviews I conducted with people who did not associate with the alternative food space in Xela. One of my defining experiences of feeling my way through the fabric of food and agriculture in Guatemala was the enduring sense that it did not quite look and feel like I had expected from my studies. I could see partial truths everywhere, different bits of theory holding up all at the same time. For example, Xela's food landscape reflected global shifts towards industrial foods while bucking them through the existence of diverse projects that seemed to only awkwardly fit foodways described as traditional and alternative. While I focused my work on the latter, I knew that I would need to clarify what those alternatives are supposedly alternative to in Guatemala. This was especially important because there was little existing anthropological research on the consumption end of conventional food in Guatemala, although several excellent ethnographic, economic, and historical studies have scrutinized smallholder adoption of agrichemicals and non-traditional agricultural export crops like broccoli and snow peas. In other words, I would need to make a smaller comparative study of Guatemala's conventional system and bring to light how it differs to conventional systems theorized elsewhere. I did so by observing customers of different formal and informal eateries, striking up conversations with conventional vegetable producers on their farms in Xela's nearby communities, and conducting ten-to-20-minute interviews with consumers in restaurants like McDonald's. The bottom half of Table 1 summarizes these activities.

To get a sense of who ate where, I engaged in systematic observation of clientele in different eateries, noting down details about the social group of the clientele. How Guatemalans dress is not always a reliable indicator of whether they identify as indigenous since not all Maya-identified women wear *traje*, traditional Maya dress that typically involves a colorful, patterned woven top called a *huipil* and a skirt called a *corte*. In addition, Quetzaltenango is complicated by the fact that some ladina women sometimes adorn their bodies with the characteristic Xela *traje* consisting of a *huipil* with geometric patterns in color combinations of purples, lilacs, yellows, and reds and a dark navy blue or dark purple skirt, rather than a wrap-around *corte* that is the more typical style of rural communities. Nevertheless, ladina women typically do not wear traditional items, so I use my systematic observations of female dress and other signs to estimate each place's proportions of clientele who are indigenous, non-indigenous Guatemalan, and foreign. I report on the other characteristics I used to socially place people throughout the dissertation.

Table 1: Interviews conducted with alternative and conventional stakeholders

	In-depth Interviews	Short Interviews
Alternative Stakeholders		
Owners of alternative stores/restaurants	14	0
Government workers	12	2
NGO workers	34	5
Alternative producers	31	1
Alternative consumers	26	22
Representatives of Alternative Inputs Businesses	0	7
<i>Total: Alternative Stakeholders</i>	<i>117</i>	<i>37</i>
Conventional Stakeholders		
Smallholder vegetable producers	1	11
Consumers in fast food restaurants	3	20
Owners of conventional stores	0	8
<i>Total: Conventional Stakeholders</i>	<i>4</i>	<i>39</i>
Total: All Stakeholders	<i>121</i>	<i>76</i>

A good doctoral fieldwork project should generate far more data than could possibly make it into a dissertation. The extended period of time that anthropologists spend in the field during graduate studies is a luxury few are able to replicate at other points in their careers. The year or two they invest in their communities of study become treasure troves of information and insights that hopefully sustain many years of academic productivity through books, journal articles, and public scholarship. My project is no different. One part of producing this dissertation was making choices about the content that made it in and what would be saved for other writings. As such, the following chapters spend little time discussing the alternative food system work of state actors. Although I do not describe in detail the 20 government-led meetings that I participated in, I do draw on them and the in-depth interviews I conducted with their participants when making larger points about social relations in Guatemala's food systems.

I also do not present the detailed data that I conducted on Xela's urban food environment. This includes a systematic GIS mapping of food availability and activities in Zone One, where most of the alternative cafes and markets are located. It also includes eight, monthly data sets comparing the type, quality, and price of produce sold in three venues: CORO's Organic Day market, Xela's Zone One municipal market, and the closest supermarket, La Despensa Familiar. My laptop also contains multiple folders with food price information from the Las Hojitas vegetable box share, other organic stores and markets, and food options and prices in malls, fast food joints, and market eateries. My 700 pages of field notes detail many of my personal experiences in such spaces. Some of this information informs different chapters of the dissertation, but in-depth theorizing about the distribution of monetary and other values in Guatemala's food options will await a separate publication.

Part of the systematic mapping I conducted included paying close attention to how, where, and how frequently different food and agriculture brands advertised. I took photos of many shops' outer walls that were painted with corporate logos, like Pepsi and Coca Cola, noting down their locations and talking with the business owners. I used a GIS mapping tool to record the geographic coordinates, time, and details of every branded delivery truck that passed me by as I walked around Xela and other places. I noted the details of advertisements displayed in large billboards lining major roads and city entrances. Engaging with advertisements in the physical world led me to investigate corporate cultural production online, especially social media like Facebook where each year more and more Guatemalans connect to each other, and to food brands as well. I systematically scanned the Facebook pages of leading brands, like Tortrix, Pollo Campero, and Pepsi, looking for the posts that resonated with people out of the deluge of cultural production that the companies engage in. I also reviewed every advertisement video that I could find on YouTube and other online channels. Some YouTube users have begun curating older ads from the 1970s and 1980s, while the companies themselves have been publishing their marketing campaigns on social media. This research proved fruitful not only in describing the background noise of Guatemala's food material and virtual environments, but in theorizing identity connections people have with foods and drinks in the country, particularly how certain foods are embroiled in the very idea of what it means to be Guatemalan. Chapter five reports these findings, some of which highlight the most viral posts while others connect the dots on the identities that the marketing campaigns promote, such as an analysis of 10 different Pollo Campero campaigns from the 1970s through to today.

What distinguishes anthropological fieldwork from other disciplines is the researcher's immersion in the lives of research participants and the places they inhabit. Since my study would

follow the network of diverse food system actors within Xela, I needed to be centrally located. It would have been difficult for me to reside with one of CORO's producers because most of them lived in the communities surrounding Xela. It would also have had the unintended effect of aligning me with one family or person in particular, rather than being equally available to and trusted by all the producers. I decided to have some distance from CORO's organization in my living arrangements but not completely out of the alternative food efforts in the city. I spent my first 10 months in Xela living with an American friend who owned an organic restaurant in town, sourcing his ingredients from local farmers. He had lived in Guatemala for over a decade and was a central figure in the city's younger crowd of foreigners working in the development sector who mingled with Guatemalan friends with well-travelled, cosmopolitan histories and progressive outlooks. For the last four months, I rented a room in a small house of one of those Guatemalans to reduce the temptation to speak English, even though many of the middle class Guatemaltecos I knew spoke it perfectly. Living among this sector of Xela's populations gave me an advantageous vantage point from which to evaluate the effects of migrations to, not from, Guatemala. The rise of local alternative food projects could not be understood outside of understanding the circuits of European, North American, Australasian, and Asian migrants in the country, some of whom pass through via temporary work assignments, others of whom have made Guatemala their permanent home.

The immersive nature of ethnographic fieldwork also means that everything is always data. Every chance encounter, every passing conversation, every non-event is fair game for ethnographic recording. This can make the spirit of the formal requirements of ethical review boards hard to apply to the reality of conducting participant observation. For example, while I recorded all interviews with prior verbal permission from the participants, I also took notes on

many informal conversations and unplanned events that I did not have the chance to seek permission to officially record. Additionally, it would have been culturally unacceptable for me to interrupt the proceedings of various events in order to announce my presence and read out an informed consent statement. To manage some of the dilemmas, towards the end of my fieldwork, I started practicing a model of confirmed consent with my longer-term participants and informants. I reminded them that my work means that everything is data and that our conversations are subject to my recording through ethnographic fieldnotes.

There is another advantage to the immersive nature of ethnographic fieldwork. I have so far been able to quantify the in-depth interviews I conducted, the events, meetings, and markets I attended, the number of pages I produced during nightly fieldnote writing. But certain data that colors the pages of this dissertation was not to be found on my disk drive or on my voice recorder. Progressively through my fieldwork I began to understand that my immersed body was an important research instrument. It stored much more information, and sometimes more important information, than I did or could write down. It fully sunk in later when I started writing my dissertation, “only after moving from field to desk, that my corporeal transcripts... [proved] as valuable as my textual ones in my thinking” (Fenton forthcoming). My own personal sensory and emotional experiences in the field corroborated my observations of how my participants’ bodies engaged with Guatemala’s food systems. Each chapter that follows weaves together data from all my methodologies, planned and unplanned, to tell the story of the struggles for wealth and health in Guatemala’s risky food ecologies.

In what follows, I sometimes use real names of organizations and sometimes pseudonyms where they needed anonymity. All people’s names have been changed, except when crediting artwork or photographs, which have been reproduced with the creators’ express permission.

CHAPTER 3: *ARÉ'S JOURNEY: A LIFE LIVED AT THE INTERSECTIONS OF* GUATEMALA'S FOOD SYSTEMS

If CORO's markets can be considered alternative food networks, it is important to consider what they are alternatives to. This chapter traces recent decades' changes in Guatemala's food systems to explore their traditional, conventional, and alternative dimensions. It does so by telling the life story of a K'iche' man called Juan José, who is nicknamed Aré.

Aré is a composite character whose background amalgamates the experiences of several key informants. I chose to combine them into one fictional person because none of the details in his life were outliers. Instead, they echoed in multiple people's journeys who recounted their personal experiences of changes in Guatemala's food production, distribution, and consumption. Aré's story links his agricultural and eating practices to the wider context of political, economic, and cultural struggles in the country because many people's stories did the same. Throughout, I refer to the character either as Aré's or by his full name, Juan José.

This chapter aims to provide the historical background of food systems changes in Guatemala while orienting the reader towards the people, organizations, and social structures that have been key to those changes. Included in the cast of characters in Aré's life are various non-human actors with whom he has been entangled, like *criollo* chickens and organic certifications. Meeting them now is important as their own stories will resonate throughout the dissertation.

This chapter also lays out the key themes outlined in the introduction. Juan José's story shows that Guatemala's contemporary food systems are more multiple, diverse, and hybrid than encompassed by the linear troika of moving from traditional through modern/conventional to alternative. Throughout his life, the narrative follows Aré as he learns and practices indigenous farming techniques, chemically-intensive monocropping, smallholder organic coffee production

for export, and a farm-to-table tourism project. Rather than moving from one system to another, he has included them all in various ways in his life, so that today he practices a little of each. His journey supports the argument that food systems have not transitioned from one form to another but have diversified. That is, they have not been linear but cumulative.

Juan José's life also demonstrates how the benefits and drawbacks within Guatemala's food system changes have been unevenly distributed along historical race-class-gender hierarchies. While he has managed to overcome the poverty he was born into, he has faced persecution and dislocation due to his Maya heritage and his student organizing activities during the Civil War. Violence and precarity have played an important role in his life, as they have in broader changes to food and agriculture in Guatemala. This has shaped the opportunities Aré has had to practice different forms of farming and eating.

Some of those opportunities have been positive. His life circumstances have attracted support from transnational non-profit and research organizations that are sympathetic to his causes. Aré has, in turn, used those connections to build extensive networks in Europe and North America, demonstrating how different food system projects emerge from the intersections of global and local movements of people, resources, and ideas.

Finally, Aré enjoys eating a variety of traditional, fast, and other foods. He is a true food system omnivore. His tastes and preferences complexly relate to his personal history, identity, and politics. Aré loves Guatemala and his people. He prefers the taste of weak coffees that his compatriots enjoy rather than strong concoctions mimicked from foreign lands. Aré is also a proud Quetzalteco. He prefers his fried chicken from the regional chain, Albamar, rather than its national competitor, Pollo Campero. But Juan José is also a pragmatist. He happily eats meals in McDonald's restaurants for the tasty burgers and to take advantage of the free, high-speed Wi-Fi

they supply. Like many people, his body is simultaneously enrolled in supposedly traditional, conventional, and alternative food systems through both social (identity) and corporeal (sensory) mechanisms. He lives his life at the intersections of diverse value systems, practices, and social configurations.

ARÉ'S JOURNEY

Juan José is a youthful-looking older Guatemalan man whose friends and relatives affectionately call him Aré. The nickname references Juan José Arévalo, the democratically elected leader who assumed the presidency on March 15, 1945, the day that Juan José was born. Like eighty percent of the Guatemalans who went to the election polls the previous December (Glejeses 1989a), Aré's father, Federico, voted for Arévalo because his policies promised better conditions for K'iche' people like him, as well as for the rest of the country's indigenous population, agricultural workers, and poor urban residents. Arévalo's presidency marked Guatemala's "spring in the land of eternal tyranny" sandwiched as it was by conservative, military dictatorships (Glejeses 1989a, 133).

The president acted on his progressive election promises, establishing a social security system, labor codes, and educational, health, and road infrastructure programs (ibid). He also reversed some of the repressive laws forcing indigenous labor to work the country's export crops passed by Arévalo's predecessor, Jorge Ubico, who ruled between 1931 and 1945. Ubico's policies were the latest in seven decades of similar state reforms aimed at growing Guatemala's agricultural sector, which started with Justo Rufino Barrios. Between 1871 and 1879, he privatized communal and church lands and forced indigenous *campesinos* to work the newly formed plantations and *fincas*, especially those dedicated to coffee (McCreery 1976). To oversee the reforms, 1871 also saw the establishment of Guatemala's Ministry for Development, which,

among other sectors, was responsible for business, agriculture, and livestock (McCreery 1981). Subsequent dictatorships passed additional labor laws to support the production of coffee, sugar, cacao, and bananas. In 1899, a year after he came to power, Manuel Jose Estrada Cabrera, whose rule was marked by granting large concessions to America's United Fruit Company, created and attached to the Ministry of Development the General Directorate of Agriculture (McCreery 1986). Subsequently, in 1920, President Carlos Herrera y Luna decreed into existence the Ministry of Agriculture, charging the new division with attending to the agricultural sector, which the government proclaimed as "the main source of wealth for the country" (MAGA 2019). Today, it carries the name the Ministry of Agriculture, Livestock and Food, or simply MAGA (pronounced mahgah). MAGA's birth was accompanied with the 1921 establishment of the Central National School of Agriculture (ENCA) that trains future agronomists in the latest scientific farming techniques (ENCA 2019).

Before Arévalo reversed some of Ubico's reforms, several generations of the men in Juan José's family migrated to the coast to harvest coffee beans. The same was true for many indigenous and non-indigenous people. Coercive labor laws were not the only driving force of the seasonal coffee migrations. Between 1871 and 1940, Guatemala suffered repeated corn shortages, which directly contributed to the growing *finca* workforce (Carey 2001). Meanwhile population growth and shrinking resources meant few inhabitants of highland villages were able to survive without plantation wages (McCreery 1994, 304). As it was for indigenous communities in other countries (Collins 1988), the migrations made it hard for the families left behind to maintain their subsistence, cash crop, and community life activities.

Juan José grew up in a small village helping his father intercrop the three sisters of subsistence milpa - numerous varieties of maize, beans, and squash - on a plot not far from their

home in a rural municipality of Guatemala's Department of Quetzaltenango. Several times a week they walked half an hour each way through undulating hills of the Western Highlands to grow and harvest enough food to subsist for almost the entire year. They had animals too, but did not consume much meat, often eating simple soups of root vegetables, edible flowers, and foliage, usually accompanied with spiced beans, a poached egg or two, and bread or corn tortillas that Juan José's sisters made fresh every day. He remembers his early years as simple and peaceful.

Plenty of outdoor space surrounded the family's adobe home and Aré and his seven siblings helped where they could, including tending to their mother's native medicinal and edible plant garden. There was not much broccoli, carrot, or celery around then, so they mainly took care of her flowers, herbs, yuca, yams, several species of chili peppers, calabash, and güisquil.

The children of the family had busy mornings, helping to take care of the animals and gather food and other items for the family. Juan José got up early every day to take one of their three cows out to pasture on the village's grass embankments. He then collected cow and pig dung for fertilizer. Finally, he brought ingredients for his eighty-year old great grandmother to use in preparing the family breakfast and for making medical ointments for the animals. From the garden, he picked Maria Luísa for tea, amaranth leaves for soup, and epazote for the medicine. He then searched for freshly-laid eggs in the usual places that their loose backyard *criollo* chickens liked to leave them. The locally-adapted small, lean, multi-colored hens required little care as they were independent, active, and healthy. Outside of profiting from an occasional handful of dried maize that his mother used to throw to them, they spent their days scavenging, digging, and hunting. They sought out preferred plants, grains, and insects for their daily food

and perfectly sized, shaped, and textured stones for their gizzard's food processing.³ These chickens were small and their meat tough compared to imported fatter species that NGOs would gift to rural families half a century later. Yet, mothers all over Guatemala would complain that the taste doesn't measure up and that the foreign birds are more expensive to keep. "These chickens don't know how to eat," the women would exclaim when noticing that the exotic hens require more food than the *criollo* ones since they do not possess the same vigorous foraging skills.

Aré's family typically relied on their friends, neighbors, and other community members for advice and help in their productive activities. However, external experts visited them for as long as he can remember. He later learned that, in 1950, his presidential namesake oversaw the establishment of the Agronomy Faculty at Guatemala's capital-city based University of San Carlos, the fourth oldest university across the Americas founded in the 17th century under the rule of the Spanish Crown on the continent. The agronomy school aimed to combine agriculture with scientific research in order to help modernize Guatemala (FAUSAC 2019). It was part of the administration's efforts to extend government services to rural areas for the first time in the country's history (Handy 1988). Under Arévalo's successor, Jacobo Árbenz Guzmán, MAGA developed a rural extension program from the 1950s onwards that acted through two General Directorates, one of Agricultural and one of Livestock Services (FAO 2011).

Throughout Aré's childhood, his father, Federico, received visits from government rural extension workers who encouraged him to use new chemical substances that promised to reduce workload and boost plant growth. Several of Federico's friends were singing the praises of these

³ As chickens do not have teeth, the pebbles make up the grit that grinds food down to size inside a specialized stomach-like organ called a gizzard before passing the food, along with the digestive enzymes it came with, to the small intestine for easy nutrient absorption.

synthetic fertilizers, which were also promoted by workers representing the United States Agency for International Development (USAID), local Catholic priests and Evangelical missionaries, and Peace Corps volunteers (Carey 2009). Initial maize yield gains meant that farmers staved off corn shortages and could spend less time working for pittance as migrant laborers during the coffee harvest season on the coast. But, even though Federico supported the Árbenz administration in its political efforts and the chemical fertilizers were often being given out for free—as they frequently still are as a way for political parties to secure votes around election season—he was skeptical and stuck to what he knew. Several times each growing season he went with his children to the nearby woods to collect partly-decomposed humus of leaves, twigs, and other plant material. They then carried this *broza* and their animals' dried and processed excrement, *estiércol*, to fertilize their soils, including on their three small wheat fields that were spread out 20 minutes' walk apart on the other side of the valley to their milpa plot. Like it did for many families living in other highland departments, such as San Marcos, Huehuetenango, and Quiché, wheat augmented Juan's family's food reserves and generated cash for school and other necessities.

While Federico was weary of the fertilizers promoted in his community, Juan José vividly recalls his family's excitement at the prospect of getting more farm land from the government. The promise came from Jacobo Árbenz' agrarian reform that attempted to distribute to campesinos 1.5 million acres of uncultivated fertile land belonging to 100 plantations, including over 400,000 acres belonging to the United Fruit Company (Glejeses 1989b; Handy 1994; Petras and Morley 1984). Although Aré was only seven years old, he understood that more acreage would mean more crops and more harvest would mean more money for other things, like buying clothes or school supplies. He also hoped that he might one day accompany his father to

the city and that Federico might treat him to a Pepsi Cola, a dark, fizzy, bottled drink that had been sold in Guatemala since 1942 but that Aré had never tried.

Juan José loved school, but it was expensive and, in his father's eyes, unnecessary beyond basic literacy for living in rural Guatemala. "No more studying, I won't pay for it," Federico told a dismayed Juan José once he finished primary school in 1956. This was the latest in a series of denied requests from his father, whose mood Juan José remembers changing. Federico was more strict and less hopeful after the 1954 *coup d'état* that overthrew Jacobo Árbenz. The US Department of State and the CIA orchestrated the takeover after the revolutionary government's agrarian reform caught the ire of the United Fruit Company (Gleijeses 1992). In the stead of Árbenz's democratically-elected Party of Guatemalan Revolution, the CIA installed the National Liberation Movement party, headed by the military dictator, Carlos Castillo Armas who ran unopposed in a national election. The new government confiscated agrarian reform land from small farmers like Federico, returning it to large landholders. The US-allied regime also began to arrest and kill hundreds of student, union, and community organizers and quickly reversed many progressive policies in order "to recreate the conditions of optimal capital accumulation" by US and private capital (Petras and Morley 1984, 267). The political changes led to a series of leftist uprisings, including the 1957 assassination of Castillo Armas by a presidential guard (Newton 2014), which culminated in the start of Guatemala's Civil War in 1960 .

Despite Federico's proclamations against further schooling, Aré wanted to *superar*, to get ahead. He did not give up, convincing a neighbor, who bought wheat from his father, to hire him to bake bread to sell in the community. Although he was exhausted from lack of sleep, Juan José managed to earn enough money to buy the uniform and materials he needed for the next stage of school. In 1958, at the age of 13, he enrolled in the lower tier of secondary education called

basico. Every day he worked the three to five AM shift in his neighbor's home, hand grinding the grains of a creolized, local soft wheat variety and baking fresh, dense, savory bread in a wood-burning stove. He then helped with the usual family work, went to school, came home to weed and care for the animals, and finished his homework before starting the cycle all over again. Seeing how hard his son was working, Federico acquiesced, excusing Juan José from some of the farming activities and helping to pay for his school supplies.

Juan José was encouraged by his teachers and went on to be the first and only child from his family to go to university. In 1968, he moved to Guatemala City, the nation's capital, and enrolled in classes within the Department of Agronomy at the University of San Carlos, also known as FAUSAC. He wanted to learn all he could about the kind of agriculture that uniformed men promoted in his community, with an eye on eventually gaining similar agricultural extension work through the Ministry of Agriculture.

Upon entering the university, Aré immediately got involved in student organizing. He believes that student activities helped to convince the institution to open a campus in the city of Quetzaltenango to serve his home, the western highlands of Guatemala. FAUSAC created the Western University Center (CUNOC) in Quetzaltenango on December 5th, 1970 (CUNOC 2016). CUNOC began life as an experimental center where agronomy was one of three tracks making up the Science and Technology Division. The center would contribute to the goal of promoting farming as a scientific and technical enterprise.

At FAUSAC, Juan José learned something different from how his family farmed: he learned how to engineer agriculture. He could now talk competently about, and was prone to drawing diagrams of, how synthetic fertilizers support plant carbon, nitrogen, and phosphorus cycles. He could mix together cocktails of chemical poisons to kill off unwanted pests. He was

adept at convincing small-scale farmers of the benefits of expanding production, making it more efficient by growing just one crop at a time, and making it more profitable by producing more cash crops. He believed in rural development through agricultural modernization and farmer participation in national and international markets.

Yet, Juan José was different from most of his middle class, urban college colleagues. While Aré could give agricultural engineering advice with the best of them, when home, he still farmed his family's milpa and wheat fields the way he learned when he was young. He still helped transport *broza*, his siblings still collected *estiércol*, and he furthered their fields' fertility by buying his neighbor's chicken excrement-based compost called *gallinaza*. He saw no conflict between his professional advice and personal farming practices, but he did jab at the other students for their lack of practical rural experience, frequently tormenting them for how often they misread the agricultural landscape (Fairhead and Leach 1996). "You know, even today, most agricultural engineers have no dirt under their finger nails," he told me. "And have you heard the latest joke about them?" Without skipping a beat, he went on: "A recently-trained agricultural engineer goes into a small field to evaluate it. After a couple of minutes, he says to the farmer: "*Señor*, you need to pull that grass, it's getting very tall." "With all due respect *Ingeniero*," replies the farmer, "but that there is my wheat."

Juan José's first attempt at a university career was cut short as the political situation in the country was deteriorating. Since 1960, Guatemala was engulfed in a civil war, where US-backed military governments fought leftist state factions and guerilla rebels. By the 1970s, growing resistance in the countryside meant that despite over a decade of promoting agricultural modernization, for fear of their use in explosives, state and aid groups stopped supplying chemical fertilizers to some areas. This left numerous farmers who had now become dependent

on them without a vital agricultural input. This especially affected producers who had already converted some of their land to growing a single cash crop. Due to his burgeoning desire to help communities, Juan José left FAUSAC to work with groups of subsistence and cash crop farmers to help them collectively (re)discover non-chemical farming practices. They didn't use the word "organic" yet, preferring other labels like "ancestral" or "natural," but this work is why, for Aré, "organic agriculture in Guatemala began in 1970."

People like Juan José were not the only ones working in rural communities. He remembers how, for many years, different Catholic church factions had been encouraging farmers to modernize, helping to organize them into committees, associations, and cooperatives (Carey 2009). By the 1970s though, state actors and power elites increasingly perceived all types of social organizing as dangerous, cracking down on groups throughout the decade. Juan José and others continued their work, but under more clandestine conditions. They feared being erroneously and strategically labeled as communists and promptly disappearing, as community organizers had already begun to do.

While around the globe agricultural modernization through the adoption of Green Revolution technologies continued to be heavily promoted from the 1960s onwards, these ideas circulated alongside other influential currents of thought about what's best for people, especially small farmers in poor countries. One of these was the movement for appropriate technologies (Schumacher 1973). It was based on the premise that while poor-country governments have pursued development by stimulating the growth of certain sectors of the economy, most poor people had continued to be left out of the benefits of scientific and technological advances. Instead of focusing on expensive, externally-developed tools, the movement promoted labor intensive, decentralized, and biodiversity-promoting rural technologies. These had to be small in

scale and had to intelligently use existing local resources to sustain rural communities while helping to build their ecological base. Despite its critics (e.g. Eckaus 1987; Hollick 1982), for two decades, appropriate technology's philosophy was incorporated into domestic policies of rich countries (Pursell 1993) and into international aid efforts in poor ones (Eckaus 1977). Guatemala was no exception. In Guatemala, some campesinos living in fragile ecosystems, on the kinds of marginal lands that few extension workers visited, were receptive to the techniques and philosophies of the movement (Holt-Giménez 2006). They were also relatively compatible with a form of campesino pedagogy that sprouted in Guatemala in 1972 into a formal movement associated with the Catholic Church called *campesino-a-campesino*. It used farmer to farmer transfer of skills, knowledge, and small-scale technologies (ibid). That was the same year that the public Institute of Agricultural Science and Technology (ICTA) (pronounced eekta) came into existence. Its mission? To generate and promote science and agricultural technology in the country (ICTA website). via, at least in theory and according to its own discourse, the *campesino-a-campesino* methodology

The flow of the appropriate technologies current in the 1970s helped to influence Aré's life and the course of food and agriculture history in the country through to today. While in war-time Guatemala farmer groups continued to attempt to figure out how to grow subsistence and cash crops without the chemicals that some of them had come to rely on, just after three AM on February fourth, 1976, they were hit by one of the most destructive earthquakes in Guatemala's history. The 7.5 magnitude quake with its epicenter 110 miles northeast of Guatemala City was felt strongly around the country. The main seismic event and its unusually strong aftershock killed 22,000, injured twice as many, and destroyed more than a quarter of a million rural and urban homes, leaving over one million people homeless (Olson and Olson 1977).

As part of international efforts to help Guatemalans in a time of need, especially to help rebuild rural communities, in the summer of 1976, an American non-profit called Action-USA financed Juan José and another Guatemalan community leader, Pedro, to attend a two-months long course on appropriate technology in Vienna, Austria. Juan José was star struck. Everyone eagerly waited in line to get a photo with the towering German professor who was the keynote address at the symposium. "It was E. F. Schumacher! And he must have been at least two meters tall," the now 72-year old Juan José beamed at the memory. Author of the landmark 1973 book, "*Small is Beautiful: A Study of Economics as if People Matters*," Schumacher was a German statistician and economist who spearheaded the appropriate technologies movement around the world (Schumacher 1973).

The experience was formative for both young Guatemalans. While Juan José would put his newfound knowledge into practice in coffee growing projects in Mexico, the same year as the Vienna course, his friend Pedro participated in the establishment of the Mesoamerican Center for the Study of Appropriate Technologies (CEMAT), a civic organization based in Guatemala City that was initially dedicated to aiding the post-earthquake grassroots reconstruction of the country. He also contributed to several 1970s books on the application of appropriate technologies in rural Guatemala where agronomists were unlikely to be found.

While Juan José was working in recuperating non-chemical ancestral farming techniques and promoting the use of appropriate technologies, during the 1970s, his father finally converted to the use of new agricultural technologies. Several factors contributed to his decision. Federico became proud of his son for reaching higher education levels. So, he was more open to new ideas when Aré talked about faster maize plant growth and bigger yields associated with synthetic fertilizers. The timing was also fertile for change. Federico felt that he needed to do something

since he had less land on which to provide staple crops for his family, because he passed portions of it on as marriage gifts to Federico's older brothers. Diminishing landholdings among smallholders was an ongoing trend in Guatemala. Between 1950 and 1975, in the western highlands, the average farm size decreased from 1.3 hectares per person to 0.8 hectares, while the population increased at a rate of three percent per year (Jonas 1991). At the same time, land concentration increased from the time of the 1954 coup to the end of the 1970s; by 1979 two percent of the population owned 65 percent of the land, large-scale farms of 2,500 hectares or more made up just one percent of the farms and 20 percent of the land, while 78 percent of all farms were less than 3.5 hectares and made up just 10 percent of the land (World Bank 2004). Many of Federico's friends began renting and traveling to farm fertile lowlands in order to produce enough maize for their families (Lyon 2010). These "milpa migrations" were almost as hard on the families and the communities as plantation work (ibid). In trying to avoid the strategy, Federico started applying some fertilizers to his maize plots in the hopes of getting more corn out of the same acreage.

Another impetus for using agrichemicals came from another outside source. Most of the fertilizers and pesticides Federico used were for his new experiments in growing broccoli for export. He finally made the decision to try vegetable farming after seeing other farmers succeeding in growing the bitter green vegetable. Agricultural agents from the United States Agency for International Development (USAID) provided them with initial seeds, investments, and market channels. In theory, groups like USAID were interested in bringing subsistence farmers into market economies to stimulate rural development. However, the United States government was also interested in steering farmers around the world away from the temptations of Communism. In the context of the ongoing Cold War ideological battle, when anti-

communism drove the Truman administration's foreign policy in Guatemala (Petras and Morley 1984), the proponents of Green Revolution technologies knew that supplanting local systems with new crops and inputs, and ways of knowing that accompanied them, would lead to large-scale social disruption and recreate farmers in the west's own image. That was the explicit point of the Big Jump Green Revolution strategy in many parts of the world: "to induce social change by displacing the culture and economy of [subsistence] cultivation" (Cullather 2004, 254).

During the 1980s, Are's life also continued to hybridize. After over a decade of working with rural communities, to further his education, Juan José enrolled back at the University of San Carlos in 1981, but this time at CUNOC in Quetzaltenango and in the newly-established *Ingeniero Agrónomo* pre-undergraduate, technical program. There, he became a leader in the student nationalism movement that pushed for "equal liberty, the constitutional republic, political rights, and the responsibility of university students to lead the nation" (Vrana 2017, 3). In Quetzaltenango, some student leaders studying agricultural engineering pushed to reform the department and its programs. They felt that, through its focus on classroom learning and preparation for work in large scale, export-oriented agribusiness, the program was out of touch with the needs of ordinary Guatemalan smallholders and the goals of facilitating rural development in the country. Juan José did not know it at the time, but this activity was about to enmesh him in the effects of the acute 1981-1983 genocide that, according to the latest tallies of "who counts" (Nelson 2015), left more than 200,000 mostly Maya civilians dead or disappeared and one and a half million displaced.

Student organizing and protests had surfaced sporadically since the revolutionary period of the 1940s and 50s, a counter-reaction to which led to the famous reversal of the land redistribution program of the Árbenz government and precipitated the subsequent four decades

of revolution, counter revolution, and war (Handy 1994). The *San Carlistas*, as the students called themselves, intensified their activities during the armed conflict period while, as the genocide unfolded, the military and the national police declared war on the University and the public sector at large (Vrana 2017). For two years, General Rios Montt implemented a scorched earth campaign, an all-out offensive against the civilian, largely indigenous population carried out under the pretext of cutting off the social support base of the leftist guerilla insurgents (Jonas 2000). More than a million and a half people were forced to abandon their burning milpa fields⁴ and flee their massacred communities to seek refuge inside and outside of Guatemala's borders. Fearing their safety after receiving death threats and watching their colleagues perish, in 1982, Juan José and some of the other student leaders fled too.

Aré crossed the border into the Mexican state of Chiapas, where he would spend 10 years under the protection of a Catholic university and the guidance of local liberation theologians. It was in the border town coffee community that served as his refuge that he learned that while some in Guatemala were working on ancestral knowledge and appropriate technologies, other countries had their own labels for non-chemical forms of agriculture. From England there was demand for “organic” agricultural products, France wanted “biological” ones, and Germany sought out “biodynamic” goods. Meanwhile, American academics were promoting something called “agroecology.” “I saw the future,” Aré often reminisces. That future was organics – in the plural.

During the 1970s and 1980s, Guatemala’s armed conflict was heating up and chemically-intensive production of non-traditional crops, like broccoli, lettuces, snow peas, celery, and even berries, spread like wildfire throughout highland communities. However, when Juan José looks

⁴ One of the effects of the political turmoil and the temporary abandonment of agricultural production would be a drastic reduction in maize diversity in Guatemala (Steinberg & Taylor 2002).

back on the decades, he does not see only destruction associated with natural disasters and the Civil War, nor a simple evolution from traditional to modern, Green-Revolution forms of farming. Instead, he sees that the suffering and violence on Guatemala's home front brought multiple opportunities at the same time. Different ideas for how rural development could be achieved competed for the hearts, lands, and labor of the country's smallholders. At the behest of MAGA extension agents and foreign development workers, some farmers, like Aré's father, "modernized," entering global, chemically-intensive vegetable chains while maintaining hybrid production systems on their milpa plots (Isakson 2009). Others, like the coffee communities that Juan José worked with, found foreign market outlets for a cash crop they produced without synthetic chemicals. Others still received support to continue developing small-scale, locally-appropriate technologies that they passed to others farmers through methods like the *campesino a campesino* methodology (Holt-Giménez 2006). The 1970s and 1980s were the decade of agricultural changes in many directions.

Yet, those changes did not simply involve different people and organizations following unique, separate, and sometimes opposing paths. It was not so simple. Instead, like Aré's father, various entities combined and hybridized their work in the farming sector. In the early 1980s, for example, MAGA's extension directorates partnered with the Institute of Agricultural Science and Technology (ICTA) to combine extension with research in a program that built on ICTA's early experience of working with the *campesino-a-campesino* methodology to promote conservation agriculture (FAO 2011). The program's work plans were developed with producer participation in their design, execution, and evaluation. National public coverage grew to 213 agricultural extension agents, 1,280 trained agricultural guides, and 2,800 agricultural representatives (ibid).

The hybrid project helped to spread smallholder adoption of both, Green Revolution and conservation agriculture technologies (FAO 2011).

The extension program was the kind of initiative that Aré envisioned being part of when he studied at FAUSAC and CUNOC, but his dislocation abroad prevented him from realizing that dream at the time. He also learned from a distance that the agricultural extension experiment was short-lived. Structural adjustment that began in 1982 started to gut the funding of many state departments, including MAGA and its directorates. The extension services were terminated in 1989 (USDA GAIN Report 2014).

By moving in a different direction, his life continued to diversify and hybridize. By 1991, he was deeply involved in coffee production in southern Mexico, helping to organize poor farmers to gain the organic, biological, and biodynamic demarcations that they needed to sell their beans abroad. He frequently travelled to Europe to promote Mexican harvests in large coffee buyers' conventions. There, he had learned of his relative powerlessness in a competition driven and trader-centered world where producers were pitted against one another to drive down prices. He saw that organics was already a cut-throat business.

Yet, the trips also further enmeshed him in webs of transnational relationships with European and North American actors trying to export their versions of organics to poorer countries. Country governments, non-profits, and universities financed Juan José's participation in short courses and seminars at universities in Germany, England, and Spain. Although he quickly acclimated to circulating among well-known figureheads of different organics movements, Aré was star-struck one more time when traveling to the United States to receive basic instruction in agroecology from its leading proponent, Professor Miguel Altieri at the University of California, Berkeley.

As Guatemala's armed conflict was coming to an end and the Peace Accords were in the process of being negotiated, Juan José decided to return home in 1995. Armed with over a decade of experience in certified organic coffee production and intellectual engagement with organics from all over Europe and North America, he continued to help farmers organize into associations and cooperatives to sell to international buyers.

With one foot in small organic coffee production in Guatemala and another in international certification circuits, Aré was positioned as a cultural broker between two worlds. He capitalized on the opportunity that his bridging role presented by helping a friend to establish (in 1997) and consolidate Mayacert, a national agency that today all but monopolizes certification of Guatemalan produce destined for export (Mayacert 2019). Farmers can choose between a total of 19 different seals. They can seek up to eight country organic labels, a host of other labels covering everything from the gender and land size of the producer, and others targeting projects adhering to a broad set of food production standards, such as fair trade, environmental, religious, and food safety standards. Aré effectively summarizes that much of his work has always been about translation:

Many farmers were already not using chemicals or engaging in practices that were not listed as allowed or not allowed in international organics requirements. But, they were similar. My job was to speak two languages: the language of what the Guatemalan *campesinos* did and the language of what the Europeans and the Americans wanted to see them do.

Juan José had his finger on the pulse of developments around the world, especially neighboring countries. He remembers that, since many Latin American nations lacked their own legally-prescribed organics standards, groups in Nicaragua, Honduras, and El Salvador were by the early 1990s already experimenting with free or cheap participatory certification systems to verify and guarantee organic production practices for local markets. But Aré was more

concerned with exporting coffee, so he joined the leadership of the Association of the Exporters of Guatemala (AGEXPORT)⁵ to push for an organics law in Guatemala that would define the term and legislate national standards for inputs and practices. By 1997, AGEXPORT played its



Figure 3: Certifications Offered by Mayacert in 2019

(Reading the rows left to right, they are: USDA Organic certification; Canada's Biologique label; the Hazard Analysis and Critical Control Points (HACCP) food safety certification; Peru's National Service for Agrarian Health (SENASA) stamp; Mayacert's own Inputs Register for organic production; United States Certified Fair Trade demarcation; Bird Friendly Coffee label of the Smithsonian Migratory Birds Center; European Common Market Organic Standard, BioSuisse label from Switzerland; the 4C Association certification for coffee producers; Sagarpa Organics from Mexico; the Japanese Agricultural Organic Standard (JAS); Utz certification of sustainably-farmed coffee, cocoa, tea, and hazelnuts; the Kosher Central America label; the Mayacert Organic label; KRAV, the Swedish organic standard; the Small Producers Symbol (SPP); the United Nations Global Compact initiative label (a voluntary program for businesses and producers to implement and report sustainable and socially-responsible practices); the Watersafe label; and the With Women's Hands seal for sustainable farming done by women.

⁵ AGEXPORT was founded in 1982 with the mission to "make Guatemala an exporter country" (AGEXPORT 2019). Today, it boasts almost 4,000 associated companies (AGEXPORT Hoy 2013).

part in persuading a MAGA official to draft the law as it sought support from a myriad of foreign aid and international non-government organizations that showed increased interest in supporting organics production for commerce. But, funding was tight and national law efforts were parked as the group came up against the disinterested, slow, and corrupt bureaucratic machine of MAGA. It also came up against an agency that continued to be defunded. The two MAGA directorates responsible for the defunct extension program also finally closed in 1998, two years after the signing of the Peace Accords, when peace was pursued alongside further structural adjustment programs initiated by President Álvaro Arzú (1996-2000) (BTI 2016).

Despite setbacks, Juan José continued to promote national legislation through two routes. First, he helped put it on the agenda of the National Commission for Ecological Agriculture (CNAE), a coalition set up in 2001 to bring together major state, commercial, and non-profit actors interested in organics. Later, he influenced the capital-based Department of Organic Agriculture, a four-man MAGA office formed in 2006, which, in 2017, rekindled the process of finalizing the law and attempting to push it up the Ministry's ranks.

Today, Juan José's work and life run within, along, and between seemingly disparate agricultural philosophies and practices. His activities defy each characterization. As do the activities of many people he works with. Aré has established himself as a consultant to both organic farmers' groups and producers working with chemicals. While he continues to promote certified organic coffee and other products to international buyers, he uses what he learned at FAUSAC to advise individual and associated non-organic producers on farm business and practices. Both the organic and the non-organic farmers Aré works with grow mainly to sell, so they all cultivate monocultures of traditional cash crops like coffee or non-traditional agricultural exports, like broccoli, carrots, and onions. Few of these farmers maintain fully diversified farms

with multiple native crops and *criollo* animals. Both groups take advantage of resources that are still available locally, like *broza*, *estiércol*, and *gallinaza*. Yet, most also rely on buying industrial versions of these natural and other, synthetic, inputs from agrichemical stores. The main difference between these commercial non-organic and organic monoculture farms is whether they use a mixture of chemically created and naturally derived fertilizers and pesticides or if they exclusively apply the latter.

Juan José maintains his MAGA connections as well. He has periodically given workshops to a new crop of agricultural extension workers. Government extension work returned in 2011 with the election of the corrupt and now jailed ex-military general, Otto Molina Perez, who, during his term, frequently proclaimed that after two decades of neglect, the government is finally returning to the countryside (MAGA 2014). With the help of multinational organizations and aid, NGO, and academic groups, the government went on to conceive the National System of Agricultural Extension (SNAE). The 2013 system aimed to rebuild and expand pre-structural-adjustment extension services and infrastructure (USDA GAIN Report 2014). Part of the plan was to spread the use of technologies and knowhow utilizing the *campesino-a-campesino* methodology through farmer groups called CADERES. The government contracted experts like Aré to realize the plan.

Of late, Juan José is also trying to participate in efforts that focus on organic production for local markets and on initiatives that aim to rebuild diverse farming systems to generate household subsistence for the country's rural residents, especially the indigenous groups, eight out of ten of whom live in poverty (CIA 2019) in communities where up to 70 percent of one-to-five-year-olds are chronically malnourished (USAID 2018). Emphasizing nutrition, food security, and food sovereignty, these projects use international NGO and aid funding to

encourage subsistence and local cash-crop production over growing for export, and gift or lend the animals and tools that rural families need to decrease their dependency on external farm inputs. Like Aré's work with Mayacert, the local NGOs translate local practices into the language of international donors.

In Quetzaltenango, numerous local NGOs, farmer and consumer groups, and state and aid actors form the Western Regional Organic Collective (CORO). It is the only remaining regional collective from the 10 that were formed in 2013 as part of MAGA's and CNAE's National Strategy for the Development of Organic and Agricultural Production of the Republic of Guatemala 2013-2023, although internal divisions have caused CORO leaders to push for autonomy from the government agencies.⁶ The CORO helps train and organize agroecological producers in the region, runs three organic markets in Xela, and represents regional efforts in national and international forums. Its members also undertake research and push for legislative and structural changes.

One research project carried out in 2015 by an English contractor working with SERJUS, a local NGO and CORO member, collected interview data from over 100 local agroecologically-focused organizations and examined it using social network analysis and stakeholder mapping to demonstrate the extent of agroecological production and markets in the region, highlighting great need for training, inputs, and marketing. The CORO used the finding to successfully push for MAGA-Quetzaltenango to open, under the auspices of the Department of Organic Agriculture in the capital and with support from the German development agency GIZ, the Office for Ecological Agriculture (OFAE), to support non-chemical producers and organic markets in the region.

⁶ Recall the incidents surrounding the Seventh National Convention on Organic Agriculture from the Introduction to this dissertation.

Since Guatemala does not have its own organic law, since external certifications are expensive, and since rumors circulate that third-party labels are not to be trusted as they are easily bought and rarely verified, the CORO is also working to establish a regional participatory guarantee system between Quetzaltenango's producers and consumers. Emphasizing trust and interpersonal relationships, the proposed system relies on visits by producers and Guatemalan and foreign consumers (settled expatriates and more temporary NGO workers) to farms within the collective. While some data is collected, like types of crops grown and whether compost is produced on each farm, the visits center mainly on conversations and building friendships and respect between those involved. Aré and his Mayacert colleagues hope to use this channel to enter the domestic organics market by implementing a labor intensive but financially cheap system that they have created for use by small-scale producers and local consumers in Guatemala. But, progress is slow as CORO members remain skeptical and suspicious of Mayacert's export orientation, economic power, and national reach, preferring to experiment on their own.

Despite some of its historical efforts in building extension services for smallholders, many people still consider MAGA an agent primarily of large scale, plantation based, and export agriculture. Yet, the government agency is not monolithic, nor are its employees and leaders completely without agency. The Ministry is engaged in multiple and hybrid activities, promoting and supporting multiple and hybrid forms of farming. In 2016, for example, MAGA-Quetzaltenango's leaders felt "converted" to supporting intensive family-farm production systems that rely on locally-available resources and inexpensive technologies. They changed their approach after receiving postgraduate training on the topic from FAUSAC and the 34-member inter-state organization, the Inter-American Institute for Cooperation in Agriculture

(IICA).⁷ Their projects included setting up the Appropriate Technology Unit that they hired Juan José to participate in. The working group aims to work with other MAGA-Quetzaltenango units to train a new era of extension workers in promoting (via the *campesino-a-campesino* methodology and systems thinking approaches) decentralized, human-centered, sustainable agriculture.

Apart from Aré, the Ministry hired established experts to help with the extension training and the Appropriate Technology Unit. This includes a previously long-time ICTA employee who specializes in systems thinking. Also part of the team is a long-term rural development NGO founder and critic of agricultural development in Guatemala. MAGA-Quetzaltenango additionally invited local Maya and female leaders in ethnoveterinary, agroecology, and community building to provide trainings to ministry staff and extension workers. If it proves successful, the regional pilot project could serve as a national model for extension work at the Ministry.

In addition to its own activities, in 2017, representatives from MAGA-Quetzaltenango joined experts from ICTA, FAUSAC, USAID, the German development arm, GIZ, the Department of Organic Agriculture from MAGA in the capital city, and others to help create a certified Diploma in Agroecological Extension at the Technical Institute for Training and Productivity (INTECAP) in Quetzaltenango. Since the 1970s, the Institute has aimed to be Guatemala's "leader in the professional training of workers and human resources to join the labor force" (INTECAP 2019). The diploma aims to train NGO and government workers in the theory, application, and spread of sustainable farming methods. It is the country's first fully-fledged certification of training in agroecology, food sovereignty, and systematic community

⁷ IICA formed in 1942 to "promote agricultural development and rural well-being in the hemisphere" (IICA 2015, iii).

analysis to identify and support the adoption of sustainable technologies and practices by Guatemala's farmers. INTECAP trained its first cohort of the diploma's instructors in the institute's pedagogical approach in 2017. The diploma innovated away from relying mainly on non-indigenous, male experts with agricultural engineering degrees to teach its courses. Of the 16 people who completed INTECAP's instructor training, five were women and four were Mayan men with backgrounds ranging from veterinary sciences to community development. In 2017, demand for the course outstripped supply before classes even began. Just as with MAGA-Quetzaltenango's efforts, if all goes to plan, the diploma's success will spur on replications across INTECAP's training centers throughout Guatemala.

In Aré's experience, change often requires two steps forward, one step back, especially when it comes to the government. Internal politics has meant that the efforts of the one MAGA agronomist who made up its Office for Ecological Agriculture were frequently redirected towards other Ministry tasks. Those activities included collecting door-to-door data for the 2016 agricultural census that was rumored to be a tool for political party distribution of the \$40-\$55 million worth of subsidized fertilizers that the state annually purchases from large Guatemalan companies, like DISAGRO and TIGSA (Central America Data 2014; 2015). Meanwhile, a Xela-based politician maneuvered the ranks to reassign a key MAGA-Quetzaltenango leader to another department to reduce his competitiveness for local office. After backing the reassigned man's bid for leadership in 2017, Aré too received dismissal from MAGA's Appropriate Technology Unit. The move amounted to only the latest in a series of actions that branded him a general thorn in the side of the Ministry, an outspoken thorn who pushed for transparency, accountability, and a commitment to smallholders. While Aré successfully defeated the unfair discharge in labor court, by the end of 2019, he still was not reinstated in the role. All told, the

MAGA activities that the three men and others led in the direction of small-scale technologies, *campesino-a-campesino* methodologies, and organic agriculture proceeded in fits and starts, sometimes stalling for many months.

As he plugs away at his professional projects, Aré is using some of the rural land he acquired in the last couple of decades to grow, by means of his fathers' farming methods, milpa and stone fruit for his family. He recently took a course in permaculture, another current that has been active in Guatemala since the 1990s, and came back inspired. He is currently building wooden cabanas and traditional adobe saunas between his avocado trees, structures he can rent out to visitors. He plans to diversify the land into a low maintenance, highly productive system where his granddaughter, a nutritionist in training, can experiment with tasty and healthy dishes.

When he and his small propeller plane are not contracted to air-spray pesticides onto large monocultures, Juan José's Canadian grandson in law, Kevin, installs organic hydroponics on commercial farms throughout Central America. Kevin smirks at the contradiction of his livelihood. Half the time his work supports the pesticide industry. Half the time he installs systems for farmers looking to reduce the need for such chemicals. He inhabits two worlds that pull in opposite directions, but he reasons that he must make money somehow.

Juan José would like to capitalize on Kevin's experience to also build greenhouse hydroponic growing systems on his own farm, so that he can produce the more fragile lettuces, herbs, and strawberries that his granddaughter's dishes will require. Aré's family is looking to the future. When they complete the cabanas, saunas, and permaculture and hydroponics projects, they hope to lure wealthy foreign and Guatemalan tourists looking for an ecofriendly, chemical free, farm-to-table experience.

In Juan-José's home, on the edges of the center of the small city of Quetzaltenango, the rooftop is dedicated to an army of potted plants. Tall maize stalks shade the corn shelling area. Pots of native herbs and medicinal plants line one wall of the roof. Experimental soil beds are attempting to creolize heirloom tomatoes from the seeds José's American and Italian friends smuggled into the country for him. In between the beds sit spacious cages of chickens, turkeys, and rabbits. His young great grandchildren help clean out and compost the animals' waste to provide fertility for their great grandmother's small, diverse, and chemical-free native garden.

Juan José loves watching the sunrise from his rooftop as he snacks on his breakfast *sheca*. This round, bun-shaped, sweet bread is a regional specialty that inspires pride and nostalgia among Quetzaltecos. It is one of dozens of varieties of sweet breads and cakes enjoyed throughout the region and the country. For several centuries, Quetzaltenango was the center of the country's wheat production in the highland region. It was historically important for local relations between the indigenous and ladino (non-indigenous) sections of the population. Some K'iche' Mayas' control of local and national wheat markets contributed to their wealth and differentiation as an indigenous elite in the 18th, 19th and 20th centuries, playing a role in their bids for recognition as important economic and political agents in the nation (Grandin 2000). At the height of local production in the 1960s more than 30,000 farmers cultivated the golden grain (Ruballos Arana 2012).

Juan José remembers the sea of yellow that covered a large area on the edge of Quetzaltenango, which, despite being largely residential, is today still called The Wheat Fields (*Los Trigales*). But the industry suffered massive declines in the 1980s with changes in legislation that removed price controls and import quotas, opening the country's market to cheaper imports from the United States and Mexico and allowing for the consolidation of the

wheat milling industry (Ruballos Arana 2012). While small-scale wheat production and artisan milling declined, the number of chain and small bakeries (*panaderias*) rapidly expanded. Today, *panaderias* are as ubiquitous as *tortillerias* in the cities and towns of the highlands and people joke that even toddlers know you cannot drink your coffee without your *pan* (bread). Wheat flour and its derivatives provide a substantial portion of calories to the population. Per the country's Consumer Price Index, an average Guatemalan family spends Q7.61 (\$1.00) per day on bread, an expenditure that is helped by its low price: basic sweet breads are as cheap as tortillas, four of which are sold for Q1 (\$0.13).

While examining his *sheca*, Juan José remembers the soft wheat varieties and traditionally prepared, more savory breads that he used to bake when he was a young boy. Those are hard to come by now. Aré does not lament the loss entirely though as he admits to enjoying the contemporary light, fluffy, and sweet breads that are made with refined white flour and sugar. Juan José's diet consists mainly of his wife's meals at home prepared with ingredients from their own garden, from the regular market, and from CORO's monthly organic market. The couple swear that CORO producers' *criollo* chicken and eggs and organic tomatoes, avocados, and carrots are unmatched in flavor by produce found in the city's municipal markets and supermarkets. But Aré also enjoys eating traditional meals in reputable eateries called *comedores*, patronizing Albamar, Quetzaltenango's regional chain restaurant serving *tipica* food and carry-out fried chicken. When craving chicken, Juan José chooses Albamar every time over the leading national fast chicken chain, Pollo Campero, to show his support for businesses hailing from his beloved Xela. But, Aré also eats lunch in the pricey McDonald's where he can use the free fast Wi-Fi to peacefully browse the internet and chat to friends on WhatsApp. He finds McDonald's burgers and many of the city's food options tasty (*rica*) in their own way and

prioritizes establishments that focus on hygiene to reduce the likelihood of falling ill from pathogenic contamination. But he is also convinced he has a strong Guatemalan constitution, so he does not shy away from specialty street foods that come to town during festive fairs several times a year.

Aré washes the morning *sheca* down with weak instant or *cascara* coffee. Instant coffee is cheap and thus popular with Guatemala's masses who self-mockingly call their preferred coffee "sock water" (*agua de calcetín*). The wealthy and the foreign denigrate it as of poor quality and of poor taste. Cascara is a weak beverage made from the husks of the coffee cherry. The waste product recently began to be exoticized in rich country markets, where some specialized coffee shops charge up to 50 percent more per pound of *cascara* than for roasted coffee beans.⁸

When ordering coffee in Quetzaltenango's coffee shops, Juan José always makes the point of ordering black coffee not as an Americano, but as a *café Guatemalteco* (Guatemalan coffee). Taking pleasure in educating young food service workers and hipster baristas, he likes to remind them that it is Guatemala, and not "America," that grows what to Aré is the best coffee in the world.

Like many, Juan José is a proud Quetzalteco. He loves his city. He wakes up before dawn every morning, beckoned as he is out of bed by the delicious smell of freshly baked sweet breads from the *panaderia* across the street. As he takes in the gentle aroma of the sock-water coffee

⁸ While coffee trade blogs and magazines have been writing about *cascara* tea at least since 2008 (e.g. Square Mile Coffee Blog 2013), by October of 2017, a cooperative coffee shop serving Brown University students in Providence Rhode Island sold Guatemalan cascara for \$18 per pound while it charged \$12 per pound for whole roasted coffee beans from the same location (personal observation). Others are expanding cascara definitions and product lines. Using the fleshy part of the coffee cherry to produce a "cascara syrup," Starbucks released a Cascara Latte in January 2017 (Starbucks Stories & News 2017) that flavors a regular cafe latte with the syrup.

and the sweet taste of the *sheca* from his green roof, he likes to listen to hear how many roosters are also watching the sun appear over the horizon. And he likes to look to see how many corn plants, güisquil vines, and peach trees are poking out of the courtyards of the homes of his fellow city dwellers.

READING ARÉ

Aré is a composite character. His story compounds several accounts of actors who have shaped food and agriculture in Guatemala. Yet, this tale is not unusual. It encompasses the numerous complexities, contradictions, and patchy fits and starts of activities that characterize many people's narratives who will fill the pages of this dissertation.

Looking at the trajectory of a single life, like Juan José's, renders impossible its simple classification. Is Aré a traditional producer, a conventional grower, or an organic farmer? Is he a social activist fighting for substance-level smallholders who believes, like E. F. Schumacher did, that "small is beautiful," or is he a successful businessman who saw the organics future and helped scale up the export efforts? Are his work and life based on a conviction of a sustainable way of farming, living, and eating, or are they based on the opportunities, rewards, and pleasures that came along?

In reality, like most people, Aré is a food system omnivore. He participates in multiple versions of supposedly traditional, conventional, and alternative production systems, combining them in different ways in his personal and professional lives. He can see the benefits and drawbacks of each option, making tradeoffs between them on a daily basis and as part of his longer-term plans. He experiences little cognitive dissonance between his various pursuits.

Juan José represents a hybrid existence. His is a life assembled out of the contradictions embedded in the coexistence of opposing forces. He has been crisscrossing the lines of tension

that run between the poles of analytical dualisms; foreign-local, traditional-modern, subsistence-market, export-domestic, conventional-alternative, rich-poor. He has straddled them all. He has done so by using his cultural capital in acts of translation to bridge, connect, and transform distant worlds. Today, he enjoys all the fruits that the hybrid worlds he helped build have to offer.

CHAPTER 4: A WALK AROUND XELA

Aré's journey ended by showing his omnivorous nature when it came to consuming different types of foods from different kinds of establishments. Like Aré, people in Guatemala face many options for where to buy ingredients or where to eat out their meals. Like Aré, they have different reasons for choosing different places, reasons that follow coherent logics. Before considering some of the decision-making processes and their constraints, which Section III will do in detail, it is important to gain a panoramic view of the country's food retail environment.

This chapter takes a walk around a small, but centrally-located, park in Quetzaltenango. The city bustles with a diverse range of food related activities involving people from all walks of life. While some of the activities seem to fit the categories of conventional, traditional, or alternative, closer examination shows that most of them take on hybrid forms and involve different sets of human actors. This chapter thus continues to document recent decades' diversification of local food provision.

This chapter also aims to elucidate Xela's particular social geographies of food production and consumption. For example, it shows the central role that Guatemalan businesses have had and continue to have in dominating corporate food provision in the country. This challenges ideas that globalization by international brands flattens out local food systems. On the consumption end, a walk around Xela shows that a variety of people participate in different avenues of food provision in the city. Nevertheless, different ethnic and socioeconomic groups tend to congregate in particular establishments, revealing Xela's social distribution of eaters. The walk around Xela thus continues to lay the ground work for understanding food system complexity in Guatemala.

XELA'S FOOD CORNUCOPIA AND GEOGRAPHIES OF FOOD PROVISION

Just five minutes in the Central Park of Xela's historic Zone One—a small rectangular space that would fit four times over into the nearby 11,220-seater soccer stadium—exposes visitors to a loud, colorful, and aromatic food cornucopia. There are many kinds of meals and snacks on offer. As in other Guatemalan markets (Fenton 2013), who offers what type of food follows particular social geographies of food provision in the city that cluster related activities by sex, age, nationality, and ethnicity.

Mobile, typically-male, vendors peddle one-quetzal (\$0.13) assortments of home-made or industrially-produced candies, pork rinds, and corn, potato, and plantain chips. Older women fully clad in Xela's distinctive *traje* sell Q3 (\$0.40) corn-leaf-wrapped *paches* and *tamales*, or yellow, white, or black corn tortillas, four per quetzal. Young men and sometimes women with babies snuggled tightly to their chests in colorful, hand-woven wraps, stand by wheelbarrows of seasonal mangos and oranges, offering, for Q3-5 (\$0.40-\$0.67), to individually peel, shape, and serve them with sweet, salty, and spiced condiments. Others stand year-round by small metal-framed stalls, selling a variety of fresh fruit from Guatemala's nearby hot coastal areas; fruit that they cut and arrange in Q5 (\$0.67) plastic bags for a convenient snack.

Get to the park early enough and you can spot young and teenage boys skirting its edges, pulling goats with full udders, ready to milk a portion and bag it for Q5 (\$0.67) a pop. Get there in the afternoon and you can enjoy cheap ice-creams sold by well-dressed middle-aged men in ranchero hats and variably-topped shaved ice sold by fashionable male 20-somethings out of their bicycled *Granizada* carts. Evenings are the province of pop-up stands selling Q10 meals. Middle aged men operate in pairs to shave meat into portions of grease-laden tacos. Young male entrepreneurs or workers prepare hotdogs, all made and dressed with store-bought ingredients. Groups of women, some in *traje*, some in Western clothes hand-make corn *pupusas*, serving

with them pickled vegetables and spicy tomato sauce. Others deep-fry chicken and potatoes they peel and chop on the spot. People of all walks of life enjoy these foods, including some foreigners who stop to taste the city's alimentary offerings.

Weekends attract many to a non-indigenous family who, within hours, sell out of their popular fresh ceviche that they serve from the trunk of their car. And, throughout any day, when they are not handed flyers for offers at the TacoBell down the street, workers and tourists can procure Q5-15 (\$0.67-\$2) breakfast, lunch, and dinner dishes from female home cooks in Xela's *traje* who sell their creations out of nimble wheeled contraptions with large, foldaway umbrellas to protect from both the sun and the rain.

Away from the streets and inside the buildings, eaters can pay Q15-60 (\$2-4) for food in a variety of spots. Half a block away, they can frequent smaller, but typically busy, eateries called *comedores*. There, women and occasionally men, serve *comida casera*, more traditional dishes like meat and seafood stews, and grilled or fried chicken, pork, fish, or steaks served with variable combinations of rice, potatoes, boiled or grilled vegetables, salad, guacamole, bread, and tortillas. Some of the comedores are run by indigenous people, some are not. The types of dishes they serve are also available in the typically more expensive *restaurantes típicos*. The "traditional restaurants" are differentiated from comedores by uniformed, typically-male staff; better equipped, out of view kitchens; and spaces for larger parties and entertainment. While *restaurantes típicos* stick to *comida casera*, it is not the only option at a typical comedor. Also on offer as parts of the served meals are dishes from foreign traditions that have been incorporated into local food offerings, including chow mein, *ensalada rusa* (Russian potato and mayonnaise salad), and battered, deep-fried chicken.

Three large areas of the indoor-outdoor central market that begins in the corner of Xela's Central Park—one of four main markets in the city—are devoted to such comedores, where customers can take a rest from shopping for fresh fruits and vegetables, meats and dairy products, flowers and plants, and pre-packaged foods, as well as everything they could possibly need to equip, care for, and adorn their bodies, gardens, and homes. Throughout the city, many people transform their houses' ground-floor entrances and garages into makeshift comedores or fried-food outlets, unassumingly opening, without advertising fanfare, for lunch, dinner, or a late-night snack. Many others attach handmade signs to their home's windows or front doors to alert passersby to items on sale like chocolate-covered fruit, honey, and dairy foods. Others still sell home-made food during meal times from their *tiendas*, small general stores that sell a variety of dry goods, like processed foods and drinks, liquor, cigarettes, candy, and home supplies.

Back in the park, the sugar seekers can pop into one of two dessert chains, the Costa Rican POPS ice-cream franchise and the small Guatemalan cakes, ice-creams, and cafe chain, Monte Alto. Meanwhile, the caffeine deprived can purchase expensive coffees, desserts, and full meals at one of two well-known Guatemalan café brands, Café Barista and &CAFÉ (*and café*), or the regional bakery and café chain XelaPan, one of 12 in the city, right there in the center. McDonald's, one of seven in the city and more than ninety in the country, occupies one of the best kept buildings in the square and boasts the fastest free Wi-Fi in town for all customers. Visible down an adjacent street is the national fried chicken chain, Pollo Campero, Guatemala's favorite fast food brand that has five restaurants in Xela and more than 120 nation-wide restaurant locations and almost 200 takeout spots. At the opposite end of the park is one of Campero's competitors, the regional fried and grilled chicken, comida casera, and grocery store chain, Albamar (also one of five in the city). Most of these more formal restaurants and stores

are staffed by trained, uniformed, younger personnel who focus on providing excellent customer service.

Central Park and its adjacent streets also house small independent restaurants. The US-expat-owned Tacorazon restaurant offers burritos, tacos, and rice bowls with non-chemically-grown ingredients. Several more foreigner-owned or co-owned spots can be found within a block of the park: a French woman runs a healthy juice bar with vegetarian meals and organically-sourced ingredients, an Australian transplant co-operates a healthy bakery café with a female Guatemalan chef, a Canadian woman and her Guatemalan husband run a popular bar, restaurant and live music venue. These places make up some of the city's "alternative" food initiatives because they focus on organic ingredients, healthier food options, and, sometimes, fairer labor practices.

Everywhere, all food is ready to be washed down by bottles, cans, or cups of Coke, Pepsi, and other soda, including competitive national brands like Big Cola. These companies do little of the final-consumer selling themselves. Their goods are instead distributed throughout Guatemala by armies of vendors operating across the formal-informal business spectrum.

Soda is not the only drink on offer. Comedores and street stalls also sell grain-based *atoles*, *mosh*, and *Incaparina* (Tartanac 2000), and artificially-flavored or freshly-prepared fruit drinks, like *licuados* and *frescos*, all generously sweetened with sugar.⁹ Alternative restaurants make their own fruit and vegetable refreshments, thoroughly disinfecting the produce and holding back on the sweeteners. Specialty cafés sell a variety of coffee concoctions, such as Americanos, espressos, lattes, and frappes.

⁹ Alcohol is also widely available and alcoholism and alcohol-related deaths are high in Guatemala.

Walk in any direction and into any of the other six zones in this city of some 200,000 people, travel to another urban center, or visit a smaller nearby town, and the cornucopia continues. Mobile or stationary, the food options are plenty, and they explode during busy ferias that take over city, town, and village plazas every few months. While Guatemalans typically claim to still eat most of their meals at home and buy their ingredients in local markets, food sellers from Q3 (\$0.40) street eats to Q40 (\$5.33) McDonald's or Pollo Campero meals serve plenty of clientele, all year around.

GUATEMALA'S FOOD SWAMPS AND DESERTS

What this walk around Xela makes clear is that the city has plenty of food options that range in their healthfulness. That is at least according to popular, government, and medical dietary guideline recommendations that might recommend as healthy whole foods made from scratch with little salt, sugar, or fat and as unhealthy foods that are highly processed, deep fried, or which carry many of the said additives. Comedores and restaurants sell healthier soups made from vegetables and a little meat alongside fried chicken meals served with rice and tortillas. Fast food restaurants like McDonald's and Pollo Campero sell salads alongside their traditional menu items. Street eats vary from cut up fruit and hand-rolled tamales to chips and soda. On balance, however, urban spaces like Xela are thus perhaps best conceptualized as food swamps: "areas in which large relative amounts of energy-dense snack foods inundate healthy food options" (Rose et al. 2009, 2).

On the flipside, the further that towns and villages get from larger urban cities, the fewer food retail options they have. There, *tiendas* sell durable, packaged goods, offering produce only occasionally, like in-season bananas or tomatoes. Despite prevalence of agricultural production by smallholder farmers, rural retail spaces are thus best thought of as "food deserts"

characterized by low access to healthy and affordable food options (Beaulac, Kristjansson, and Cummins 2009). As NGO and community workers have commented, and as this researcher has frequently observed, there might not be power lines, running water, or cell service in a hilltop community reachable only slowly by undulating dirt roads, but "*la porquería siempre viene*," the junk food always comes. With extensive corporate distribution channels, there are always soda, candy, and industrially- processed snacks available for sale in cinder-block or wooden makeshift stores in even the most remote places. Meanwhile, inundating the visual and auditory landscapes, both urban and rural, are brand advertisements, large and small, painted on storefronts and bus stops, blown up on billboards and posters, and blasted over megaphones from proprietary marketing vans. Entire neighborhoods become branded with industrial food logos and colors. Advertising messaging becomes more child-oriented the closer it gets to schools (Chacon et al. 2015).

HYBRID FOODWAYS

Food is everywhere and everyone is involved. Twenty nine percent of the country's inhabitants officially work in agriculture, down from 38 percent in 1991 (World Bank Data 2019a). Innumerable intermediaries distribute edible goods to local markets. Hundreds of thousands of people, whether selling street, fast, or posh food, put meals on the plates of the country's 16 million consumers.

While the meals might come from establishments that seem to fit into one of the three categories making up the traditional-conventional-alternative troika, most are hybrids in form, practices, or the social relations that underpin them. Most food, whether prepackaged or made fresh, is produced or processed using at least some industrial methods. Most local farmers use at least some synthetic fertilizers and pesticides on their crops and industrial feed and medicines for

their animals, whether those products end up in a *típica* meal they prepare at home or buy in a *comedor* (more on this in chapter six). Factory-style industrial chicken and egg production that is dominated by a handful of national companies is increasingly replacing the market for backyard chicken and eggs (more on this in chapter seven). Yet, some corporate chains serve creole eggs. Some make tortillas from maize grown by their families or other local farmers, many others buy the Maseca brand corn flour from Mexico. While *atoles* and *mosh* are part of comida típica associated with more traditional foodways, they can be made with traditional corn, but they are often also adapted to the less traditional rice or oatmeal. Fruit-based drinks combine seasonal fruits that women buy in local markets. But sometimes they make them with the harvest from their backyard apple or peach trees, when the season allows.

Meanwhile, the city's alternative restaurants also vary their products and practices. They buy ingredients for their ventures from a variety of places. Several of them buy vegetables from a local middle-class organic farmer, but others opt for conventional produce from the markets down the street. Some source chicken meat from a regional distributor who delivers to many businesses in the city. Others prefer to buy poultry from indigenous women in the municipal market. There are few options for buying organic fruits, so the entrepreneurs source them from nearby supermarkets or from sellers who truck in the products of large-scale fruit monocultures from the nearby hot coastal areas. While these businesses may be deemed alternative, their dishes are made from ingredients hailing from diverse production and distribution systems.

GEORGAPHIES OF CONSUMPTION IN XELA

While all kinds of people eat in all kinds of places throughout Quetzaltenango, the city, like any settlement, displayed particular geographies of consumption that are linked to nationality, ethnicity, and income. To find out some of the patterns of what, where, and how

different people eat, I conducted multiple observation sessions in eateries, noting down people's ages and sexes, what kinds of groups they congregated in, what they ate and what they did, how long they stayed and what they wore. In all, I conducted one session in a market comedor area, one in Pollo Campero, one in Taco Bell, and five in McDonald's. I also conducted eight sessions in small independent restaurants serving "healthy" food made with locally-sourced, organic produce: four sessions in Frutopía, two in Tan Lechuga Yo, and two in Xela Green. I complemented these systematic data collection sessions with less formal visits, eating in each place several times, after which I wrote general notes on observations that either confirmed my previous data or surprised me.

Market comedores serve the cheapest meals and tend to attract mainly indigenous people. During one observation session in September of 2017, for example, of the 37 women and girls, who were in one hall containing four different comedores, eight wore western clothes (21 percent); the other 79 percent wore *traje*. The men in the comedores tended to wear the campesino style dress, which often includes a cowboy hat. In the comedores, people typically ate their meals in small groups, focusing their time on eating. Each place could seat around a dozen or so people at any one time. Benches and plastic seats were arranged in a square around each group of women cooks who prepared the food over gas stoves. When would-be customers walked through the front doors of the tall-ceilinged enclosure, the lead women from each group loudly shouted their available meal options in a competitive bid to attract the client. Three of the female teams running comedores were dressed in *traje*, one group were ladina women sporting western clothing. Apart from me, only one young foreign man ate in this eatery, at least once per week. The American man who settled in Xela to run an improved-stoves project always chose

the same comedor as he felt a loyalty to the indigenous cook who had gotten his attention when he first arrived and whose food he liked.

Xela's Pollo Campero, tended to have roughly a 50/50 split between groups with indigenously-dressed women and not. There was no WI-FI on order and the restaurant differed in its service model whereby customers were accompanied to their table by servers who waited on them. The Zone One restaurant could seat around 50 people at any one time.

McDonald's on the other hand, tended to stick to the self-service model. People ordered their meals and picked up the food when it was ready, although sometimes McDonald's staff would bring the food to their tables, which could seat around 40 people at a time. The restaurant tended to attract more middle-class customers, many of whom spent the time using the free high-speed Wi-Fi on their smart-phones. Of the 97 women and girls observed, 61 were dressed in western dress (63%), the rest in different styles of *traje*. Foreigners did not typically eat in McDonald's either. I saw only one Japanese man eating a burger there during five sessions of systematic observation.

Of the 120 people (men and women) who ate at one of the three independent and health-food/organic focused places, only two women were dressed in *traje*, who ordered smoothies from Frutopía. These places tended to attract foreign customers and middle-class Guatemalans, especially those working with the foreigners in the city's various NGOs. Frutopía's main product was fruit and vegetable juices and smoothies, but it also operated a sit-down model for salads, sandwiches, and other vegetarian-only dishes. The restaurant could seat 12 to 14 customers at a time. Of the 75 observed customers, 20 were foreign (27 percent) and 53 Guatemalan (73 percent). Tan Lechuga Yo is a tiny lunch-only restaurant serving salads and soups, which simultaneously seats a maximum of six or seven people. Of the 37 people I observed eating there

or stopping in to get to-go food, 25 were foreign (68 percent) and 12 Guatemalan (32 percent). Xela Green, a small vegetarian restaurant with the capacity to seat around a dozen people was the least busy at any given time. Of the eight people that ate there when I did on two occasions, half were Guatemalan and half foreign. Meanwhile, Tacorazon's owner estimated his clientele to also be around half foreign and half Guatemalan, although his goal was to make the restaurant more popular with the latter.

These figures show that Xela's eating establishments attract a variety of customers with few being frequented exclusively by one social group. However, there are also clear tendencies towards clientele from particular backgrounds with each restaurant offering different kinds of food, service model, and social atmosphere. Chapter nine will describe in more detail the decision-making processes behind different people's eating-out choices. For now, it is worth noting that many of Xela's food options represent hybrid production, distribution, and consumption options, although each might tend more towards one set of ecological and social relations than another. This underscores the point that it can be hard to tell where one supposed traditional, conventional, or alternative system begins and where another ends. This dynamic makes it clear that the globalization of agriculture and food by giant foreign corporations has not flattened out local food systems, but that the movement of people, ideas, and practices has led to a diversification and inter-relation of food options. Taking a closer look at the businesses that dominate different industrial food sectors in Guatemala further demonstrates this lack of flattening out.

THE CORE ROLE OF PERIPHERAL BRANDS

The walk around Xela's and Guatemala's food retail environments tells us a great deal about the place of the country and its urban and rural communities in larger circuits of capital

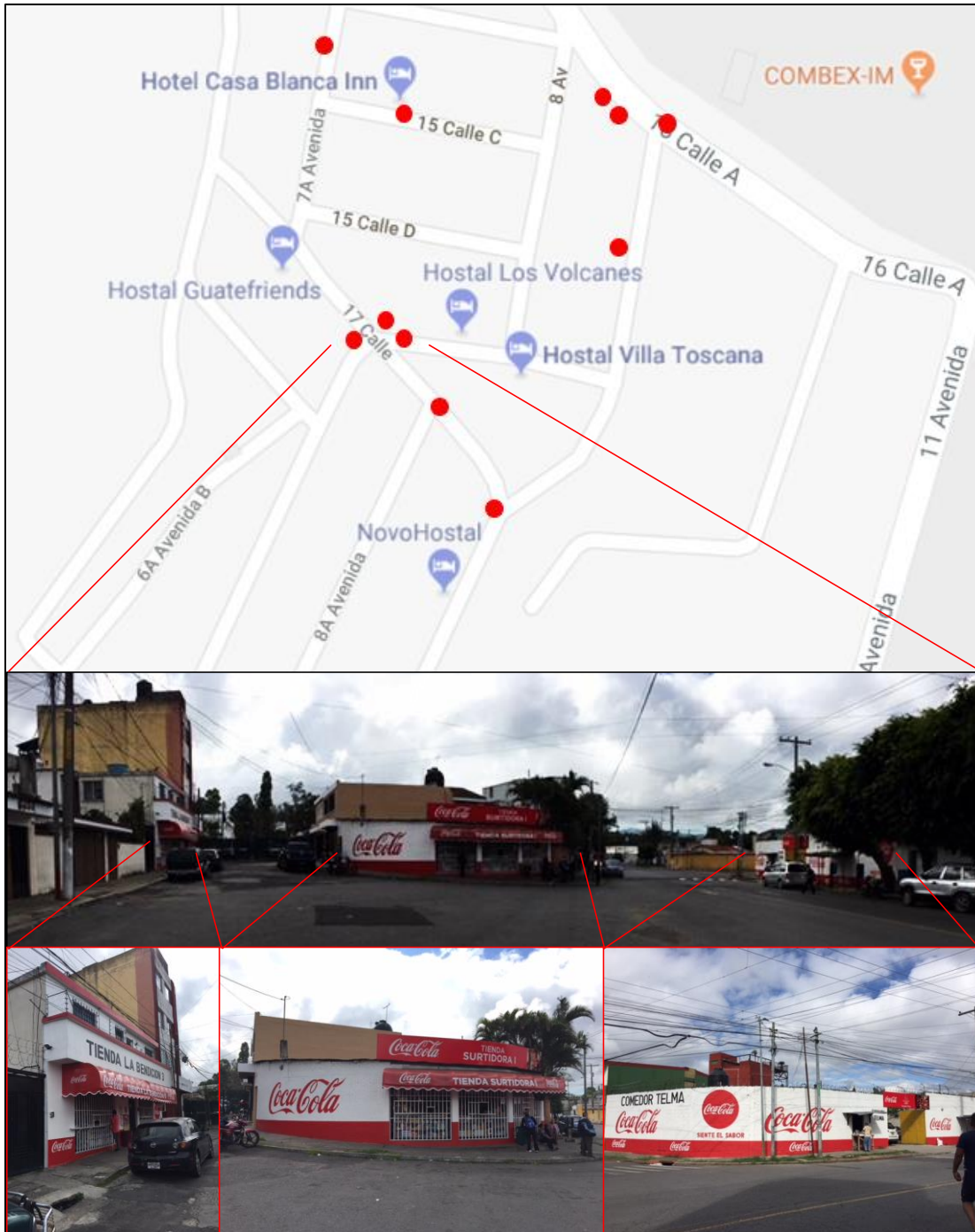


Figure 4: Coca Cola Town

The red dots on the map of this small neighborhood in Guatemala City show store fronts that have been painted in Coca-Cola colors. Up to four stores can be visible from any given spot. A school is located in the middle of the map.

accumulation. It reveals the extent of economic food linkages into Guatemala by foreign companies. It also reveals more regional and sub-national players that shape the food options available to Guatemalans.

FritoLay (a PepsiCo subsidiary), for example, is the leader of the top five companies that control 80 percent of the Guatemalan cookie and snack market. The others, in order of market share, are Diana (El Salvador), Yummies (Honduras), Bimbo (Mexico) and Señorial (Guatemala) (Gómez Divas 2015). Within that, the chip brand, Tortrix, leads the nation. It accounts for 15 percent retail value share of the local savory snack sector (USDA GAIN Report 2015), which reached production levels of 78,700 metric tons worth approximately \$600 million in retail sales (USDA GAIN Report 2018a), equivalent to \$40 per capita every year. Chapter five will consider in more detail how Tortrix became a widely-consumed and loved chip brand in Guatemala. For now, it is notable that Tortrix was started by a Guatemalan man who had travelled to the United States to learn about industrial snack making techniques. However, after changing corporate hands a few times, it was bought by PepsiCo-Frito Lay in 2004, although many Guatemalans remain oblivious to this change in ownership. Every year the company produces over 500 million bags of a dozen or so flavors of Tortrix chips, selling them for just Q1 (\$0.13) each (Muñoz 2012).

The franchised restaurant market tells a slightly different story. According to the US Department of Commerce, the first foreign franchise to open in Guatemala was Pizza Hut in 1969, but the real boom in the sector occurred in the last 10 years (US Department of Commerce 2018). Today, 30 US chains operate successfully in the country in a franchising market that grows by 15 percent every year. Of the 30 franchise businesses, 24 are food and drink chains, including brands like Wendy's, Burger King, Subway, Starbucks, Carl's Junior, Panda Express

and Dairy Queen. McDonald's has been the most successful. It opened its doors first in 1974. By 2016 it operated 87 franchises with plans to open 25 more by 2020 (E&N 2016). Although US food businesses have made significant inroads, with more than 300 associated locations in the country, the Guatemalan-owned Pollo Campero remains the country's favorite chain restaurant. The Spaniard, Francisco Pérez de Antón, started the prototype of the restaurant in Guatemala in the 1960s, perfecting his fried chicken recipes after a trip to the United States (M. G. Díaz 2019).

Pollo Campero is part of an increasingly competitive domestic fried chicken market. Since 2011, the corporate giant invested in more than 190 smaller, takeout-oriented stores called Pollo Granjero (Bolaños 2015) to contend with the likes of Pollo Pinulito, a fried chicken takeout that has opened more than 100 franchises since its conception in 2008. The takeout market segment includes international chains like KFC and local brands like Chapincito, Frito Pollo, Rico Pollo, Pollo Ranchero, Pollo Chapín, Pollo Galán, Pollo Express and Pollo Criollo. These are popular "especially in those places that lack easy access to fast food restaurants or without the financial means to afford the price of a more complete menu," like the meals offered in Pollo Campero and other restaurants (Industria Avícola 2011). Despite increased competition, Pollo Campero's leadership remain confident about their positioning. "The brand defined a culture and the way in which the Guatemalan consumer would eat chicken," said Juan José Gutiérrez, the company's president recently, "and since then we have been setting the rules of the game" (E&N 2018).

Pollo Campero is just one part of an economic empire of its parent company, Corporación Multi Inversiones (CMI). CMI owns many of the brands that dominate Guatemala's, and to a lesser extent Central America's, food markets, including 20 wheat and cereal brands of flours, pastas, and cookies; 13 pet and animal feed and livestock brands, like

Pollo Rey and Pollo Lindo that in 2013 controlled 82 percent of Guatemala's fresh chicken market, and Toledo, a pork processor that accounted for 27 percent of the prepared foods sector (Monge 2014); and Café Barista, a leading coffee shop with 35 plus locations, the takeout and delivery chains of Telepizza (more than 90 sites in Guatemala and 1,400 in the world) and Pollo Granjero (more than 190 national locations). CMI supplies its fresh and restaurant chicken lines through its own vertically-integrated factory-farm-style production, including bird feed.

The supermarket sector told a similar story until recently. Supermarkets in Guatemala target middle class and high-end consumers. Fernando Paiz, a graduate of Northeastern University, turned his family company, which started in 1928, into the Central America Retail Holding Corporation (CARHCO), the largest supermarket chain in Central America (Jaramillo 2018). The business grossed two billion dollars a year from 363 establishments until Paiz sold 30 percent of the shares to Walmart in 2005, merging to create Walmart Central America. Fernando Paiz remained president, opening an additional 400 stores by 2006. Walmart took over 100 percent of the company some years later.

In today's Guatemala, the American giant runs 250 retail spaces under brand names like La Despensa Familiar (171 nationwide, three in Xela), Paiz (26 nationwide, one in Xela), Maxi Despensa (43 nationwide, two in Xela, and Walmart Supercenters (ten nationwide, one in Xela)) (Walmart n.d.). To become Guatemala's largest supermarket chain, Walmart overtook what is now the second largest presence, UniSuper. Founded in 1950, UniSuper operates 80 supermarkets under the brand name La Torre (three of which are in Xela) and 13 smaller express stores. The two companies dominate much of the supermarket market in Guatemala. With just three stores in Guatemala City, PriceSmart is the third largest supermarket vendor in the country.

It is a leading Costco-style warehouse club in Central America that first came to Guatemala in 1997.

Supermarkets of course stock many different kinds of products. These include prepared foods and ingredients that people buy to cook with at home. The US supplies 30 percent of consumer-oriented agricultural product imports to Guatemala worth US\$417 million (USDA GAIN Report 2018b). These include, in order of size of market, corn, soy, wheat, poultry meat (but not eggs),¹⁰ and pork and pork products. That makes the US the country's largest supplier, but it is not the only one. Mexico, Costa Rica, and El Salvador supply around 15 percent each (ibid.).

As various chapters in this dissertation will attest, this tells only part of the story. In all, only 30 percent of nationwide food sales happen through supermarkets; the rest occur through long-standing municipal markets throughout Guatemala's towns (USDA GAIN Report 2018b). Most of the corn Guatemalans eat is still produced domestically and much of it for subsistence consumption by the country's rural, largely indigenous and poor population. Guatemalan industrial poultry operations produce most of the country's chicken and eggs, crowding out small producers. Highland smallholders grow most of the fresh vegetables sold throughout Guatemala and neighboring countries, produce that is transported by enterprising intermediaries despite great risks.

VAST ACCUMULATION OF EDIBLE WEALTH IN GUATEMALA

In Guatemala, a small number of powerful families have dominated the economy and politics, building up vast empires by dominating many sectors of society, not least its food. The

¹⁰ The United States is not able to import eggs into the country due to the differences in egg handling. American eggs are washed, which means that they need refrigeration. Eggs in Guatemala are not washed and are sold unrefrigerated.

intimate links between the country's economic elite and its government institutions are important to consider for they reveal the kinds of state-business alliances that have shaped agricultural and food-related wealth making. They show that, at least until now, domestic capitalists have had as much and often more power than foreign ones to shape Guatemala's economy.

Chief among the elite families of Guatemala is the Gutiérrez-Bosch clan, the owners of Pollo Campero's parent company, Corporación Multi Inversiones (CMI). The family-owned conglomerate started in agriculture, poultry and food in in the 1920 and diversified further into real estate in the 1980s, financial services in the 1990s, energy in the 2000s, and telecommunications and hotels in the 2010s. Today, CMI employs over 30,000 employees in 16 countries across its six divisions. Its banking groups include Banco Industrial and Banco Reformador (De Guate 2019).

CMI's co-president, Juan Luis Bosch Gutiérrez, has also presided over both the Guatemalan Industrial Chamber and the Coordinating Committee of Agriculture, Commerce, Industry, and Finance Associations (CACIF), a powerful industry umbrella group whose influence on congressional votes has been found to outstrip that of the deputies' affiliated political parties (Gustavo 2012). He brother, Felipe Antonio Bosch Gutiérrez, has also served CACIF's president, is the Chairman of the Board at CMI, and is the Director of the non-profit group, The Foundation for the Development of Guatemala (FUNDESA) (FINDESA n.d.). Their cousin, Juan Guillermo Gutiérrez Strauss, has twice run for President of Guatemala (in 2011 and 2015). Some slate his brother, Dionisio Gutiérrez Mayorga, a CMI board member and who is the wealthiest Guatemalan alive today (Prensa Libre 2015a), and who is slated to be the next Guatemalan president in 2021 (Epoca 2019).

The Gutiérrez men are among the country's 260 millionaires, who make up the 0.001 percent of Guatemalans whose combined wealth of \$30 billion equals to 56 percent of the national GDP (Rodas 2015). Meanwhile, 59 percent of the population lives below the national poverty line (World Bank 2018b). Dubbed the Rockefellers of Guatemala, the Gutiérrez-Bosch lineage is number one on the Forbes' list of the most influential families in Central America. Number four on the list is the Castillo-Monge family, the owners of the 82-business empire, Corporación Castillo Hermanos. The company has owned the country's leading beer producer, Cervecería Centroamericana, since 1896, and the Central American Bottling Corporation (CBC), which owns the Pepsi-distributor, Embotelladora La Mariposa, since 1885. Ricardo Castillo Sinibaldi, Jorge Castillo Love y Juan Monge Calderón are all family members who are also political figures in Guatemala (De Guate 2019).

The Gutiérrezes, the Bosches, and the Monges and their various enterprises coordinate their activities by collaborating through powerful business, lobby, and NGO groups. Their corporate partnerships include the Paiz family who owned and operated the La Torre supermarket brand, among others. Other business associates include Cementos Progreso and Pantaleón Sugar Holdings. Cementos Progreso is the country's leading construction company with annual sales above \$400 million. It was founded in 1899 by Carlos Juan José Novella Kleé, whose family is also one of the wealthiest in Guatemala today and whose political members include Juan José Melville Novella, Juan Miguel Torrebiarte Novella (De Guate 2019). For its part, Pantaleón, the largest sugar exporter in Latin America today, has operated in Guatemala since 1849. It is still run by the Herrera family, the descendants of Manuel María Herrera, Minister of Development under General Justo Rufino Barrios (1873-85), and of Carlos Herrera Luna, former President of Guatemala (1920-21). According to Edgar Rubio Castañeda, a leftist

Colonel who recently wrote the insider expose, “*Desde Cartel*,” “From the Cartel,” together, the Gutierrez Bosch, Castillo, Paiz, Novella, and Herrera families are worth over one billion US dollars and have influenced all of the Congress’ “retrograde economic and social laws,” such as one of the lowest income tax rates in the world together¹¹ with high consumer goods taxes (Unger 2017). All of Guatemala’s powerful families are interconnected not only through business enterprise and coordinated political activities, but through a closed circle of personal relationships, including friendships and inter-marriages (Casaús Arzú 1992).

This chapter further illustrates that the landscape of food production, commerce, and consumption in Guatemala is a complex mix of local, national, regional, and international trade involving corporate and non-corporate actors. It is also a food ecology that problematizes the conventional-alternative food binary that is often found in the alternative food networks literature. Even a tripartite categorization of customary, industrial, and alternative foodways is problematic as they intersect in multiple ways and individuals, like Aré from the previous chapter, often participate in a mixture of them. Meanwhile, Xela’s and Guatemala’s food landscape also troubles the idea of domination of US agriculture and food businesses, showing instead the central role of national capital in accumulating vast wealth from this and other sectors. Yet, it takes two to tango. How Guatemalan food businesses, like Pollo Campero, have become so successful among Guatemala’s consumers is important to consider. The next chapter takes up this question by looking at the advertising and marketing strategies of different brands.

¹¹ The top income tax rate is just seven percent.

**CHAPTER 5: FEEDING YOUR LOVE FOR GUATEMALA: DISCIPLINING TASTES,
BUILDING A NATION**

Whenever I travel back from Guatemala, I witness, with my eyes and my nostrils, a common practice. I share the aircraft cabin with large bags of fried chicken whose aromas fill the plane and whose cartoon-chicken logo signals to all the country's leading fast-food brand, Pollo Campero. The food typically accompanies Guatemalans and returning diaspora on their journeys to North America even though they could buy fresh meals at Campero restaurants in 77 major US cities and more than 100 other locations worldwide. But it is not just travelers who have a taste for Pollo Campero. The first restaurant opened in Guatemala in 1971, and the company now boasts 320 restaurants and take-out stores across the country. While her children prefer McDonald's, Lucia, a 37-year-old lawyer from Xela, loves Pollo Campero instead. "I am very Chapína in this way," she likes to say in a way that suggests that a true, proud Guatemalan favors Pollo Campero over international fast-food brands. Chapín (Chapína in its feminine form) is a widely-used shorthand denoting a Guatemalteco, a person from Guatemala.¹² YouTube channels, like Alo Chapín and Videos Chapín, caption recordings of eaters frequenting Campero joints with tags like "eating like a Chapín." For many Chapínes inside and outside of Guatemala's borders,¹³ Pollo Campero represents a treasured national brand and a nostalgically Guatemalan way of eating out.

Pollo Campero is not the only popular food brand with links to the nation in Guatemala. A lunch containing Tortrix chips greets United-States deportees as they enter an airport building

¹² 'Chapín' is commonly used in everyday speech to denote a Guatemalan even by those who adamantly claim that inside the country the label pertains only to Guatemaltecos from the capital city and not from other regions.

¹³ 'Chapín' is also a marker of Guatemalan identity for some of the country's diaspora (e.g., Golash-Boza 2011).

where a large sign in Spanish and Quiché languages reads: “Now you’re in your country and with your people.” State officials chose the brand “to help returning migrants readjust to society” (O’Keefe 2014). Wedding planners intent on providing foreign guests with a “Chapín wedding” experience include Tortrix in welcome kits that also feature indigenously-dressed dolls and Guatemalan rum (Villalobos Viato 2016). On Facebook, Guatemalans state that “whoever does not enjoy a Coca Cola and a Tortrix is not a Chapín.” The bags of salty and spiced corn-based snacks first circulated in the country in the sixties. Today, the company annually produces over 500 million bags of a dozen or so flavors that are sold for just \$0.13 each (Muñoz 2012).

This chapter helps shed some light on additional processes by which peripheral food regimes get established. It continues to show that Guatemala’s food sectors have been dominated by domestic rather than foreign capital. At the same time, it reveals some of the ground-level mechanisms the businesses have employed to become successful. The chapter shows that while the companies mimicked American-style food production, with their business leaders learning their techniques through travel to the United States, they employed localized strategies to sell their products to Guatemalan publics.

Analyzing the companies’ historical sales and marketing strategies allows us to understand how they both nurture and harvest their associations with a particularly Guatemalan way of eating out and snacking. I focus on three inter-related strategies (although there are many others that cannot be covered here.) These include creating a generational rift by disciplining young consumers, displacing old habits by inserting the brands into the landscape of known foods, and emotive marketing that associates the brands with trending identity shifts and promotes a unified national identity. Through an analysis of some of the brands’ advertisements I trace disparate visions for the country and what it means to be a Guatemalteco. I call these “the

modernist Guatemalan,” “the content Chapin,” “the striving Guatemalteco,” and “the *Indio Permitido*.” I link these representations to race-class struggles in the country between the elite, non-indigenous, and indigenous sectors of the population.

GENERATIONAL RIFTS, LIFELONG CONSUMERS AND NOSTALGIA MARKETING

The story of Tortrix is instructive in the tactics that food businesses have used to succeed in becoming a part of Guatemala’s fabric of consumption. Tortrix chips first circulated in 1962 after the company’s founder, José René Menéndez Martínez, returned from a trip to the United States where he learned various snack-making techniques (Barrientos 2013). Seeing home-cooking and tortilla-making habits as barriers to sales, the company recognized the need to socialize new generations of Guatemalans into buying convenience foods. It devised a strategy of marketing and heavily discounting the snacks in schools where children could buy them for two centavos a bag while the cost to the general public was five centavos. A company executive celebrated that “[w]e all have Tortrix in our blood, it really was a novel idea [to market to children]” (Barrientos et al. 2013). Today, industrial snacks and drinks are widely sold in Guatemalan school *tiendas*, small stores that are typically located in the central playgrounds or just outside. Of all the industrial snacks available, however, the brand reigns. A study of four primary schools, for example, found that Tortrix was the students’ most preferred snack (Pehlke et al. 2016).¹⁴

Pollo Campero too markets to children as a way to discipline their taste buds through positive brand associations. Its children’s menus come with toy giveaways, a practice invented by Guatemala’s first McDonald’s franchisee and later perfected in the United States as “The Happy Meal” (Borrelli 2019). Pollo Campero runs child-oriented competitions, like a series of

¹⁴ The second most preferred snack was mango.

contests during the 1980s that invited entrants to draw the best that Guatemala has to offer (Guate en los 80's 2012). The brand's chicken mascot decorates its restaurant walls and children's play areas. One brand manager explained that "[p]romotions focused on attracting children, for example: Super Hero characters, toys, etc... are key, because it creates a relationship with them to establish them as lifelong consumers" (Flores Morales 2004, 53).

The companies' efforts to create "lifelong consumers" with positive associations from childhood have seen success, as seen in people's nostalgic associations with Tortrix. For example, more than 55,000 Facebook users reacted positively (with 49,464 likes, 3,015 smiles, and 2,595 loves) to a 2016 company post showing a couple on a date enjoying a bag of Tortrix and a bag of soda captioned with "These are dates only a few will understand" (Tortrix 2016). Facebookers shared the post 3,587 times and generated 234 discussion threads of a total of 1,793 comments.¹⁵ A quarter of the comments threads (26.1 percent) on the dates posts included a proposal for such a tryst to a loved one. In a fifth of the conversations (19.7 percent) commenters delighted in or poked fun at the cheapness of such a date, with a handful of respondents (3.4 percent) quipping that youth nowadays expect more luxury dates instead. More than a sixth (15.0 percent) professed love for the depicted way of snacking. Four percent of responders explicitly claimed it a Chapín thing to do in comments like "whoever does not enjoy a Coca Cola and a Tortrix is not a Chapín" and "I remember from my childhood that spicy lemon Tortrix was awesome with my Pepsi."

¹⁵ Only 30 of the 55,256 reactions were negative (thumbs down or angry face). With responses like "[t]ogether until diabetes separates us," six commenters critiqued the post for promoting unhealthy consumption. While it is possible that more negative comments were filtered out by Tortrix in an effort to curate only positive replies. However, such filtering would be very time consuming to do on a larger scale. It is possible that Tortrix filtered initial comments but stopped curating as more poured in and the post spread. For example, company representatives replied personally to the first 111 threads but stopped commenting beyond that. Most of the Tortrix comments were stock responses like thumbs up, winks, and smiley faces.



Figure 5: Tortrix's Viral "Dates" Facebook Post

Demonstrating lifelong brand loyalty, explicitly nostalgic comments or the sentiment of “that’s so us” featured in 26.1 percent of the 233 threads. Most commenters started conversations with others to travel down the memory lane:

Angel, remember when we ate like this? Except it was with the chiltepe [Tortrix flavor].

Baby, look, this is what we talked about the other day. How romantic. They are advertising like this... they stole our idea... Many memories came to me [after seeing this], my love.

Well, it’s true, how I miss those afternoons with you... you were the best.

Others stated their memories as fact:

The truth is, that was a great time when you were 10 years old.

As you say, only a few will understand this. It was like this with my boyfriend. He is now my husband and although we no longer suffer economically we always share one tortrix and drink one soda in the same glass to remember the old times.

Hmmm, Tortrix is so delicious. This reminds me of times past and the soda in a bag.

In 28 percent of the nostalgic responses the users expressly linked their memories to learning to eat Tortrix as children and at school, with comments like “[t]his reminded me of break times at school!! There was nothing better;” and “I haven’t had dates like that, but [eating Tortrix] after school or during break, that was the best.”¹⁶

LANDSCAPE OF THE KNOWN AND MAKING THE STRANGE FAMILIAR

Creating lifelong brand customers out of exotic products also requires making them seem familiar. To come up with the name Tortrix, José Menéndez amalgamated the Spanish word, *tortilla*, and the English word, tricks. This branding reveals another part of the company’s sales vision: to associate the snack with the most ubiquitous food in Guatemala, corn. Tortrix circulates messages that tell Guatemalans that the snack is the same as the maize they are used to eating. For example, one Facebook post sets three packets of Tortrix chips against a background of rainbow-colored corn varieties with the words “There is no difference...” in the middle. The ingredients list of a Tortrix bag attest to many differences between it and maize. Nevertheless, the advertising successfully misleads some consumers, such as Rolando, a respondent in a study of food changes among the Q’eqchi’ Maya in the Livingston area, who “stated that Tortrix is “healthy” and “just like our tortillas” (Williams 2017, 42). While Rolando understood other types of chips as “unhealthy,” he singled out Tortrix as healthy because of the brand’s successful equivalencing of its products with the corn that the campesino grows.

¹⁶ There is no data available on the amount of money spent on industrial food advertising in Guatemala. There are also no figures on the percentage that directly targets children. In the UK, advertising of “unhealthy foods” to children runs in excess of £250 million (~US\$300 million) (Food Foundation 2017). The promotion of fresh vegetables accounts for only 1.2 percent of all broadcast advertising spend in the UK (Food Foundation 2016). I did not see nor hear any promotions of fresh fruits or vegetables on mainstream television, radio, or newspaper channels during my time in Guatemala.

The is one way that the company attempts to make the strange familiar. Just as the American Committee on Food Habits taught women to include kidney in their steak pies, Tortrix shows Guatemalans how they can fit the snack into their existing dietary repertoires. One image, for example, shows Tortrix sprinkled onto fried eggs, another into a breakfast oatmeal.



Figure 6: *Tortrix in the Landscape of Known Foods*

Pollo Campero has similarly been able to insert fried chicken into the landscape of known foods. But it has done so in a slightly different way. To understand how it is worth visiting a typical restaurant.

Every day, young servers in bright lime, orange, and yellow polka-dot t-shirts greet patrons entering the typically-busy Pollo Campero restaurants throughout Guatemala. The standardized menus offer “complete,” traditional breakfasts of eggs, beans, cheese, plantains, crème, and sausage, as well as fried chicken sandwiches and ham and cheese croissants. Lunches and dinners are the province of chicken meals, with original, grilled, and extra crispy options served with side options of guacamole, beans, or fries. There are also fried chicken sandwiches, burgers, wraps, and salads, and combos of thighs, strips, and wings. Also typically on offer at the back of the menu are pizzas to eat in or take out from Campero’s very own Telepizza brand.

The meals are not cheap, averaging Q40 (\$5.33) for breakfast, Q49 (\$6.55) for lunch/dinner, and Q43.75 (\$5.83) for an individual pizza. Yet, the restaurants serve plenty of clientele, whether they sport western clothing or indigenous *traje* and campesino-style dress, especially in its Highland franchises, like in the city of Quetzaltenango. The sit-down service model, booths to accommodate larger groups, and lack of Wi-Fi provide for a different experience compared to foreign chains like McDonald's that are less frequently visited by indigenous-presenting Guatemalans.

As chapter nine will detail, one man I spoke with as he enjoyed his meal in McDonald's characterized Pollo Campero as providing a *comida completa*, a complete meal that juxtaposed against McDonald's having "just burgers." Similarly, Hondurans classify food available in foreign fast food restaurants, like McDonald's and Burger King, as snacks rather than "real" meals, which must include rice, among other things. In Guatemala, a meal includes a little bit of many kinds of things on a plate that must, especially in the Highlands, be eaten with tortillas or *tamalitos*, smaller versions of *tamales*, cornmeal cooked in the leaves of a cob.

The differences between the two restaurants are reflected in the appearance of novel food groups in Mayan languages. Among the Maya K'iche' of Nahualá in the western Highlands, Pollo Campero falls into the new category of *wokbal kilim ak, venta de pollo frito*, 'a place selling fried chicken,' while McDonald's fits into *kaxlan wokbal, venta de comida extranjera*, 'a place selling foreign food' (Cuj, personal communication).¹⁷

In other words, Pollo Campero introduced fried chicken meals to Guatemala.

McDonald's introduced burgers. Neither foods were prevalent in the country before the 1970s.

¹⁷ The research shows the creation of new linguistic taxonomies for various types of industrial foods that have entered the communities in the last half a century. Another example is *xaq munil*, which includes snacks eaten when craved such as cookies, chips, and soda (Cuj, Sattler, and de Beausset forthcoming).

However, fried chicken has become a more ubiquitous part of eating out in the country. Pollo Campero serves more than eighty million dishes a year in Guatemala alone, with an estimated US\$500 million in global sales in 2016 (M. G. Díaz 2019).

Part of Pollo Campero's success lay in inserting fried chicken into the landscape of known foods for both indigenous and non-indigenous Guatemalans, whether or not that strategy was explicit. The restaurant's model mimics some of the qualities that, for many, make a meal a meal, and makes eating out a special occasion: it runs a sit-down service model, its food comes with known accompaniments like avocado and beans and includes a little of each thing, and (often indigenous) women sell tortillas at the Highlands franchises' entryways. The other part of Campero's success lays in associating the brand with the Guatemalan identity. The history of the company's founding helps shed light on the processes involved.

“TAN GUATEMALTECO COMO TÚ”

Pollo Campero's official history tells a rags-to-riches story of its founders (CMI Website 2019). The franchise is part of Corporación Multi Inversiones (CMI), a large agro-industrial conglomerate that grew out of a convenience store opened by Juan Batista Gutiérrez in 1920 in San Cristobal, Totonicapán (CMI Website 2018). Batista was just six years old when, in 1902, his parents travelled from their native Spain to Guatemala in search of opportunity (CMI 2016). By 1936, his expanded business entered the flour mill industry under the brand of Molino Excelsior and began its first poultry farming operation in 1964, extending it to El Salvador and other Central American countries in 1972, one year after Juan Batista Gutiérrez, along with his business associates and his son, Dionisio Gutiérrez Gutiérrez, opened the doors of CMI's first Pollo Campero restaurant in Guatemala. After Gutierrez Gutiérrez died in a 1974 plane crash, his own son, Dionisio Gutiérrez Mayorga, took over the conglomerate and the rest is history.

Missing from the official narrative is the role played by another man. In a recent BBC World interview, Francisco Pérez de Antón took credit for developing the business and the fried chicken's characteristic flavor (M. G. Díaz 2019). The Spanish transplant came to Guatemala in 1963 to marry the Xela-born María Consuelo Gutiérrez, the grand-niece of CMI's founder, Juan Batista Gutiérrez. Pérez de Antón first worked at Gutiérrez' industrial chicken factory. He recalled that chicken was not very popular at the time, so he wanted to experiment with "added value" products. The young man started by frying chicken from the back of a pickup outside a movie theatre. Pérez de Antón recounted how he was overwhelmed by his success as people flocked to the food. "I sold 700 portions in a week," he said.

Pérez de Antón went on to travel to the United States to learn fried chicken techniques and to create a flavor he deemed suitable for the Guatemalan market. He settled on an ingredient to enhance the juiciness of the chicken, an additive that he jokes made the chicken "addictive." After some years of success, Gutiérrez's son, Dionisio and his cousin Juan Batista Gutiérrez, invested US\$1,500 to open the first Pollo Campero restaurant in 1971.

The popularity of the restaurant model was not the only surprise Pérez de Antón remembers. The diversity of customers attracted to Pollo Campero was also unexpected. I have argued that part of the acceptance of Pollo Campero by non-indigenous and indigenous Guatemalans lay in it inserting fried chicken into the landscape of known foods and expectation about ways of eating. While the company initially imagined advertising to the middle classes, Pérez de Antón decided to aim for a bigger societal catchment area by appealing to the national Guatemalan identity. He coined the slogan "*Tan Guatemalteco Como Tú,*" "As Guatemalan as You," a nationalistic catchphrase that the brand replicated in El Salvador with "As Salvadorian as You." Restaurants in the two countries were opened within a year of each other and some El

Salvadorians still erroneously claim that Campero was founded on their soil. The company continues to use the slogan to this day, along with others it has since developed, like “A Taste of Who We Are” from the 1980s (Canal I Love Guate 2013b) and “Feeding Your Love for Guatemala” from the 1990s (Canal I Love Guate 2013a). For his part, Pérez de Antón left the business in 1984 to focus on his passion of writing. He went on to become a prominent Guatemalan author, winning the National Prize in Literature in 2011 (M. G. Díaz 2019). He also wrote a book called “A Memorial of Kitchens and Battles: The Unique Story of the Birth and Development of Pollo Campero (1969-1984)” (Pérez de Antón 2002). In it, he argues that the chain’s success in Guatemala lies contra to the predictions of core-periphery relations of dependency theories: “we did not “depend” on anyone, nor were subjects of “domination” by no-one, and, even as we operated on the periphery, the center subjected us to no blackmail” (Pérez de Antón 2002, 100).

Pollo Campero is not alone in associating itself with the national identity in Guatemala. Having changed corporate hands several times since its 1962 founding, Tortrix was acquired by the American global giant, PepsiCo’s Frito-Lay company, in 2005. To address declining sales in an increasingly competitive snack market, the company endeavored to position the brand within the national culture as a symbol of Guatemala whereby Tortrix would trigger consumer “feeling[s] of belonging and identity” (Fuentes 2007). The company’s marketing strategy proceeded by associating humorous and positive messages with the national identity by releasing multiple annual campaigns specifically targeting the label Chapín.

While both companies have reported oriented to appealing to the national identity, the vision of Guatemala and its people that their ads have presented have differed. This is to be expected since appealing to the national identity is just one advertising strategy among many.

The Tortrix “there is no difference” ads that promote the chips’ similarity to corn is a case in point as it does not explicitly point to identity. Companies segment their marketing strategies depending on the consumers they are targeting, as was made clear by Campero’s brand manager:

Advertising must be specific to each market and should not be a universal recipe. Consumers of each market are studied to understand their values, preferences and lifestyle, so that communication establishes a unique and relevant connection that can be developed over time (Flores Morales 2004, 54).

Important information about the segment of the population the brands target can be gleaned from the content of their ads. The different Pollo Campero and Tortrix advertisements represent four different versions of Guatemalanness, reflecting different and sometimes competing visions for nation-building.

HISTORICAL RACE-CLASS RELATIONS IN GUATEMALA

Ladino is a Guatemalan social category that is conceived of in opposition to indigenous people through behavioral rather than phenotypic traits, such as speaking only Spanish, dressing in western clothes, and practicing mainly Iberian customs. The classification dates to the 16th century when the group occupied the second level in the colonial social pyramid: although less oppressed than the “Indians,” ladinos had limited access to resources and opportunities compared with the Spaniards and *criollos* (descendants of Spaniards), whose ideology of racism, discrimination, and exploitation they nevertheless adopted (Pelaez 2009). Leaders pushing for independence from the Spanish crown envisioned a highly industrialized and “ethnically homogeneous Guatemalan nation” in which there would be no Indians or ladinos, just Guatemalans (Hale 1999, 301). After the 1821 formation of the Republic, the Guatemalan state and its international allies treated the country’s cultural-linguistic diversity as an obstacle to its development. Ladinos were then explicitly articulated as the national group and Indians as the

homogenous, anti-national other during the Liberal Reforms of the 1870s (McCreery 1994; Palmer 1993; Smith 1990).

In the following decades, to deal with what the International Bank of Reconstruction and Development (now The World Bank) called “the Indian problem”(IBRD 1957, 3), domestic and foreign elites espoused ideologies of indigenous assimilation into the ladino culture. Even during the 1944-54 Democratic Spring, the administration of President Jacobo Árbenz attempted a land redistribution program in the hopes of creating a homogenous revolutionary peasant class by “ladinonizing” the Indians and integrating them into national society as citizens with land, political, and labor rights (Handy 1994). The subsequent CIA-installed Castillo Armas regime explicitly looked to the United States for an example of modernization to follow. The coup ushered in four decades of military dictatorships and the 36-year Civil War and state-perpetrated genocide that left up to 250,000 (mostly Maya) civilians dead or disappeared and one and a half million displaced (Nelson 2015). Like Árbenz before them, leaders of the Rebel Armed Forces (FAR) who fought Guatemala’s military sought to incite a social revolution that integrated indigenous people, and others on the margins, into a homogeneous national community (Kirkpatrick 2006).

Other movements in Guatemala have pushed for a more multicultural representation of the nation. The 1996 Peace Accords strengthened the 1985 constitutional recognition of Guatemala as a multiethnic, multicultural, and multilingual nation and proposed reforms to redress the systemic injustices that indigenous people had historically endured (Jonas 2000). The Accords led to the significant expansion of the Pan Mayan Movement of indigenous intellectuals who, since the early 1980s, sought to revitalize Maya culture, unite Mayan groups, and push for political representation of indigenous people (Fischer and Brown 1996; Smith 1991; Warren and

Jackson 2002). Today, the Government of Guatemala recognizes ladino as an ethnic classification along with 21 Maya linguistic categories and the Garifuna and Xinka coastal groups.

Yet post-war state multiculturalism has been widely criticized for supporting only cultural, rather than political and economic, rights and promoting a limited version of an *indio permitido* (authorized Indian), an indigenous Guatemalan who is politically moderate, bureaucratically savvy, and adequately cosmopolitan (Hale 2004). He is an indigenous Guatemala who promotes Maya language and culture but does not assert himself too readily on the political stage.

The war and post-war periods also saw the expansion of the discourse of *Chapinismo* in Guatemala. The idea of Chapinismos as particular Guatemalan-Spanish parlances had already existed at least by the end of the 19th century (Lentzner 1893). However, the wider Chapín discourse matured during the 1960s, 70s, and 80s (Way 2015). The armed conflict helped to spread “Chapín” as an alternative identity label to divisive markers of the past. For instance, recognizing a wider social yearning to heal social rifts, especially between indigenous and *ladino* (non-indigenous) groups, Rigoberta Menchú, a Mayan leader and a Nobel Peace Prize winner who (unsuccessfully) ran for president in 2007 and 2011, spoke of an emerging shared culture: “The Chapín culture has not come cheaply; Indians and ladinos have paid their dues in struggle, in awareness, in daily work to forge this culture” (Menchú 1992, 65).

Other studies find post-war ethnic ambivalence among ladinos who use anti-racism discourses to distance themselves from problematic labels (Hale 2006), and among Mayans for whom religious and place-based identities ring strongest (MacKenzie 2010). This has led some scholars to reassess if ethnic identities are still as dominant in daily life in Guatemala (Stoll

2011), even as they are performed to attract tourist (Little 2004) and development (Villavicencio 2017) dollars. Charles Hale sees ladino uses of terms like hybridity, *mestizaje*, equality, anti-racism, and other progressive-sounding discourses as elite appropriations of critical social science concepts that are used to continue to dominate and disenfranchise indigenous people (1999). For him, these narratives reinforce social exclusions through erasing of difference.

This practice may be read as racism going underground, where colorblind rhetoric masks ongoing and more insidious forms of discrimination and oppression (Combs 2017). But the fact that some Guatemalans are beginning to shun classic expressions of racism also “sounds like progress” to David Stoll (2011, 142). Many of my participants expressed that it was important to recognize that “we are all Guatemalans,” “we are all Chapínes.” This was the case both for ladinos and for those identifying as Maya or indigenous. This is not simply the internalization of dominant views that is characteristic of symbolic violence which Bourdieu and Wacquant (1992, 167) define as being “inflicted on a social agent with his or her complicity.” It is also a recognition that to move forward, society needs to overcome (*superar*) social divisions. One of the proposed ways to do that is through sharing a sense of unity in an imagined national community (Anderson 1991), which, from an idealistic standpoint, can be transformative only if within that national community social differences are accepted, respected, and equally valued. This is the kind of multiculturalism that Guatemala’s Pan-Maya movement desired, even though a much more limited version of it actually transpired (Hale 2002). In the post-war moment, new communal identity markers, be it a Chapín culture, a Guatemalteco identity, or something else, have become important to some as people seek overcome the discrimination and violence of the past.

This is not to say that racism or racial hierarchies no longer exist or that the Chapín label is uncontested. To the contrary, its usage is fluid and dynamic. One middle class woman I spoke with was born in Guatemala City but moved to Quetzaltenango for her work as a nutritionist. She did not know of any Mayan roots in her family. When I asked her how she identifies, she said: “I am a Chapína, Chapína. Ladina, I imagine. I don’t know.”

Lucia, on the other hand, was born in Chimaltenango. Her maternal grandfather had German roots but her family did not preserve much of their history. Lucia did not want to associate with the ladina and indigenous labels, preferring to think of herself as mestiza:

I think that most of us are mestizos, we are mestizos ehm... That is what I think. Those in the capital [city] probably think that they have less indigenous roots than those of the interior of the Republic and, for example, as those of certain areas of the coast. They also believe they have less indigenous roots than here in Xela because Quetzaltenango itself is a place with a lot of K'iche' history. And Mam too. [The Capitalinos] have in mind that their ancestors are more Spanish than indigenous. On both sides, both among the indigenous and ladinos, there is a lot of discrimination. A lot, a lot of discrimination, a lot of racism. So I think it is good to say that I have both of them and I do not fight with either of them.

Despite this discussion, Lucia claimed the term Chapína as shorthand for a proud Guatemalteca when describing her preference for Pollo Campero at the beginning of this chapter. She was not the only one to juxtapose Chapín food against foreign brands. I spoke with one young man from San Cristobal, Totonicapán, a town 30 minutes away from Xela, who identifies as indigenous although he does not speak a Mayan language. When I asked him where he likes to eat out, he said: “Where, where it is more, how do you say it, more Chapín. Because I don’t like fast food. I don’t like McDonald’s. [I prefer] something Chapín. I don’t like McDonald’s. Perhaps I am more used to Guatemalan cuisine.” When I asked him to elaborate on his sense of identity, he told me that others classify his community as Maya K’iche’. I pressed him on whether or not his practices any indigenous customs. He replied that older people in his community do, but he does

not. He went on to tell me that he is also Catholic but does not practice anything Catholic either, but he still most identifies with the Maya culture because his grandparents are K'iche'. Our conversation took us to his small business rearing chickens and selling poultry and eggs. He had no formal training in how to take care of the birds, so he learned by doing. "We, Chapínes, we throw ourselves into the water. We don't know how to swim but we just do it and learn." I asked him what Chapín meant. He asserted that Chapín is a general term for Guatemalans but a person from San Cristobal is called *Cristobalence*, while a person from Quetzaltenango is called a Quetzalteco. "But it does not matter," he asserted, "it is all the same, we are all Guatemaltecos."

Some natives of Quetzaltenango, for example, maintain that while people outside of Guatemala used Chapín for all Guatemaltecos, inside the country the label only refers to Guatemalans from the capital city. They differentiated themselves as proud Quetzaltecos instead and tended to tell stories of Xela's bid for independence as the capital of the Sexto Estado. Others equated Chapín with the label ladino. Others claimed a more community-based identity but still called themselves Chapínes in the flow of normal conversation.

CHAPÍNES LOOKING FOR CHANGE IN GUATEMALA

There is also a political dimension to the label Chapín. Recent years have seen Guatemalans of all backgrounds struggle against the interlinked axes of corruption, crime and violence that have contextualized their existence. In 2011, the public demanded an end to widespread crime and violence and thus elected General Otto Pérez Molina on a tough-on-crime conservative platform of change. In 2014, widespread protests led to the repeal of a plant protections law—dubbed the Monsanto Law—that would have legalized GMO crops, including corn, in the country, a move widely perceived as both blasphemous and violent (Grandia 2017).

For the last four years, Guatemalans have repeatedly asserted themselves against elite corruption in the country.

In April 2015, Guatemala erupted in mass protests the likes of which the country had not seen since the democratic opening of 1944. Students, business owners, and indigenous leaders sustained a peaceful demonstration of tens of thousands of people for almost 20 weekends in response to *La Línea*, a hotline through which high-level officials accepted business bribes in return for lower import taxes, in the process defrauding the public purse of \$120 million (Bigda 2015). Galvanized via social media with the hashtag *#RenunciaYa* (*#ResignNow*), the uprising called for measures to hold the guilty accountable, reform the constitution, and strengthen the independence of the judicial system, leading to the resignations and arrests of both President Otto Pérez Molina and Vice President Roxana Baldetti.

The events signaled hopes for a turning point in Guatemala's turbulent contemporary history of race-class divisions, the state's violent squelching of revolt, and almost complete impunity for crimes large and small. The protests re-surfaced in March and September of 2017 to call for the resignation of the President-elect, Jimmy Morales, a political outsider who swept to power in 2015 on a platform of "Not Corrupt, Not a Thief" only to soon be embroiled in a series of his own graft and misconduct scandals. The end of his presidency signaled a backlash against initial hopes of change and attained progress. Morales went on to expel the UN-backed corruption investigating body, CICIG (Luhnnow 2019), that had put Molina and Baldetti in jail. He also went on to agree to designate Guatemala "a safe third country" for asylum-seekers after America's president, Donald Trump, threatened to impose tariffs on outgoing Guatemalan exports and incoming American remittances (Malkin 2019).¹⁸

¹⁸ Guatemala's Constitutional Court blocked Morales' attempt to accept the third-country designation in July 2019 (Menchu 2019).

CORPORATE THEORIES OF CHANGEMAKING IN GUATEMALA

The last decade has also seen the economic elite coordinate their efforts to support achieving change in Guatemala by promoting a unified national identity of hard-working and consuming Guatemalans. *Guatemaltecos Mejoremos Guatemala* (Guatemalans, Let's Improve Guatemala), *Mejoremos Guate* for short, for example, is a foundation formed in 2011 by a consortium of leading business interests. The project's website lists comprehensive proposals that will encourage its members "to walk in the same direction. The result is a path to follow, to invest our time and efforts and enforce it in order to build a better Guatemala" (Mejoremos Guate n.d.). The group includes many enterprises that belong to the same families of European origin (Spanish, German, and Italian) that have dominated Guatemala's economy and politics for almost two centuries.

Mejoremos Guate was founded in 2011 by leaders of CACIF, FUNDESA, and AGEXPORT (and industry group of agricultural exporters). Of the businesses mentioned throughout this section, it lists the following as its members. In order of appearance: Azúcar de Guatemala/ASAZGUA (a sugar industry group), Banco Industrial, the Central American Bottling Corporation, Cervecería Centroamericana, Cementos Progreso, Corporación Multi Inversiones (CMI), Pantaleón Sugar Holdings, La Torre, and seven others. The group presents a united business front in its visions for Guatemala. The foundation's English language page describes the initiative this way:

Mejoremos Guate is an initiative set in to motion by a group of entrepreneurs who joined forces and resources to develop a national strategy in order to influence public policies in favor of the country's development. It is a citizen proposal, open and inclusive, to promote dialogue and achieve a consensual national plan with other actors and sectors. The initiative is driven by a united private sector, integrating projects and technical initiatives, marking a path that will allow us to work together towards a more prosperous, solidary, safe and just nation (Mejoremos Guate n.d.).

Promoting national solidarity is one of the organization's three strategies for achieving its goal of "increasing the nation's competitiveness for job creation." At the same time, many of the involved businesses use nationalistic rhetoric in their individual marketing campaigns. This includes Banco Industrial, Corporación Multi Inversiones, Cervecería Centroamericana, Cementos Progresos, and 26 other for-profit and non-profit initiatives (Tock 2017). As Tock (2015) concluded, it is the oligarchic private sector, not the government, that widely promotes national pride in Guatemala.

It is of note that members of this oligarchic elite have been documented to hold racist views against indigenous people. The historian, Marta Casaús Arzú, famously interviewed more than 100 members of Guatemala's prominent economic-political families for her book "Guatemala: Lineage and Racism" (Casaús Arzú 1992). She found that two thirds of them considered "Guatemalan Indians to be inferior, lazy, thieves, liars, drunks, deserving to be forced to work hard, to be under-paid, or even exterminated (as five of the interviewees recommend)" (Vilas 1993, 663). This makes it possible to understand, Casaús Arzú argued, why the elite supported the genocide of the 1970s and 1980s and policies that promoted the assimilation (ladinization) of Guatemala's indigenous people. It is also possible to see how this ideology can logically underpin elites' desire for a unified Guatemalan public. The promotion of a proud national identity whose self-worth is tied into hard work, striving, and self-improvement is another way that presumed inferior, lazy, thieving, and drunk Guatemalans can be assimilated.

This brief history of shifting race-class configurations, societal turbulences, and demands for change in Guatemala is helpful in locating different visions for Guatemala as a nation and ideas about what makes a Guatemalteco. I now turn to the Campero and Tortrix ads to discuss

the four national identity tropes they entail. The analysis demonstrates the symbolic connections that the brands have with different factions of Guatemalan society.

THE FOUR GUATEMALANS OF FOOD ADVERTISING

1) *The Modernist Guatemalan*

Pollo Campero's catchphrase, "As Guatemalan as You," is not the only marketing tool that the company has used since the 1970s. Every decade until now, the it has backgrounded all of its nationalistic slogans by its hymn, "Let's Sing for Guatemala." The sentimental jingle was released after the devastating 1976 earthquake (Nómada 2014). Its music and lyrics have not changed since. It calls on Guatemalans to: "all advance together, in the same direction. [To] all work together for the good of the nation. [To] sing for Guatemala, our beautiful and beloved earth... because together we will make a great nation."

The song's call for Guatemalans to work together for the country have accompanied a vision of its citizens that I call the "Modernist Guatemalan." For example, a 1970s commercial shifted between scenes of male workers on a construction site, at a smelting plant, and in long-distance trucks with the following narration:

The worker wakes up. When the sun rises, he gets up full of joy to serve his nation. Each day you strengthen her progress... You use modern techniques, manage construction, pour the red-hot metal to transform raw material, and transport our products to distant places. Worker of my land, you are Guatemala! (Canal I Love Guate 2013b).

In another example, a 1990s ad played the song over scenes of cowboys riding modern tractors, white children in western school uniforms, sportsmen racing state-of-the-art kayaks, and white-coated researchers pacing a busy science lab (Canal I Love Guate 2013a). In total, 10 out of 13 analyzed Campero ads from the 1970s through to the 2010s represented a high-modernist, industrial country populated with European-looking citizens, contradicting a reality where 73.5

percent of the population works informally¹⁹ and 38.8 percent is officially indigenous (INE Guatemala 2016)²⁰.

These Pollo Campero marketing campaigns are distinctly futurist. They confer a sense of a people on the move and a country that is set to follow the path of industrial, agricultural, scientific and social development of wealthier, whiter nations. They envisage a nation spellbound by the allure of the foreign. The messaging matches the explicit desires of the many generations of ruling elites to modernize the country, including leftists like Jacobo Árbenz. It also speaks to the kind of emulation that has been encouraged by the United States since the world wars, a vision committed to pen in Castillo Armas' Plan de Tegucigalpa.

2) *The Content Chapín*

In contrast, Tortrix's Chapín ads represent an anti-elitist Guatemalan who shuns European pretensions in favor of distinctly Guatemalan ways of being, talking, and eating. The 2008 ad series, "These Chapínes are Missing Tortrix," for example, portrayed Guatemalans who could, with the help of Tortrix, learn to be more Chapín-like. One television spot showed a family at dinner, who, to background classical music, snobbishly discussed the evening's menu of potato salad, soufflé and cheesecake (Sandovalscobedo 2008a). Suddenly, they get interrupted by a loud buzzer and flashing lights. A male voice shouts "Ahhhh, these Chapínes are missing Tortrix," after which the family gets covered up to their necks in bags of the snack, the music switches to the marimba, and their voices become more regionally inflected as they instead ask for local dishes of *chipilín tamalitos* and fried plantains. In another ad, a young man fails to impress a young boy whose sister he is courting when he communicates in formal Spanish (Sandovalscobedo 2008b). He only gains acceptance after the same Tortrix intervention

¹⁹ International Labour Organization, ILOSTAT database. Data retrieved in August 2018.

²⁰ Other estimates of the population's ethnicity range from 40-60 percent indigenous (Valladares 2010).

when he starts using the more common Guatemalan Spanish. These two ads were joined by other variations on the theme (e.g. Sandovalscobedo 2008c). Other themes include an earlier Tortrix ad series called “*Heroe Chapin*,” “Chapin Hero.” It celebrated ordinary Guatemalans who, from shoe makers (Sandovalscobedo 2010b) to machete crafters (Sandovalscobedo 2010a), purportedly represent the “Chapín culture.”

These Tortrix ads represent a different kind of national subject to Campero’s Modernist Guatemalan. The series never include indigenous-presenting protagonists. Instead, they are middle class Guatemalans who may have previously been called ladinos. The country’s historic race-class hierarchies might have oriented the ladino against “backward” indigenous people and aspirationally against a creole elite. However, the Tortrix Chapin identity is not compared to someone else. It leaves behind outwards expressions of racism against the Maya. It leaves out the Maya, period. But it also does not idealize the country’s elites, many of whom have proven corrupt. The ads do not represent a Chapín that needs changing, that needs to modernize. It symbolizes instead a Chapín with an internally-derived sense of worth and acceptance. She is a Chapína who is content with who she is.

The advertisements point to shared ways of being that define the label and its sense of worth. This excludes pretension and foreign influences. It does include ways of speaking that are peculiar to Guatemala and more humble and common professions than those the Modernizing Guatemalan engages in. Ironically, the Chapín in the ads also claims as his own elements of cuisine with deep Mayan roots, like *chipilín tamalitos* and fried plantains. He also, of course, eats Tortrix.

And this message resonates. For instance, on March 31, 2017, Tortrix published a Facebook post that mimicked a dictionary entry to say: “CHAPÍNES Adj. [sic]. A beautiful

thing, a lovely thing, a thing well done” (Tortrix 2017). The post received more than 60,000 positive reactions, was shared 17,500 times, and generated almost 300 comments. 10 percent of the commenters professed their love for Tortrix. Two thirds identified positively in other ways with the post, with some expressing being proudly Chapín in tags like “Chapínes, we are really made like Tortrix and a bag of soda.” However, 13 percent of the comments questioned the appropriateness of the word “Chapín,” citing its colonial origins in a Spanish platform shoe and its Mexican use as a pejorative term for Guatemalans. The other 10 percent rejected the post’s various premises, offering up alternative definitions like “Chapín people are dirty, without education” and perceiving instead that “every day we get worse as a society.” Nevertheless, tens of thousands of Guatemalans positively connected with the Tortrix message enough to like and share it on their own and their friends’ pages.

3) *The Striving Guatemalteco*

Another trope evident in food company advertising is what I call the “Striving Guatemalteco.” It has been most evident in campaigns that followed the #RenunciaYa anti-corruption protests of 2015, which sought a different kind of Guatemala. Unlike the Tortrix Chapín, who is encouraged to be content with himself, however, the “Striving Guatemalteco” is reminded that he has to first change himself to build a great nation. This portion of the analysis includes a prominent campaign ran by Pepsi, an American brand distributed by a national bottling company belonging to the Castillo family.

While Pepsi is a foreign brand, the Castillo family’s Embotelladora La Mariposa has held exclusive rights to produce, bottle, and distribute Pepsi since 1942. It is important to stress that while Pepsi is a global brand and beverage, its national distribution in Guatemala belongs to Embotelladora La Mariposa and it is Embotelladora La Mariposa that finances and runs its

marketing campaigns. Pepsi's national links in Guatemala are also evident in its domestic partnerships. Unlike McDonald's, which serves only Coca-Cola beverages, Pollo Campero restaurants exclusively serve Pepsi products.

Pepsi is one of two market leaders in the soft drinks sector. In 2016, an estimated 89 percent of Guatemalan households bought Pepsi beverages on average 26 times per year (Media Press GT 2017). While the brand slightly trails Coca-Cola in sales, in 2017 Pepsi had three times as many online Guatemalan fans as Coke (Solares 2017). Its popularity means that, like Coke, Pepsi shows up in language, religion, and everyday practices like cooking (Nagata et al. 2011). With almost 700,000 Facebook followers, Mundo Chapin (Chapin World) is a website dedicated to "contributing to a positive national identity" (Mundo Chapin 2019). "Sirloin Steak in Pepsi Cola Sauce" is the only one of the site's 250 recipes, which purportedly represent the "national heritage of Guatemala," to feature a brand-name product as an ingredient. And Pepsi, like Campero and Tortrix, has marketed directly to the national identity, including during their post-#RenunciaYa campaigns.

Food companies keeping up with national protest sentiments did not miss the opportunity to capitalize on public desires for change. On May 3, 2016, a year after the initial social spark, Pollo Campero launched a new advertising campaign (Pollo Campero Guatemala 2016a). It used wordplay, emotive scenes, and inspirational music to propose that large changes lie in each Guatemalan moving "from talk to decision," "from postponing to proposing," "from conformity to nonconformity," "from leaving to sharing," and "from laziness to prowess." In the middle, the video cut to the now-iconic scene of a sea of blue-and-white national flags waving above the heads of the protestors in Guatemala City's Constitution Square. It then presented other poignant visuals and suggested that all Guatemalans move from "pointing [to others] to giving an

example,” “from indifference to making a difference,” and “from egoism to heroism.” In the finale, backgrounded by the climax of the triumphant music, the deep-voiced narrator and the words on the screen read: “If we all change, all will change.” Versions of the promotion appeared on television and radio, print and social media, and giant billboards throughout the country. The company also asked its 735,000 Guatemalan Facebook followers to vote for successful Guatemalans who embody the proposed changes, decorating the winners in a televised “Hero of my Country Awards” (Pollo Campero Guatemala 2016b)

Pollo Campero was not alone in capitalizing on the eventful year. In July of 2016, Embotelladora La Mariposa launched the latest stage of its Guatemorfosis campaign for Pepsi. Guatemorfosis first began in 2012 after the election of President Molina with the Patriot Party whose closed fist logo and the slogan “con mano dura,” “with a tough hand,” represented hope for curbing crime and violence in the country. It was also a time of widespread anticipation of transformation associated with the end of the latest *b'ak'tun*, a 5,126-year cycle of the Maya calendar (Muralles 2014). The Pepsi-branded campaign called on people to join in “because there is a change waiting for us, and that change will not start until you decide to change” (Pepsi Guatemala 2012). After the 2015 protests, Guatemorfosis focused on individual achievement through TV, radio, and billboard promotions of successful Guatemalans (celebrities, artists, businesspeople) accompanied by the “I belong here, I belong here” nationalistic sentiments of the chorus of “Fronteras,” a song performed by the internationally-acclaimed Guatemalan singer-songwriter, Gaby Moreno (Pepsi Guatemala 2016). Hashtagged with *#YoSoyGuatemorfosis*, *#IAMGuatemorfosis*, the post-protest video received more than 1.2 million views, 11,000 likes, and 800 comments on YouTube.

In February of 2017, Tortrix, a Guatemalan company that now belongs to Frito-Lay (a PepsiCo subsidiary), also began promoting its “secret” for a better Guatemalan future. The secret, according to the company, is to “Go all in with Tortrix!” A company brand manager clarified that “[w]e are starting the year with an innovative campaign... showing Guatemala that we can be better. We want all Chapínes, Tortrix fans, to get involved... and together we can improve the history of our country and commit ourselves... to go all in with Tortrix!” (elPeriódico 2017). The campaign reinforced the messages by giving “Tortrix Gold” awards to two NGO founders to recognize the men as “outstanding Guatemalans who go all in and who, with their work, dedication, and care, are changing the future of our country” (ibid.)

The 2016-17 Campero, Pepsi, and Tortrix post-protest campaigns were consistent in their messaging. All three promoted a national, Guatemalan identity. All three asked Guatemalans to change themselves to change the nation. All three saw that change rooted in labor and individual achievement. Pollo Campero emphasized personal change, heroism, and hard work as routes to national betterment, while Tortrix’s “all in” messaging reinforced heroism and hard work, and Pepsi suggested that national betterment will “guatemorphosize” out of personal transformation and individual success.

The “Striving Guatemalteco” trope reminds people that there is something in them that needs changing. They are called upon to build a great nation through a trickle-up theory of national betterment. While Guatemalans protest the systemic issue of corruption, the food-brand commercials locate Guatemala’s woes inside each Guatemalteco. As a remedy, the ads promote fashioning the Guatemalan self through the instruments of heroism, hard work, entrepreneurship, and self-improvement (O’Neill 2015). These micro-technologies of self-governmentality (Dean 2009; Foucault 1991) hold the promise of forging a nation through the labor of a united

population. All that you have to do is to decide to get ahead—to *superar*—as a 2011 Campero commercial maintained. Over an image of a made-up, well-dressed young ladina woman lunching with two friends, the narrator read: “you are always smiling, happy. You decided to get ahead [*superar*], you are clear about that.”²¹

4) *The Indio Permitido*

There is one thing that unites the marketing campaigns that employ the Modernist Guatemalan, the Content Chapín, and the Striving Guatemalteco tropes. They depict Guatemalans that fit either the European or ladino stereotypes. Indigenous-presenting Guatemalans are entirely absent in the vast majority of the ads. As a Spanish informant had put it to me: “In all these discourses there is a brutal absence of the indigenous people. I don’t like the word Chapín. The word “Guatemalteco” does not mean anything. What does it mean to be Guatemalan? Please! Here [in Guatemala] there are 200 classes of Guatemaltecos.”

One exception to the “brutal absence” rule is a 1980s ad promoting the “Let’s Draw Guatemala” children’s contest (Guate en los 80’s 2012b). The ad’s male narrator speaks over images that alternate between a scene in Guatemala and the painting of that scene by a young boy. The video moves from the lake and mountains to a shot of a *traje*-wearing indigenous woman who is finishing up wrapping her red headdress. The voiceover invites the audience to paint Guatemala’s “nice people and their colorful *traje*” for entrance into the Pollo Campero competition. The ad moves on to describe the entrant categories and available prizes. While the video includes an image of an indigenous woman, she is not a protagonist. She does not look at the camera. She does not speak. She is not identified by her origins, although her headdress and *traje* suggest that she is from Santiago Atitlán. Her presence is tolerated as a colorful backdrop

²¹ I will return to the significance of *superar* in the next chapter.

for ladino children's imaginations. The Tortrix Chapin and the post-protest ads ignored the indigenous Maya altogether, depicting only the non-indigenous Guatemalan class. It would be Pollo Campero again that would break the mold.

As part of the company's "Let's Make Guatemala Our Best Work" multi-year campaign, a 2009 Pollo Campero featured for the first time a campesino man dressed in a white cowboy hat and a rancho dress shirt (MKNetworks 2009). At the beginning of the commercial he is seen shelling maize. The ad then follows him into a milpa field as he narrates: "I work with the earth, with the harvest that I myself planted. I do so with pleasure, care, and love, because with my work I feed people and with my work I make a difference. Let's make Guatemala our best work. Arriba Guate!"

A 2014 ad in the same series featured an indigenous woman as its main protagonist. The commercial shows a woman wearing *traje* running a stall selling tourist souvenirs, who says: "I run our family business. I want to get ahead. So, I work. Hard. And with a smile I attend to all my clients, because I know I'm making a difference. Let's make Guatemala our best work!"

In March 2017, Pollo Campero launched stage two of its "If we all change, all will change" campaign. Its videos and billboards collaged adult and child faces of Guatemala's different ethnicities. The campaign called for unity in diversity through personal change, individual labor, and national pride. The posters read: "16 Million Guatemalans, One Guatemala. If we all change, all will change."

For its own theme tune, Pollo Campero revived "Let's Sing for Guatemala," a sentimental jingle that the company has intermittently used since its founding to call on Guatemalans to "all advance together, in the same direction. [To] all work together for the good

of the nation. [To] sing for Guatemala, our beautiful and beloved earth... because together we will make a great nation.” The company’s executive president explained that

Pollo Campero is proud to be a Guatemalan brand... [that] is very dear to its people. For that reason, we... present this campaign that promotes our unity... There are Guatemalans of different origins, occupations, and ages, but united in the same feeling of making a great nation through work, who express their voice in our hymn, “Let’s Sing for Guatemala” (Martinez 2017).



Figure 7: Pollo Campero’s “If We All Change” Billboards

By including ethnically-diverse faces, Pollo Campero’s “16 Million Guatemalans, One Guatemala” campaign suggests a break with the brand’s advertising past. The inclusion of more diverse faces points to Pollo Campero’s recognition of indigenous people as legitimate customers of the brand and a valid consumer segment of the Guatemalan economy. As was suggested by its founder, the chain has appealed to all sectors of society, including indigenous-presenting campesinos, despite the representational biases in some of its nationalistic marketing. However,

while these ads signal the broadening of media representations of Guatemala's residents, the underlying messaging remains unchanged. The 2009 and 2014 ads still promote hard work and individual striving as routes to making a better Guatemala. Meanwhile, backgrounded by the "Let's Sing for Guatemala" hymn, the 2017 campaign's slogan is still "If we all change, all will change."

While the faces on Campero ads have diversified, the messaging has stayed the same. This resembles Hale's *Indio Permitido*. In Campero's ads, the *Indio* is only allowed to participate if he plays by established rules, not strives to change them. In this way the 2009, 2014 and 2017 Campero commercials represent both a break from and a continuity of the past, depicting only an *Indio Permitido* who assimilates through her hard work, positive attitude, and nationalism. Who still fits the standard narrative.

DO THESE MESSAGES RESONATE?

I bumped into Sandi and her two friends early one morning at the bottom of Cerro El Baúl, a forested lava dome whose apex overlooks the entirety of Quetzaltenango's panorama. As one of Xela's only remaining green areas and the only ecological park, the hill is popular with joggers, cyclists, and dog walkers. Like them, I regularly made my way up one of two steep undulating paths. It was the only outdoor place to move my body in. It was also the only place to give my lungs a break from the smog of Xela's perpetual traffic. Several times a week my chest cavity palpably expanded from the cool air that has been freshly cleansed by the mountain's foliage.

As it did for everyone else, the journey always entailed the risk of armed robbery or sexual assault despite regular walking police patrols. During my short year in Xela, four groups of people I knew personally were ambushed by machete- or gun-carrying men who jumped out of the forest to relieve them of their possessions. One event made the local news when a group of five teenage

girls were accosted, two of whom were allegedly raped. On another occasion, groups of stick-carrying older women coming down the mountain warned me to be cautious because a terrified young woman descended moments before after experiencing a near miss with a would-be assailant. While banding together did not always make a difference, joining Sandi's group lessened the risk. We imagined that the three dogs we had between us would also weigh on the side of caution in any attacker's calculus. We carried no valuables with us.

Sandi and I got talking about the Pepsi Guatemorfosis billboard that for months had adorned the eastern entrance to the city by the Arch of the Sixth State monument. The company had recruited famous local artists and regular people to appear in the campaigns. The Xela billboard featured Baldo, a friend of Sandi's and a regular feature of the city's alternative scene. Although he had started and closed an organic tea shop, participated in theatre-based empowerment projects, and shared Sandi's views on plant-based eating, Baldo was not political, she told me. Whether they hold political views or not, few artists could turn down offers to participate in corporate campaigns, Sandi went on to say. She gave the example of Domingo Lemus, the Xela-based musician and actor who fronts Tortrix *Entrémosle #ConTortrixMuchá* and *MuyMuy* campaigns. As other friends would tell me on different occasions, like it or not, there are few other opportunities to make a living as an artist in Guatemala.

I asked Sandi what she thought about the nationalism promoted by campaigns like Guatemorfosis. "It's propaganda," she asserted, "the idea that you are supposed to change yourself to change the nation." "It is not real" she said. For Sandi, beneath the veneer of a proud and hard-working national subject was an ongoing reality of difference, racism, and inequality. And the Chapín identity? She thinks the term refers to all Guatemalans but the "I am Guatemalan" campaigns are "just marketing, nothing more."

Sandi is critical of company marketing and dismisses it as unrealistic. She represents a contingent of discontented middle-class non-indigenous youth in the city who are questioning the world around them, some more politically than others. Many of them enjoy a cosmopolitan existence. They are well educated, well travelled, and well connected in an expansive friend network of Guatemalans and foreigners living in and around Zone One of the city.

I put to Sandi that not everyone thinks like her. The messages clearly do resonate, and the companies are successfully translating them and other marketing tactics into monetary value. Tortrix's 2005 Chapín branding, for example, led to a 60 percent sales increase compared with 2004, another 49 percent surge in 2006 compared with 2005 (Fuentes 2007), and annual double-digit growth at least through to 2009 (Ad Latina 2009). For its emotive marketing efforts, during 10 years after the global marketing awards, the Effies, came to Guatemala, Tortrix had won five gold, four silver, and two grand awards, picking up the "Brand of 10 Years" honor during the decennial celebrations in 2014 (Effie 2014). All three brands have entered Guatemala's Marketing Hall of Fame: Pollo Campero in 2004, Pepsi in 2009, and Tortrix in 2011. And Pollo Campero and Tortrix earned Lovemark designations,²² two of 18 in Guatemala in 2017 (E&N 2017), after hiring the global advertising agency, Batten, Barton, Durstine and Osborn (BBDO), in 2004 and 2010, respectively.²³

²² Lovemark is a marketing concept that seeks to replace the idea of brands. It was first introduced in the book "Lovemarks: The future beyond brands" by the CEO of the global advertising giant, Saatchi & Saatchi (Roberts and Lafley 2005). On their website, Saatchi & Saatchi define Lovemarks as brands that inspire "loyalty beyond reason" because they "reach your heart as well as your mind, creating an intimate, emotional connection that you just can't live without." Every year, the advertising industry rewards new brands around the world with Lovemark status.

²³ The Pepsi Guatemorfosis campaigns were created by the Guatemalan office of the US-headquartered DDB global marketing network.

CONCLUSIONS

In the four decades after its founding, Pollo Campero ads reflected an elite vision of a future Guatemala that has followed in the footsteps of wealthy foreign countries to become a high-modernist nation. The “modernist Guatemalan” is assimilated. He looks and labors like his neighbors to the North. This representation reflects the dominance of modernization theory of the time. This is connected to the admiration and expressed goals of the country’s elites for mimicking the development path of other countries, primarily the United States, where Campero’s founders learned their craft. The inclusion of European-looking citizens links with a long history of assimilationist goals of Guatemala’s political elites.

Tortrix’s 2000s Chapin campaigns, on the other hand, portray an anti-elitist Chapin identity that is built on an internal self-worth, valorizing the particularities of Guatemalan ways of speaking, working, and eating. I contend that this “content Chapin” trope resonates because of a search for new identity markers that emerged in the post-war period. Both ladinos and indigenous people have sought to overcome—*superar*—(or at least distance themselves) from the racism that underpinned the armed conflict while growing increasingly discontent with a corrupt, super-wealthy elite.

The worsening of precarity, crime, and violence after the war has led to increasing calls for change in Guatemala, including the election of a tough-on-crime president and unprecedented anti-corruption protests. The Campero, Tortrix and other ads that followed promote a “striving Guatemalteco” who changes herself to change the nation. The marketing campaigns came after the country’s oligarchy organized around initiatives like *Mejoremos Guate*. It aims to create jobs and the promotion of a positive national identity as one of its three key tactical pillars. I argue that the “striving Guatemalteco” trope that the companies promote in unison reminds Guatemalans that the problems the country faces are internal to them. They are still “less than.”

If they want to change Guatemala, they first need to change themselves. The path to a great nation is heroic striving represented by individuals working hard to get ahead—*superar*.

Finally, I have argued that Pollo Campero's inclusion of campesino and indigenous people in its campaigns reflects the "*Indio Permitido*" trope identified by Charles Hale. On the one hand, the diversification of protagonists signals social progress. On the other hand, the characters are only permitted within the "striving Guatemalteco" framing. Pollo Campero can no longer ignore a portion of their own clientele, rural and/or indigenous people who have asserted themselves in the consumptive sphere. But the *Indio* can only appear as fitting into the nation as an individual hard worker who asserts her Guatemalanness by eating Tortrix, celebrating her happy moments at Pollo Campero, and enjoying Pepsi with every meal.

Guatemala's panorama of the links between leading brands and historical race-class relations greatly complicates the picture of a high-modern, foreign-dominated food regime. National, not foreign, companies dominate food and many other sectors. They belong to a small handful of elites who have amassed great amounts of edible wealth. They have done so by engaging and promoting ideas about what constitutes a proper meal and or a real Guatemalteco that are steeped in the country's particular history of social relations.

SECTION II: THE SUPERTOXIFICATION OF GUATEMALA'S FOOD ECOLOGY

CHAPTER 6: *MORE IS BETTER*: VEGETABLE FARMING AND CHEMICALLY RISKY FOOD ECOLOGIES

Section II lays out in more detail this dissertation's thesis that one of the ways that peripheral countries' experience of development has differed from rich country experiences is through the supertoxification of their food ecologies. The use of industrial inputs, technologies, and medicines in food provision have introduced various new food-system risks that affect ecological and human health. This chapter examines the use of agrichemicals in the production of vegetables in and around Xela. It follows the chemicals from the farm to local markets and to consumers to show their benefits and risks. It shows that farmers adopted agrichemicals and input-heavy vegetable production because it helped free them from worse conditions of migrating for seasonal plantation harvesting labor to the coast while allowing them to expand, not contract, their production of subsistence milpa. This was the case initially, when early adopters reaped the biggest yield gains before productivity benefits tapered off. However, this came with trade off down the line. The chemicals are used unsafely due to a lack of public institutions that can offer a layer of protection against the hazards the toxins pose. This contributes to the supertoxification of local food ecologies that endanger the health of farmers and their communities and final consumers as the chemicals travel through the food chain.

ALMOLONGA

Quetzaltenango is a city encircled by agriculture. Its surrounding communities are dedicated to agricultural production of traditional *milpa* crops, seasonal flowers, and non-traditional vegetables. The vegetables require year-round irrigation and most farmers use synthetic fertilizers and pesticides in their production. While farming is ubiquitous in the

department's towns, villages, and countryside, one place occupies a central position in local narratives about food hazards and safety, Almolonga.

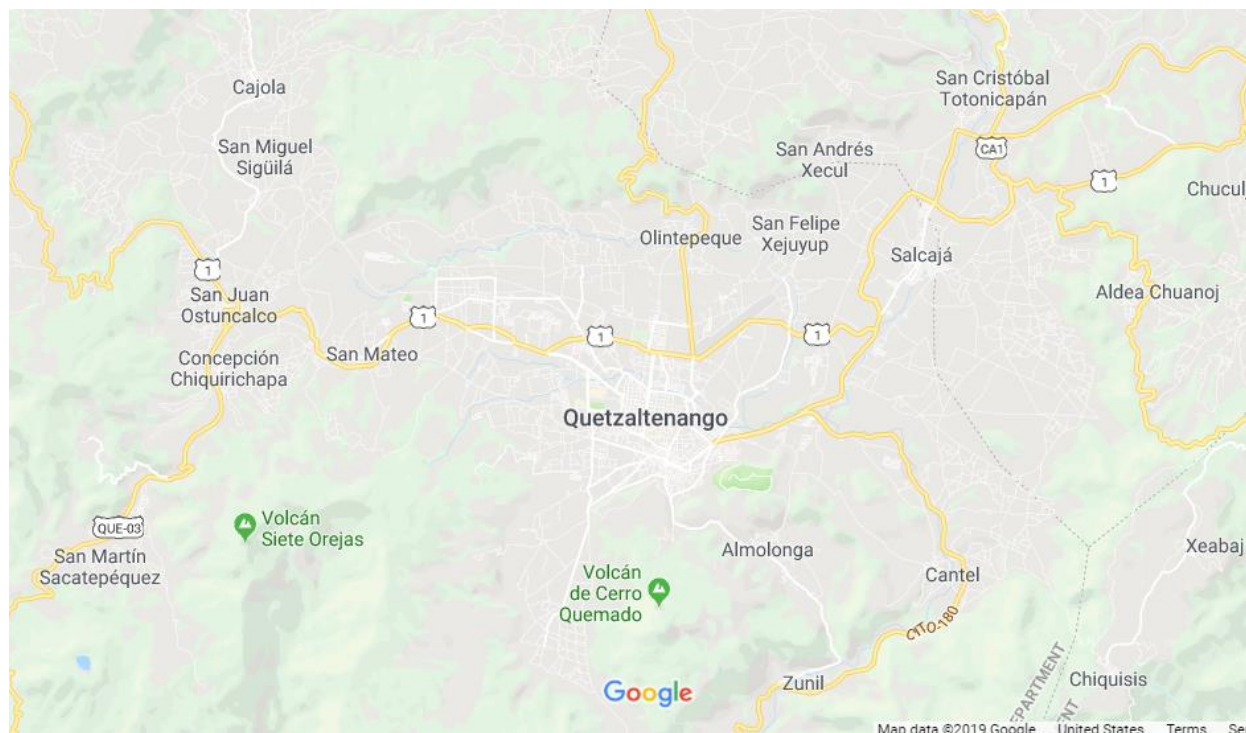


Figure 8: Xela and its Surrounding Communities

Almolonga is a 20-square kilometer, mainly indigenous K'iche', agricultural highland town that lies five km southeast of the historic center of Quetzaltenango. Dubbed “The Garden of the Americas,” Almolonga produces multiple harvests a year of flawless, often gigantic vegetables. Intermediaries export much of the produce to El Salvador and other neighboring countries, but plenty of the crops end up in local Guatemalan markets as well. Today, Almolonga grows 89 percent of all the cabbage produced in Guatemala, 42 percent of beets, 36 percent of carrots, and 29 percent of onions (Carmack, Gasco, and Gossen 2016, 356).

In pre-Columbian Náhuatl, Almolonga means “the place where water springs.” It speaks to the valley’s location at the confluence of several water sources that allow for year-round irrigation. Almolonga also enjoys cool temperatures and fertile volcanic soils due to its close proximity to the Santa María and La Muela volcanos. Despite these geographical advantages, it is reported that until the 1970s the town was quiet and agricultural production was low (The Economist 2017).

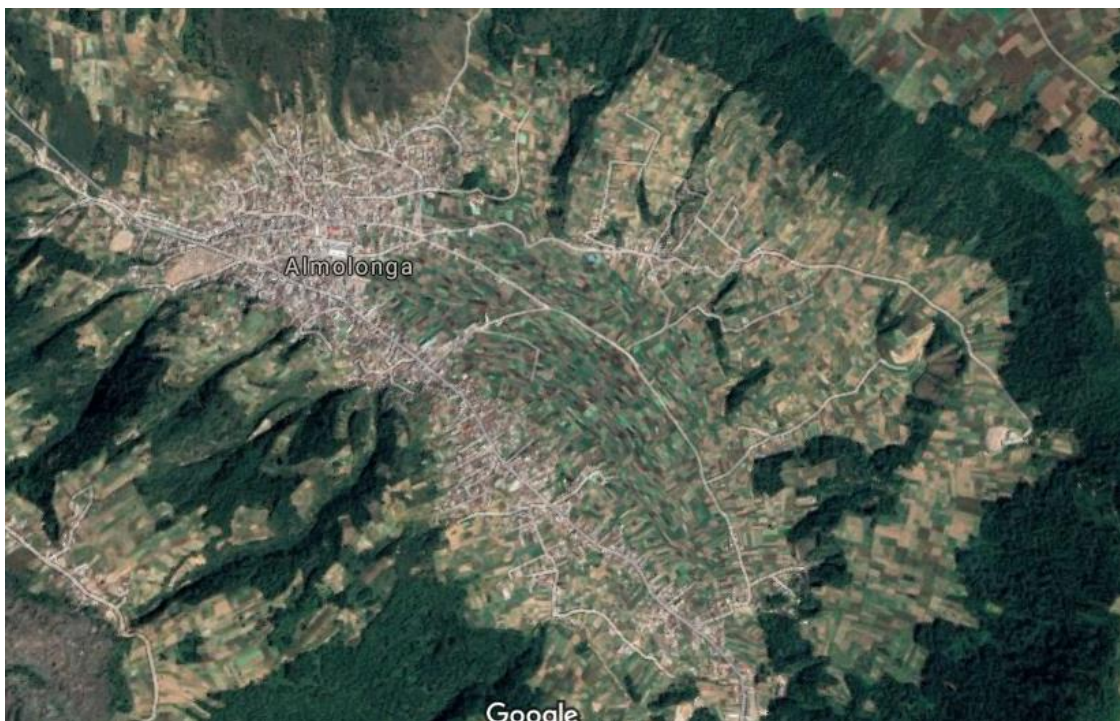


Figure 9: Birdseye View of the Vegetable Patchwork of the Almolonga Valley

Photo: Google Earth

Not so now. With 80 percent of the population involved in agriculture, this valley never sleeps. Wearing headlamps for work in the darkness, local men, women, and children, and hired agricultural workers from the coast—more than 5,000 of whom cultivate over 500 hectares of land (González M, Livio Zúniga, and Wilson 2013)—start harvesting vegetables as early as one AM. By then, trucks already await their daily bounty of carrots, celery, and spinach from the

people who wash and pack them in a shallow river at the southern end of the fields. The river springs up higher in the mountains and the water supply runs through public bath houses and residential homes before reaching the agricultural fields and the busy vegetable-washing spot downstream. Water is not chlorinated and, when tested, the town's piped H₂O has been found to contain high concentrations of fecal coliforms (Arbona 1998).

The Protestant community claims Almolonga as a “miracle town” since the last few decades' increases in production coincided with the spread of Evangelism (Duke 2012) ;²⁴ two dozen churches serving a population of just 25,000 people have added to the dozens of *cantinas* (bars) that Almolonga was famous for in the 1970s (BBC Mundo 2016). The accompanying protestant ethic and the prosperity gospel are credited with inspiring the town's population to sober up, work hard, and seek wealth (Gramajo and Alfaro 2012). The town and its miracle story have attracted substantial international attention, with recent coverage by the likes of the BBC (BBC Stories 2018), The Economist (2017), and Public Radio International (Bracken 2016).

Yet, scholars have shown that Almolongueños' history of production for the market stretches back throughout the colonial and post-colonial period. As well as growing small amounts of *criollo* vegetables for supplying coastal *fincas*, they produced and traded easily-transportable, durable goods, like grains, domestic fowl, and wool throughout the 17th, 18th, and 19th centuries (Goldin 2009). Production occurred first on communal lands and then on private

²⁴ Dozens of videos published on YouTube claim Almolonga as an example of the transformation of communities that embrace evangelism. For example, in English, there is the 2011 “City Transformation! Almolonga, Guatemala” with 42,000 views and the 2013 “John Benefiel: Transformation in Almolonga, Guatemala” with 3,360 views. In Spanish, there are the 2012 “Transformación 1” with 149,000 views and “Transformación 2” with 15,000 views, the 2011 “Documental: Almolonga Ciudad Milagro” with 230,000 views, and the 2010 “Almolonga” with 491,000.

holdings during the 19th and twentieth centuries as, throughout Guatemala, communities were legislatively obliged to rent or sell their lands to wealthy ladino families for commercial production (McCreery 1983; Reeves 2006). In Almolonga, one such family owned the largest expanse of flat, arable valley, before it needed money and sold it back to native families in smaller, fragmented plots, so that by the turn of the twentieth century Almolongueños owned most of the land of their township (Goldin 1989; Goldin and Tejada 1993).



Figure 10: Vegetable pickers start as early as one AM in the valley of Almolonga, Guatemala

Photo: Luc Forsyth

Artificial inputs had been promoted in Guatemala since the turn of the twentieth century after the development of first potassium and nitrogen fertilizer industries in Europe in 1861 and 1903, respectively (Russel and Williams 1977). According to historical records reviewed by

David Carey, a 1903 *Boletín de Agricultura* asserted that all plants required chemical fertilizers, MAGA promoted their use during the next two decades, and by the 1920s evangelical missionaries in San Antonio Aguas Calientes opened an agri-service store selling artificial inputs (Carey 2009).

But those were exceptions. Although agronomists and academics continued to promote the virtues of chemical inputs throughout the first half of the century, synthetic inputs did not catch on in rural communities until the 1950s and 1960s when USAID and ENCA-trained agronomists pushed Green Revolution technologies throughout the countryside (Carey 2009).

Although farmers throughout the highlands had initial trepidations about adopting the inputs, the prospect of higher yields was attractive (Carey 2009). It engendered the promise of being able to overcome corn shortages that had repeatedly plagued the communities since the 1870s. It also included the possibility of no longer having to seek agricultural employment outside of their communities, such as seasonal migration to work on coastal plantations that many still had to do despite the abolition of forced labor in the mid-1940s. And they saw initial results; by the 1960s maize yields had increased (Carey 2009).

When it came to vegetables, carrot and cabbage seeds from the United States arrived in Guatemala as early as the 1940s and synthetic pesticides followed closely behind. By 1950, Cobre and Gamexan were widely used as pesticides, the latter of which is an extremely toxic organochlorine insecticide (AVANSCO 1994, cited in Arbona 1998, 49). With these developments, and with the 1940s construction of the Pan-American Highway, vegetable production in Almolonga increased during the 1940s and 1950s (Goldin 2009) as did cash cropping of lucrative crops like garlic and onions in communities like Aguacatán, where cooperatives were giving out fertilizers to their members by the mid-1960s (Brintnall 1979).

But it was not until the 1980s that vegetable production began to intensify significantly due to additional external interventions in smallholder production systems. By the late 1970s, as part of internationally-supported strategies for rural development, many farmers were convinced to convert some of their land to produce non-traditional vegetables for export. Aid agencies worked on the premise that Guatemalan smallholders held a comparative advantage in being able to exploit household labor, making them internationally competitive in the production of high-value, labor-intensive crops like broccoli and snow peas (Hamilton and Fischer 2003). The sector was introduced as part of structural adjustment and pro-poor export-oriented policies of actors like the IMF, World Bank, and aid groups (Krznaric 2006). The crops depended on intensive agrichemical use. The farmers depended on USAID loan guarantees to afford the needed seed and input technologies while Guatemala's national banks favored lending to large-scale operations instead (Carey 2009). In Almolonga, as elsewhere, the push for vegetable production and adoption of agrichemicals coincided with the 1970s rise of born-again Christianity and its gospel of prosperity, sobriety, and work ethic (Gramajo and Alfaro 2012; Tec López 2017). The multiple forces contributed to the rise in economic prosperity of the town (Goldin 1989).

During the 1990s and early 2000s, several research groups tracked the outcomes of the introduction of non-traditional crops around Guatemala's highlands. They typically found that despite mixed results and some drawbacks, farming communities praised their involvement in export cash cropping for allowing them to control their labor and maintain ties to their communities and their agrarian traditions.

World Bank's Calogero Carletto and his colleagues, for example, tracked two decades of changes in the Santiago Sacatepéquez community that adopted snow pea production. After reviewing long-term effects, they found that average welfare standards increased for all

communities members (Carletto, Kilic, and Kirk 2011). However, highest improvements were seen among early-adopting farmers who quit snow pea production after the initial 1980s boom and before yield declines that followed. Producers who continued with snow peas into the 2000s showed the least improvement despite initial welfare bumps.

Anthropologists have been as interested in *emic* measures of success and welfare gains as *etic* ones. A longitudinal project with Kaqchikel farmers between 1998 and 2004, for example, found that vegetable producers were concerned about toxicity of production methods and increased class differentiation that eroded community solidarity (Hamilton and Fischer 2005). However, they also valued the cash crop income generating strategy for the opportunity for advancement that it afforded and the ability to use their land and labor to strengthen community bonds. The sector also led to concentration of land in favor of Maya smallholders and supported more egalitarian gender relations (Hamilton, Asturias de Barrios, and Tevalan 2001; Hamilton and Fischer 2003). Anthropological research in other communities also found that farmers held a positive overall assessment of their wellbeing since the introduction of non-traditional agricultural crops (Goldin 1992). Broccoli farmers in Tecpán, for example, welcomed the opportunity that export cash cropping provided for securing “something better” in their lives (Fischer and Benson 2005; 2006). Meanwhile, vegetable production has not replaced subsistence cropping of *milpa* or diverted household funds to buying corn. Instead, farmers have used their cash crop windfalls to underwrite and expand maize cultivation (Isakson 2009).

Guatemala’s communities have reaped some economic and social benefits of adopting chemical-intensive production methods. Yet some foresaw that the chemical agents would act on human bodies, the soil, water, and other organisms in possibly deleterious ways. From the initial entry of the substances into their towns and fields Maya farmers worried about the changes they

ushered in in their relationship to the land and nature (Carey 2009). How the chemicals are used today suggests their premonitions were prescient.

A WALK THROUGH THE FIELDS

On a chilly October morning, a journalist-colleague and I awoke at three AM at a friend's home in Almolonga to set off on a walk through its field. Mario was pouring a milky blue solution he just mixed into his backpack sprayer when we greeted him. We talked for a while about his production. His lettuce was almost ready for harvesting, so he walked from his home in the center of Almolonga to prevent a fungus from infecting the crop and to additionally fertilize the field where neat piles of white chemical fertilizer pellets were already perfectly symmetrically stacked between every plant.

To create the milky blue solution, Mario mixed a fungicide called Mirage 45 with a nitrate-rich fertilizer called Phito. The day before, he sprayed the lettuce with Amistar, another fungicide. Its empty packet lay discarded on the edge of his field, close to one of the gushing streams that make up the valley's extensive network of concrete and earth canals that guide excess water downstream to the area's busy vegetable-washing spot. We saw many such abandoned packets, some of which understatedly warn: "*Precaución. Antídoto: No Tiene,*" Caution: There is No Antidote."

Mario got his recommendations about which chemicals to apply, how, and in which quantities from an agrichemicals store in town. Noticing that he was wearing only jeans and a hoodie, we asked if it was dangerous to expose the skin on his hands and back directly to the mixture. "Normally, I use protective clothing," he assured us. "But not today, because this chemical is not very strong," he said. We thanked him for his time and moved on.



Figure 11: Discarded Chemical Packaging in Almolonga

*Left: Discarded packages lines one of the canals in Almolonga.
Right: “Warning: There is no antidote,” reads the label of a bottle in a field of onions.*



Figure 12: Jeans and a Hoodie: Clothes Mario Wore During our Visit

Photo: Luc Forsyth

MARIO IS LIKELY SLOWLY BEING POISONED – IS IT HIS OWN FAULT?

I was curious about the chemicals Mario was using. In the book, “The Death of Ramón Gonzales” (Wright 1990), I had read about the terrible effects of pesticide poisonings on the health of agricultural workers in Culiacan Valley in Oaxaca, Mexico. Those afflictions ranged from skin problems and respiratory diseases to cancers and deaths. Around the world, acute pesticide poisonings happen in the course of agricultural and public mosquito-control work, through accidental exposure of children, and by purposeful ingestion aimed at self-harm (Jørs, Neupane, and London 2018).

Global estimates have accuracy issues, but they still point to the size and spread of the problem. According to a recent review, around three million people are hospitalized each year due to acute pesticide poisoning, 300,000 of whom die as a result (Jørs, Neupane, and London 2018). Ninety nine percent of the three million poisonings occur in developing countries even though these nations use only a quarter of the world’s agrichemicals (Jeyaratnam 1990). With the risks so serious, I wondered, could Mario be in more danger than he seems to realize?

When I returned to Xela, I began researching Mirage 45 and Amistar, some of the chemicals Mario was using on the day of our conversation. What I learned left me deeply concerned: Although he does not seem to realize it, Mario is likely slowly being poisoned. So are the other Almolonga farmers I spoke with, especially those who perceived few risks in the agrichemicals they routinely use.²⁵

²⁵ Tito, for example, is one farmer who thought that because he had not yet fallen ill the chemicals must be safe. However, it is possible that he has simply not been diagnosed. During my fieldwork, Guatemalans most frequently linked pesticides to cancers and gastrointestinal problems. Cancer screenings are highly inaccessible in Guatemala, especially in rural areas and in indigenous communities. They are not routinely offered in health posts, especially not in Mayan languages and not without pay. Meanwhile, if someone is diagnosed, the only two treatment centers are located in Guatemala city (Flood et al. 2018).

While many chemicals make up any given insecticide, fungicide, or herbicide, which are collectively called pesticides, little is known about the combined effects of the mixtures (Hernández et al. 2013). Laws only require agricultural companies to list the main chemical that aims to eradicate an unwanted pest. While some scientists study the effects of these active ingredients on individual species or the environment, others investigate the impacts of existing pesticide use on human communities.

The active ingredient in Mirage 45 is a substance called Prochloraz. It is sold under the brand name, Sportak, which was developed by Bayer but bought by the Food Manufacturing Corporation (FMC) in 2011 (Bloomberg 2011). FMC is an American agricultural sciences company with revenues of \$4.7 billion in 2018 (FMC Corporation 2019). It has ambitions to grow to a \$5.5-6 billion a year “crop protection leader” by 2025 (FMC Corporation 2019, 1). Prochloraz works by inhibiting the production of ergosterol—a substance with similar functions as cholesterol in animals—that is needed for cell membrane growth in fungi. It is a broad based, systemic fungicide that is widely used in Europe and Latin America but is not registered for use in the United States.

In their online database of Central American Pesticides, the National University of Costa Rica lists Prochloraz as an endocrine-disruptor, a neurotoxin, and a possible carcinogen (UNA n.d.). Endocrine disruptors interfere with human and animal hormone systems, at times causing cancerous tumors, birth defects, and reproductive problems. Neurotoxins can induce fatal toxic shocks. Carcinogens can damage DNA so that cells are changed in a way that causes them to become cancerous.

One of the best documented endocrine disrupting effects of Prochloraz is that in-vitro exposure in parent animals leads to severe sexual deformation of their offspring. The chemical

feminizes male infant rats by reducing the production of testicular testosterone and increasing the production of luteinizing hormone, responsible for ovulation in females (Laier et al. 2006; Vinggaard et al. 2005; 2006). This deforms the penises of male rat fetuses and causes them to grow vaginal pouches. The same feminization effects has been found in amphibians (Haselman et al. 2018), while zebrafish experience the masculinization of offspring instead: more males and intersex individuals are born when fish eggs are exposed to Prochloraz (Kinnberg et al. 2007). This effect persists even when exposure is discontinued just after the point of embryo's sexual differentiation (Baumann et al. 2015).

What about Amistar, that chemical whose packaging lay discarded on the edge of Mario's field? Amistar is developed by the global agrichemical giant Syngenta. With thousands of tons in production each year, and projected global sales of US\$25 billion by 2020, Amistar's active ingredient Azoxystrobin is one of the most predominant fungicides on the market (Business Wire 2016).

Yet, despite Azoxytrobin's global ubiquity—the fungicide is manufactured in more than 80 countries (Agro News 2017)—scientists are only just beginning to learn about its effects on non-target organisms. The chemical drifts into and persists in aquatic ecosystems (Rodrigues, Lopes, and Pardal 2013) and unsprayed soils (P. G. Edwards, Murphy, and Lydy 2016) and research demonstrates its negative effects on the species it contacts. For example, Azoxytrobin has been shown to damage the reproductive capacity (Cao et al. 2016) and fetal endocrine development (Jiang et al. 2018) of zebrafish. It also damages the DNA of various species, like zebrafish (Han et al. 2016) and earthworms (Han et al. 2014), reduces colony growth of soil bacterial and fungi, completely eliminating some species in the process (Baćmaga, Kucharski,

and Wyszowska 2015), and retards cell growth in juvenile Atlantic salmon (Olsvik et al. 2010). The studies typically report worse effects at higher doses.



Mario mixed a milky blue solution while we talked

Amistar packaging lay discarded on the edge of Mario's field

Figure 13: Mario and the Chemicals He Uses

Just because a chemical damages an animal in a certain way does not mean that it will have the same effect in humans. Studies of rats, fish, and micro-organisms are controlled experiments that deliberately expose organisms to different doses of toxins to measure the effects. Doing similar research on people would be highly unethical.²⁶ However, with existing widespread use of pesticides, a natural experiment is occurring in urban and rural communities.

²⁶ Guatemala has a history of unethical human experimentation by scientists from other countries. The US recently apologized for its 1940s unethical experimentation with syphilis in the country whereby participants were injected with the disease to study its natural course (Palomo 2015).

Well-designed real-world studies that compare areas of high and low exposure to chemicals can reliably point to their effects in human beings.

In a famous anthropological study, researchers compared two groups of children of four and five years of age in northwest Mexico (Guillette et al. 1998). All the children belonged to the Yaqui indigenous groups and thus shared the same diets, genetic backgrounds, cultural patterns, and social structures. One group lived in an agricultural valley with a historically heavy use of agrichemicals. The other group lived in the foothills where pesticide use was avoided. The anthropologists administered various tests to the two groups. Compared with the children from the chemical-free foothills, the children of the agricultural valley showed poor stamina, memory, and hand-to-eye coordination. The other big difference was between the children's abilities to draw a person.

Pesticide health impacts have been found in Xela as well. In a more recent study, a pharmacologist from Guatemala's University of San Carlos concluded that, compared with a control group, children exposed to pesticides used in agricultural production in the department of Quetzaltenango were 10 times more likely to develop Acute Lymphocytic Leukemia, the main cancer affecting children between zero and 14 years old in Guatemala (Vargas et al. 2014). Children who were directly exposed to fumigations inside or outside the home had an 11.5 times higher risk of developing the condition. Children who lived close to fields that used pesticides were 9.3 times more likely. More research is needed to confirm the effects, but this retrospective cohort study observed large differences despite a small sample size of 24 cancer patients and 24 controls. At the same time, researchers around the world who study environmental exposure to pesticides and cancer rates frequently find positive associations across much larger samples. For example, in a population-based case-control study of 23,715 Spanish children, Gómez-Barroso

et al. (2016) found that living near crops generally known to be sprayed with pesticides is a risk factor for childhood malignant tumors. Meanwhile, Silva et al. (2016) found a positive association between prostate cancer and pesticides or agricultural occupations in a metanalysis of 49 non-randomized controlled studies that met the New Castle-Ottawa scale criteria for methodological quality.

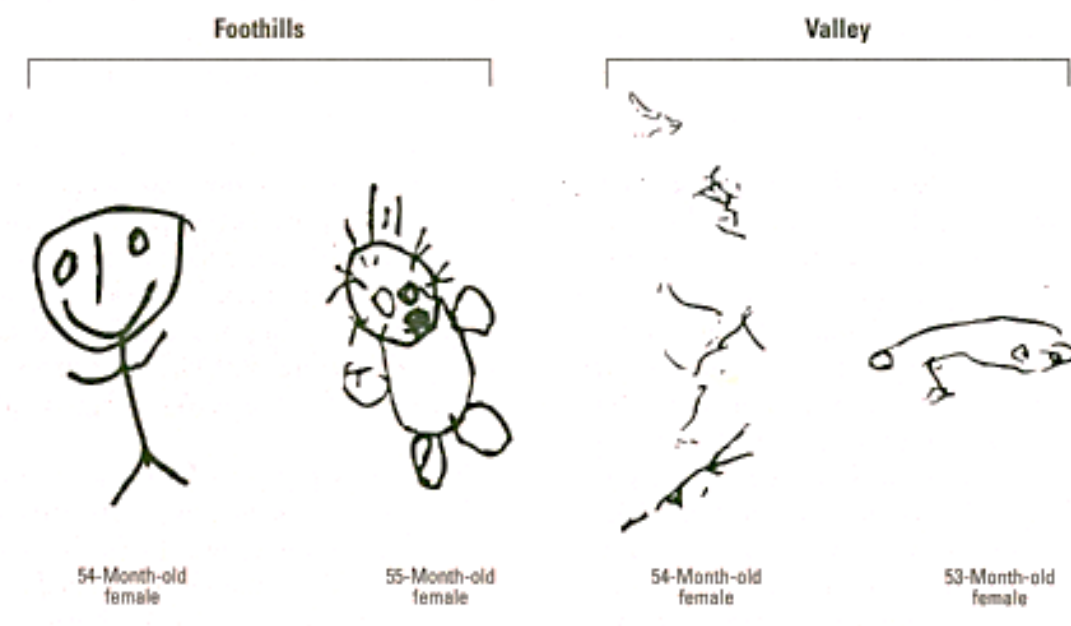


Figure 14: Drawings by Some of the Children from the 1998 Mexico Study.

*On the left are drawings by children from the chemical-free foothills.
On the right are drawings by those from the agricultural valley with high agrichemical use.*

Different pesticides can build up and persist in the environment and in the bodies of people and the animals they eat. A 1973 study showed high amounts of residues of five different pesticides in the milk of 48 nursing mothers and numerous milking cows from Guatemalan communities in the cotton-growing Pacific coastal region (Olszyna-Marzys et al. 1973). This included residues of the highly-persistent, but moderately toxic (Extension Toxicology Network n.d.), insecticide DDT (dichlorodiphenyltrichloroethane). The chemical was found in

concentrations of up to 12.2 mg/kg, almost 250 times higher than the limit of 0.05 mg/kg accepted by the FAO. Time magazine reported the news in the United States adding that DDT overuse led to the spread of resistant malaria-bearing mosquitos and USDA's rejection of beef, pork, chicken, and fish shipments to America because of high DDT content (Riding 1977).

The milk residue findings were replicated for mothers living in other areas of Guatemala (Winter et al. 1976), including women living in the country's capital, Guatemalan City (de Campos and Olszyna-Marzys 1979). The authors concluded that the results point to high DDT and other pesticide contamination levels in the general population. Guatemala banned DDT in 1979. Eight years later the endocrine-disrupting chemical persisted in the milk of mothers and cows at 70 times the accepted safe concentrations (de Campos et al. 1987 *in* Alfaro López 2006, 49).

Cancer is not the only concern with agricultural chemicals. A review of 452 studies reported that:

A huge body of evidence exists on the possible role of pesticide exposures in the elevated incidence of human diseases such as cancers, Alzheimer, Parkinson, amyotrophic lateral sclerosis, asthma, bronchitis, infertility, birth defects, attention deficit hyperactivity disorder, autism, diabetes, and obesity (Mostafalou and Abdollahi 2017, 549).

For example, evidence is building for associations between agrichemical endocrine disruptors and obesity, diabetes, and other chronic metabolic diseases that have traditionally been thought of as resulting from lifestyle changes such as the Nutrition Transition and sedentarism. A recent study comparing 866 cases of confirmed diabetes mellitus with 1021 healthy controls in a rural Thai province found that prevalence of the disease was positively associated with exposure to all types of studied pesticides, including banned ones like DDT (Juntarawijit and Juntarawijit 2018). A metareview of studies investigating pesticide effects on diabetes pathogenesis found that

exposure to organochlorine pesticides was associated with a 61 percent increased risk of Type 2 diabetes (Evangelou et al. 2016). Exposure to endocrine-disrupting pesticides during pregnancy has also been associated with higher rates of gestational diabetes among women involved in agriculture in the US (Saldana et al. 2007) and of metabolic dysfunction in Danish adolescents (Andersen et al. 2018). Conversely, organic food consumption was associated with a lower incidence of metabolic syndrome than non-organic diets among French adults (Baudry et al. 2018).

A recent study of 400 people in the communities of lake Atitlán found a 13.8 percent prevalence of diabetes and additional 13.8 percent of pre-diabetes (27.6 percent total), up from previous estimates in other Guatemalan locations of 4.2 percent in 1970 and 8.4 percent in 2003 (Bream et al. 2018). The team found that BMI was not significantly associated with the disease but age was. Compared with people below the age of 40, individuals aged 40 to 64 years were more than five times more likely to have diabetes mellitus and those in the 65+ category were 10 times more likely. After speculating on possible additional causes like changes in lifestyle of the rural residents, the paper concluded that diabetes prevalence in rural Guatemalan communities may be of “epidemic proportion” (Bream et al. 2018, 2). However, since the disease was not associated with weight (BMI) but with age, and because people live longer today than they did before, the study also concluded that in some populations diabetes “may be a disease of ageing” (ibid.) The research team did not consider the chemicalization of the food ecology as a possible pathway that may have contributed to the rise in diabetes in the population. As demonstrated above, evidence is growing that endocrine disrupting substances are associated with the onset of chronic diseases like diabetes. Occupational exposure to pesticides, in particular, is strongly correlated with the infliction in a number of settings and populations. More research is needed to

confirm the association in Guatemala, but it is possible that age is correlated with diabetes partly because young people in the Lake Atitlán communities farm less, while their grandparents and parents have been directly exposed to toxic compounds for several decades. That communities have not had adequate protection from the negative effects of the chemicals also points to the processes of uneven development that exacerbate risks from pesticide usage: a (resource) poor regulatory environment, lack of proper training, and profit seeking in the agrichemical sales. I turn to these next.

WHERE IS THE GOVERNMENT?

It is reasonable to ask whether there are established rules and regulations that farmers should follow to avoid health problems associated with pesticide exposure. The answer to that is yes, but they are not enough. In Guatemala, for example, one law prescribes in detail how pesticides ought to be used. The governmental decree #377-90 establishes the “regulation on registration, marketing, use, and control of agricultural pesticides and related substances” (El Presidente De La República 1990). Yet, as one MAGA agronomist put it: “we have many laws, beautiful laws, it’s just that no one follows them.”

One of the reasons why pesticide poisonings occur more frequently in peripheral countries compared with richer nations that periphery countries have poor regulations, unenforced agrichemical controls, and virtually non-existent training and protection of farmers and agricultural workers. A major factor in the equation is the severe resource constraints faced by public sectors of poor nations. For instance, in a country with millions of farmers, in 2016, Guatemala’s Ministry of Agriculture, Livestock, and Food (MAGA) aimed to train only 200

people in the correct use of pesticides (MAGA 2016).²⁷ Such insufficient government ability—and ambition—to disseminate, control, and monitor agrichemical use mean that laws, rules, and regulations are typically unenforced and the standards for the safe use of pesticides remain largely unknown. When they are disseminated, this is done in Spanish, a second language for many indigenous farmers, who not only prefer to communicate in their native Maya languages, but who also may not read or write at all.



Figure 15: An Agrichemical Advertisement Overlooks Small Farms in the Almolonga Valley

Photo: Luc Forsyth

²⁷ The agricultural extension service that was vibrant during the 1970s was dismantled before the 1996 Peace Accords, essentially privatizing the sector. Instead of government efforts, the agricultural inputs industry carried out private trainings of farmers and retailers. According to one report, over three years in the 1990s the industry body AGRIQUIMA's 800 trainers trained 226,000 farmers and 326 members of the agrichemical industry in application methods (Medina 1999, 15).

Some responsibility for their own wellbeing does fall on the shoulders of the farmers themselves, but the structural issues of illiteracy, lack of agricultural training, and paucity of other culturally and linguistically-appropriate support mean that the dangerous effects of pesticides are a social problem as well. While the state is all but absent when it comes to agricultural training, farmers are recruited into agrichemical use by global companies and their promoters and distributors.



Figure 16: An Advertisement for Glyphosate Painted on a Market Wall in Almolonga

Photo: Luc Forsyth

“MORE IS ALWAYS BETTER” AND THE BUSINESS OF LIFE AND DEATH

As high-profile agrichemical companies battle for the reputation of their products in the courts of both, the law and public opinion—like the current case of RoundUp’s link to cancer (Levin 2019)—it is not hard to find connections between the financial interests that drive both agriculture and health industries. Bayer, for example, is a German chemical company whose

reported 2018 total assets are worth US\$126.29 billion (Bayer 2019), more than one and a half times Guatemala's entire GDP of US\$79.11 billion for the same year (Knoema 2019). It is the world's largest agrichemical business. The company makes more than 40 different insecticides, fungicides, and herbicides (Bayer de México n.d.), a portfolio that increased with its acquisition of Monsanto in June 2018 for US\$62.5 billion (Chee 2018).

The Monsanto buyout has also propelled Bayer to the top of the world's seed industry that reached US\$62 billion in 2017 (IMARC Group 2018). At the same time, Bayer is a big pharmaceutical player. As part of its portfolio, it researches and develops cancer treatments, boasting four drugs that have treated more than 600,000 people (Bayer n.d.). In the business of life and death, as the company profits from selling massive amounts of seeds and "probably carcinogenic" agrichemicals, it also makes money from developing and selling expensive cancer drugs.

Global and national corporations are not the only suppliers of agrichemicals to Guatemalan farmers. Lack of enforced regulation means that many substances circulate that do not meet minimum quality standards. The Association of the Agricultural Chemical Guild (AGREQUIMA) monitored agrichemical containers between 2016 and 2018. It found 209 suspicious brands. Half of those (n=104) were of Guatemalan origin but had no registration or label designating the country of origin. The other half (n=105) were of foreign origin but without a registration number in Guatemala. AGREQUIMA'S president, Ricardo Estrada, explained that:

The illegal trade in agrochemicals has the actions of smuggling, forgery, adulteration and transfer of products, and emphasized the health and safety of the farmer, his family, his community and the general population, which consumes those fruits, vegetables and grains, which have received applications of agrochemicals from illegal trade (Central America Data 2018).

Back in Guatemala, highland farmers are not experts on the pesticides they use. In a study of 100 vegetable producers in Almolonga's neighboring community of Zunil, one local university student found that every single farmer used one or more of 15 common pesticides, half of which are categorized as "extremely dangerous" (Medina 1999). However, 62 percent had never received training in correct pesticide application, and, with a 75 percent illiteracy rate in the municipality, 43 percent had never read any instructions accompanying the products they were using. Just like Mario, they relied on the guidance provided by agricultural stores in their communities: 76 percent of the Zunil farmers got their pesticide application information from chemical vendors.²⁸ Official numbers put the 2018 number of agri-service stores in the country at about 3,000, with an additional 110 businesses specializing in importing pesticides (Bolaños 2019). They also estimate that about 12-15 percent of trade happens illegally with contraband agrichemicals.

During my fieldwork, some farmers described learning about which chemicals to use for what effect from "charlas" (talks) in Almolonga's agrichemical shops. Store owners host workshops where urban, non-indigenous, professionally-trained company representatives instruct local farmers on the use of their employers' chemicals.

Company representatives also bring producers to their own facilities. Filip, a French journalist had the opportunity to tag along to such an event upon an invitation from Ricardo, an Almolongan agrichemical store owner. Ricardo only sells one Dutch company's seeds, fertilizers, and pesticides. He organizes his farmer clients to accompany him on a trip to the company's test plots in Antigua once a year to learn about the latest product offerings. The group

²⁸ Farmers in other countries also rely on agrichemical sellers for advice on pesticide use. For example, in one Chinese study farmers relied on retailers for application information, which sometimes included sales of restricted chemicals (Wang et al. 2015). While in a Tanzanian sample, vegetable farmers purchased their inputs from retailers without receiving advice on their use (Ngowi et al. 2007).

leaves on a van, a *microbús*, from Almolonga at four in the morning, arriving in Antigua several hours later into an atmosphere of fanfare. Loud music backs the energetic sellers' greetings asking Ricardo's farmers and the many other groups who converge at the estate: "Hello everyone! Are you happy to be here? Are you going to be buying today?" A tour guide chaperones each group around the facility, showing off the latest beet, cauliflower, and carrot hybrids developed on the estate for local production. Ricardo's farmers were particularly impressed by a new giant beet variety. Although they complained about the lack of meat, the producers also enjoyed sampling the produce when the company put out a spread of raw vegetables, salads, and juices for lunch. After more plot tours in the afternoon that ended with a sales event the Almolongueños made their way into Antigua to enjoy the colonial city for a couple of hours. They ate McDonald's hamburgers for dinner before heading back to the highlands.

The main point is that pesticide sellers—company representatives and agrichemical store owners in communities—are not impartial givers of agricultural advice. An anthropological study of pesticide use in Guatemala's San Carlos valley found that, with this vested interest in selling more products, vendors of chemicals in communities typically say that "more is always better when advising farmers on chemical dosage (Dowdall and Klotz 2014).

With the "more is always better" philosophy propounded in the countryside, Guatemalan producers are likely using unnecessary amounts of pesticides. As other research among indigenous smallholders has found (Wright 1990), excess chemical use presents an insurance policy for crops when their loss can devastate your livelihood. One MAGA agronomist voiced his frustrations to me that even when tried to re-educate farmers about correct applications they

did not always listen. Instead, they chose to add a little more, here and there, just in case as a risk reduction strategy.

This problem is not unique to Guatemala. Research from around the world reports overuse of pesticides on farms (Dasgupta, Meisner, and Huq 2007; Grovermann, Schreinemachers, and Berger 2013; Jallow et al. 2017; Zhang et al. 2015). To improve health and ecological outcomes, many call for the adoption of integrated pest management techniques alongside agrichemical usage. A recent French study of almost 1,000 farmers concluded that 94 percent of them could reduce pesticide use by 42 percent without negatively affecting yields, while two fifth of the farms could experience increases in crop production if they reduced pesticide application (Lechenet et al. 2017).



Figure 17: A Family of Farmers Visit a Chemical Vendor in Almolonga

Photo: Luc Forsyth

Pesticide use is linked to the types of seeds that farmers rely on. Almolonga's producers do not save the seeds from their vegetables. They rely on bulk buying seedlings of hybrid varieties each growing season. They can buy seedlings from specialized agri-service stores in and outside of Almolonga. They can also purchase them from some of Almolonga's farmers who specialize in starting the plants instead of growing them to maturity.

The producers make planting decisions based on what is selling well at the time and historically. When we spoke in June of 2017, for example, Rene, an Almolongueño who was deported home in 2013 after 23 years living and working in the United States, was getting ready to plant five cuerdas of his family's land. He does not like planting onions because their market price was too variable and he could not always recoup his investments. He does like planting carrots and cauliflowers because they tend to have good markets. In the previous growing cycle, Rene experienced some luck as his cauliflowers were mature on a day when his sister called him at work in a Xela cafe to tell him that Almolonga's central market had a shortage of the vegetable. To his boss' chagrin, Rene took off to harvest 15 sacks of cauliflower, negotiating a price of Q4.50 per head and making over Q4,000 for the morning. For the next cycle, he wanted to plant more leeks because he made Q2,000 from just half a cuerda of the crop last time. Leeks, he explained, are not popular in Xela's markets but sell well and fetch a good price in the capital. Even though leeks take around six months to grow, while cauliflower only takes 90 days, Rene thinks they are worth it. This is especially because his cousin specializes in transporting Almolonga's produce to Guatemala City and San Salvador national hub markets, so Rene enjoys lower costs of getting his produce to customers in Guatemala and El Salvador. Rene plants the crops and applies fertilizer and pesticides himself two to three times per growing season. But he

typically pays day laborers to pull the weeds and prepare the land before planting. Such land clearing is charged per cuerda and Rene pays Q150-200, depending on how large and dense the weeds had grown.

Other Almolonga farmers also described their production as a business for generating cash income, adeptly describing time and economic inputs and profit outputs. When I asked producers whether they think that their crops could grow organically, without chemicals, they unanimously said no. They could not imagine how their lettuces, carrots, and spring onions could live without artificial fertilizers and pesticides. They did not think it was possible for two reasons. They said “la tierra no da,” the earth does not give, a refrain I heard again and again as farmers blamed decades of agrichemical use for “burning” the earth, making it incapable of producing much at all without external inputs. They face a farming contradiction: while agrichemicals allow for vegetables to thrive unencumbered by predators or competitor plants, they continue to reduce the soil’s own fertility.

On the other hand, when I asked them why they farm, Almolongueños told me that farming is their heritage. They farm from tradition. They farm from the past. And that legacy has passed down the skill of producing vegetables using chemicals. The valley’s current farmers have not seen them grown in any other way and they did not know of any stores or other sources where they could buy organic seeds and pesticides.

Yet the producers’ on-farm practices are mixed. Yes, all Almolonga’s farmers use chemical fertilizers and pesticides once the vegetable seeds are planted. But some also use more “traditional” methods when preparing the ground. They apply *broza* and *gallinaza* between harvests to help condition the soil, to aid its ability to nourish the crops. Some thus also farm

from a more distant past, a heritage that predates the wholesale conversion of the valley into a horticultural patchwork.

Many farmers also grow borders of *hierba buena* (spearmint) around the edges of their plots. The hardy perennial's biomass helps prevent soil loss through irrigation runoff into neighbor's land parcels and into Almolonga's streams. Meanwhile, spearmint's rhizomatic roots help filter pollutants from water as it leaves the fields.²⁹ And it gives the farmers an additional "free" crop that does not require repurchasing seeds year after year.

Almolonga's producers thus navigate another life and death tension on their farms. *Malas hierbas* is the local term of weeds. It literally translates as "bad herbs." Herbicides are enrolled to kill *malas hierbas* due to their "badness" of competing for nutrition from the soil, for competing for life. *Hierba buena*, on the other hand, which literally means "good herb," is allowed a portion of the field's fertility. It is granted life on an Almolonga's farm assemblage. The farmers recruit spearmint for its "goodness" in providing agroecosystem services of soil retention and water purification.

Almolonga's producers have not completely adopted to the linear logic of growing vegetables using only chemicals. They do not simply rely on streamlined, factory-like, input-output-based processes: take dirt, add seed, add fertilizer and water, kill pests, harvest, repeat. Instead, they also use circular logics of keeping some fertility in the soil and the soil on the farm. By protecting their soil and water supplies through non-chemical practices the farmers mix their strategies to ensure the longevity of the land and the agrarian livelihood into the future.

²⁹ Mint grown together with other ornamental plants in a polyculture have also been found to be effective removers of pollutants from wastewater (Calheiros et al. 2015).

TRACKING AGRICHEMICALS OFF THE FARM

The journey of agricultural chemicals does not end there. While they have a specified role on farms, they are not contained to it. They go on to interact with other bodies in the local ecologies. Produce from communities like Almolonga makes its way into markets throughout Guatemala and neighboring countries. The vegetables are sold throughout the municipal markets of Quetzaltenango as well, including by male and female Almolongueños who aggregate produce from the valley's plots. Xela has four main markets where consumers purchase ingredients for foods prepared in the home or for meals they make for sale in their small eateries, cafes, and restaurants. (Small food businesses typically buy products at market prices as they do not have other suppliers who can help them realize the economic advantages of repeat business).

La Terminal is the largest market in the city, sprawling down several blocks of the northwestern Zone Three of the city into the Minerva bus terminal. It includes the Mercado de Mayoreo, a wholesale market to the north where intermediaries sell produce in bulk. Other intermediaries sell in the wholesale portion of the main market, and other vendors sell in small quantities to individual customers from rows of stalls inside the enclosure or from tables or from the ground while line the streets outside the main structures. It is known as the cheapest market as well. For many people its cost savings are worth the microbus trip.

La Democracia is the second largest market with a similar set up to *La Terminal* that is found further south in Zone Two of the city. Fruit and vegetable vendors concentrate on the outside, selling along adjacent streets, while traders of meat, non-perishables, and prepared meals take up the inside of the buildings. *Las Flores* is the smallest market in the southwestern corner of Zone Two, while a largely-indoor produce market can be found across the street from the cathedral in Central Park of Xela's historic Zone One.

As in other markets in Guatemala (Fenton 2013), most of today's Xela's market vendors are intermediaries. They resell goods they buy from others in their communities, in nearby towns' central markets like vegetables from Almolonga and further afield like tropical fruit from the coast, or from the wholesalers around Quetzaltenango. The markets continue in their historical roles of connecting Guatemala's rural and urban areas, ecological zones, and ethnic groups by centralizing the flows of goods and the people who deliver them from all around the country (Jensen and Eff 2014).



Figure 18: Xela's Main Municipal Markets

Image: Google Maps

A DANGEROUS SALAD?

The markets' connecting role also helps to spread health risks from agrichemicals along Guatemala's food chains. While contact with pesticides affects Guatemalan farmers and farming communities most directly, the risks of chemical exposure are not contained to the farm. Unenforced regulations and lack of farmer training mean that produce that is harvested,

especially too soon after fumigation, also exposes unsuspecting consumers to chemical residues on their food.

There is almost no data on chemical contamination of food sold in markets or supermarkets in Guatemala. This is partly because testing a single fruit or vegetable sample for chemical residues costs in excess of US\$400 and has to be done in foreign labs as the country lacks its own facilities (personal research). One 1995 study from the now defunct Unified Laboratory for the Control of Food and Medicine (LADICA) found that only two of seventy tested samples of cauliflower, tomatoes, bell peppers, and cabbages in Guatemala's local markets contained pesticide residues below their recommended Maximum Residue Limits (MRLs) (Medina 1999, 7). The other sixty-eight samples (98 percent) exceeded the maximum limits.

To help further estimate the situation in Guatemala, it is instructive to consider research from nearby countries and of Guatemalan exports. Both these sources further suggest that contamination of locally-available produce is likely to be high. A 1983-84 study in Costa Rica, for example found residues of the fungicide Clorotamil, a carcinogenic chemical substance that is listed in the List of Extremely Hazardous Substances, on tomatoes (concentration of 0.8 mg/kg), celery (13.8 mg/kg), lettuce (0.7 mg/kg), and cilantro (0.1 mg/kg) (Castillo and Wesseling H. 1987). A student from the University of San Carlos calculated that a fresh salad prepared with 150 g of tomatoes, 150 g of lettuce, 20 g of celery, and 10 g of cilantro, would contain 0.4 mg of Clorotamil, 14.4 times the substance's maximum allowable dose, its maximum residue limit (MRL) (Alfaro López 2006). A more recent investigation in Venezuela found that, at the moment of harvest, the five studied pesticides contaminated 48 percent of the study's samples of tomato, red pepper, lettuce, potato, onion, and scallion, with 17 percent of samples exceeding the maximum permitted limits (Quintero et al. 2008). Similar but less drastic findings have been

reported at the point of harvest in Brazil where three percent of tested vegetables and 0.9 percent of fruits exceeded maximum residue levels (Gebara et al. 2005), and in Spain where four percent of tested Valencia oranges also surpassed limits (Blasco, Font, and Picó 2006).

Corporate food retail venues are not exempt from the problem. In fact, produce sold in supermarkets and municipal markets may be equally likely to contain agrichemical residues. In a 2015 study, researchers found high concentrations of seven different pesticides on mangos, guava, and papaya in both local markets and supermarkets in the city of Cartagena de Indias in Colombia (Jaramillo-Colorado, Palacio-Herrera, and Pérez-Sierra 2016). One of the most prevalent was Disulfoton, the active ingredient in a range of pesticides that, when ingested, is toxic to humans in concentrations as low as two mg/kg. Disulfoton was present in similar concentrations on fruit in local markets (0.35-6.27 mg/kg) and in supermarkets (0.19-5.19 mg/kg).

Similar findings have been reported outside of Latin America, in places like Thailand (Sapbamrer and Hongsisong 2014), Saudi Arabia (Osman et al. 2010), Ghana (Bempah et al. 2012), Spain (González-Rodríguez et al. 2008; Lemos et al. 2016). Some studies find much lower instances of residues exceeding MRL limits. For example, 1.2 percent of almost 10,000 samples in a five-year research project in Taiwan (Chang, Chen, and Fang 2005) and one out of 15 (6.7 percent) samples in a Chinese study (Fang et al. 2015). Nevertheless, research more consistently finds positive results, pointing to the prevalence of a wider pesticide residue problem around the world, meaning that Guatemala's residues are also likely to be high.

To additionally estimate the situation within Guatemala we can look to available data on export crop contamination. In the 1990s, border authorities rejected around a quarter of Guatemalan produce destined for export mainly because of residues of chemicals banned in other

countries. Between 1984 and 1994, the United States detained or rejected over 3,000 shipments from Guatemala valued at over US\$18 million (Sullivan et al. 1999). In the 1992-3 period, the US Food and Drug Administration tested more than 100 international produce shipments (Barakat 2017). Of the 13 represented countries, Guatemala had the highest rate of pesticide violations (24.8 percent). Snow peas were the worst offenders: 41 percent of tested snow pea shipments from Guatemala contained illegal pesticide residues. The United States took measures to reduce pesticide use in snow peas and strawberries grown for export by teaching the farmers skills like integrated pest management techniques (Sullivan et al. 1999). However, the efforts have been piecemeal. Today, Guatemalan exporters lose an estimated US\$28 million in sales every year because of rejected produce shipments (Gándara 2016). This suggests that farmers who grow for export regularly fail to abide by strict and more regularly enforced American standards that aim to protect American consumers. Despite these efforts, the CDC reports that pesticide biomarkers show up in the blood or urine of 90 percent of the US population (CDC 2015).³⁰ This further suggests that it is possible that production for laxer domestic and Central American markets is even more likely to miss- and over-apply pesticides to their crops.

Non-traditional crops, like Mario's lettuce, require more chemical inputs than native varieties, which are better adapted to local climates, soils, and general conditions. Changes in diet mean that more Guatemalans are now consuming non-traditional crops like carrots, broccoli, and cauliflower. At the same time, each year, Guatemalan farmers apply more and more pesticides to all sorts of produce, whether destined for domestic or international markets. At just over 10 kilograms per hectare of cropland per year, Guatemala ranked 19th highest pesticide user in the world in 2013 (the Maldives ranked the highest), playing second only to Costa Rica in the

³⁰ US agriculture also uses large amounts of pesticides that contribute to the pesticide biomarkers statistics.

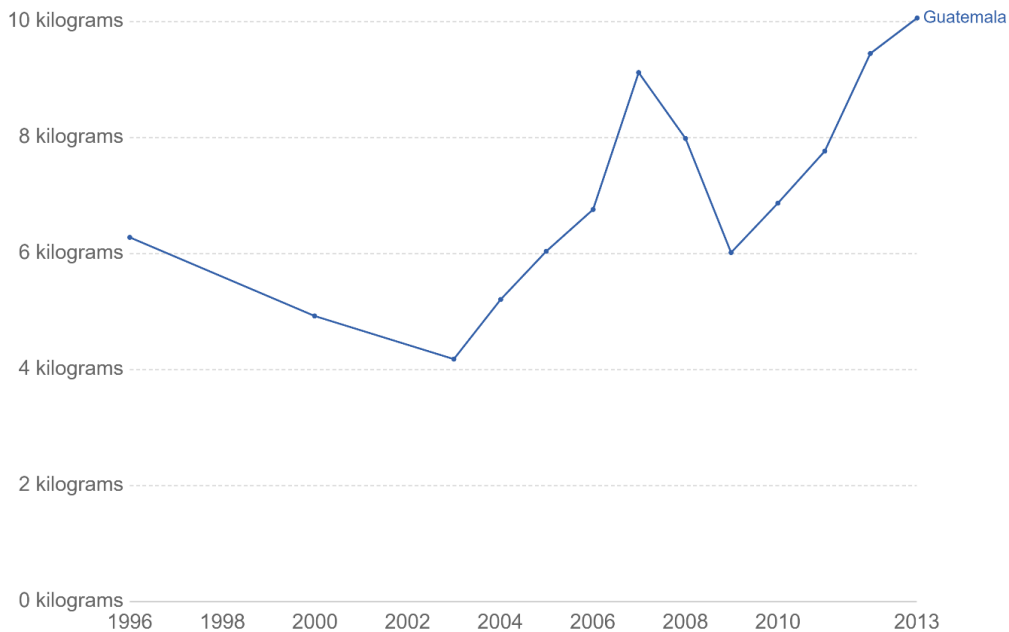


Figure 19: Guatemala's Pesticide Use After the 1996 Peace Accords (average kg/ha of crop land)*

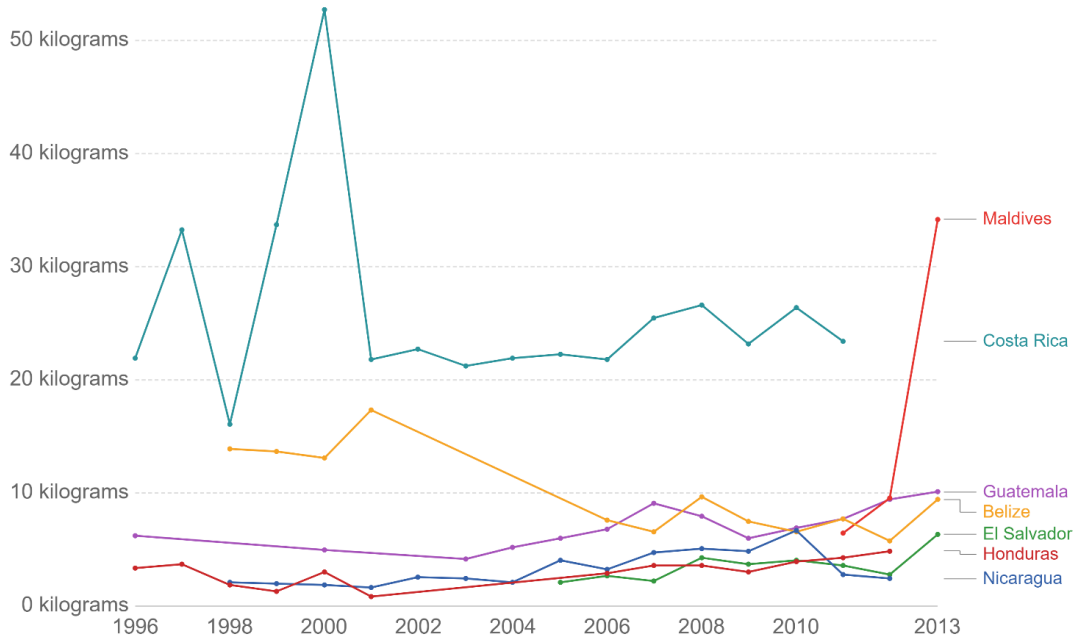


Figure 20: Guatemala's Pesticide Use Relative to Other Countries (average kg/ha of cropland)*

*Sources: FAO, Our World in Data Database

Central American region. According to analyst estimates, in 2017, Guatemala was the main buyer of fertilizers and pesticides in Central America, importing \$232 million of fertilizers and \$170 million of insecticides, herbicides and fungicides (Central America Data 2018). With millions of dollars invested in production facilities from companies like Bayer, it is also home to a thriving inputs production industry that sells on the national market and exports to nearby countries and other continents, like Africa (Castellanos 2015). In 2014, Guatemala exported almost US\$5 million in fertilizers and over US\$30 million in pesticides (de Guate n.d.).

Put together, the reviewed statistics, studies, and on-farm agrichemical practices suggest that portions of produce on Guatemala's farms and in municipal markets and supermarkets is likely to be contaminated by pesticides at levels that are toxic to humans and other organisms. This includes particularly harmful substances that are banned in other countries. Direct contact through agricultural work and indirect contact through living close to sites of application and through residues on food represent risks to the country's public health. While it is difficult to establish definite causal links, the combined scientific evidence suggests that pesticides are associated with a litany of health afflictions (Mostafalou and Abdollahi 2017).

CONCLUSIONS

Guatemala's countryside has undergone considerable changes in recent decades. Proponents of Green Revolution technologies and cash crop exports promised higher yields and incomes because they wished to bring about the development of Guatemala and the insertion of its citizens into international markets. Yet farmers adopted chemicals and vegetable growing because of their own desires to control their land and labor resources, maintain community traditions, and get "something better" for themselves and their families. Producers in Almolonga continue to farm as part of their familial heritage, but they incorporate practices from multiple

traditions. Meanwhile, the chemicals they use present real, material, biological risks to their health and the health of consumers down the vegetable value chain.

CHAPTER 7: *THE CHICKEN AND THE EGGS: THE CHEMICALIZATION OF ANIMAL-DERIVED FOODS*

Having considered how agrichemicals entered smallholder agriculture in Guatemala and then ended up in local markets, this chapter turns to another big change in food production and retail: poultry. The case of chicken and eggs in the country further contributes evidence that Guatemalan, not foreign, businesses have dominated development of agriculture and food industries in the country. It also shows another way that local food ecologies have been supertoxified. Just as with the agrichemicals in the countryside, the probable misuse of chemical and biological inputs in industrial poultry production is adding risks into the food system. This chapter also shows how these new risks are compounded on top of a high pathogenic load stemming from Guatemala's lack of public sanitation, potable water, and other hygiene institutions.

Poultry is important to consider because it went from being an unpopular meat in the 1970s to the largest source of animal protein for Guatemalans today. As chapter five showed, chicken has even become a marker of national identity. This is despite the fact that chicken and other meats are expensive relative to plant-derived protein sources and that industrial eggs compete with backyard egg production.

This chapter begins by describing the economic aspect of poultry consumption. It shows that price is not the only or often even primary consideration when it comes to choosing what to eat. Meat is not easily replaced by plant-based foods in many peoples' minds. This point will become important again in chapter nine when arguing that "healthy eating" advice often goes unheeded because it is out of step with how people experience, categorize, and choose food in their daily lives.

The chapter then traces the rise of chicken as a valued food in both United States and Guatemala to show the connections and disconnects between the two countries. I show that while Guatemala's elites have sought to mimic the development path of America, they have maintained much control over the domestic poultry sector. I go on to show that they have done this partly by differentiating their product against traditional animal rearing practices, painting the latter as dangerous and risky. I show that the industry's claims of food safety superiority break down in the face of scientific studies of poultry contamination by food-borne pathogens like *E. coli* because the products circulate in food retail channels that lack good sanitation. I end the chapter with a discussion of the additional risks that the poorly-regulated industrial poultry adds to Guatemala's food ecologies, further supertoxifying them in the process.

QUÍMICOS IN GUATEMALA'S FOOD SYSTEMS

The addition of industrial chemicals to farming has been theorized as the chemicalization of agriculture (Romero 2015). However, similar processes in the production of animals that include novel chemicals and biological agents does not have a corollary term. That is, novel industrially-produced substances have been added to the production of both, crops and animals, but the English-language term "chemicalization" does not adequately cover the latter. To overcome the problem, I use the *emic* category of added *químicos* to describe the general process of adding artificial inputs into different food provision sectors.

When I asked consumers and producers in Guatemala what "organic" meant to them, of those who had heard of the term at all, many simply replied "*sin químicos*," without chemicals. As they elaborated on the "without chemicals" statement, for example, it became clear that the *químicos* they were referring to meant more than just the agrichemicals found on vegetable or milpa farms. The respondents typically juxtaposed *químicos* against *natural*, defining the latter

as “no preservatives,” “no agrichemicals, no food additives like fat, not processed,” “natural foods without preservatives or condiments,” “does not have poisons or fertilizers or medicines, no external inputs,” and “what does not cause damage to health or environment, unlike packaged products.” For them, *químicos* meant a myriad of external inputs into different parts of food production, processing, and distribution, ranging from medicines to preservatives. So, I use *químicos* in this broad sense of the word to show how the industrialization of poultry in Guatemala has also contributed to the chemicalization, and thus supertoxification, of the country’s food ecology, which has compounded, rather than solved, the risks arising from a high biologically-pathogenic load.³¹

IT IS EXPENSIVE TO EAT (MEAT) IN GUATEMALA

To understand some of the economic factors of food purchasing in Quetzaltenango, it is worthwhile comparing local food prices and incomes with the country’s closest wealthy-nation neighbor, the United States. In April 2017, I compared the costs of various fruits, vegetables, meats, and eggs as advertised online in an Atlanta Walmart store with two supermarkets in Xela’s Zone One, La Torre and La Despensa (a Walmart brand), and the Xela Zone One indoor market. It was necessary to include two supermarkets because they stocked different things, with La Torre selling fresh meats that La Despensa did not, and La Despensa stocking more fruits and vegetables than were available at La Torre. Items were matched as closely as possible for type and size/weight of product. Unmatched items were left out of the calculations. Meats were all priced by the pound. Half of the vegetables and fruits were available by the pound and the other half by the unit. More items matched between the supermarkets and fewer matched across all

³¹ This term can also apply to the oil-derived plastics that are used for food packaging.

three sites, although the local market had a larger variety of meats, fruits, and vegetables on sale than the Xela supermarkets.

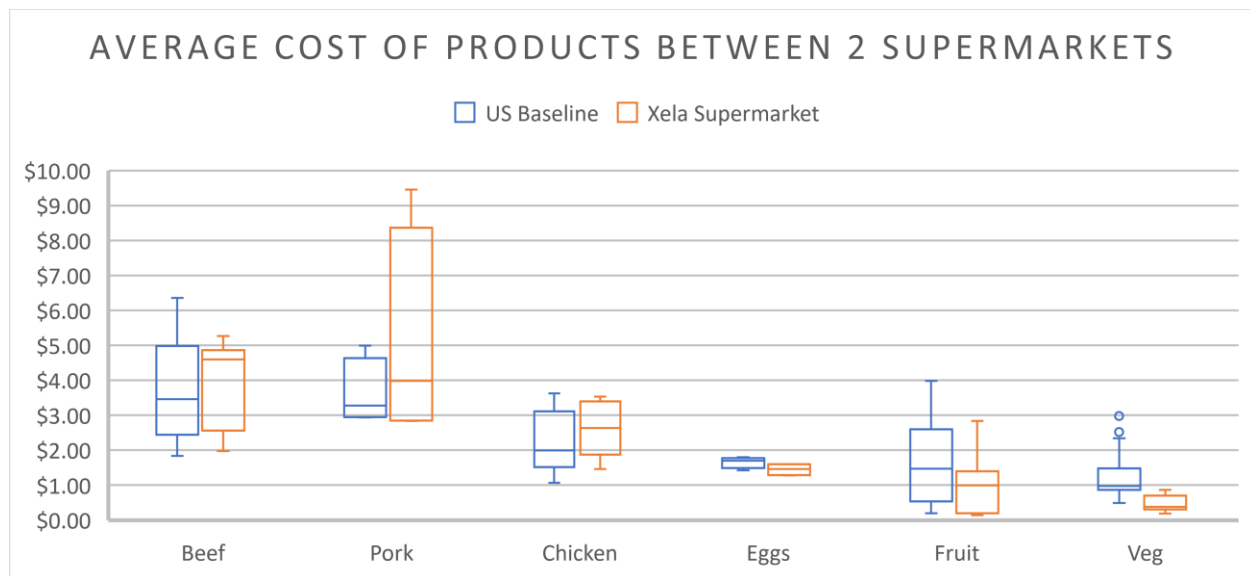


Figure 21: Price Differences Between Xela and US Supermarkets in April 2017 (US\$)

Overall, on average, comparable meats (eight samples), which include various cuts of chicken, beef, and pork, cost 14 percent more in the Xela supermarkets than they did in the Atlanta Walmart, ranging from 77 percent more for ground beef to 19 percent less for beef bone. Meats in the local market cost seven percent less on average than in the US supermarket, ranging from 61 percent more for sausage and 34 percent less for beef bone. Meats was the only category that on average, dollar for dollar, cost more in Xela than in Atlanta. All the other food categories were less expensive in Guatemala, with local markets being slightly cheaper than supermarkets, a finding that supports Quetzaltecos' assertions that they find supermarkets to be pricier than local markets. Compared to Atlanta, eggs (three samples) cost eight percent less in Xela supermarkets and 14 percent less in Xela local markets; fruits (n=13) cost 40 percent and 45

percent less, respectively; and vegetables (n=20) were, correspondingly, 59 percent and 61 percent cheaper than the US supermarket.

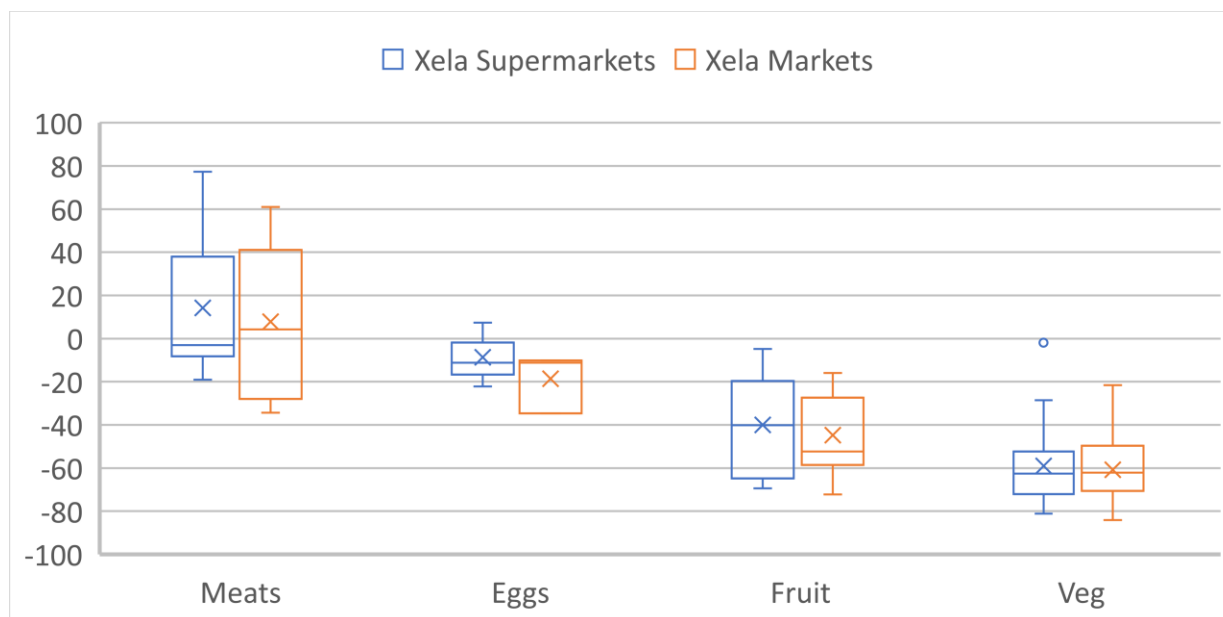


Figure 22: Price Differences of Xela Supermarket and Local Market as Compared to a US Supermarket Baseline in April 2017 (percent)

Incomes in the two nations help put these cost differences in perspective. According to the World Bank, in 2016, the average Gross National Income (GNI) per capita of Guatemala was \$3,790, less than seven percent of the GNI per capita in the United States of \$56,810. The average national monthly net salary (after tax) is estimated to be five times higher in the United States (\$2,689.90) than in Guatemala (\$526.60). That figure is augmented for some Guatemalans by the influx of remittances to the country (equivalent to \$37.71 per capita per month). Nevertheless, almost 60 percent of the Guatemalan population is deemed to be living under the national poverty line (World Bank Data n.d.); in the US, the proportion is 12 percent (Semega, Fontenot, and Kollar 2017). At the time of writing, the minimum hourly wage in Guatemala was

around \$1.45, compared with \$7.25 in the United States. Yet, in Guatemala, the legal mandates are often ignored; in and around Xela, agricultural day laborers and hot dog stand workers reported receiving just 50 cents per hour for their work. In any case, when compared with the United States, fresh produce, especially meat, is relatively more expensive even for those who might be paid \$1.45 per hour in Guatemala. To buy six eggs, a head of escarole lettuce and a head of broccoli, and one pound of each of chicken breast, chorizo, potatoes, tomatoes, and onion would cost \$11.00 in an American supermarket and \$7.90 in a Guatemalan one. At \$7.25 per hour, which works out to \$6.96 after taxes, an American minimum wage worker would need to work around one hour and 35 minutes to afford that basket of goods. At \$1.45 per hour, \$1.38 after the five percent income tax had been taken out, a formal Guatemalan minimum wage worker would need to work more than three and a half times longer to buy the foods (~five hours and 43 minutes). To buy just one pound of chicken and six eggs costs more in Xela than in Atlanta, \$3.09 and \$2.89, respectively. A minimum wage worker would have to work two hours and 15 minutes in Guatemala and just 25 minutes in the US.

Table 1: Costs of a Basic Food Basket in US and Xela Supermarkets

FOODS	US	XELA
1 lb chicken breast	\$1.99	\$2.29
1 lb chorizo	\$2.94	\$2.87
6 eggs	\$0.90	\$0.80
1 lb tomato	\$0.98	\$0.33
1 lb onion	\$0.87	\$0.39
Escarole lettuce	\$0.98	\$0.39
Broccoli	\$2.34	\$0.83
Total Basket Cost	\$11	\$7.90
<i>Hours of after-tax min-wage work to afford the goods</i>	<i>1 hr 35 mins</i>	<i>5 hrs 43 mins</i>

These data suggest that it is expensive to eat (meat) in Guatemala. Yet, price is frequently not the only nor the most important value that drives decisions about what and where to eat in Xela, especially when it comes to the biggest meal of the day, the lunch. Typical breakfasts and dinners are still made up of beans, tortillas, *chirmol*, scrambled egg, and perhaps a piece of cheese. But lunch is a different matter. Tortillas, beans, rice, and bread are likely to be present, but other elements are also important. For example, even though meats are expensive, many people, especially urban middle classes, consider them vital to the completeness of a meal like lunch and signal a less precarious status of the eater. Consider Veronica's comments as we talked in Taco Bell. For work, her husband transports cars from the United States to Guatemala:

If there is not a piece of meat, we do not feel it was a lunch... we always look for meat either pork or beef or chicken, but there must be meat... It is tastier if the meat is fatty... When we see someone eating salads or vegetables, we say "the poor thing does not have meat," instead of thinking that that person is feeding themselves better than us.

Others too commented on trying vegetarian foods and salads but not liking the taste because the meals did not contain meat (which is a shorthand many people use for all types of animal-derived foods, just as in Veronica's quote above). Pedro, a man I spoke to as he enjoyed a burger in McDonald's. He worked in beer promotions in the city and ate out lunch every day because his work demanded daily travel. When asked where he likes to eat apart from McDonald's, he said "meat restaurants, more meat, like steak." He then went on to describe his experience of trying a salad:

Pedro: One day I ate a salad and I did not like it.

Why not?

Pedro: I did not like the taste. It did not have any meat.

When asked to recall their meals from the previous day, people often mentioned meat as a component. For example, I spoke with three K'iche' women, who came to Xela for a training and decided to lunch in McDonald's. They all worked as part-time health promoters in their communities. One of them described her typical eating habits like this: "for breakfast we typically eat cereal, well it is the children that eat cereals, we eat fruit, fruit smoothies, orange juice, or oatmeal *mosh*. And for lunch a salad, a vegetable soup, and a piece of meat. That is also how we eat dinner too."

While meat is seen as a vital component in ready-made foods bought outside the home, the relative inexpensiveness of vegetables makes them an unlikely candidate for spending money when eating lunch out. Marita explained it like this:

I never eat a salad at McDonald's because the lettuce does not really make sense for me [to pay for]. Nor, for example, to eat in Tan Lechuga Yo [a café specializing in salads], because it seems super illogical to pay Q35 [\$4.67] for a salad when with this money you can buy many ingredients for a salad for dinner and a lunch for another day. Because we have a lot of [cheap] vegetables and everything, then, really, in my mind, I will never eat an outside salad.

In other words, people's relationship to the price of different foods is complicated. Meat is expensive but highly valued as an important and tasty element of a meal. At the same time, some of the healthiest native foods in Guatemala are also some of the cheapest, but they are not valued in the same way as the more expensive meats. *Amaranto*, *bledo*, *chipilín*, and *hierba mora* are examples of native *hierbas*, herbs, that are also among the more nutritious plants on the planet (Booth, Bressani, and Johns 1992). The leaves, seeds, and flowers of the amaranth plant, for example, can variably be used directly in cooking or ground up into naturally gluten-free flour containing elevated levels of high-quality protein, unsaturated fats, dietary fiber, and essential amino acids, as well as nine minerals and numerous antioxidant vitamins (Kraujalis et al. 2013). Plants such as amaranth once provided vital micronutrients to Guatemalan diets as

regular additions to soups, stews, and *tamalitos*. But, they have fallen out of favor, having been denigrated as backward and thus belonging to a less modern rural past. They make up the green leafy vegetables category of “old” foods whose prevalence in Guatemalan diets halved between the 1950s INCAP studies and the 2000s CeSSIAM research (Bermudez et al. 2008). While some of the greens can still be found for Q1 (\$0.13) for a large bunch in Xela’s municipal markets, and while they sometimes grow freely in fields and on the sides of roads, except for some older Guatemalans, these nutrient-dense plants no longer hold a central place in most people’s diets.

A CHICKEN IN EVERY POT

The rise of meat consumption, especially of poultry, is a relatively recent development not only in Guatemala. As noted earlier, chicken was not a popular meat in the country in the 1970s, for example. Yet, chicken was also not a popular meat in the United States two decades earlier. The stories of chicken in both countries intertwine and diverge in interesting ways. It is a history that helps in understanding patterns of poultry consumption today.

Pollo Campero’s innovation in fried chicken in Guatemala both rode a wave of consumptive change and helped to strengthen the wave by associating itself with the national identity (M. G. Díaz 2019). Guatemala’s political elite has contributed to the spread of the meat-eating portion of the Western Diet or the Standard American Diet in Guatemala. For instance, increasing meat production for the purposes of domestic consumption was an explicit goal of the CIA-inserted, Castillo Armas military regime in the country. In its political manifesto and blueprint for the country, *El Plan de Tegucigalpa*, meat was part of a larger stated strategy of emulating the successes of “other nations” in modernizing (Castillo Armas 1954). Here, “other nations” served as code for the United States in a document that lifted entire sections of narrative from America’s Human Rights documents that emerged at the time. The manifesto proposed

developing livestock industries in the Petén region in order “to produce the largest possible amount of meat to improve the nutrition of the people and for export” (Castillo Armas 1954).

This history provides an example of the way that United States’ interests have actively sought to change other nations in America’s image (on top of its drive to promote the economic interests of American companies, such as the well-studied case of the United Fruit Company). These developments can be better understood within the broader history of the restructuring of global economic and political relations that Food Regimes Theory observes. As I have argued elsewhere (Fenton forthcoming), the consolidation of the nation state system created additional axes of social comparison in the global human community. One was the reconfiguration of sub-national social relations in order to promote national identities and unities that could culturally legitimate nation states as geopolitical units. In places like Guatemala this led to much elite activity being aimed at assimilating the unruly indigenous majority.

The other axis of difference was competitive comparison between nation states that was consolidated after World War II (Fenton forthcoming). The creation and spread of the GDP as an accepted marker of wealth, progress and wellbeing helped to reinforce the image of America as a beacon of prosperity and wellbeing that is worth emulating. This added soft power to America’s post war military, aid, and other interventionism. With the fall of the Berlin Wall, America’s place as the foremost global leader worth following was secured. With all other nations ranked against the US for prosperity, the rest of the world, especially countries on the lower end of the GDP totem pole, became crystalized as “less than,” “developing,” “underdeveloped.” Modernizing and developing became important for elites of countries like Guatemala whose referent for upward comparison was set against the foreign wealthy. American style of production and consumption became important components of an idealized lifestyle.

This history helps in understanding how and why animal-meat products become desirable for elites to promote and for consumers to eat, as well as for public health institutions to accept as important for addressing protein malnutrition.³² It becomes unsurprising that Guatemalan food industry would go on to mimic the changes in its Northern neighbor. Prior to the world wars, chicken was an expensive, infrequently-consumed meat in the United States (Striffler 2005). Its rise from occasional fodder to daily staple in many Americans' diets is intimately linked with war-time and post-war changes in society. Steve Striffler provides an excellent account of the entrepreneurs who standardized, scaled up, and diversified poultry production. I will not recount that history here except to make the point that industrial chicken, like many agricultural chemicals, food additives, and plastic food containers, was a war-time technology. Poultry's spread is linked to the symbolic end to the sacrifice and scarcity that violent times represent.

Like the rest of the world, Americans suffered a great deal in the first half of the twentieth century, especially through the Great Depression. Even before then, "a chicken in every pot" was associated with rising standards of living and prosperity; a local committee of the Republic Party used the proverb in a 1928 advertisement asking voters to elect Herbert Hoover as president (New York Times 1928). The consumption of meats was also entangled in specific ways during World War II. With 16 million Americans serving in the military at the time, with two million in Europe, the United States sent much of its meat to its soldiers abroad. Supporting the effort at home meant sacrifice on the part of the women and men who stayed behind. From the outset, the US Government was concerned about growing malnutrition at home. It put together various committees to analyze the problem and think up solutions. One of these was the Committee on Food Habits (CFH) (Guthe 1943; Mead 1943; Wansink 2002). Made up of

³² Although plant-based proteins based on native varieties of beans, squashed and seeds could also be effectively leveraged to address protein inadequacies.

psychologists and anthropologists, and later headed by Margaret Mead, one of the topics the committee investigated was the best way to encourage Americans to eat less-desirable cuts and types of meat. Part of the solution was to “make the exotic familiar” by showing how organ and other meats could fit into existing meals, such as promoting a steak and kidney—rather than only steak—pie (Duhigg 2012, 61). As a result of the committee’s efforts, organ meat consumption went up by 33 percent during the war and by 50 percent in the 1950s and they became associated with comfort.

I dwell on this history to show that while a “chicken in every pot” has long been associated with prosperity in the United States, foregoing “desirable” cuts of all meats was a necessity of the sacrifice of war-time efforts. As the world went about reconstruction efforts in the post-war period, it is understandable that higher meat consumption would be both promoted and desired as a symbol of the end of violence and want. At the same time, fueled by Cold War ideological battles, the US installed favorable regimes all around the “Third World.” This included the CIA-implanted Castillo-Armas regime in Guatemala, whose El Plan de Tegucigalpa doctrine promised to follow in the modernization example of other nations and increase meat production for the nutrition of the population. With higher meat consumption as the inter-war and post-war goal and with the United States increasingly turning to chicken, it is no surprise that Guatemala would follow in its footsteps. This chapter will now consider some of the changes that have since occurred in poultry in the Central American country.

CHICKEN AND EGGS IN GUATEMALA

Pollo Campero’s mega-expansion in Guatemala was secured because of its parent company’s, CMI’s, vertically integrated businesses in chicken feed and industrial poultry production. More accurately, Pollo Campero was one outlet for the poultry production that CMI

established more than a decade before the first restaurant opened. The Gutiérrez men opened Guatemala's first chicken factory, Granja Villalobos, in 1964, "thus starting the [industrial] poultry industry in Guatemala" (CMI Website 2019).

Supplying raw product to its chicken restaurants is just one part of CMI's strategy. The company also grows birds for home consumption through its brand, Pollo Rey. Pollo Rey products are sold in several locations: municipal markets, small Pollo Rey/Toledo pork stores, independent meat stalls, and supermarkets. CMI is one of several industrial poultry producers in the country who are nationally organized to represent their interests. The aviculture industry boasts an economic contribution of two percent of national GDP and eight percent of agricultural GDP and generating 35,000 direct jobs (Méndez Montenegro et al. 2018). It also positions itself as helping to address malnutrition in the country, claiming that poultry makes up 60 percent of the animal protein eaten in Guatemala, with annual per capita consumption of 43.6 lbs of chicken and 189 eggs (Méndez Montenegro et al. 2018). This is an impressive rise since chicken was not a popular meat in the 1970s and, like other meats, poultry remains expensive relative to non-animal sources of protein.

Today, CMI is an active member and leader of ANAVI, the National Association of Aviculturists of Guatemala. Formed in 1973, the business consortium now represents more than 200 egg, chicken, and turkey enterprises with more than 600 factory farms in the country, five hundred of which are dedicated to egg production, boasting 10 million laying hens that produce more than 7.5 million eggs per day, making Guatemala a leader of poultry consumption in Central America (Crónica 2016). Poultry producers use 17 different breeds of broiler chickens and four egg-laying breeds (FAO 2018a). The egg industry is additionally organized within the

Association of Egg Producers of Guatemala, the Union of Egg Producers, and the Union of Aviculturists of the South (FAO 2018a).

It is estimated that 50 percent of eggs eaten in Guatemala are supplied by industrial producers and a further 20 percent are contraband from Mexico, El Salvador, and Honduras (FUNDESA/CACIF 2011). In March 2017, ANAVI introduced green egg cartons to differentiate Guatemalan eggs from contraband ones from Mexico and other countries that were packaged in the standard gray cartons (Soy502 2017). The group claimed that Guatemalan eggs were fresher and had a higher nutritive value than those from other countries. The new eggs were promoted in Guatemala as “100 percent national.” Guatemala does not import eggs from countries like United States because American eggs are washed and thus need to be chilled, which is not a common practice in Guatemala where eggs are unwashed and kept and sold unrefrigerated.³³

The demand for chicken meat is met mainly by national production (by companies like CMI), which grew from 96 million cut birds in 2006 to 113 million in 2012 (INTECAP 2014) and 160 million in 2015 (Crónica 2016). Poultry meat imports, mainly from the United States, are the other side of the supply system. It accounts for up to 30 percent of chicken consumed in Guatemala (The Poultry Site 2006) and it grew from 57.9 metric tons in 2006 (with a value of \$29 million) to 82 metric tons in 2013 (worth \$67.7 million) (INTECAP 2014). Post-Peace-Accords trade liberalization agreements opened the Guatemalan market to free trade with the United States and other neighboring nations, leading to large increases in imports of food into the country, especially poultry. Guatemala went from importing no chicken in 1989 to 70,000 tons in 2003 (Thow and Hawkes 2009) and to surpassing 120,000 tons in 2018 (FAOSTAT 2019). As

³³ Personal communication in March 2019 with Sean Cox, Agricultural Attaché, USDA Foreign Agricultural Service (FAS) in Guatemala.

part of the Dominican Republic-Central American Free Trade Agreement (CAFTA-DR) with the United States, in 2017 Guatemala removed all tariffs on fresh and frozen US chicken imports (Central America Data 2017), products that were taxed at 15 percent in 2015 (Central America Data 2016). Currently, Guatemala is the United States' fifth largest chicken importer (after Mexico, Canada, China, and Cuba), worth US\$120 million in 2017.

While the industrial poultry sector has steadily grown in Guatemala, it faces competition from backyard production that has been practiced in the Spanish colonies in the Americas since the 16th century (Díaz del Castillo 2005). Recent figures are hard to come by, but the Government of Guatemala worked with FAO on a May 2003 comprehensive national census of backyard production of animals and plants in the country (INE 2005). It found that 84 percent of the surveyed households kept between eight and 20 backyard chickens. This amounted to more than 725,000 producers in over 610,000 households keeping a total of over 10.3 million birds, mainly in rural areas but in some urban portions of villages, towns, and cities as well.³⁴ These produced more than 1.3 million eggs every day and were mainly consumed during special occasions and community events. The patio bird numbers rivalled Guatemala's human population at the time of around 12 million people across the nation. With almost 8.2 million heads, chickens and roosters accounted for 79.4 percent of all patio birds and 87.7 percent of all the eggs produced. The others, in order of importance, were ducks, turkeys, doves, geese, whistling ducks (*pijijes*), and quails. The census found that women were responsible for 79.2 percent of that production. It also reported the existence of more than 800,000 heads of livestock, of which 444,000 were pigs, 148,000 cows, and 148,000 rabbits, and 3.5 million units of 63 different edible plants and tree species, with mango, lemon, orange, avocado, and peach trees

³⁴ The department of Quetzaltenango counted almost 184,000 birds in a little less than 21,000 households.

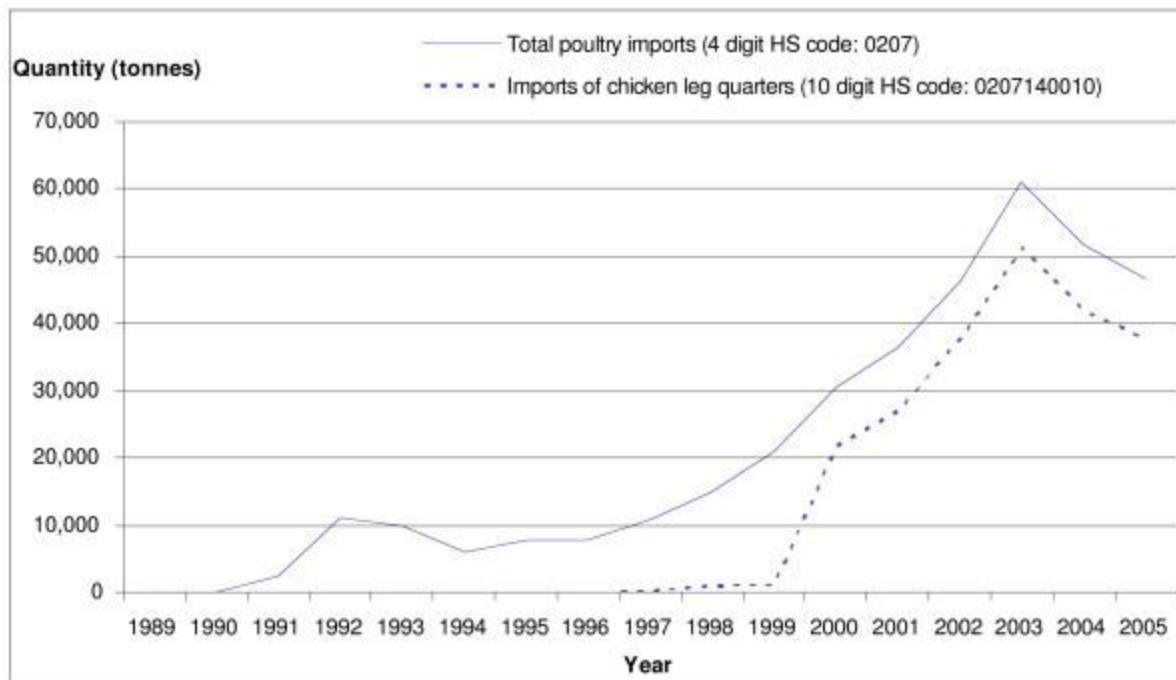


Figure 23: Poultry Imports into Guatemala Following Trade Liberalization (1990-2005)
Source: Thow and Hawkes (2009)

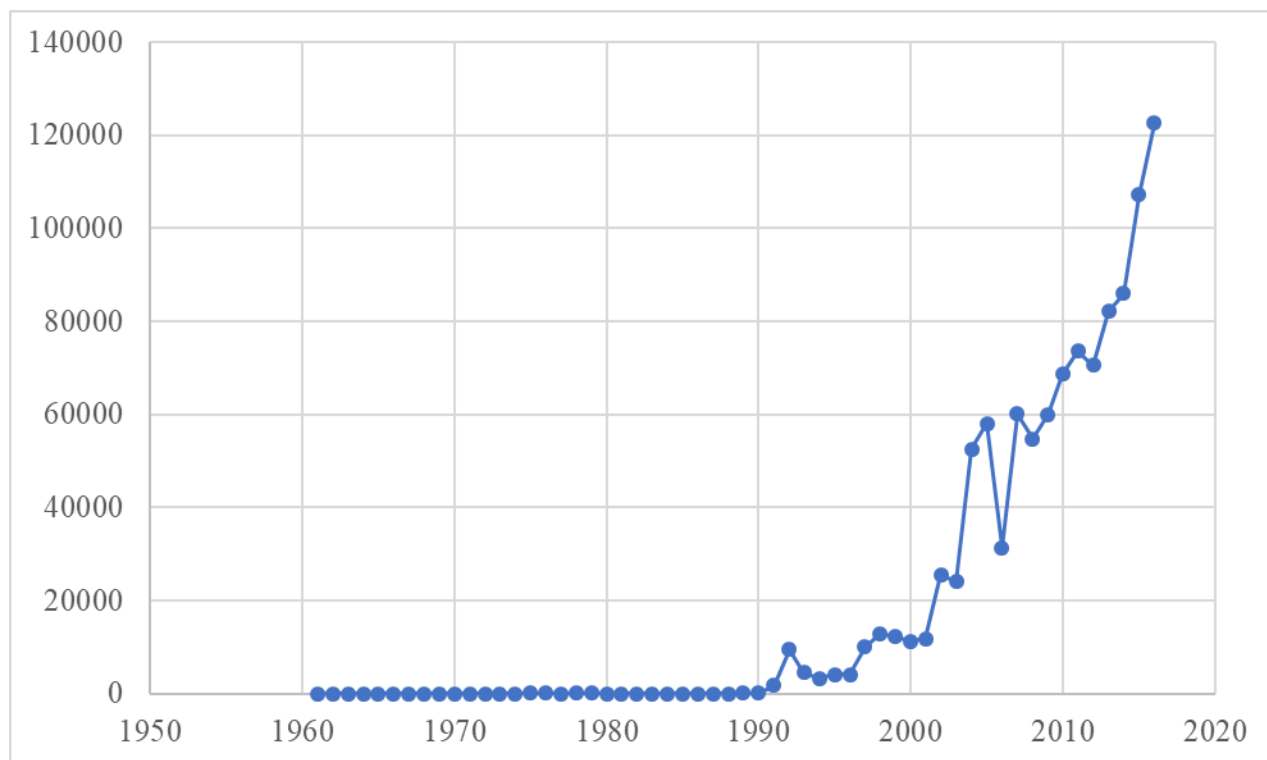


Figure 24: Chicken Imports into Guatemala (1960-2017) by Volume (tons)
Source: FAOSTAT

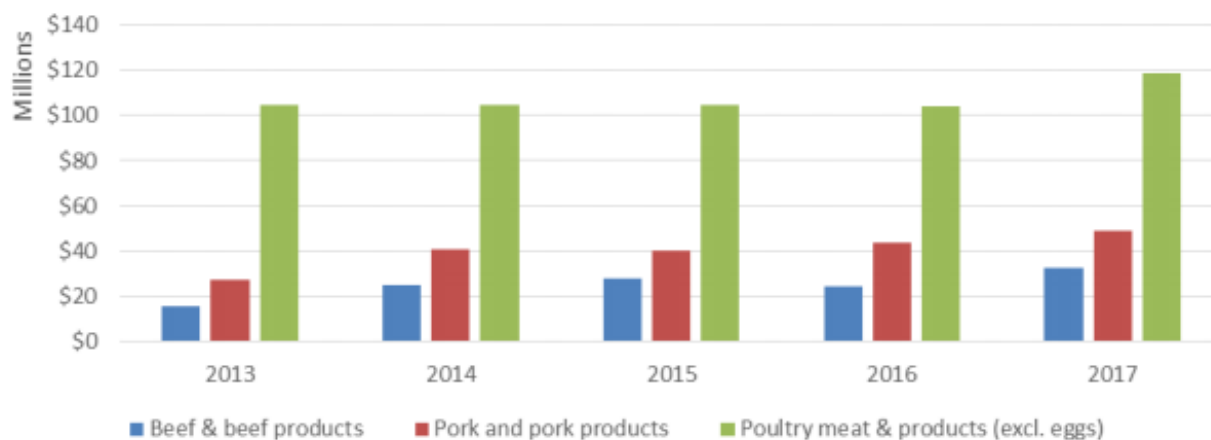


Figure 25: US Meat Exports to Guatemala

Source: USDA GAIN Report (2018a)

being the most pervasive. The report concluded that backyard food production represented an important source of biodiversity and food security in Guatemala (INE 2005).

Although many rural residents still keep backyard chickens for personal consumption, domestic factory-farmed poultry and American imports are replacing local markets for *criollo* poultry. While, in 2015, 43 percent of domestic chicken production was estimated to come from backyard sources (Cordón y Cordón 2015), by 2018 that figure was reduced to 32 percent (Méndez Montenegro et al. 2018).³⁵ Meanwhile, the diversity of poultry and other animal products in important urban municipal markets, like that of Totonicapán, have vastly reduced

³⁵ It is possible that the numbers presented here are poor estimates. These figures come from official documents of Guatemala's National Poultry Health Program (PROSA), of the Animal Health Directorate of the Vice Ministry of Agricultural Health and Regulation (VISAN), a directorate of MAGA. However, the methodology for estimating poultry production is not delineated. It is safe to assume that industrial chicken production numbers are more reliable. They come from businesses that coordinated through industry groups outlined in this section and from production methods that are more amenable to metrification. Nevertheless, I report the figures to demonstrate a likely trend of the *increase* in proportion of domestic production of industrial poultry relative to backyard chicken rearing. This increase in proportion would also be possible with an increase in industrial production but without a corresponding decrease in backyard rearing. Nevertheless, combined, the evidence presented here suggests that backyard rearing has decreased in quantity and genetic diversity.

(Loarca 2017). During my monthly survey in Xela's Zone One municipal market and La Despensa supermarket between September 2017 and August 2017 there were no backyard chicken or eggs on sale. Globally, through their unique genetic reconfigurations, industrial broilers have become the defining symbol of the Anthropocene, a vivid example of human transformation of the biosphere (Bennett et al. 2018).

Criollo chickens and eggs differ in size, texture, and flavor from their industrial counterparts. Many people still prefer *criollo* varieties even though broiler chickens and industrial eggs are more widely available and cheaper, especially in urban areas. As preference for *criollo* persists, various companies have begun to attempt to appropriate the alternative. Maggi, Knorr, and the Japanese company, Ajinomoto Co, are just some of the brands that have released lines of *criollo* flavoring and instant soups in Guatemala. Not to be outdone, in August 2018, Malher, a Guatemalan food and beverage company that sells its products throughout the Central American and Caribbean region, announced that "a new taste" was coming to Guatemala, "a taste of the countryside." It advertised its *gallina criolla* consommé seasoning with images of free-roaming birds.

Women choose consommé packages with good reason: they are cheaper and less time consuming than making their own chicken stock. Yet their use also tunes their bodies to industrial alternatives, at the same time redirecting money away from local economies. Wendy, a German 30-year resident of a small Guatemalan community hypothesized as much when expressing her frustrations at watching women cook with industrial stock cubes: "the chicken flavoring is quicker, it saves time, but people don't realize that it does not come from actual chicken. I always ask them: Why do you trust these packages and not your neighbors?"

GUATEMALA'S TRUSTED CHICKEN

Part of the answer to Wendy's question comes from the fact that foods are not value-free. Instead, they circulate within social hierarchies and broader food ecologies that carry multiple risks. Advertisers exploit local dynamics to sell their goods. In Guatemala, some companies nurture trust in their products through narratives that propagate hygienic discrimination against the neighbors that Wendy referred to.



Figure 26: Criollo-Branded Instant Soups and Consommés



Figure 27: Malher's Advertisement for Criollo Chicken Stock

For example, in 2017, Pollo Rey launched a line of fresh, yellow *pollo criollo* chickens. While these retain the yellow skin color of the backyard, corn-fed species found throughout Guatemala, they are produced in large-scale, caged, factory farms. The tag line for the new product ran as “the great taste of our own” and “trusted yellow chicken.” The company’s brand manager explained in a television interview that the innovation came “from the needs of our customers. We know that in Guatemala many like to eat yellow chicken. Many housewives cook with yellow chicken” (Mi Canal GT 2017). Another representative went on to explain that Pollo Rey is combining the chicken Guatemalans already like with the health and safety standards of industrial production to bring the “trusted yellow chicken” to market. “Why trusted?” she asked rhetorically. Because the brand can guarantee that the chickens “do not contain certain bacteria, have not touched dirty floors...that the product is fresh and 100 percent hygienic” (ibid).



Figure 28: Pollo Rey’s Advertisement for Criollo Chicken

The narrative implicitly sets the industrial hygienic practices of Pollo Rey in opposition to unnamed but presumed unhygienic practices of backyard chicken selling. While this may be seen as responding to legitimate concerns of bacterial contamination in chicken production and distribution, it also is a practice of hygienic discrimination against poor, often indigenous and frequently female, producers. This kind of discrimination can also be seen in editorials of

national newspapers that call for the “cleaning up” of Xela’s streets by removing informal vendors from its markets (Ventura 2017), vendors who tend to be indigenous and female. Rather than focusing on unsanitary practices of the few, an entire group of people becomes portrayed as unhygienic. I call this hygienic discrimination because it demonstrates a more implicit rhetorical strategy that reflects the race-class-gender ideological hierarchies in Guatemalan society (Smith 1995) compared with the more explicit hygienic racism discourses of “dirty Indians” found in other places, like in contemporary Ecuador (Colloredo-Mansfeld 1998).

COMPOUNDING FOOD ECOLOGY RISKS

While Pollo Rey claims hygienic superiority of their poultry, studies of bacterial contamination of chicken carcasses in different retail environments of Guatemala suggest that industrial production does not offer the professed protection. A 2014 study of 33 chicken samples from a municipal market in Guatemala city found that 55 percent of them were contaminated with *Salmonella* and *E. coli*, while five out of 11 analyzed tap water sources at the markets also tested positive for *E. coli* (Mendoza Parada 2014). Meanwhile, *E. coli* has also been found in samples of ground beef from Guatemala City markets (Dabroy Palomo 2014), but was not found in any of the 44 tested samples of artisanal fresh cheese (Pérez Montúfar 2014). A study of stuffed pork loin from supermarkets in Guatemala City found 23 percent of 30 samples tested positive for *Listeria* and another 27 percent for other bacterial contaminants (Colón Samayoa 2015).

A larger study of samples from 300 chicken carcasses from seven departments in Guatemala found that 36 percent were contaminated by *Salmonella* and that 59.2 percent of the *Salmonella* strains were resistant to at least three antibiotics (Jarquin et al. 2015). The study tested samples from different retail environments, including municipal markets (n=125),

supermarkets (n=80), and independent poultry shops (n=95). The researchers found contamination in all three environments: 51.2 percent of municipal market samples, 13.8 percent of supermarket samples, and 29.5 percent of independent poultry shops. Of the 24 samples from the department of Quetzaltenango 41.7 percent contained *Salmonella*.

None of the three market contamination studies specified whether they tested industrially produced or backyard-raised chickens. However, they are more likely to be the former. This is because industrial poultry now dominates retail while the diversity of bird varieties available in municipal markets had drastically decreased in recent decades (Loarca 2017).

A 2003 study, however, looked specifically at 32 samples of criollo eggs from backyard production that were sold in Guatemala City's Zone Four market. It found that none were contaminated with *Salmonella* on the shell or inside the egg, although 59 percent had visible dirt on the outside (Cozano Rubio 2003). Poultry products are one of the main vehicles for spreading the foodborne pathogen, *Listeria* (Jamshidi and Zeinali 2019), although studies confirming this in Guatemala are still lacking.

Whether the chickens are produced industrially or in someone's backyard, when they are sold in markets, they still encounter unhygienic environments. The high pathogen load affects the health of Guatemalans. As noted earlier, diarrheal disease is still the fourth highest cause of premature death in Guatemala, down from the first highest in 1990. It especially affects children (Olga R. Torres 2011). Harmful strains of *Salmonella*, *E. Coli*, and other pathogens are contributors to the burden of the disease. A recent study estimates that, in Quetzaltenango, 64 percent of the population consults public health services for diarrhea (S. L. Díaz et al. 2015). The research team's lab analyses of almost 10,000 stool and blood cultures detected 85 strains of *Salmonella* and 113 strains of *Shigella*, an infectious intestinal disease. The researchers estimate

that for every reported case of *Salmonella* in the department, 40 likely go unreported. They conclude that the two pathogens present a large disease burden in the department.

Interestingly, there is a long tradition in Guatemala of using almost 400 different native plants from 95 families to treat gastrointestinal upset. Caceres et al. (1990) tested the most common 84 for their effects on different strands of *E. coli*, *Salmonella*, and *Shigella*. The authors found that 40.48% of the plants inhibited one or more of the enterobacteria, concluding the existence of a scientific basis for using medicinal plants in treating enterobacterial infections in humans. Others have since then found similar results for Guatemalan medicinal plants (A. B. Miller et al. 2015), showing that various ethnomedicine techniques, like their ethnoveterinary counterparts, can hold up under western scientific scrutiny.

Like with the case of agrichemicals, poor retail hygiene results from a lack of physical sanitation infrastructure, like clean water sources, and from a paucity of social infrastructure, like appropriate behaviors. Both are linked to a poorly-funded and poorly-functioning public institutions. Consider, for example, the following recounting of a government food handling training attended by Rebeca, a first-time restaurateur I spoke with in Quetzaltenango:

I went to a food handling training the other day that the Ministry of Health gives. I left super sad and disappointed, you know? I went to the training at eight in the morning. There were about 75-90 people in a room without a microphone where the person just spoke [in their own voice.] They didn't teach me anything, I don't know anything. If you gave me an evaluation right now about it, I wouldn't know a thing. I know some things because I researched them on my own, but they [at the training] didn't teach me. They didn't teach anyone, not even the process of washing your hands.

There were people at the training looking for work who will run taco or hotdog stands. For that they need a card that says "Food Handling Certificate." At the training they showed us three slides while... speaking of things that were completely unrelated. For example, they told [the group] about a new, 24-hour desk at the health center where they can go vaccinate their dogs against rabies, bla bla bla.

I thought to myself "This cannot be true. It can't be, oh no, it can't be." I couldn't believe it.

Someone raised their hand and asked the man to speak louder because they could not hear. He told them to come up to the front of the room because he could not

speaking any louder. Then they said they will have changes for next time, with microphone and more seats and told us to come back to pick up our cards on Friday at the Ministry of Health. I thought “it can’t be, really? They will give me a card? I don’t know anything!”

How is it that they are confident in people? They are going to get their cards, my food manipulation card, attach it to their resumes and they are going to get the job, that’s it. The employer will say, “oh you already know what to do. You have had the [hygiene] education.”

I found out through a friend about... an INTECAP food handling manual.³⁶ It is very good. But suppose two people who are at the training today buy the book, me and someone else. Of ninety people, two are going to really know what food handling is but the other people will not.

There are additional disease-ecology interactions that compound risks in settings of poorly developed public health infrastructures. Increased consumption of processed meats, for example, is associated with a higher risk of the onset of Type 2 diabetes (Feskens, Sluik, and van Woudenberg 2013; Micha, Michas, and Mozaffarian 2012).³⁷ The illness’ effects on the body, in turn, can negatively interact with pathogenic ecologies. Diabetes leaves people more vulnerable to food borne illness through two pathways: a) because a compromised immune system may be unable to detect incoming harmful bacteria or other pathogens, and b) because diabetes affects the stomach’s acidity, so harmful bacteria can grow within the body and lead to deaths (Nutrition 2019).

Meanwhile, industrial animal meat production processes carry with them additional health burdens. Backyard production typically does not inoculate or add steroids or hormones for growth (Aquino-Sagastume et al. 2016). This comes with the possibility of spreading animal infections to human hosts. However, substances routinely used in industrial production also carry risks. Clenbuterol, for example, is a growth-promoting amine that has similar properties as

³⁶ INTECAP is a public-private institute that provides professional trainings in Guatemala in sectors like food.

³⁷ Studies consistently find that increased consumption of all meats carries a higher risk of diabetes and other chronic conditions, but processed red meat has the strongest associations.

steroid in that they lead to more muscle production and thus leaner meats. It has been banned in animal production in the US since 1991 and in Europe since 1996 because it negatively affects lung and heart function in humans. Clenbuterol is also banned as a performance enhancing drug in sports, but athletes have tested positive for it after meat consumption in countries where the steroid is routinely used, like China and Mexico (McGrath 2011). One recent study found that 17 out of 40 samples of beef from the main market of the city of Suchitepéquez in Guatemala contained Clenbuterol in doses above the maximum residue level (Chavéz Maldonado 2017).

Growth-promoting antibiotics are also widely used in animal production. Some of the most ubiquitous are tetracyclines. Because they promote antibacterial resistance, Europe has prohibited their use in animal production while the United States has restricted it to therapeutic applications (Granados-Chinchilla and Rodríguez 2017). However, many countries still use them, including Guatemala. One study of 30 chicken breasts from a leading Guatemalan poultry producer found tetracycline residues approaching maximum permitted residue levels in 10 percent of the samples (Ramírez and Miranda 1999). In another study, five percent of 161 samples of beef from Guatemala City markets contained residues of the quinolone antibiotic (Canet-Elgueta et al. 2018). Although none of the samples contained the drug at levels above its maximum residue limit, the authors raised cause for concern because it can cause allergic reactions in humans and antibacterial resistance in pathogens like *Salmonella* and *E. coli*.

Residues of antibiotics on poultry products are ingested by humans and spread to the ecosystem. This process is implicated in the growth of antibiotic-resistant strains of *Salmonella*, *Campylobacter*, *E. coli*, and other bacteria around the world (Davis et al. 2018; Muaz et al. 2018). While antibiotics are frequently used to prevent and treat disease in the birds (Sargeant et al. 2018), they can also be used because they promote growth. This is especially so in poorer

countries where “abusive” antibiotic practices (Wadoun et al. 2016) can result due to poor education, different animal husbandry standards, and regulatory bodies’ inability to monitor and uphold those standards. These include using restricted substances in poultry production, such as furazolidone and chloramphenicol that are banned in Malaysia, USA, Canada, the European Union, and other countries (Adebowale et al. 2016). Because of health concerns associated with widespread antibiotic resistance and more stringent regulations in various countries, many researchers and farmers are seeking non-antibiotic alternatives to prevention, treatment, and growth enhancement of poultry (Alagawany et al. 2018; Gadde et al. 2017; Suresh et al. 2018).

While direct ingestion of pathogenic strains of *E. coli* and *Salmonella* is harmful to humans, the bacteria have also been productively entangled in the worlds of agriculture, food, and health that this dissertation examines. Glyphosate, for example, works by preventing the production of three amino acids that are vital to plant growth (J. P. Edwards 2005; Herrera-Estrella, Simpson, and Martínez-Trujillo 2005). To create Round-Up ready plants, like soybeans and grass, Monsanto developers spliced another organism’s gene into their genome. That gene made the plants resistant to the chemical’s protein retarding effects. The gene came from the *Salmonella typhimurium*, the same strand that has been adopted in cancer treatments because of its ability to proliferate within tumors in a way that inhibits their growth (Yoon 2018). It comes from the family of *Salmonella* strands responsible for serious problems of antibiotic resistance and foodborne disease; *Salmonella* is the world’s second largest cause of food-born infection after *Campylobacter* (Beddows 2015). *E. coli*, for its part, resides in the lower intestinal tracts of most mammals. It typically plays a beneficial role in microbiota, but specific strands have the potential to cause disease (Alteri and Mobley 2012). Apart from its role in human health and illness, *E. coli* has been celebrated as a bacterial superstar in science and technology. Its

“hardiness, versatility, broad palate and ease of handling have made it the most intensively studied and best understood organism on the planet” (Blount 2015). It is also a widely used organism for numerous human activities. *E. coli* was involved in the first ever case of the use of DNA technology in the 1980s. The human genetic coding for proinsulin was inserted into *Escherichia coli* cells, which were fermented to produce human insulin, a patented drug that is widely used today to manage diabetes (The 1989). *E. coli* is also one microorganism that is posed to help reduce non-biodegradable pollution. The bacteria can be genetically modified to produce biodegradable plastics (Jianlan 2015). *E. coli* can also be used to detect arsenic (Diesel, Schreiber, and van der Meer 2009), and to produce biofuel (Fortman et al. 2008), among other applications.

CONCLUSIONS

Poultry has been important to consider because it is the most industrialized of animal meat sectors in Guatemala today. It has shown again that domestic, rather than foreign, economic elites have promoted consumption in the style of Western or Standard American Diets, which is marked by increased consumption of meats. The poultry case also further demonstrates the uneven and combined tendency of development in Guatemala in different ways. While the commercial chicken sector has expanded, it has not completely eradicated backyard rearing practices. At the same time, the industry claims to offer a biological fix to consumers who are concerned with pathogens on their food. However, there has not been a parallel development of sanitation infrastructure and practices in food retail environment. So, whether customers buy their branded chickens in municipal markets, small stores or supermarkets, they are not protected from contaminants like *Salmonella*, *E. coli*, and *Listeria*. At the same time, there is little transparency into industrial practices, while independent research suggests widespread abuses

through use and overuse of substances that are harmful to eaters and the wider environment. Meanwhile, the ingredients included in chicken and other meat processing are associated with higher risks of chronic disease, which can negatively interact with pathogenic environments to further worsen the burden of disease in the population. Thus, industrial poultry adds the risks from various *químicos* used in production and processing to a biologically pathogenic environment.

This compounding is especially pronounced in peripheral countries like Guatemala. Not only are its people treated as one class below those in core countries, but it has seen few of the parallel food health and safety infrastructures that have provided the illusion of control in the industrial food supply of wealthy nations (Stuart 2008). Capitalist development in peripheral countries differs from core by processes like super-exploitation, whereby people are paid wages that are below the cost of their labor's social reproduction (Marini 1991; Oliveira 2019). I have suggested that another marker of difference is the supertoxification of peripheral food ecologies.

CHAPTER 8: COMPOUNDING DIET-RELATED DISEASE RISKS

While changes in Guatemala's food environment have encouraged changes in the kinds of foods people eat and where they eat them, recent decades have also seen changes in disease burdens in the country. This chapter analyzes these shifts against the prevailing theories that offer explanations for changing diets and diet-related health around the world. It starts with an overview of those trends and the explanations put forward the Nutrition Transition and Epidemiological Transition hypotheses. It then examines the evidence of diet and disease changes in Guatemala against these transitionist theories of population dietary and disease change.

I show that rather than seeing transitions from one type of diet to another and one set of disease burdens to another, Guatemala has seen a diversification of diets and a compounding of disease burdens. Consumption repertoires have diversified to include new items, which are not only processed foods, but also new varieties of vegetables and meats. Meanwhile, infectious and other illnesses, including diarrheal disease, have not disappeared but have been joined by chronic diseases as top causes of physical suffering and premature death.

I argue that this compounding of diet-related disease burdens is related to two concurrent and interrelated processes that the previous chapters outlined. On one end, the addition of agricultural, animal rearing, and food processing and distribution *químicos* to Guatemala's food ecology has occurred without the layer of protection that higher, enforced standards provide. At the same time, while there have been some public health advances in sanitation, these have not been sufficient to address a biologically-hazardous food ecology that carries a high pathogenic load. This results in the supertoxification of Guatemala's food ecologies that have created

multiple pathways for interaction of disease within human bodies that grow and consume their edible products.

THEORIZING GLOBAL CHANGES IN NUTRITION AND HEALTH

Today, growing consumption of animal food products, especially in processed forms, as well as other processed foods and drinks is also accompanied by an additional pronounced trend: the rapid spread of chronic diseases, like type II diabetes, cardiovascular disease, cancers, and strokes. In all, 20 percent of all deaths worldwide are linked to “poor diets” (Afshin et al. 2019). Because they were initially linked to increases in wealth and standards of wealth among rich nations, these were labelled the diseases of civilization, diseases of affluence, and the Western Disease paradigm. As I discussed in chapter one, obesity has received the most attention from medical practitioners, public health research, and critical social scientists.

Yet, obesity is just one in a suite of chronic diseases affecting the world’s populations that is associated with shifts in what people eat. While the changes were initially labelled the diseases of the wealthy, in rich countries they are now associated with poorer people, while healthy eating and “healthism” are associated with the upper and middle classes (Guthman 2011). At the same time, research around the world shows that chronic diseases increasingly and often disproportionately affect the poor in poorer nations, especially indigenous groups and people of color in general. The shift of the burden of chronic disease to the poor has been noted in the public health and nutrition theories and it warrants further exploration.

Various explanations for the rise of chronic illnesses link lifestyles, diets, and disease. One of the most prominent among them is the Nutrition Transition hypothesis. Led by Barry Popkin and his colleagues, the Nutrition Transition school has contributed a great deal to tracking the spread of obesity and pointing out the physiological, development, epi-genetic and

other pathways of disease onset. The theory links the rise of obesity to the transition of diets towards processed foods and drinks and reduction in physical exercise. The former has been termed the “Western Diet” defined as “high intake of refined carbohydrates, added sugars, fats, and animal-source foods” at the expense of diets rich in legumes, vegetables, and coarse grains (Popkin, Adair, and Ng 2012, 6). This type of eating has also been called the “Standard American Diet” (Grotto and Zied 2010).

Accompanying Nutrition Transition thinking is the Epidemiological Transition theory that situates contemporary dietary and disease changes within a longer trajectory of human evolution (Harper and Armelagos 2010). In short, it shows that agriculture has been bad for human health. The archeological record shows that apart from social stratification, farming brought with it poorer nutrition and infectious diseases. Bubonic plague, hantavirus, typhus, *Salmonella*, and histoplasmosis were all carried by the animals around human settlements. The heightened burden of infectious disease marked the first epidemiological transition. The second epidemiological transition is a shift to chronic rather than infectious disease patterns linked both to longer lifespans and to the spread of Western diets around the world. The theory posits that poorer countries have not seen the full benefits of the second transition while beginning to face the consequences from the age of antibiotic resistance, the hypothesized third epidemiological transition (Harper and Armelagos 2010).

Much literature credits the nutritional change that underpins the second epidemiological transition with the creation of obesogenic environments, which encourage poor food choices and discourage physical activities (Brownell and Horgen 2004; Nestle 2013; Swinburn, Egger, and Raza 1999; Wansink 2006). A particular emphasis is placed on the changes in the food retail environments around the world, including through increased international trade of processed

foods and drinks (Fenton 2012). At the center of the hypothesis is the supermarket revolution whereby a handful of global companies control increasingly large portions of food sales to consumers. The retailers change what kinds of foods that are available for purchase cheaply while displacing municipal fresh markets (Popkin, Adair, and Ng 2012). Conversely, the Food Deserts hypothesis posits that it is the lack of supermarkets, and lack of accessible healthy food options in those that do exist, that also lead to problems like obesity (Beaulac, Kristjansson, and Cummins 2009; Walker and Andrew 2006).

While documenting important environmental and bodily changes, the nutrition transition and obesogenic environments theories tend towards a linear conception of the globalization of food whereby Western and Standard American diets are posited as flattening out local food cultures. The corollary focus on the Westernization, McDonaldization, and Coca-Colonization of foodways around the globe rings alarm bells of homogenization of the world born out of cultural and economic imperialism of countries like the United States (Pingali 2007; Ritzer 1992; Zimmerer 2013). I argue that the Guatemalan case study shows that while these hypotheses do accurately account for some changes seen in food retail and consumption, they face the same ongoing critique of the Food Regimes Theory: its universalizing, homogenizing and overly structuralist interpretations that leave little room for the existence of diversity within and outside the regimes (Niederle 2018). Closely examining changes in consumption and disease burdens in Guatemala shows that the shifts are best described not as processes of homogenization but as processes of diversification, hybridization, and combining (see also Nagata et al. 2011). This dissertation shows that these more complex interactions are rooted in the country's particular historical social and ecological relations and struggles within and outside its borders.

GUATEMALA'S DIETARY DIVERSIFICATION

To examine shifts in diets in Guatemala, I turn to studies that compared people's eating patterns in three different time periods. Bermudez et al. (2008) analyzed archived nutritional data from food recalls and food frequency questionnaires. The research was conducted by the Institute of Nutrition of Central America and Panama (INCAP) in remote rural and semi-rural communities between 1950 and 1969 and with Guatemala City-based non-indigenous and Quetzaltenango-based indigenous population subsets by the Center for Studies of Sensory Impairment, Aging and Metabolism (CeSSIAM) between 1999 and 2002. The researchers use the INCAP data as a baseline to ascertain the changes in the kinds of foods that people ate (the food groups) and the number of foods in each food group. The study further disaggregated the data to look at the number of items reported in the studies in the categories of "old" foods, which were present in the INCAP study, and "new foods" that emerged in the CeSSIAM work. Table two reproduces these data.

Some categories had less diversity in the items they contained. For example, game meat and creole turkey food groups disappeared completely while the number of fish and shellfish items in the diet reduced by about half.³⁸ Green leafy vegetables also halved, from 11 items eaten in the 1950s and only five or six reported in the 2000s. Other "old" vegetables in the diets reduced from 17 items to 13 and "old" fruit from 13 to 10 and nine (among non-indigenous and Maya cohorts, respectively). This shows a reduction in the number of more traditional foods eaten. All the other "old" foods categories were relatively stable, losing only one or two foods each.

³⁸ Future research could explore the factors affecting the loss of gathered foods from diets of the studies' participants. One possible factor is ecological change whereby habitat destruction has led to the reduction in number of wild game and birds. Another is the higher availability of foods for purchase, making the time-consuming work of hunting and gathering less convenient.

Table 2: Number of Foods Consumed According to Food Group and Study

Food Group	INCAP studies (1950-60)	CRONOS Metro Study (1999-2000)		CRONOS Maya study (2001-02)		TOTAL # OF FOOD ITEMS		
	# of food items	# of food items	Change since 1950-60	# of food items	Change since 1950-60	1950-1960	1999-2002	Change in total
Corn, corn tortilla, corn atole	3	3	0	5	+2	3	7	+4
Corn tamales	2	3	+1	8	+7	2	8	+6
Beans	3	3	0	4	+1	3	5	+2
Rice	1	2	+1	5	+4	3	7	+4
Bread	3	5	+2	6	+3	3	7	+4
Breakfast cereals	1	3	+2	4	+3	1	5	+4
Other cereals (e.g. pasta)	2	5	+3	5	+3	2	9	+7
Milk, dairy products, and egg	8	10	+2	11	+3	8	13	+5
Meat, beef, and pork	11	12	+1	12	+1	11	16	+5
Game meat ^a	3	0	-2	0	-2	3	3	0
Chicken and turkey	2	1	-1	2	0	2	3	+1
Fish and shellfish	5	2	-3	4	-1	5	6	+1
Green leafy vegetables	11	5	-6	6	-5	11	11	0
Green and yellow vegetables	4	6	+2	5	+1	4	6	+2
Other vegetables	17	15	-2	18	+1	17	22	+5
Potatoes, root crops, and plantain	4	6	+2	6	+2	4	7	+3
Fruit ^b	13	18	+5	20	+7	13	26	+13
Fats and oils	2	8	+6	9	+7	2	9	+7
Sugar	2	2	0	2	0	2	4	+2
Beverages ^c	4	12	+8	12	+8	4	14	+10
Snacks ^d	0	2	+2	3	+3	0	3	+3
Desserts ^e	3	9	+6	8	+6	3	9	+6
Soups	0	3	+3	4	+4	0	4	+4
Other mixed dishes with meat [*]	0	0	0	1	+1	0	3	+3
Miscellaneous ^f	4	3	-1	2	-2	4	5	+1

a. Meat from wild animals hunted for food.

b. Fruit include fresh, dried, and canned fruit and 100% fruit juices.

c. Beverages include soft drinks, fruit-flavored sweet drinks, tap water, bottled water, tea, coffee, alcoholic drinks.

d. Snacks include salty appetizers, including potato and corn chips and popcorn.

e. Desserts include pastry, cakes, ice cream, sweetened gelatin, and pudding.

f. Miscellaneous includes salt, spices, and seasonings.

* The amounts in this column do not add up correctly, which is an original error in the Bermudez et al paper.

Source: Adapted from Bermudez et al. (2008)

Other food groups saw a more qualitative rather than quantitative shift in consumption. A similar total *number* of items were consumed in the animal products categories between the study dates. However, there was a shift in the types of food the categories entailed: five new foods were found in the milk, dairy products, and eggs group (four of them processed) , five in the meat, beef and pork group (three of them processed), and three new chicken foods (none processed). Similarly, five new vegetables, two new root crops, and 13 new fruits were detected in the diets while the overall number of foods in those categories remained stable.

Some of the food categories saw an increase in both the number of different items in them and how much many of those items were consumed. For example, there were new types of rice (from one item to five), bread (from three items to seven), breakfast cereals from one item to five), and other cereal-based foods, like pasta (from two items to nine) introduced into the diets between the study periods. The study found seven new fats and oils (with number of food rising from two items to nine), two new sugar sources (rising from two to four items), 10 new beverages (rising from four to 12 items), three new snacks (rising from zero to three items), six new desserts (rising from three to nine items), and four new soups (rising from zero to four items). The number of old corn, corn tortilla, and corn *atole* foods remained stable (three items), but later years saw an additional three new foods in the category. All but one of the groups with more items in later decades contain industrially-produced foods. With six new items in the category, corn tamales are the probable exception. I say probable because Bermudez et al. (2008) did not specify whether the corn tamales were handmade or industrially processed, but it is most likely to be the former due to the laborious and delicate nature of the food. In all, the percentage of processed foods in all the categories rose from 11.1 percent in the INCAP studies to 29.7 percent and 25.3 percent in the non-indigenous and Maya CeSSIAM studies, respectively. The

average daily calorie consumption estimates for the three studies were 2,044, 2,790, and 3,213, showing a higher rise among the Xela cohort. The higher proportion of fats in the diet than in the 1950s help explain average caloric increases; protein proportions have remained the same, while carbohydrates have changed in the type rather than the caloric amount consumed.

There are various limitations to making conclusions from this research. It compares rural and urban consumption patterns without accounting for the differences that living in those areas typically entails. It focuses on overall numbers of food items without reporting the frequency or amount of their consumption (data that was available to the researchers). As mentioned earlier, it did not always mention whether the new foods were industrially-processed.

In the meantime, despite these issues, the data lends support to the hypothesis that the compositions of diets are different between the populations and time periods studied. However, a closer look reveals that they have not shifted in a single direction. There has not been a uniform replacement of “old” native and creole subsistence foods with “new” industrial foods, or healthy foods with unhealthy ones, or more meats at the expense of less vegetables. There has not been a single nutrition transition.

What is observed instead are multiple shifts in different food categories. Some old foods have disappeared, like game and turkeys, yet some only decreased in diversity with few new additions, like fish and shellfish. Others have decreased while seeing many new additions, like animal-based products. Others persist while having been joined by several new options, like corn foods. Others still seem to have been diversified without industrialization, such as tamales.

Some foods are entirely “new” and industrial, like instant soups, that provide little micronutrient sustenance. Others have shifted to lose some old whole foods, replacing them with both whole and processed varieties. Seven items that have been lost from the original 24 old

foods in the meat, dairy, poultry, and game groups have been replaced by 12 new ones, seven of which are processed, five of which are not. Yet some food groups have shifted in providing different but largely still nutritious items. For example, 16 old fruits, vegetables and root crops were lost from the original 52 in Guatemala City and 15 were lost in Quetzaltenango, but these were replaced by 20 new fruit and vegetable varieties.

Disaggregating these trends helps to denaturalize the idea of the nutrition transition as a linear trend. It also opens the door to a closer analysis that attends to the wider Guatemalan context. That context contains within it specific changes in the relations of production and consumption that have facilitated the observed tendencies.

The context can also reveal variations that aggregated data obscures. As chapters six and seven showed, for example, some of the changes in animal and plant food groups mirror the changes in meat and vegetables the production landscape in Guatemala. The 1970s onwards saw a large expansion of smallholder non-traditional agricultural crop production throughout the Highlands and of industrial factory farming and animal product processing operations.

The Bermudez et al. study's methods and aggregation also fail to capture additional nuances in food changes in Guatemala. The authors do not say whether the food frequency questionnaires included foods eaten outside the home. For example, as this dissertation has shown, post-war Guatemala saw a rapid expansion of fried chicken and other outlets in the country. This trend may have been missed by the CeSSIAM studies. Their results did not contain "new" processed chicken items. Or this may have been a categorization issue if things like fried chicken were not coded as processed. The lack of nuance in the research hides other developments, like the industrialization of much egg production in Guatemala. The data does not capture the qualitative change of many Guatemalans shifting to buying poultry instead or in

addition to rearing chickens themselves, nor the overall increase in poultry consumption outlined in chapter seven. Meanwhile, the biggest loss in terms of micronutrition has probably been in the halving of the leafy green vegetable category, one type of food that has been racialized and thus negatively socially and temporally associated with an undesirable, indigenous past.

Finally, the study retains a western nutritional lens. It groups the foods and diets according to established medical scientific categories within the nutritionism frame (Pollan 2007). Classifications that divide foods into meats, vegetables, grains, fats, and sugars make little sense to how different communities think and talk about meals and eating. The K'iche' of Nahualá, for example, have a complex and intersecting system that classifies foods by their seasonal and local availability, by their regularity and planned/unplanned consumption, and by their source and role in the dish and the community (Cuj, Sattler, and de Beausset forthcoming). In that classification, beans, rice, sausages and eggs form one subgroup of a larger matrix, items that would belong in four different categories reported by Bermudez et al. (2008).³⁹ As chapter nine will show, non-indigenous Guatemalans also experience food in more nuanced, relational, eco-social ways than the nutritionist categories allow.

AN EPIDEMIOLOGICAL TRANSITION OR A COMPOUNDING PROBLEM?

Changes in the food retail environment and shifts in dietary patterns have been accompanied by a changing disease burden in the population. Some of the changes have been positive, like gains in life expectancy and child mortality. But some of them have been negative; for example, life expectancy has not risen as fast as expected. At the same time, chronic diseases have not replaced infectious ones. Instead, Guatemalans suffer from a contradictory mix of food-

³⁹ Future studies could yield additional insights by updating and reanalyzing the INCAP, CeSSIAM, and other data according to more culturally-appropriate categories.

related afflictions. Food security and undernutrition coexist alongside diabetes and other chronic illnesses and alongside food-borne infectious disease. I argue that this is linked to processes of uneven and combined development in the country that previous chapters have outlined: agriculture, food processing, and food retail sectors are highly developed but public health and safety institutions and protective regulatory mechanisms are not. I will now consider these changes in order to make the case that Guatemala has not seen an epidemiological transition but a compounding of food-related health problems due to woefully inadequate public institutions.

There have been some positive development in the overall national health, disease, and death story of Guatemala as the country's population has increased fourfold from four million in 1960 to more than 16 million today. But the morbidity and mortality profile in the country is changing. Average life expectancy has increased by 10 years from the 1990s to 2017, to 68 years for men and 77 years for women. In 2017, life expectancy for United States females was 81 and males was 76 (IHME 2019b).

At the same time, mortality of children under five and under one years old has steadily decreased over the same decades. Under-fives' mortality has dropped from 80 to 25 per 1,000 births and for under-ones from 50 to 20 per 1,000 births. The figures for the United States are 6.7 per 1,000 and 5.7, respectively. Some of the improvements can be attributed to improved hygienic-latrines coverage in the country from 47 percent to 64 percent and to improved drinking water from 77 percent to 93 percent (PAHO 2017), but these and other sanitation institutions are still heavily lacking.

Along with increases in life expectancy Guatemala has seen a shift in the population's disease burden whereby new diseases have joined old ones as leading causes of years of life lost and premature death. Figure 31 shows the change in the top 10 rankings of causes of premature

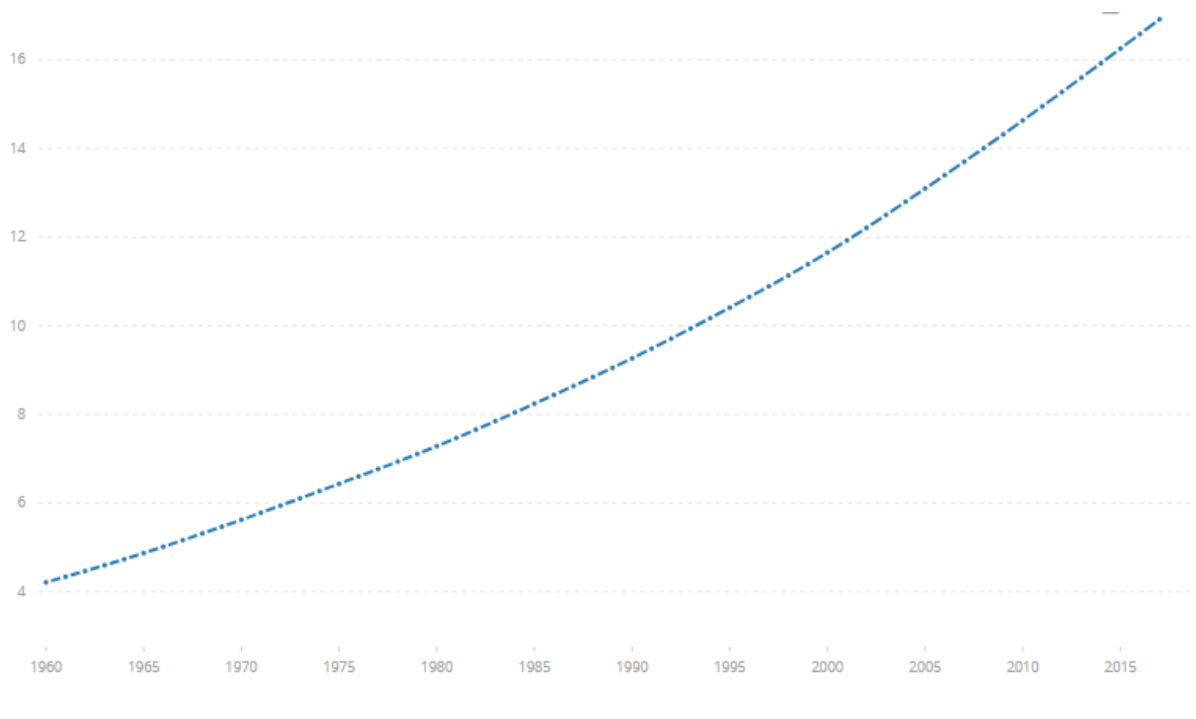


Figure 29: Population Rise in Guatemala (1960-2018) (Millions)

Source: World Bank (2019b)

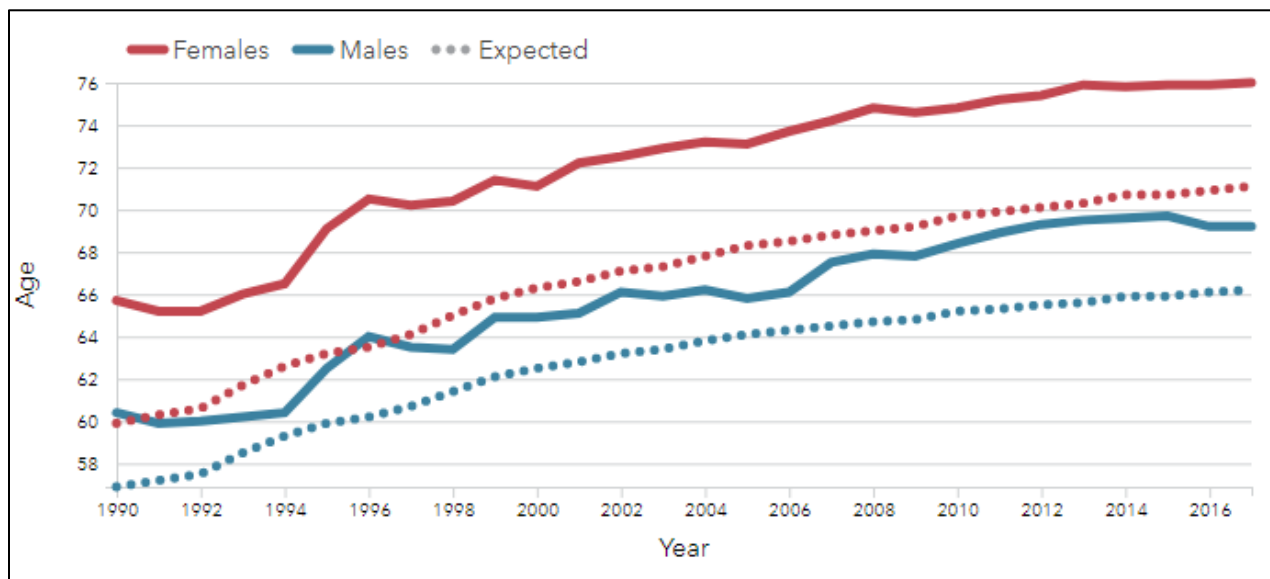


Figure 30: Life Expectancy in Guatemala (1990-2017)

Source: IHME (2019)

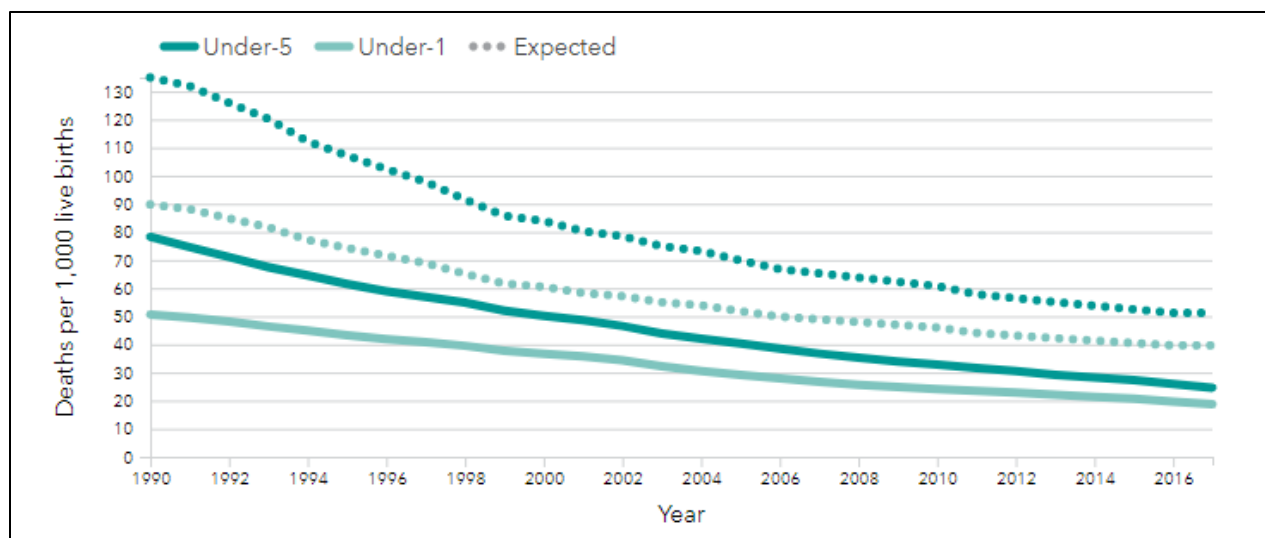


Figure 31: Mortality Trends of Children in Guatemala

Source: IHME (2019)

death in Guatemala from 1990 to 2010 and again to 2017. Lower respiratory infections have consistently been the top or the second highest cause of premature death. They most severely affect young children and are linked to poor indoor and outdoor air quality, including the use of open-air wood-burning stoves in homes (Bruce et al. 2007).

Protein-energy malnutrition has fallen from the fourth highest to 13th highest, diarrheal disease from first to fourth, and congenital abnormalities from sixth to ninth. Meanwhile, interpersonal violence has been the second highest cause of premature death at least since 2010; it was the fifth highest cause in 1990. Other causes have also risen in prominence since 1990: heart disease from seventh to fifth, cirrhosis from 12th to sixth, road injury from 17th to seventh, diabetes from 25th to eighth, and chronic kidney disease from 18th to tenth.

The trends show that Guatemala is experiencing multiple disease and mortality burdens in both the communicable and non-communicable categories. Like the nutritional changes outlined above, these epidemiological changes are more complex than linear, transitionist

theories predict. Child mortality is declining as water and sanitation systems have seen some improvements in the last 15 years at the behest of international public health projects (World Bank 2018a). However, many children and adults still succumb to preventable lower respiratory infections, infectious diarrheal diseases, and pre-term birth complications. The rural indigenous and poor populations are disproportionately affected (ibid).

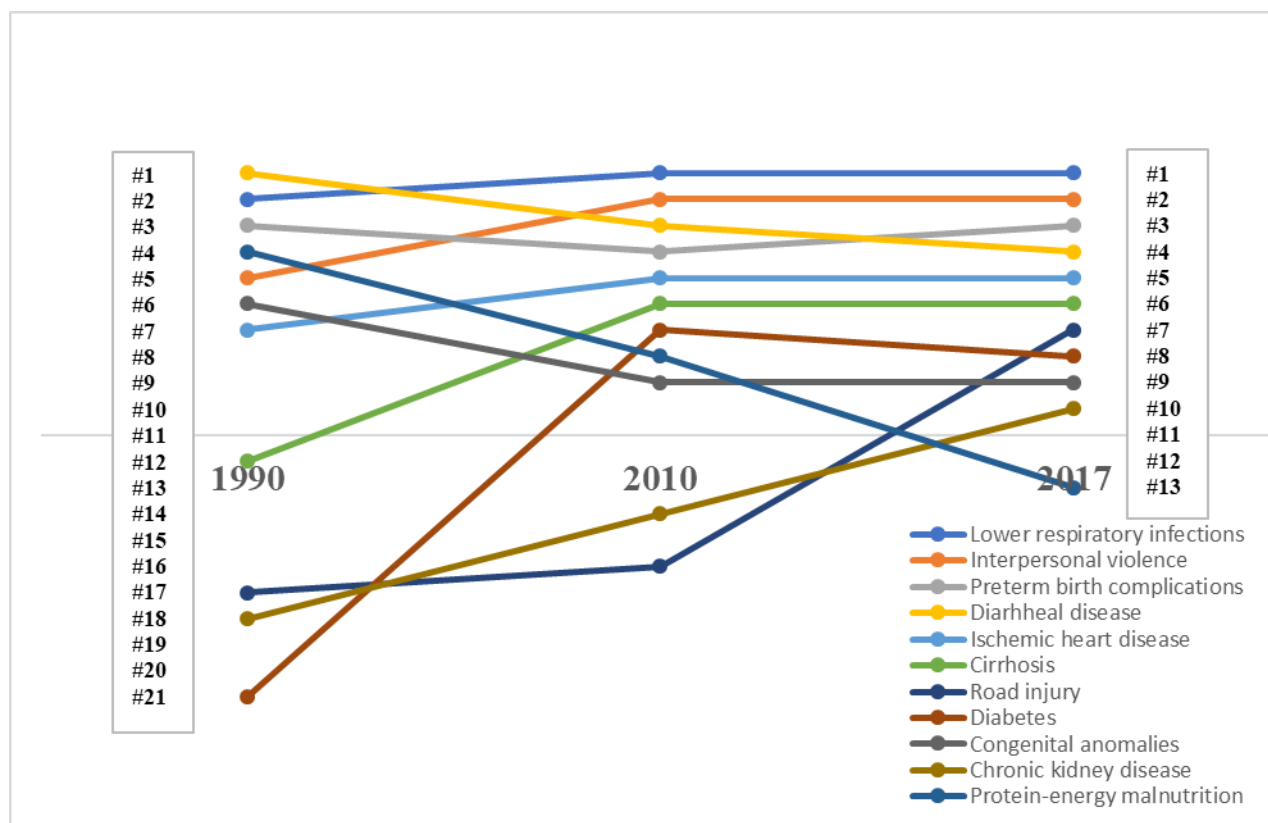


Figure 32: Changes in Top 10 Causes of Premature Death in Guatemala 1990, 2010, 2017

Sources: Data compiled from PAHO (2010) and IHME (2019)

While protein-energy malnutrition is declining, heart disease, diabetes, and diabetes-associated kidney disease have increase.⁴⁰ These chronic diseases are markers of the

⁴⁰ I do not mention as a major public health problem the reported rise in overweight and obesity in the country (Ng et al. 2014) or the apparent paradox of stunted child-overweight mother (SCOM) pairs

epidemiological and nutrition transitions experienced in wealthier nations (Popkin 1994; Popkin, Adair, and Ng 2012). The top 10 causes of premature death in the United States, for example, are ischemic heart disease, lung cancer, drug use disorders, Chronic Obstructive Pulmonary Disease (COPD), stroke, Alzheimer's, self-harm, road injuries, cirrhosis, and colorectal cancer (IHME 2019b).

With a 59.3 percent national poverty rate, many households are food insecure (INE 2015). The rate of child chronic malnutrition is the fourth highest in the world, reaching 67 percent for children under five in the Western Highlands of the country, where poverty afflicts 76 percent and extreme poverty 27 percent of the residents (INE 2014). Child stunting approaches or exceeds 40 percent frequency in both rural (Serebutra et al. 2006) and urban (Reurings et al. 2013) areas. At the same time, between the 1980s and 2010s adult diabetes prevalence rose from 8.9 percent to 11.5 percent in men and from eight percent to 14 percent in women (Danaei et al. 2011) and between 1990 and 2010 years of life lost due to premature death from diabetes have increased by 284 percent, from ischemic heart disease by 97 percent, and from stroke by 60 percent (IHME 2010).⁴¹ As researchers are uncovering links between agrichemical usage and childhood leukemia in the department of Quetzaltenango (Vargas et al. 2014), Guatemala ranks as having a high degree of risk for food and water borne infectious diseases, such as Hepatitis A, typhoid fever, and bacterial diarrhea (Index Mundi 2018). Multiple

within Guatemalan households (Doak et al. 2016; Lee et al. 2010; 2010; 2017; Ramirez-Zea et al. 2014). For the latter, Dieffenbach and Stein (2012) have convincingly demonstrated that rather than a real-world phenomenon, SCOM is more likely to be a statistical artefact resulting from the independent presence of both stunting in Guatemalan children and overweight in women. For obesity, it is now well-established that weight or BMI measures are unreliable proxies for cardiovascular health and overall wellbeing (e.g. Tomiyama et al. 2016). But, excessive focus on weight can lead to the stigmatization of fat and fat bodies, as it increasingly is in Guatemala (Hackman, Maupin, and Brewis 2016), where fat has historically been positively viewed. A focus on the metrics of weight and body size also poorly and violently maps onto people's real-world, incalculable experiences of making, eating, and sharing food (Yates-Doerr 2015).

studies confirm diarrheal incidence among Guatemalans and visitors with different strains of *Salmonella*, *E. coli*, and parasites often the culprits (González-López et al. 2014; Herwaldt et al. 2001; Ouyang-Latimer et al. 2011; O. R. Torres et al. 2015). If food is everywhere, so is food's link to disease.

The diversification of disease burdens in Guatemala is linked to her lack of public institutions that offer protection from natural and human-introduced risks. Life expectancy gains and a shift away from infectious diseases in rich countries have been achieved through the development of public goods, like education, housing, and sanitation (Helmuth 2013; Oeppen and Vaupel 2002). The latter has been particularly important and owes progress to two factors. The first is breakthroughs in understanding disease causation, such as the germ theory of disease. The other factor has included major public efforts to enact the needed cultural changes, such as establishing handwashing as a standard practice in hospitals. Neither processes have been quick. Basic forms of the germ theory of disease trace back to the Middle Ages. It gathered pace only after viruses were discovered in the 1890s. Meanwhile, West Africans have used soap for 5,000 years and all major religions exalt forms of physical cleanliness (Gibbs 1939). Yet, “handwashing is a relatively new wrinkle in history” (Markel 2015, 447). It was established as a bona fide medical prescription only in 1847. Today, improvements in sanitation account for 88 percent of global longevity gains (McDonnell 2018). Sanitation is also seen as a major key to achieving the Sustainable Development Goals, with the promotion of hand washing as one of the most cost-effective public health investments (PHN 2017).

Another important factor in changes in longevity and disease patterns has been gains in nutrition due to higher standards of living and sanitation-linked developments in food safety. Fortified foods introduced in the 19th century helped to overcome micronutrient malnutrition,

such as scurvy (vitamin C deficiency), rickets (vitamin D deficiency), and pellagra (a niacin deficiency) that plagued poor people (Helmuth 2013).

At the same time in the United States, contaminated food was one of the biggest killers, especially of infants once they stopped breast-feeding. Along with the germ theory of disease, public health drives for unadulterated foods and refrigeration made the food supply safer.

The Pure Food and Drug Act of 1906 introduced food labeling laws and made it a crime to sell adulterated (impure) food, a common business practice at the time. The government also began to inspect meat and other products through the newly-formed Food and Drug Administration (Helmuth 2013).

Unlike the United States and other wealthy nations, however, Guatemala has not seen a shift from infectious to chronic disease. It suffers instead a double burden of both chronic and communicable diseases within a wider burden of physical and economic precarity. This is reflected in the risk factors that account for most premature deaths and disability. While public health data splits different risks into metabolic, environmental, and behavioral categories, eight of the top 10 highest risk factors in 2007 and 2017 are directly related to the ingestion of food and drinks (malnutrition, high fasting plasma glucose, alcohol use, high body-mass index, dietary risks, WaSH, and impaired kidney function), while the other two are related to inhalation (air pollution and tobacco use).

Part of the reason is that Guatemala has one of the lowest per capita public health expenditures in Central America and, at 50 percent without access to private or public care, one of its highest coverage gaps (Perez Ruiz and Soto 2019). With few other options than to pay out of pocket, 65 percent of Guatemalans in the lowest income bracket experience “catastrophic health spending” that exceeds their capacity to pay (Bowser and Mahal 2011). And while gains

in extending water and sanitation facilities have been made, the food ecology of many Guatemalans remains heavily biologically pathogenic. In other words, there has been an uneven development of physical and social public institutions, leading to a combining of risks in the country's food ecology.

At the same time, peace-time Guatemala has felt all but peaceful for its residents, many of whom live in poverty and struggle to make a living. The country's armed conflict officially ended in 1996, but state-perpetrated genocide has been replaced by gang activity, violent crime, and criminal impunity. This is reflected in the prominent position that interpersonal violence, primarily through gun crime, plays in premature deaths in the country. Coupled with poverty and lack of opportunity, the threat of violence pushes many people to undertake dangerous journeys north of the border in search of better lives. Meanwhile, the economic and physical precarity has also been accompanied by a rise in alcoholism in Guatemala. Its health toll is most visible in the form of liver disease. These factors represent additional, combined, and compounded, risks that condition how people experience life, health, and eating in Guatemala.

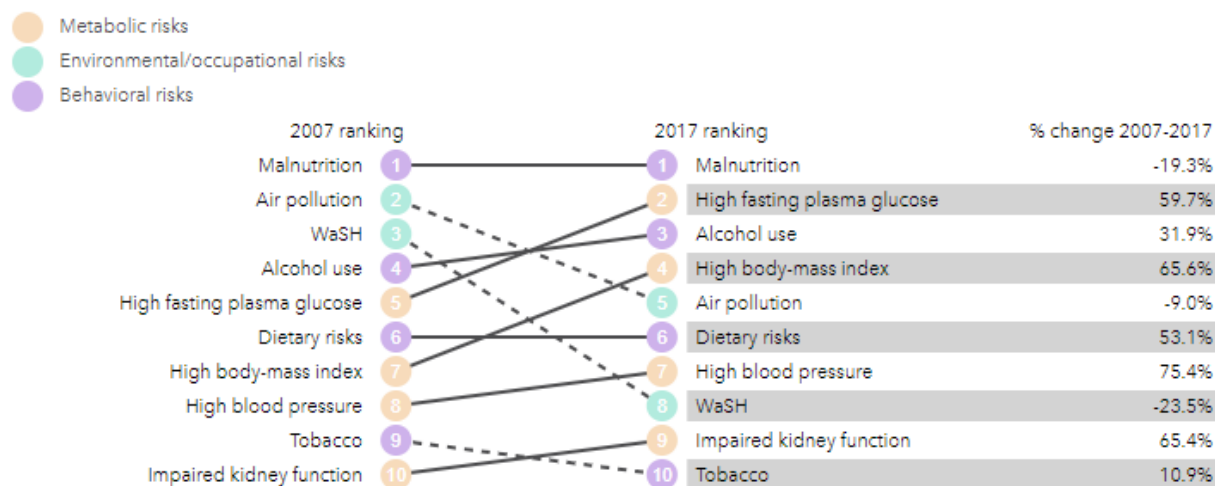


Figure 33: Changes in risk factors for death and disability in Guatemala (2007-2017)

Source: IHME 2019

CONCLUSIONS

This chapter has shown that there has not been a single nutrition transition in Guatemala. Nor has there been a linear epidemiological transition either. Nor have there been a transition to foreign-interest domination of Guatemala's agri-food systems. Instead, there have been multiple forms of uneven and combined development in food, health, and environment of Guatemala. More nuanced historical unpacking of specific shifts in food ecologies and people's eating repertoires can help us better understand their sources. Such a critical political ecology analysis can also point to avenues for reversing the negative trends while enhancing the positive ones. It can illuminate paths of resilience and resistance that are important when thinking through solutions to some of the world's largest, food-related problems. The rest of the dissertation aims to make strides in this direction, starting with the next chapter, which begins to unpack how people make decisions about what, where, and how to eat in Guatemala's supertoxified food ecology.

SECTION III: MANAGING GUATEMALA'S RISKY FOOD ECOLOGY

CHAPTER 9: HEALTHY EATING TO *SUPERAR* A SUPERTOXIFIED FOOD ECOLOGY

“Precarity is that here and now in which pasts may not lead to futures.”

Anna Tsing (2015, 61)

Sections I and II examined the food ecology that surrounds people who live, work, and eat in Guatemala today. The walk through Xela’s Central Park demonstrated the variety of foods and food experiences available to the city’s residents. A run through Guatemala’s diet and disease statistics revealed the dynamics of the connection of food to the changes in Guatemala’s leading causes of illness and death. I have thus far made the case that the chemicalization of the food supply has compounded biochemical risks within a context of economic, physical, and pathogenic precarity. The effect has been a supertoxification of Guatemala’s food ecologies. Throughout, I have stressed the uneven race-class-gender geographies of production, consumption, and suffering that Guatemala’s food ecologies, and their historical underpinnings, have produced.

Until now, the dissertation has focused on changes in the production, distribution, and marketing of food. That is, the landscape of options open to people in Xela. This chapter shifts gears to ask how people make decisions about what, where, and how they eat. I argue that consumption of different foods needs to be understood within the contours of people’s specific food ecologies. Eating is by nature a risky business because it is almost always social; whether it is one’s mother, the farmer growing food, or the restaurant down the street, one has to entrust someone else with the safety of their meals. However, contemporary Guatemala’s food ecology is marked by additional multiple and competing hazards within economic, social, and ecological

spheres. I show that managing the tradeoffs between these compounded risks is an important part of alimentary decision-making whether eating out, buying snacks on the go, or shopping for ingredients for home-cooked meals.

To make the case I rely on two concepts with expansive definitions. First, I employ the trope of *superar*, a word that Pollo Campero used in its advertising messaging. The brand used the term in its sense of climbing. There, it meant “to get ahead,” “to surpass,” “to beat.” In that way, *superar* is set against a wider field of relations where one gets ahead or surpass someone or something else. Another closely-associated meaning is “to succeed in.” In its reflexive tense, the word prescribes that getting ahead and success can lie in personal improvement. *Superarse* is to better oneself. When used in these ways, *superar* comes close to the reflecting the neoliberal self, an ideal, entrepreneurial, atomized, and competitive subjectivity that many argue has accompanied the economic neoliberalization of the world (Barnett et al. 2008; Wacquant 2012).

Superar also means to overcome. This connotation of the word is mostly frequently deployed in the emotional sense of “to get over” or “to get past” a problem. Yet, this version can also describe overcoming any kind of difficulty, including people’s perceived risks and experiences of precarity. *Superar*, then, contains a useful constellation of meanings in helping to chart decision-making in a context of multiply-hazardous food ecologies.

The chapter begins by demonstrating how different people in this study used branded foods and other luxury items to help demonstrate their climbing, *superando* socio-economic hardships set against a physically precarious future of a violent context. The second portion of the chapter shows some of the strategies that people use to *superar* the biological and chemical risks of their food ecology.

Understanding how they do so requires clarifying what is meant by “healthy eating.” In wealthier country contexts, healthy eating connotes eating many “good” actors (foods, ingredients, or macro-nutrients) and few “bad” ones. However, in places like Guatemala with actual and perceived high risks of pathogenic and industrial contamination, food safety is an important aspect of local definitions of healthy eating. This judgement relies on place-based and social notions of the sources and healthfulness of foods. Foods outside the home are not necessarily sought for their healthfulness, in the narrow sense of eating “good” nutrients, while foods made in the home are deemed the healthiest of all. There, women are charged with providing healthy food defined as a constant balancing act between its tastiness, nutritiousness, completeness, safety, and social appropriateness in family and community life. At the same time, when choosing between food options, how tasty they are is so central to decision-making that it defies a simple calculus of economic value. Finally, as some people become aware of new physical risks in their food systems, they engaged in strategies to minimize them.

This chapter thus shows that consumption straddles both senses of *superar*, with people consuming goods as a way to both strive to get ahead and seek to overcome. These fit the kind of neoliberal striving promoted by advertisers described in chapter five and the kind of enjoyment of the day mentality that violent and economically precarious environments foment. At the same time, however, people use foods and other consumer goods as tools of sociality, not just self-making or escape. And they differentiate in the marketplace as a way to protect themselves and their families against some of the material risks the foods might contain.

CONSUMING TO SUPERAR

Many Guatemalans and visitors to the country do not know the official disease statistics presented in the previous chapters. Nor have they heard of some of the contamination research

that I have presented. Yet they live the reality of this social and material environment every day, a reality that is unevenly echoed in newspapers, on the radio, and on TV.

Of the leading causes of years of life lost, violence features most prominently in the media. Food as a major risk factor for a host of longevity-reducing afflictions is less visible. If a would-be traveler confined her experience of the country to reading its daily newspapers, for instance, she could be forgiven for thinking that food (and food-related illness) was a small part of Guatemalans' collective experience. It only briefly features in menu advertisements paid for by chain fast food sellers and expensive independent restaurants, discounts offered by supermarkets, and an occasional public letter by national exporter, coffee, or avian lobby groups. The short women's inserts at the back of some papers occasionally offer a "healthy" recipe or detail the steps needed to prepare a more traditional dish. Occasionally news items appear that focus on unusual tomato price spikes or contraband egg flows from Mexico. In general, stories about chronic childhood malnutrition, rising obesity rates, or the cancer risks associated with the consumption of red meat sporadically punctuate media that are otherwise obsessed with poverty and corruption, crime and punishment, and gruesomely detailed and graphically photographed murders and road accidents. The story is the same whether one consults the upper middle and middle-class-aimed national dailies of *La Prensa Libre* or *El Periodico*, the Xela local tri-weekly *El Quetzalteco*, or the country's most widely absorbed *Nuestro Diario*. Instant deaths are sexy. Slow deaths are not.

That does not mean that food risks do not enter people's consciousness. Quite to the contrary. People constantly attempt to navigate diffuse food system hazards that they cannot see. However, industrial goods also help people navigate a wider social system that is marked by physical, economic, and political violence.

This section starts with five ethnographic vignettes that detail how different kinds of people bought and engaged with particular goods, such as branded and status foods and drinks. It shows how assembling a life in contemporary Guatemala is filled with desires to *superar* in the sense of getting ahead, and with the necessity of *superar* in the sense of overcoming a precarious existence.

1) Ricardo buys a stove

As is the norm for Guatemalans who work in formalized enterprises, Ricardo received his “Bono 14” from his employer, a coffee shop in Quetzaltenango, in July of 2017. The annual bonus is equivalent to a month’s salary and, to the surprise of some of his foreign friends, the single, 25-year-old used his Q2,000 (\$267) windfall to buy a large, industrial, multiple-burner stove. Unfamiliar with such equipment, he sought advice on how the machine functioned. When asked why he spent his money this way, Ricardo mumbled that it was an investment, a tool he could use some time in his culinary future. Then, having endured the difficulty of transporting the still-unused stove when he moved apartments several times over the next year, Ricardo finally took the oven to and left it in his parents’ home in a small community outside of the city.

2) Juana’s treat

Juana met me at an unmarked *camioneta* (mini-bus) stop in San Juan Ostuncalco, a town lying 10 miles to the west of Quetzaltenango that takes at least one bus change to reach. She greeted me with her usual warm embrace, her strong, farm work-hardened body enveloping mine. The 50-year old, uncharacteristically tall, Mam woman then loaded her shopping onto her head and led the way as she weaved us a path through the busy city market and across the central plaza to another bus stop that would take us to the upmost edge of the urban space. We rode uphill for 10 minutes to the limits of the paved road and then to the end of the dirt road as well.

After climbing out of the *camioneta*, we began to walk up a meandering, steep, dusty hill to the fading sound of giggles from the other women in the minibus who were amused at the sight of a gringa in this remote spot.

Juana's home was one of the highest perched halfway up a highlands mountain. She had lived there since she was a child when her family did not have the cinder block walls that currently offer protection from the elements. Like many such homes, the dirt floors, the makeshift corrugated iron roof that imperfectly covers the dwelling, and the free passage of chickens and other animals in and out of the living spaces blurred the distinction between the indoors and the outdoors that would be the case in more expensive structures. The neat organization of corn supplies, animal fodder, and Juana's belongings demonstrated the pride she took in a home that she has been able to build largely through her own labors.

Unlike many indigenous women, Juana married later in life and bore just one son. Even before her husband's untimely, accidental death five years ago, she supported her family by vending *atoles* in San Juan on Sundays and, on other days, by selling potatoes that she produces on two cuerdas of land, one a few minutes' walk up the hill from her home, the other a one-hour hike across the undulating western highlands. Unlike a lot of other producers, Juana has never used chemicals to grow her harvests. She does not wish to "poison" her family, neighbors, and customers. She is committed to her organic production and does not charge her clients more than others who sell chemically-grown spuds. She is convinced that they would not pay the price anyway.

We arrived at Juana's in the early afternoon and immediately sat down to conduct the interview we planned during which she told me that she does not eat out and that she rarely includes meat in her dishes, as it is expensive and she is not used to doing so. Once we were

done with the interview, she showed me where to wash my hands in preparation for a surprise lunch that she had readied for us. Juana served handmade tortillas and her own unsweetened maize *atole* before uncovering two portions of the Pollo Pinulito brand of industrially-produced fried chicken, beaming “eat!” as she pushed the treat towards me.

3) *Almolonga’s narcotraficante*

Pastor Sanchez is a leading Evangelical priest in Almolonga in a country where Evangelism has rapidly spread in recent decades. According to the most reliable estimates, more than a quarter of all inhabitants claim it as their faith (Grossman 2003 in Althoff 2014, 230), including Guatemala’s current president, Jimmy Morales.

Pastor Sanchez is not merely a self-proclaimed prophet of God; he also makes a sizeable living from exporting Almolonga’s vegetables around Central America. He spends his wealth on luxuries, including expensive clothing and cars, one of which is a BMW that he proudly claims is the only one in town. When asked what Almolongueños think of his affluence, Pastor Sanchez relayed in a 2018 BBC documentary that he is often called a *narcotraficante*, a narcotrafficker. But, he puts those rumors down to *envidia*, envy. For him, the Protestant prosperity gospel provides good reasoning for savoring his material possessions. “It’s in the Bible,” he says, “God gives us power to gain wealth and God gives us the power to enjoy wealth.”

4) *Collector’s items*

“Welcome,” Lucia warmly greeted us in her humble home in Almolonga as she served us weak coffee and sweet breads. “How wonderful that you have the freedom to come,” she continued, “we, on the other hand, we don’t leave this place.” Lucia was referring mainly to women as several of the men in her indigenous K’iche’ family had been to the United States, including Josue, her nephew and our guide for the night who would show us around the plots of

the agricultural town where headlamp-clad vegetable pickers start to harvest as early as one in the morning. While listening to Josue's stories of adventures during his 15 years of living in America, we enjoyed our refreshments at a small, improvised dining table in a room with two beds, one each for Josue and his brother. Once we were done, the Almolongueño led us to meet his cousin, Mario, whose home we would rest in for a few hours before departing for the fields in the middle of the night. While some of their kin send remittances from abroad to their closest relatives, many of the cousins' family members in Guatemala are involved in export agriculture. Josue supplements his income from a job in a restaurant by growing vegetables, like leeks, cauliflowers, and beets, on three cuerdas of land that he rents from his relatives, and Mario uses his truck to deliver Josue's and others' produce to their main market in El Salvador.

After strolling through the narrow, cobbled streets of Almolonga, we reached the front door of Mario's house. Immediately, the contrast with Lucia's dwelling came into stark relief. Mario proudly led us inside to show off the brand new, one-year old, four-story building adorned with blue glass windows, white tiled floors, and colorfully-painted ceilings. It is the kind of building that Don Oscar, an NGO founder and long-term rural development proponent, had in mind when he commented that you can tell where in the United States a community's remittances are coming from based on the aesthetic and architectural elements of the new large homes that are popping up like mushrooms throughout Guatemala's countryside.

The top level of Mario's home housed a simple kitchen where a wood-burning stove acted as the centerpiece around which three generations of Mario's family enjoyed their traditional evening meal that a three-liter bottle of orange soda accompanied. We exchanged pleasantries as Mario's father led us onto a rooftop veranda, inviting us to share in his delight in the view of the town from the height of the building. The family has risen, literally.

As it was quickly approaching midnight, Mario showed us to the bedroom we would sleep in for the next few hours. The plastic wrapping had not yet been removed from the recently-installed fixtures and the water was not yet connected to the two bathrooms on the second floor of the house, but the building's cheap construction was already betrayed by water marks on the ceilings and cracks in the walls that facilitated the buildup of a thick layer of dust and dirt on the enamel sinks and toilet bowls. Like much of the home, the bedroom was barely used. Mario passed us two new, plastic-wrapped pillows and invited us to use any of the blankets piled up in the corner of the space. A large wardrobe with mirrored doors took up a sizeable portion of the bedroom, Mario's special collection displayed atop it in full view. The young man's work as an export vegetable intermediary frequently takes him on the road to Guatemala City and other larger urban areas, from where he likes to bring back tokens of his travels. Twice Mario showed us the t-shirt he had purchased at the Hard Rock Café in the capital, but his pride and joy was an assortment of 10 used to-go cups lining the top of his wardrobe. Five were soda cups: one from McDonald's (found at 82 locations across Guatemala), another from Subway (with 20 spots in and around the capital), and three from Carl's Jr (the American burger chain with five restaurants in Guatemala City), which, English, beckoned their holders to "Eat like you mean it." Five transparent plastic Starbucks cups complemented the soda containers. The cold-drink cups sported Mario's name, hand-written in marker on the outside, while, on the inside, the smears of chocolate, froth, and cream suggested that they once contained expensive specialty Frappuccinos.

5) Distinctly Maya

It was a cool Monday night some time in September, a couple of weeks before I was destined to complete my fieldwork. From street eats to food trucks, during the past year, I had

eaten my way through as many of Xela's eating establishment as I could, sampling their offerings, observing their customers. But I had not yet made it to *Distinto*, one of two or three restaurants that many people had told me vied for the title of the best of Quetzaltenango's fine dining.

To remedy the situation, two friends of mine invited me to have dinner with them. The couple had lived in Xela for two years, directing separate high-profile USAID programs. She is Colombian. He is Canadian. They both love to eat (well).

I arrived a little early as I was already in Zone Three where the restaurant was located. *Distinto's* dark-wood décor was decadent, its waiters' uniforms sharp and freshly pressed. The young men carefully attended to each table in an ambient environment lit by candles and string lights. The place was surprisingly busy, busier than any large or small specialty Zone One restaurant on a Monday (except the always-full McDonald's). According to its Facebook page's popular hours counter, the restaurant is equally busy every night of the week, except for Sundays when it closes after lunch.

I ordered a glass of wine and perused the menu that offered Q100-Q175 (\$13-23) dishes. It was the most expensive place I had set foot in in Xela. I felt the pinch of opulence guilt.

As I waited for my friends, a group of five Maya people came in. They were in their fifties. The three men wore *ranchero* attire. One woman wore a *huipil* and a *corte*. The other woman wore western dress. I could not help but be surprised to see them. I shouldn't have been. A class of wealthy Maya is part of the region's history and ongoing reality. As Emily Yates-Doerr eloquently writes about Xela, it is a city that subverts much of what we think to be true of Latin America, including who is rich and who is poor (2015).

The group started by ordering a bottle of Zacapa 23 and soda mixers to the table. The Guatemalan rum is said to be one of the best in the world (Alindahao 2015), *the* best in the world according to some (Revista Estrategia & Negocios 2017). It is made from the first pressings of sugarcane, instead of molasses that is commonly used in other rums. It is a mix of rums aged between six and 23 years at the elevation of 2,300 meters in the highlands of Quetzaltenango (Zacapa Website n.d.). For its unique characteristics it has held the EU-recognized protected designation of origin (PDO) indicator since 2014. Zacapa 23 retails for Q350 (\$47). *Distinto* prices its bottle service with Coke, Sprite, and Fanta at Q690 (\$92). Not bad, considering, I thought.

The group ordered their food liberally, sharing numerous appetizer and main dishes. They did not eat it all. In the end, they left behind a table full of half-eaten plates, half-drunk glasses, and a third of a bottle of, perhaps, the world's best rum.

READING THE VIGNETTES

During fieldwork, frustrated and confused foreign NGO and aid workers repeatedly described Guatemalans' approach to life as "day-to-day living," where the distant future does not take precedent over the present, even if that future would be cheaper or "healthier" in the long run. One French resident of Xela reasoned that "people are not used to having cash; as soon as they get it, they spend it." At the same time, on billboards throughout the country banks encouraged Guatemalans to open savings accounts in order to conserve for the future, promising that they "have the power to save." And one Xela-based social enterprise selling improved stoves, which reduce wood use and its associated toxic fumes, had to rethink its business offering towards providing a longer-term more expensive pay-as-you go system because they struggled to gain clients for their considerably cheaper, one-off payment model.

All these cases demonstrate that saving money for an uncertain future did not always resonate as a life goal with ordinary Guatemalans. Florencio Danilo, a manager of a *restaurante típico* in Xela, best explained the link between everyday precarity and the day-to-day orientation of life in Guatemala: “It is not about partying,” he said. “The people, we say that it is better that we eat [now], dance today, eat well, because we don’t know if we will be [alive] tomorrow.” Such sentiment of being happy today for tomorrow is uncertain is echoed in Gaby Moreno’s song, *Fronteras*, as well: “Who know what tomorrow would like to gift. Today is all I have. I am going to treasure it. Putting as a manifesto how much light I can radiate. And being happy is the remedy. It can make everything better.” In this line of thinking, eating well, deriving pleasure, and being happy in the moment is a way to overcome an immediate reality where “precarity [is] marked by scarcity, health by abundance” (Yates-Doerr and Carney 2016, 313).⁴²

Enjoying the now, whether through food otherwise, can be a way to briefly overcome an immediate precarious reality where one only has to open the pages of *Nuestro Diario* (Our Daily), the most widely-read national daily that bears the tragic nickname of “Muerto Diario,” (“The Daily Dead”), to witness the murders, rapes, and mutilations that occurred in the previous 24 hours. Guatemala is consistently ranked as one of the most violent in the world (Verisk Maplecroft 2016). It is a nation where the second highest cause of premature death is

⁴² Campero, Pepsi, and Tortrix have also insisted on happiness and enjoyment as part of the Guatemalan experience. Gaby Moreno’s lyrics in the Guatemorfosis hymn, “Fronteras,” call on Guatemalans to sing and dance for today and suggest that being happy can improve everything. In its other ads, Pepsi equates the soda with “the happiness of life” and uses the slogan “live today.” For its part, Campero has for decades run the catchphrase “there for your happy moments,” and erroneously claimed in a 2014 commercial that “Guatemala is one of top 10 happiest countries in the world” before declaring that “we are happy because we always find the occasion to share affection” and signing off with “a happy country we all make.” Tortrix too has made humor, enjoyment, and happiness essential to its Chapín branding. Enjoyment of today has two functions: it is both a way for people to deal with the prospect of no tomorrow and a way for companies to attempt to discipline a specific kind of national subject who enjoys the goods they have on offer.

interpersonal violence. The Peace Accords might have put an end to the war that people colloquially call *la violencia*, the period in Guatemala's history marked by outright state-perpetrated genocide. But post-war insecurity is marked by a more diffuse kind of physical violence, a non-descript "interpersonal violence" whose perpetrator is not so easily identified. Many Guatemalans sense that contemporary precarity is "worse than the war" (Burrell 2013; Levenson 2013; McAllister and Nelson 2013) and fear has become a "way of life" among both rural (Green 1999) and urban (M. G. Torres 2015) residents. Radical pessimism that "Guatemala will never change" (Copeland 2011, 485) and the perception that "every day we get worse as a society" accompany many Guatemalans as they go about their lives.

Within this framework, enjoying one's food emerges as one way to *superar*, a sentiment of surpassing one's situation that extends beyond food to the daily struggles of life in Guatemala. *Superar* means to get ahead. It speaks to succeeding, to prospering, to rising. But *superar* is also overcoming. It can mean to transcend difficulties, to triumph over challenges, to prevail despite the odds.

Superar is on TV. In one of the Campero ads from chapter five, a female indigenous tourist store owner claims "I want to *superar*. So, I work, hard, and with a smile attend to all my clients." In another, a voice speaks over a young, hip ladino woman with "You are always smiling, happy. You decided to *superar*. You are clear about that." The marketing both reflects the existing conditions of life and conditions a particular view of how to live.

Superar is voiced in the streets. Thomas Offit (2011) has documented how young Maya men working in Don Napo's Guatemala City retail empire were driven to the physically risky enterprise by their desire "to get ahead."⁴³ While on one occasion, Don Napo marked his

⁴³ While Offit provides only the English translation of "getting ahead," David Stoll describes it as *superar* in his review of the manuscript (2011).

ascensión, his rising, by taking Offit to lunch in “the best restaurant that [he] had ever been to in Guatemala” (2011, 67).

Superar echoes in the fields. Thomas Fischer and Peter Benson have shown how Tecpán broccoli farmers engaged in the vicissitudes of a global commodity market for “*algo más*” “something better,” “something more” (2005, 2006). They conclude that:

Export agriculture taps into and generates desires for “something more” or “something better.” It emerges in a space between the promise of extra cash and the distanced extraction of surplus value, a possible future (with its multiple hopes and visions) wedged between the weight of the past and the exigencies of the present. In this nebulous space and time, articulations of power and desire take shape around competing cultural models of development and progress and multiple ideas about *what algo más might look like* (2005, 5, *emphasis my own*).

I would like to suggest that often that *algo más* looks like stuff, like things to possess, like foods to eat. Superar can be found in the kitchens, on top of wardrobes, on restaurants plates.

Spending monetary windfalls on building multistory houses, investing in vehicles, or purchasing industrial home equipment confers a sense of rising up. This is certainly socially- and religiously-sanctioned status aspiration (Barlett 1991) Yet, for some, the acts of buying, acquiring, and consuming things like Zacapa also suggest a standing already gained, a wealth by now attained, a prosperity presently enjoyed. While, for others, spending precious Quetzals to treat yourself and a gringa friend to Pollo Pinulito can let you enjoy a little wealth today, even if momentarily. Who knows what tomorrow will bring?

As the vignettes indicate, ingesting branded status foods and drinks and possessing other contemporary markers of affluence and worldly belonging can mean different things. They can incur a sense of having gotten ahead, a sense of getting ahead, or a sense of just being ahead right now, coming from a place of wealth, of rising, or of poverty. The goods can be used fully, partly, or not at all and enjoy different half-lives through consumption that runs the gamut from

publicly conspicuous to privately intimate. They can be fully ingested as a lunch between two friends, leaving no trace, or briefly linger on a restaurant's table. They can live for months on top of a wardrobe, gathering dust and growing mold. They can stay largely untouched as extra floors, cars, and kitchen equipment in people's homes.

Using your surplus value to acquire status items is one way to participate consumptively in local and transnational circuits and hierarchies of material culture. It is also a way to assert your existence despite the risks. A way to be alive today in spite of the questionability of tomorrow. Depending on where you are starting, it can be *superar* in all its guises. It is *superar* to overcome. To get ahead. To rise. It is *superar* to get something more and to have something better.

HEALTHY EATING TO SUPERAR A HAZARDOUS FOOD ECOLOGY

I did not explicitly plan to engage health in my research. Yet health was an emic category that was consistently in the forefront of conversations and other communications. For some, health was a gateway for becoming more discerning shoppers and preparers of food. Health outcomes were a major preoccupation of community, medical, development, and government organizations. Inescapable too were the food, beauty, and weight loss industries' prescriptive images of what healthy bodies ought to look like: white, thin, and concerned with eating healthily, exercising, and watching their weight.

During fieldwork, the La Torre supermarket in Zone One of Xela, for example, was adorned with images running along the top of its large building, showing smiling, European-looking faces happily holding on to the fresh vegetables they purchased in store. Doctor's clinics, nutritionists, and other services juxtaposed presumably undesirable curvy waist-lines with promised thinner, white bodies on posters and billboards in and around two small malls in Zone

Three of the city. Everywhere, companies from the global brand, Fujifilm, to the national home and consumer goods distributor, La Curacao, used European-looking faces, bodies, and styles to advertise their products and services.



Figure 34: Business Images of Modern Bodies Around Quetzaltenango

Left: La Curacao glasses promotion.

Middle: A Local Doctor promoting weight loss, diabetes and hypertension clinical services.

Top Right: Banner above the La Torre supermarket.

Bottom Right: Fujifilm promotion in a mall.

At the same time, public health practitioners in Guatemala increasingly focus on obesity and the measurement of weight and BMI, making recommendations to afflicted clients to exercise and to change their eating and cooking practices, including avoiding entire food groups and specific ingredients that are high in starches, sugars, and fats (Yates-Doerr 2015). Yet, the doctors, nutritionists, and NGO workers become frustrated when their advice proves difficult for patients to implement (ibid). While, officially, three million Guatemalans have access to basic healthcare services, most of these are culturally inappropriate and follow a western biomedical model that focuses on individual failures and responsibility (Chary et al. 2012).

Meanwhile, in and around the time of my fieldwork, well-travelled, upper-middle-class Guatemalans and settled foreigners opened several independent cafes and restaurants in Xela that aimed in some way to promote their versions of healthy eating. Xela Green served only vegetarian meals and Tan Lechuga Yo focused on salads and soups prepared with organic lettuces and vegetables. The tiny store's changing promotional board variably encouraged patrons, sometimes in Spanish, sometimes in English, to "be healthy," "eat organic," and "eat lots and lots and lots of salad." Frutopía also focused on salads and healthy sandwiches to go along with its mainstay of no-added-sugar fruit juices and smoothies, and Tacorazon sourced locally and non-chemically produced vegetables for its Chipotle-style menu. Satya health food store specialized in supplements, wholefood ingredients, and ran a small café, while Mandarinina's bakery aimed for healthier baked goods made with whole grains and limited sugar, as well as natural ice-creams, vegetable wraps, and salads. One goal that all these establishments shared was to eventually attract mainly Guatemalan clientele and grow. But, within a couple of years of operations, the bulk of their clients were still settled, working, or touring foreigners. While more Guatemalans frequented the cafes and restaurants and some purveyors estimated that as many as half their clientele were locals—many of whom came by way of their foreign friends and NGO colleagues—none of the businesses had achieved wider local appeal. Somewhere in all of this lies a disconnect.

WE DON'T EAT FOR HEALTH

As we sat in Xela's new Zone One TacoBell with her mother and two children, I asked Irma what healthy eating meant to her. Sipping her soda through a straw, she looked around the

restaurant and said: “We don’t have that culture of caring for our health.” Comparing Guatemalans to foreigners, she told me that she and her compatriots do not eat for health.⁴⁴ Irma had put her finger on a missing link between ordinary Guatemalans and the billboard promotions of “healthy” bodies, individualized “eat healthy” messaging of nutrition professionals, and the goals of restaurateurs who promote “healthy” ingredients. The messaging has been influenced by specific ideas of individual, modern, European bodies that are thin, that exercise, and that eat health(y) foods. The presumed solutions to unhealthy bodies and presumed poor eating habits mimicked individualized biomedical approaches to health. The prescriptions for engaging in better habits betrayed the psychosocial models of behavior change that underpin them.

Yet, these messages did not travel well across contexts, resonating only with Quetzaltenango’s foreign and a small proportion of its local, more cosmopolitan, residents. For everyone else, there was more to eating than the end result of a healthy body, narrowly defined as individual, slim, light-skinned, and self-conscious. What counted as healthy eating, how healthy different foods were judged to be, and what and where people ate were driven not by a narrow definition of health as a balance of eating healthy foods, avoiding unhealthy foods, and expending energy through exercising, but by the specific, complex, and dynamic interactions between material, social, and symbolic aspects of people’s relationships, their local food environment, and Guatemalan society at large.

Irma’s comment was revealing. It was not about health per se. There is plenty of evidence that people do make daily eating choices based on considerations of health. It is just that they define health more broadly. That includes immediate risks to health over long-term benefits. In

⁴⁴ Irma was not alone. Others also called out the apparent paradox inherent in understanding many foods to be unhealthy, but widely consuming them anyway.

other words, the future-oriented temporality of medical and public health recommendations is at odds with the presentist temporality of how many people eat. Suggestions for eating salads and vegetables for health also do not resonate with many people because the temporality, economics, and sensory experience of such food does not align with how people currently eat. This includes past oriented temporalities of eating from tradition or nostalgia and sensory expectations of what makes for a tasty meal. It is also linked to the “live for the day” mentality that can characterize settings of poverty and physical precarity.

HEALTHY EATING: PLACE, FAMILY, AND COMPLETENESS

Most Guatemalans that I spoke with claim to eat most of their meals at home. Home meals are typically the women’s domain whose distinct cultural patterns of cooking comprise the local cuisine. Simple breakfasts and dinners of scrambled eggs, refried or stewed beans, corn tortillas, and a spicy tomato-based sauce called *chirmol* are still a widespread norm, as they have been since pre-conquest times (Earle 2012).⁴⁵ Lunch represents the most important and largest meal of the day. Here, cooks vary in their preferences and by their economic access to ingredients, but a small piece of beef, chicken, pork, or fish will feature in the meal, whether in a stew, grilled, or fried, and will be accompanied by rice, spaghetti, potato or some other starch, and served with mayonnaise- or lemon-juice-dressed assortments of boiled vegetables. The lunches are leisurely⁴⁶ and most workers will try to go home to eat, but even those who eat out

⁴⁵ While chickens were introduced to Mesoamerica during the Columbian Exchange and rapidly spread into indigenous households (Earle 2012), the inhabitants of the continent had, pre-conquest, domesticated various species of turkeys (Cook and Borah 1979) and ducks (Borah 1979), so it is probable that they consumed these birds’ eggs instead.

⁴⁶ By three PM, many Quetzaltecos also break for coffee and cheap sweet bread bought from a small or chain *panadería* (see chapter three).

take their time, slowly consuming even “fast food” meals like McDonald’s over a long hour, putting their burgers and fries down between bites.⁴⁷

Yet, eating at home is not just a matter of tradition or economic practicality.⁴⁸ The practice is central to definitions of healthful eating too. In our conversations,⁴⁹ I asked people to describe their typical eating and shopping habits, which places they like to eat out and why, and what it means to eat healthily. When asked what healthy eating meant to them, Americans and Europeans typically replied by listing the foods one should try to eat more of to be healthy, like fresh fruits and vegetables, and macro nutrients and ingredients that they should eat less of, like fats, sugars, and salt. When asked the same question, while half the Guatemalan respondents listed specific healthy and unhealthy foods or ingredients, the other half’s first response was that healthy eating was eating foods that were prepared in the home. Home-cooked foods were also prominent in the responses of participants who were asked to freely locate, as they came to mind, foods at the bottom, in the middle, and at the top of a ten-point scale that ranged from the least healthy foods to the healthiest foods. The results are shown in Figure 33. Apart from two mentions of salads, eating at home was the only category given for the top of the scale: the healthiest foods. Typical responses included: “It is what I prepare; food that I make at home,” “Home-cooked food, like beans that my mother makes,” “Cooking in the home.” When

⁴⁷ While the food may be considered fast in local lexicon – *comida rápida* – the eating is typically slow as those who live in Xela do not experience the same time compression as is often reported for richer nations. Observations in McDonald’s and other restaurants revealed that, when purchasing meals, and not just drinking coffee or snacking on desserts, clients lingered for 40-60 mins, taking their time in eating.

⁴⁸ Shorter and more rushed lunches were reported by some who worked for international NGOs in Xela and by those who had experienced professional/corporate employment in the nation’s capital, two sectors that impose stricter working structures and cultures than are typical of local businesses.

⁴⁹ To draw a comparison with those who bought organic foods and avoided frequenting fast food restaurants, I spoke with 30 people in McDonald’s restaurants and observed and occasionally spoke with others eating in Pollo Campero, Taco Bell, and local comedores, as well as those who frequented some of the health-focused restaurants and cafes like Frutopía and Tan Lechuga Yo].

expanding on why they felt that home cooked food was the healthiest, respondents spoke to several aspects that equated to the ability of the cook to ensure that the family was well taken care of in the nutritiousness, completeness, and tastiness of food.

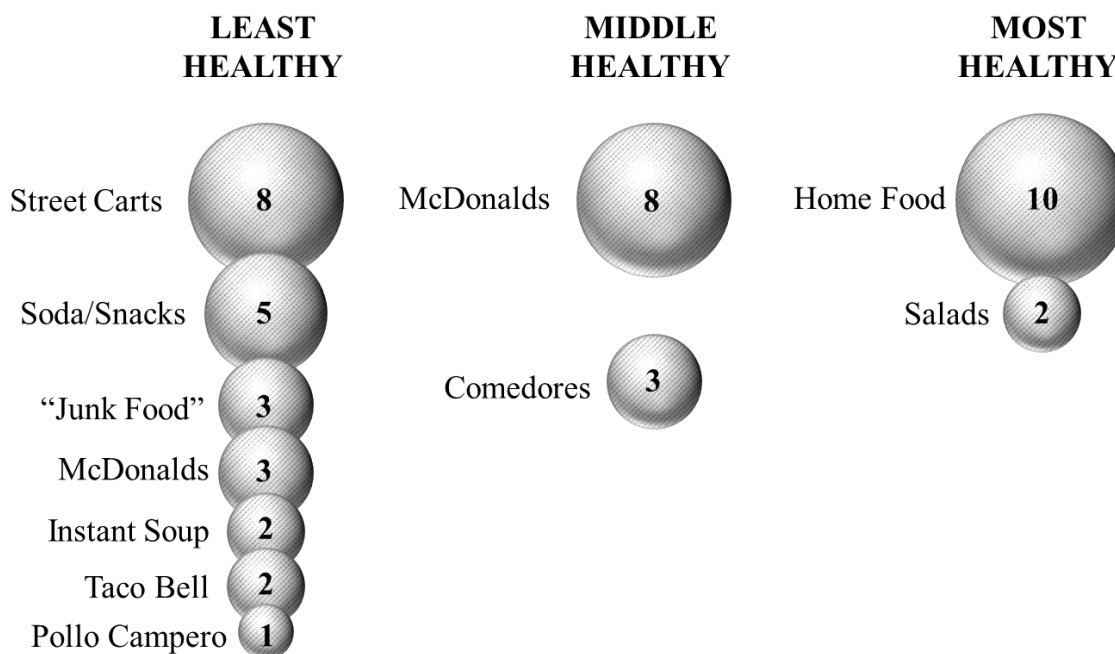


Figure 35: Answers Given to “What are the Least, Middle, and Most Healthy Foods”?

For example, when I asked three mothers in their 30s, two who identified as K’iche’ and one who did not, who were eating a McDonald’s lunch together, what does it mean to eat healthily, they discussed it as follows:

Linda: For me, healthy food is made in the home. Vegetables, fruits, and foods like that, made at home.

Elena: It is what is cooked in the home... [I] try to balance out eating times and have things in the house, for example, for snacks; have fruit, apples, nuts. Those kinds of things so that the little ones can eat [them] between meals.

Carlita: A more balanced diet, trying to make sure that you have a little of each thing... Fruits, vegetables, cereals, milks, dairy products.

As Guatemalans located healthy eating and the healthiest foods within the wider social realm of care through home cooking and social connection through collective eating, the material qualities of the foods took a back seat. They needed no discussion because their nourishing nature would be guaranteed by the women who prepared them. By the hands, experience, and intentions of the home cooks, for many, eating was considered healthiest when done in the home. From the perspective of the home cooks, the health that is being cared for through food is fluid, at times relating to dietary pleasures, at other times to spirituality, at others still to enhancing inter-personal relationships and social ties, and caring for broader human and natural communities (Yates-Doerr and Carney 2016). Rather than being an individual, biomedical bodily state, health emerges a manifold social process that is rooted in historical material and social relationships and a geography of consumption where the kitchen serves as an important site of culinary care, and a primary site of health care (Yates-Doerr and Carney 2016).⁵⁰

Having “a little of each thing” in the home and on the family’s plates also ensured the completeness of meals and completeness was another measure of healthfulness. When evaluating McDonald’s and other restaurant options as less healthy, several respondents also pointed to the food being incomplete, more of a snack than a meal. For instance, I spoke with Eduardo and Marco when they were eating lunch of hamburgers and fries in McDonald’s. Eduardo said that he and his friend sometimes liked to eat breakfast in Pollo Campero:

And why do you like to eat in [Pollo] Campero?

Eduardo: We feel that it is more complete, right? More complete.

Marco: Yes, it is also more food.

In what sense is it complete?

⁵⁰ Home food was also judged to be one of the tastiest foods. How tastiness features in eating decision-making will be covered in the next chapter.

Eduardo: It's complete because [it has] eggs, beans, cheese, bananas, cream, so the breakfast is more complete, instead here [in McDonald's] eh...

Marco: Here it is... Look, a hamburger and that's it... there's nothing more to choose from... [just] chicken.

Towards the bottom of the healthy food scale was the category of “street food,” *comida de la calle*, the food available in the location of the street. McDonald's,⁵¹ which was typically called *comida chatarra*, “junk food,” and identified as lacking nutritive qualities, was typically placed in the middle of the scale for its healthfulness. Yet street foods, like tacos and hotdogs, were put exclusively at the bottom of the scale for being both *comida chatarra* and carrying the added quality of poor hygiene. Hygiene was also a factor in placing comedores, which serve similar meals to home cooks, into the middle of the scale rather than at the top. When describing why they avoided comedores and street foods, participants mentioned “lack of hygiene,” “contaminated environment,” and not knowing the ingredients used in meal preparation, with speculations on the use of industrial consommé,⁵² rancid oil,⁵³ and dirty water. Although people rated the safety and healthfulness of places to get their food from, a study of meals from street carts, low-income homes, and four and five star hotels in Guatemala City found no statistically significant differences between their bacterial load, including *E. coli* (Freese et al. 1998).

⁵¹ McDonald's is over-represented in the results as a named restaurant since most of the interviews were conducted with customers in one of two McDonalds chosen for the study. Typically, participants were asked to say where they place McDonalds on the 1-10 scale.

⁵² Consommé cubes are understood by many in Guatemala to be unhealthy for human bodies due to their high sodium content (e.g. WHO 2012). Health clinics and practitioners also point to stock cubes as one type of food to avoid for achieving good health [personal observations].

⁵³ A recent study found that 99% of 300 samples of oil from 20 vendors of fried chicken and fries in Esquintla was unfit for human consumption (Vásquez Martínez 2018). The 20 vendors use a total of four tons of oil every month. Weekly samples were collected from each for five consecutive weeks, three samples per vendor of soil from the surface, middle and deepest portion of each fryer, totaling 300 samples.

Golosinas is a food category that includes processed snacks and drinks. Alongside fast food restaurants and street food, golosinas were also frequently mentioned when people were asked to define comida chatarra. “Everything in bags,” “everything packaged,” and “sodas,” “Tortrix,” and “Cheetos” were all given as examples of golosinas. As an essentially placeless food that is mobile and ubiquitously present, the category is an exception that proves the rule. Rather than being attached to a specific geographical locale, like the home, the street, or the restaurant, golosinas were identified by their place within packages.

In all, the act of eating and the foods themselves were socially and geographically bound. It was the place, the people in it, and their action of feeding the family that made up the “healthful” qualities of food. While concurrently holding “rational” and “quantifiable” ideas about healthy eating (Kimura et al. 2014) as a balance between consuming “good” foods and avoiding “bad” foods—eating salads and avoiding grease, processed foods, and red meat⁵⁴—for many Guatemalans, healthy eating is not just about ingredients. Instead, ideas about healthy eating are intimately attached to where, how, and by whom the food is made, and health is neither sought nor expected to be the result of the food eaten outside the home.

Ultimately, they were also tied to knowing where food came from, an aspect made more difficult inside and outside the further one was away from the entire process of producing and preparing particular foods. Consider Nadia’s narrative, an indigenous woman working on local food sovereignty:

For me... healthy eating [is] knowing where your food comes from... not losing your habits. I grew up in a family where you ate hierbas every day... When you wanted to eat meat you grabbed the chicken from the corral and that's it... To celebrate Christmas or big parties you grabbed a pig and you killed it; you knew

⁵⁴ What foods were considered less healthy were mentioned in the conversations at large. These responses are not represented in Table 1 because they were not given when respondents were asked to place foods belong at the bottom, middle and top of the 10-point healthfulness scale.

that the pig ate in the mountain all day, that he ate kitchen waste, and that it was a meat that tasted rica. Not so now... that's how we ate before.

In summary, while all food was tied to the place where it is eaten (or the bag from which it is consumed), healthy eating was tied to one place above all others: the home. Cooking at home for specific family members was one of the relationships that made up the healthfulness of food. By taking on the responsibility for the nourishment of their families, women's home-cooked meals were linked in the minds of many with healthy foods. So, eating at home was equated with healthy eating.

Through their care for the health of their relatives, mothers and wives can guarantee the completeness of meals, their balance, in ways that eating out does not do. Yet, while a sense of completeness was important to meal healthfulness, it was not the only defining aspect. Perceived lack of hygienic practices was also intimately tied to how healthy foods from certain places were judged to be. The material quality of possible food contamination also impacted how some shopped for ingredients that make up their dishes.

AVOIDANCE AND SEEKING STRATEGIES IN A SUPERTOXIFIED FOOD ECOLOGY

As noted, when it comes to eating out, hygienic practices, or perceived lack thereof, were for some an important indicator of the healthfulness of any given food. The "material anarchy" (Atkins 2009, 120) that unsafe foods represent led to either the wholesale avoidance of certain places, like street food and *comedores*, or a selective avoidance where each place was judged on a case-by-case basis. Some people similarly practiced avoidance and sought to attempt to reduce or evade the risk of pathogenic and agrichemical contaminations.

Much of Guatemala lacks safe, public water sources. Participants frequently pointed to risks associated with contaminated water that is used both in the production of food (irrigation) and its preparation (washing ingredients, preparing water-based soups and drinks). One

documented strategy that some women employ for avoiding contaminated freshly-prepared foods is to instead choose processed, packaged snacks or drinks (Yates-Doerr 2015). While some onlookers negatively judge Guatemalan mothers who give soda or chips to infants, the behavior is not illogical when it constitutes a food safety strategy. Their choice is not one of simply choosing between a healthy and an unhealthy food. It is one of choosing between two risky strategies. When juggling between different health hazards, an immediate hazard of pathogen contamination with potentially acute health impacts versus a long-term and diffuse hazard of compounding health effects that might, sometime in the future, lead to non-communicable disease, people might reasonably choose the former.⁵⁵

This is nothing new. In the 19th century, fears about food contamination led Europeans to seek food safety reassurance in branded goods, which remained a widespread behavioral tactic until the food risks were mitigated across European societies (Atkins 2009). Similarly, in late 19th century Belize imported brands were trusted as markers of stable quality in an otherwise unpredictable and variable supply of foodstuffs (Wilk 2006b). The same was seen in early 20th century Japan, where foreign brands of canned foods were preferred by those who could afford them over unreliable Japanese versions (Cwiertka 2006). In the United States, the period between the 1880s and the 1930s was similarly marked by high anxiety about the dangers of the food system, during which some brands sought to differentiate themselves as trustworthy purveyors of safe food options (Erb et al. 2013). Today, due to poor food safety standards and several food scares, Chinese consumers trust corporate, industrially produced pork as the pinnacle of meat quality, an image that businesses work hard to cultivate (Schneider and Sharma 2014).

⁵⁵ Fuel expense, whether gas or wood, is another reason for choosing cheaper and less time-consuming prepackaged food options (Brown et al. 2016).

Some Food Regimes theorists see this preference as an exception to a presumed norm of place-based and/or organic process demarcations preferred by privileged segments of Europeans and North Americans. For example, Henry Bernstein calls it “a characteristically distinctive, apparently aberrant” response (Bernstein 2015, 15). Yet, all the other historical cases, including the views of some of Guatemala’s residents, demonstrate that the self-promotion and acceptance of branded foods as safer, more hygienic and better trusted is a more “normal” response to trying to *superar* unruly and complex environments containing multiple and competing risks. It is a response that can defy efforts to educate people about better practices. Such projects assume that the central problem is a lack of knowledge of correct behaviors. Yet knowledge is only part of the puzzle, and not only in poorer settings. For example, today, attitudes and practices in the preparation, maintenance, and consumption of food in British kitchens, no matter how risky they seem to outsiders and experts, are not easily explained away by consumer fickleness or ignorance of correct behaviors. Instead, “habitual practices often emerge from a scheme of reasoned and practical logics in which food safety is but *one* dimension” (Meah 2014, 99 emphasis original). In Guatemala, the plural nature of food risks—competing hazards that can be short-term and acute or long-term and diffuse—further complicate the matter.⁵⁶

SHOPPING FOR SAFE INGREDIENTS

When shopping in local markets for ingredients for meals to be made in the home, both foreign and Guatemalan consumers employed additional seeking and avoidance strategies to reduce the risk of contamination of fresh produce from unclean rural water sources and agrichemical residues.

⁵⁶ The issue is further complicated by awareness, at least in rural areas, of acute levels of malnutrition that are symptomized by underweight and wasting, and not of chronic ones that are characterized by stunting and nutritional lack (Brown et al. 2016).

As chapters four and six demonstrated, most farming in Guatemala today utilizes at least some industrial agricultural inputs. And like other nearby towns (Medina 1999; Morales, Perfecto, and Ferguson 2001), farmers in Almolonga incorrectly and excessively use toxic chemicals (Arbona 1998), so that they are likely negatively affecting their own health and posing risks for their harvests' eventual consumers. This stems partly from an environment of low literacy, paucity of government and other training in safe agricultural practices, and agrichemical sellers' deep penetration into stores, into the visual landscape, and into community meetings, where they have been reported to promote "a "more is better" application philosophy" (Dowdall and Klotz 2014, 44).

It is within local history and reality that both native and foreign residents of Quetzaltenango situate Almolonga as a possible source of high agrichemical contamination. While most are unaware of the research and the specifics of risks, they sense that something is amiss. As a result, they engage in several tactics to reduce the risks associated with bacterial and chemical exposures. Unfortunately, when tested, the strategies they employ cannot guarantee the desired reduction of risk. Yet, regardless of their efficacy, the very existence of the strategies is useful in analyzing the factors that drive local food procurement. I discuss three of the tactics next.

When shopping in local markets, some consumers avoid sellers from Almolonga. Many communities in Guatemala are identifiable by the specific patterns, colors, and designs of clothes that are hand-woven and worn by women even today, and, only occasionally, by men. Women from Almolonga typically wear a colorful, thick head band, a thick *huipil* with zig-zag, multicolored patterns, and a *corte*. While avoiding women dressed this way, some consumers seek out women from the community of Llanos del Pinal, which lies on the other side of the

Cerro Quemado volcano, 10 kilometers by road, but just five kilometers as the crow flies east of Almolonga. Customers reason that the poverty of Llanos del Pinal prevents producers from purchasing agrichemicals, while the community's lack of public amenities leads to cleaner water sources. In the local markets, consumers seek out women without the Almolonga head band and with the characteristic Llanos del Pinal *traje* of a lighter, flowy skirt and an apron worn over the *huipil*.

Some consumers go as far as avoiding the larger Xela markets of La Terminal and La Democracia altogether, preferring to shop in the smaller and more central Mercado Las Flores where more women from Llanos del Pinal sell. Across the markets, some buyers avoid market vendors who sell large quantities of a limited number of products and seek those who sell many items in small quantities, reasoning that the latter must be producing small amounts on their own personal, diversified gardens or farms and thus they must be using fewer agrichemicals. Finally, some consumers avoid overly large vegetables and seek out smaller ones as they figure that the bigger the vegetable, the more likely it is to have come from Almolonga and to have been produced with larger quantities of agrichemicals.

When tested, these strategies were found wanting. Of the 75 vendors surveyed in the largest market of La Terminal, only 14 were from Almolonga and they sold between two and 13 products each. None of these vendors were the producers of the vegetables they sold; all had purchased them for resale, most from the capital and in the wholesale Xela market, and just one from the Almolonga market. Of the 13 women from Llanos del Pinal who sold between two and 13 different products each in the La Terminal market, 11 did grow the produce themselves, but 10 of those women said they used chemical fertilizers and pesticides, and one said she used "just a little."



Figure 36: Some people avoid large vegetables and seek smaller vegetables

Of the 15 vendors of vegetables in the Mercado Las Flores, 11 were from Llanos del Pinal, selling between one and eight products each. Only five of those women were producers of the goods they sold, three of whom claimed to use only *abono criollo*, a catchall term for natural manure and plant-based composts. In total, across the two markets, only three of 16 women producers from Llanos del Pinal said they did not use synthetic agricultural inputs; 81 percent said they did. Among other sellers in the markets—i.e. those not from Almolonga or Llanos del Pinal—most, whether selling a lot of one thing or small amounts of many products, had bought their produce from wholesalers that same morning to resell to consumers.

Unsafe agrichemical use and waste management practices were not confined to Almolonga. During field visits, agricultural plots and waterways in the community of Llanos del Pinal were also littered with discarded agrichemical packaging. During a visit to Cantel, another agricultural hub on the outskirts of Xela, farmers with little protective clothing were applying

pesticides from backpack sprayers despite particularly windy conditions during which spraying is unadvisable due to substantial risk of drift and air contamination. The spraying on that day happened 30 meters upwind from a field where a family of three generations was breaking for lunch from their own agricultural work.

Finally, the size of produce was not a good proxy for the origin of any given vegetable, nor for its production methods. It was probably a better indicator of the seeds the farmers used. As one MAGA agronomist pointed out, and as subsequent research confirmed, the size of conventional produce had more to do with the variety used rather than the amount of chemicals applied. Some hybrid plants are bred specifically for their larger size, like the giant beets that impressed the Almolongan farmers were during their field trip to the Dutch seed company's test plots near Antigua. The tour guides promoted their conventional seeds for yield, which in the case of annual crops like vegetables equates both to their actual size and to their speed of growth, which, in a place like Almolonga, can increase the number of harvests a farmer achieves each year.

Back in Quetzaltenango, vegetable size was not a reliable predictor of its geographic origin. While Almolonga is known for producing large vegetables, especially carrots (see BBC (2018) documentary "God's Giant Miracle Carrots"), produce sold in Xela's markets did not vary in size according to its source. For example, the bunch of large carrots featured in Figure 36 came from another Quetzaltenango community of La Esperanza, whereas the small ones came from Almolonga.

On the flipside, there was great variability in the size of produce sold in Xela's organic markets. Groups of novice farmers around Xela who eschew agrichemical use have all produced variable size crops, including large, fist-sized beets all year around (Chuvileva 2017). Farmers

typically took great pride in showing off their sizeable goods to a warmly receptive audience of organic consumers.

In other words, the strategy of avoiding sellers from Almolonga is misguided since many are not the producers of the goods they sell but are the intermediaries. Seeking out sellers from Llanos del Pinal is also a flawed strategy since, while market vendors from Llanos del Pinal were more likely to be the producers of the vegetables they were selling, 81 percent of them said they used synthetic inputs in their production. Buying from sellers who vend small amounts of a variety of products did not guarantee purchases from non-chemical producers. Nor was choosing smaller produce a reliable risk-reduction strategy either, since the size of produce was not differentiated by source communities and organic farmers were also capable of producing impressively-sized vegetables.

Avoiding invisible but potentially harmful chemical residues was also the reason given by many of the customers of CORO's small organic market and CSA project. In a number of cases, the decision to buy organically came after the decision to eat more vegetables and leafy greens for health reasons. That is, once some customers decided to engage in strategies to minimize negative health impacts of eating industrial and animal-based products they became more keenly aware of the hazards of eating their desired plant and whole foods. When I asked Maria how her CSA experience has been, she replied with:

I like it. My husband takes great care of his diet. He is more disciplined in that sense. He used to be a little overweight, but then he started a different eating regimen, healthier, and started doing a lot of exercise. So, he consumes a lot of *hierbas*. You go to the [municipal] market and always find a lot of greens, but they are not cultivated in a healthy way. When we started, the CSA baskets came with a lot of greens—mustards, spinaches—and he liked that a lot. And I liked it too because I said to myself "I do not have to go to another place, these are safe" and he will always have them for his dinners.

Not all consumers practice the same avoidance and seeking strategies. There is considerable variation between and within individuals, and many practiced what could be deemed from the outside to be contradictory eating behaviors, with contradictions occurring between professed beliefs and actual behaviors and between behaviors associated with different foods and food groups. For example, not all people avoided street food or *comedores*. Some people had an arguably more accurate handle on the diffuse nature of biological risks in Guatemala's food ecology, perhaps due to the successful spread of public health messaging that signaled progress from a biomedical perspective. They saw pathogen contamination as widespread and equally likely whether the food was prepared at a street cart or in an upscale restaurant's stainless-steel kitchen. Some also claimed to have strong constitutions and bodies that were accustomed to the local bacterial load; they thus saw no need to discriminate between food purveyors, even if they did perceive hygienic differences in their food handling practices.

Others claimed to avoid unhealthy foods when cooking or eating out, but the discussions and observations that ensued with their families revealed a stark difference between the ideal and the real. When they did practice conscious avoidance, many only did so for one or two of the strategies discussed in this chapter; few practiced ideological purism of engaging in all of them. Other factors complicated a clean "seek healthy/avoid unhealthy" eating relationship, however participants defined healthy eating.

In all, consumer avoidance and seeking strategies for reducing the risk of fresh produce contamination are not likely to be effective. However, just like with those who claim to avoid the unhygienic food preparation of street food stalls and *comedores*, the fact that some of Guatemala's residents engage in such tactics at all is telling. Their risk-reduction-aimed seeking

and avoidance behaviors point to just one of the ways that people make food decisions in Guatemala's particular – and particularly hazardous – food ecology.

EATING OUT, EATING RICA FOR TODAY

Eating out confers additional, non-food experiences and services that render the practice a worthwhile expenditure and a necessary one for most travelling Guatemaltecos who take cheap crowded buses to towns and cities to access medical and legal services, for work or NGO trainings (with their bus fare paid and meals covered or provided), and to visit relatives or attend church. For example, groups of Guatemalans with women wearing indigenous traje and men in rancho hats and formal white or gray shirts and well-ironed suit pants represent a more rural campesino style and are vastly more numerous in market comedores and restaurantes típicos than western-dressed customers, choosing the comida casera style of fare when having to eat out while visiting the city for church, legal or doctor's appointments, to shop, or to visit family.

Many fewer traje-clad women and rancho-style men frequent different McDonald's restaurants in the city, which offer brightly lit and colorfully decorated interiors, televisions, and free fast Wi-Fi, as well as separate upmarket McCafe areas with leather armchairs where well-heeled clients consume expensive coffees (\$1.87—\$4.00) and specialty cakes (\$2.27-\$3.33). The free Wi-Fi is an attractive perk for the literate and social media savvy since mobile internet data is prohibitively expensive in the country overall. Clients are warmly greeted with welcoming smiles by guards armed with sawn-off shotguns who open the doors of McDonald's for them. The restaurants' made-up young service workers attend to different kinds of clientele, from suited professionals holding business meetings over coffee and apple pie, through school-uniformed teenagers eating burgers while catching up on social media gossip over the free internet connection, to occasional indigenous-dressed grandmothers buying their grandkids a

birthday Happy Meal to treat them to the free toy and children's play areas. For Adrian, for example, even though he finds it a little expensive, McDonald's offers a comfortable place to pass time, even if he is alone. I struck up conversation with him as he sat alone browsing on his phone: "[I come here] because it is friendly. I usually like the people... and the food is rica. When I come here and spend a lot of time, no one is going to tell me to leave... it is very comfortable to be alone here."

Facebook and TripAdvisor reviews of McDonald's restaurants rarely focus on food, but emphasize employee attentiveness and restaurant facilities. Excellent customer service, free amenities, and a safe, well-maintained space markedly contrast with the busy, loud, and dusty streets of Xela that cut through rows of often dilapidated facades of colonial and contemporary buildings that are further damaged by powerful and milder earthquakes several times a year. If modern nation states and their citizens' experiences are characterized by order, safety, connectivity, and plentiful service and amenities, then McDonald's provides a taste of that modernity in a country that is otherwise typically judged to be comparatively poor, isolated, criminal, and violent.

Participating in the modern economy is not the only benefit of choosing where and what to eat. Daily food choices represent a host of symbolic, affective, and political acts, whether one is consuming foreign and national fast food brands or choosing to eat in informal comedores or niche organic cafes. As the first section of this chapter showed, food confers one of the most accessible ways to *superar*, overcome, even if for a moment, a precarious Guatemalan reality, to identify with larger imagined communities, and to variably resist the material anarchy of the country's ecologically, politically, and morally hazardous food ecology environments.

There is one more important piece to the food decision-making puzzle. One quality was central to justifications of most food choices. When asked about a *típico* breakfast in the home or eating a McDonald's burger, people tended to describe the meals as *rica*. As Yates-Doerr (2015) details in a book based on ethnographic fieldwork in Xela, when Guatemalans assess a food as *rica*, they do not do so in the Anglo sense of "rich" that indicates a heavy, perhaps unhealthy food that weighs down the body. Instead, *rica* means a pleasurable, desirable, tasty food that is valued through an intuitive, sensorial assessment, not via a calculus of caloric content or gram intake of sugars or fats, nor through a simple economic assessment of its costs compared to cheaper ingredients like vegetables. Here is Lucia's response when I asked what *comida chatarra* (junk food) meant:

[Comida chatarra] has no nutritional value... It is *rica* because the ingredients they use are tasty. For example, the hamburger that you are going to consume is only fat: fat, flavor, but there is no nutritional value... Meat, meat is... *rica*! A hamburger from McDonald's carries a taste like, it's *rica*! It has ingredients that make it tasty. But, there is no nutritional value.

Dishes prepared by women in the home were also judged to be *rica*, as were restaurant meals that resembled home-cooked ones. Consider a middle-class Maya woman's reply when I asked her where she goes if she has to eat outside the home when traveling for her work with an NGO:

If I am in Chimaltenango [a Guatemalan city], there is a small comedor, really small, where the lady there handmakes tortillas and toasts the tortillas and gives them to you with beans and cheese. And you know that those things there taste *rica* because that is how I eat in my house as well.

Rica was a quality closely associated with proclamations of seeking out foods "por el gusto," for the pleasure associated with eating them. When I asked him why he decided to eat in McDonald's on the day we met, as one respondent said: "For pleasure, as a treat." Another man described fast foods and preferring *comida casera* in comedores or restaurantes típicos "for the pleasure. It is not junk food. It is prepared food, it is well made, it has a special flavor." When

asked if she knows of restaurants that sell more vegetarian dishes or salads, one ladina woman replied: “if we are going out to eat, we are not going to eat healthy, we are going to eat what pleases us.”

Eating for pleasure intersected with the economics of eating out in different ways for middle-class Guatemalan consumers when compared with foreign ones. Few of the Guatemalans I interviewed and observed in McDonald’s had purchased the cheaper “menu of the day” option. When asked about their meals, many said that they chose whatever they desired at the time. Other busy establishments, like Pollo Campero, *restaurantes típicos* and comedores, ran few savings deals or “buy one, get one free” promotions. Many of the establishments that drew a substantial portion of their clientele from Xela’s foreigner population, however, were full only on the one night a week that they offered some sort of discount. This speaks to the different ways in which these two groups related to eating out.

The European, North American and Australasian foreigners who live, work or study temporarily in Xela eat out much more often than their native counterparts. Many have eating out routines with different places chosen on specific days of the week. Deals and promotions fit into these consumptive repertoires. Some of the promotions were food related, like two for one on wood-fired pizzas or an all you can eat Asian buffet. Others focused on alcohol. Two-for-one margaritas at the taco place on Tuesdays. Cheap wine at the burger spot on Wednesday. These specials helped to ensure that each place was lively, full of friends and acquaintances from the city’s NGO and alternative crowd networks. Each place was much quieter on other nights of the week. Much of the eating out for foreigners, especially the evening meals, was thus social. It was a place to go to socialize in a circuit of frequent consumption outside the homes that foreigners rent. Adding to the sociality were the restaurants’ owners. The small restaurants and cafes around

Xela that catered to this population were typically run by other young entrepreneurs, foreign and Guatemalan, who were part of the same metropolitan friend networks.

It was also striking how few foreigners ate in chain restaurants like McDonald's and Pollo Campero. For example, only one Japanese man and one European man ate in the Zone One McDonald's during 11 hours of systematic observation over five different days in the restaurant. Foreigners preferred to frequent locally-owned businesses owned by friends and acquaintances who catered to their tastes and who they trusted to be more hygienic. Many also liked to work on their laptops from coffee shops. Most had a favorite comedor and restaurant típico as well. Variety and sociability were key factors for people who eat out often.

Yet, McDonald's is one a few spots that is always busy, a fact that inspired both admiration and anxiety in the owners of small food businesses trying to attract more Guatemalan customers. Guatemalans reported eating out less often and ordering whatever they wanted rather than being attracted to a deal. The relatively high cost of a McDonald's or a Pollo Campero meal also helps to explain the lack of economizing. The equivalent for foreigners are the more expensive Distinto or Tertulianos where they might eat out only occasionally and so order what they want without worrying about the price.

This behavior might seem irrational from the standpoint of a purely economic calculus, leading to assessments of poor resource management. However, the trend begs explanation rather than judgment. Why would relatively poor people spend money on luxuries and expensive foods? In their work on poor people's decision-making, the economists, Abhijit Banjee and Esther Dufflo, conclude that:

Things that taste good, or things that make life less boring are a priority for the poor...The poor are skeptical about their supposed opportunities, and the possibility of any radical change in their lives...Therefore, they focus on the here

and now, on living their lives as pleasantly as possible, and on celebrating when the occasion demands it (Banerjee and Duflo 2011, 79, emphasis added).

Guatemalans live not only in a poor context, but also in a physically precarious one. This adds to the sense of wanting to enjoy the day, through food or otherwise. Psychological and sociological research on class dimensions of consumption in the United States also confirm that, unlike wealthier families who can delay gratification for a bigger pay off down the line, poorer people's experience teaches them that the opportunity to enjoy something that is available and affordable today might not materialize again tomorrow (Mullainathan and Shafir 2013; Perry and Calarco 2017; Ray 2017; Watts, Duncan, and Quan 2018). This shows that economic scarcity can drive the kind of sentiment of "living for the day" that can be seen in Guatemala.

CONCLUSIONS

Living in Guatemala involves multiple layers of precarity, including economic scarcity, that are highly unequally distributed but felt by all to some degree nonetheless. Choosing to splurge on something now instead of next week makes sense in such a context of precarity where pasts do not reliably reproduce into the future, as suggested by Anna Tsing's remarks that opened this chapter. As this dissertation has demonstrated, precarity has been good for business. It is worth recalling from chapters three, five, and seven, for instance, that many Guatemalan companies that dominate food and agriculture sectors today were born and/or expanded during the most physically, economically, and socially precarious decades of Guatemala's recent history, its 1960-1996 Civil War. This chapter has shown that somewhat counterintuitively, but perfectly logically, precarity and consumption dance together, entangled as they are in a mutually-reinforcing loop.

This chapter has also shown that choosing what and where to eat involves bodily and emotional mechanisms that are attached to the economic conditions of people's lives that create a

more complex calculus than one of price. People do not necessarily economize by buying the cheapest meal in a restaurant. They have made the choice to go and enjoy the experience.

Skimping on taste for an economic saving might seem economically rational from the standpoint of those who have the luxury to think about a prosperous tomorrow, but does not make much corporeal sense for those living for the day. The calculus people employ is not only monetary, it is also sensory. It estimates the amount of sensory pleasure that a dollar can provide, the depth of desired flavor per Quetzal spent. The preference is embodied and sensed in an immeasurable way.

In the hierarchy of qualities that make one food more desirable over another, the price or healthfulness of its ingredients, measured by its micronutrient profile, can take a back seat to other qualities such as the tastiness of any given meal based on it containing its appropriate aspects of *rica*, such as home-preparation, particular flavors, or meat. And, overall, all sorts of foods were considered *rica*. Whether a home-cooked dish, a junk food, or a fast food meal, *rica* was the basic quality required for eating anything at all. In other words, any food worth choosing has to, first and foremost, be *rica*. As Chapter 11 will document, what counts as *rica* varies between people and can shift across one individual's lifetime. At the same time, a more *rica* taste of agroecologically-grown products compared with their chemically-grown or industrial counterparts helps to distinguish Xela's alternative food networks, markets that the next three chapters unpack.

CHAPTER 10: *THE ORGANIC DISTINCTION*: CLASS-BASED ALTERNATIVES AND CORO'S SOLIDARITY ECONOMIES

Alternative Food Networks, such as organic farmers markets and CSA vegetable share schemes that are well documented in Europe, North America, and Australasia, have been credited with providing many ecological, economic, and social benefits to the communities they serve (Cone and Kakaliouras 1995; Grasseni 2013; Kloppenburg, Henrickson, and Stevenson 1996; Lyson, Gillespie, and Hilchey 1995; Ostrom 1997; Sage 2003). Yet, a major critique of rich-country alternative food initiatives, like organic farmers markets and CSA projects, is that they tend to cater to the wealthier, health-conscious, mainly white population segments and, as a result, regardless of their intentions, to the contrary, they reproduce societal race-class hierarchies (Alkon and Agyeman 2011; Slocum 2011; Saldanha and Slocum 2013; Slocum and Saldanha 2016). However, the disproportionate focus of scholarly inquiry on white and middle-class oriented initiatives are likely culprits in the relative invisibility of struggles that minority and marginalized people engage in for fairer, healthier, and more sustainable food. This imbalance in scholarly production on the topic may be inadvertently contributing to the reinscription of traditional systems of power and privilege in agri-food systems in the centers of power, like the United States (Bradley and Herrera 2016). It is the same kind of scholarly imbalance that chapter one identified in Food Regime theorizing and that this dissertation helps to redress.

This chapter introduces the landscape of Alternative Food Networks in Guatemala to ascertain what kinds of social dynamics they engender. It shows that there is variation in the initiatives around the country. Guatemala's particular history and social context play an important part in the look, feel and practices of different Alternative Food Networks.

In some ways, some of the projects enact Guatemala's peripheral place in relation to the United States and within wider transnational circuits of people and ideas. Transplants from wealthy countries, including America, have started successful organic farms in Guatemala, pointing potentially to a kind of organic neocolonialism at play. Meanwhile, wealthier Guatemalans have also created successful organic farm businesses, adopting and imitating prestigious patterns of food provisions from the Global North.

But, Guatemala's alternative food landscape also profoundly contradicts the expectation of a simple power relationship between foreigners and Guatemalans. In different ways and to varying degrees, many projects incorporate, build on, and extend traditional indigenous foodways in different ways, which sometimes appear as part of economic development programs that foster cross-class and cross-ethnicity alliances. This chapter thus locates important linkages between Guatemalans, Americans, and Europeans in the unfolding of alternative food projects all around the country that contradict linear narratives of cultural domination and homogenization.

I start by describing 10 Alternative Food Networks around Guatemala, most of whose producer protagonists enjoy relatively privileged positions in society. They include foreigners and Guatemalans with extensive foreign connections, especially through study and work in the United States. Their motivations for creating organic markets and CSAs vary, but they are all able to tap into wealthier consumer circuits within Guatemala itself.

Like many Alternative Food Networks in the United States and Europe, these projects can in some ways be critiqued for their elitism and for reproducing classed and racialized social dynamics prevalent in the country. However, such a critique would need to take into account two caveats. The first is the need to contextualize the material limitations within which the projects operate. These constraints preclude some of them from realizing socially transformative projects

while supporting the reproduction of traditional power dynamics. The second caveat is that the levelled critique would need to be careful not to flatten out the diversity of the initiatives themselves, including the important contributions they are making to ecological and human health and to fruitful relationships between people of different economic means and ethnicities.

The first part of this chapter shows that projects that tend to include producers and consumers of the same social class do so because creating sustainable farms requires resources that poorer farmers do not have. This includes access to land, seeds and organic inputs, investments, and the ability to financially weather failed experiments. Since Guatemala's government provides sparse production supports for sustainable agricultures, only the economically better off can afford to start organic farms by themselves.

The second part of the chapter moves to describe CORO's Quetzaltenango-based initiatives. They operate under different principles, bringing together more diverse stakeholders in the process. The Las Hojitas vegetable box connects Guatemalan and foreign middle-class consumers directly with CORO's less advantaged producers. These projects still rely on transnational circuits of people and ideas, but their social makeup is different. They work together through the principle of a solidarity economy that is most vigorously promoted by a Spanish transplant leader in their community. However, this chapter makes clear that these ideologies and relationships are only possible because of the external support of domestic and international development organizations. They provide materials and trainings that help poorer producers build up alternative farming systems, investments that wealthier farmers from the first part of the chapter can make themselves. This chapter thus lays the groundwork for the final two chapters that consider more closely whether and how race-class-gender hierarchies are subverted

to the principle of solidarity in the Xela project and the role that the wider aid infrastructure plays in its economic, material, and socio-ecological configurations.

ALTERNATIVE FOOD NETWORKS AROUND GUATEMALA

In 2012, Shad and his wife Colleen started Atitlán Organics, a project based in the small Kaqchikel lake town of Tzununá. The permaculture farm supports the food needs of the American couple. It also sells produce to its mostly foreign customers in the alternative retreat town of San Marcos. Shad makes weekly trips to the town's small center where his clients come to pick up their regular boxes of goods.

To generate income, the couple have developed Atitlán Organics as a tourist, voluntourist and learning destination. It offers farm tours, volunteering practicums and permaculture certification courses. The entrepreneurs have expanded into hosting groups of travelers by building the Bambu Guest House, a self-described luxurious natural building that can house up to 24 people at a time. The farm supplies all the ingredients to Bambu Guest House's farm-to-table restaurant.

Early in the life of the project, Shad hired a local farmer called Nicholas as a business partner. As of 2018, the farm tour includes Nicholas' own permaculture project located, reaching on foot in 10 minutes from Atitlán Organics. Bambu's restaurant employs three local aspiring chefs. Most of the visitors to Atitlán Organics are foreign. The project's website is offered only in English.

Atitlán Organics offers one example of the kinds of linkages and collaborations that produce sustainable food projects around the lake. After traveling around different parts of the world, an American couple moved to the lake for the picturesque scenery and higher quality of life it offers compared with what they experienced and expected to get back in the United States.

Their dollars stretch further in Guatemala too in terms of purchasing land and building housing and other structures. The two young people are highly educated and voraciously keep up with popular and specialist literature on alternative ways of living, working and farming. Their project's goal is to support their lifestyle while contributing positively to the nearby community. They employ Tzununa's local residents and rely on settled foreigners to buy their food and on visiting foreigners to engage in their service and learning offerings.

My pilot work revealed three other similar initiatives around the lake. In San Juan, Alijo, a local Tzutujil man grows a small plot of organic vegetables. As his day job he works for a local NGO and the farm is a mixture of a personal and a professional project. Alijo employs an older local man to do most of the manual labor, but he takes charge of using his tuk tuk to deliver weekly produce boxes to his foreign clients in San Marcos. Alijo charges more than market rate and does not believe that the people in his community are ready to invest in his cleaner but more expensive produce.

Then there are three young men in Santiago Atitlán, the capital of Tzutujil people in pre-Columbian times. They grow native food and medicinal plants and an array of vegetables on two small plots in different parts of the town. They use the spaces for educational work with children, but deliver weekly produce boxes mainly to the settled foreigners of Santiago.

Finally, the Mesoamerican Institute for Permaculture (IMAP) is run by a highly-educated Mayan man. It is located off the beaten path, further inland in San Lucas Toliman. IMAP relies on funds from selling expensive permaculture certification courses to foreign students or local participants funded through international NGOs. The project employs local workers and carries out educational initiatives in the community.

I also visited projects in Antigua, another tourist hotspot, which I located through their online presence and through word of mouth. One project included a small CSA run by an indigenous Mam woman. Several years ago, she organized a group of women in organic production on their small plots in the community of Patzún, an hour and a half drive east from Antigua. An international NGO supported the project, but it was hard for the women to work together. One by one they peeled away until she was the only one left. A Dutch NGO friend suggested that she start delivering boxes of her produce to foreigners in Antigua and helped her set up her initial clientele. She now delivers twice weekly, using the courtyard of a popular coffee shop to sell and market her goods. She also has clients in Guatemala City, traveling by public bus to reach them.

Just like Shad and Colleen on lake Atitlán, Antigua has its own foreign farmer. A Japanese woman who married and had a child with a Guatemalan academic runs her plot just outside of Antigua. She sells her products to foreign and upper-class Guatemalan customers in a French-owned restaurant in a wealthy area of Guatemala City.

A wealthy ladino Guatemalan man grows vegetables in permaculture spirals instead of straight rows on a portion of land on his large Colonial estate. He employs a couple of workers for the manual labor and delivers boxes of produce directly to his clients' homes. Similar CSA projects to that one exists in Guatemala City.

Caoba Farms is the most commercial, prominent and best marketed of the Antigua projects. The owner, Alex, is a Guatemalan man of German descent who studied business in the United States. His large farm occupies two prime locations and employs more than a dozen people. The enterprise sells trendy organic lettuces and microgreens to upscale restaurants in Antigua and Guatemala City. It is very diverse though, also producing many kinds of vegetables,

eggs and other products that it sells for significantly more than municipal market prices. Caoba aggregates its own products with up and coming specialty food brands from around Guatemala in the farm shop that resembles a health food store one could find in any European or American city. Caoba also delivers weekly orders to wealthier Guatemalans in Antigua and Guatemala City.

On Saturdays, the property becomes a bustling market where foreigners and upper-class Guatemalans speaking in perfect English sell their craft creations. On offer is everything from handmade jewelry and pottery to pricey drip coffee slowly percolating across tubes and beakers of elaborate glass contraptions that belong in a futuristic culinary lab. Several experimenters sell craft brews, beers whose hops and other ingredients are imported from places like Oregon. It also houses an on-site pizza restaurant owned by a British couple and employs two indigenous women to sell the farm's variations on more "traditional" fare. This includes selling tortillas made green with the addition of the leaves of the moringa tree, which is dubbed "the tree of life" and a "superfood" that is more nutritious than kale. The dishes are served with a seasonal salad of vegetables from the farm, including imported, heritage varieties of lettuces, cherry tomatoes, and European basil. Complementary shuttles to and from the center of Antigua, live music and free activities for children complete Caoba's Saturday event.

The majority of the farmers market patrons are settled and visiting foreigners and wealthier Guatemalans vacationing in Antigua for the weekend. The farm's organic credentials were rarely the first reason for buying its produce, especially on market day. One American man employed by the United States Agency for International Development (USAID) said he loved coming to Caoba with his four-year-old son because it is the kind of market he "was used to back

home in California.” Many people come for the atmosphere. They see it as a fun place to be and bump into others from the community. It is something to do with family, friends and visitors.

Caoba is an example of an imported model of what an organic farm and farmers market might look and feel like. The market is a place to stay and pass time even more than it is a place to shop. Most of the sellers and buyers share educational levels, social class and ethnicity, even if their country of origin differs. The Japanese farmer and the wealthy finca owner too rely on people who share their positions in society. The indigenous woman from Patzún is an exception that proves the rule. She was looped into the settled foreigner circles through participation in a development project, selling her produce to wealthier, better-educated customers.

All of the lake Atitlán, Antigua and Guatemala City projects relied upon or included weekly customer delivery components in their operations. These all had in common a community-supported agriculture model where a single farm or farmer developed and maintained an exclusive customer base for their products. All of the projects relied in no small way on settled foreigners and sometimes on wealthier Guatemalans. With the exception of the Patzún project, the farmers were typically well-educated and from the professional class, whether they were foreigners like Shad, Guatemalan descendants of European settlers, like Alex at Caoba Farms, or Tzutujil Maya, like the creators of projects in San Juan, Santiago and San Lucas Toliman. By way of their education, travel and participation in professional and NGO networks, the projects connected to the desires of elite groups for chemical-free produce, even if it came at a higher price. On two occasions project leaders shared pejorative views of poorer Guatemalans, claiming that they just “don’t get the organic value” and are not worth developing as clients or partners.

The apparent elite nature of many of these alternative food networks was inescapable. They seemed to be replicating the path of similar projects in the United States, Canada and other wealthier countries. There, researchers have pointed out the limits of the transformative potential of farmers markets and CSAs due to their higher prices and exclusionary, white-marked spaces (Guthman 2008a; Lambert-Pennington and Hicks 2016; Slocum and Saldanha 2016; Slocum 2007). Some did this “despite themselves,” through color-blind and moralized rhetoric of bringing “good” food to others (Guthman 2008b). In other words, observers have called out the local-organic food movement as classed and racialized.

To the dismay of some of my interlocutors in Guatemala, the projects I visited in 2014 and 2015 were too. Galita, for example, is a poised, well-heeled young Guatemalan woman who studied Environmental Sciences at an elite American university. She suggested we meet for a glass of wine in the bar of a five-star hotel in central Antigua. Since returning to Guatemala she has earned a living setting up organic herb and vegetable gardens in the homes of wealthy Guatemalans in the capital city. Yet, she told me repeatedly that she does not want Guatemala’s organic food to be just for the wealthy. She lamented the exclusionary prices charged by Caoba, a project where she buys her produce.

But such critiques would be unfair in Guatemala’s context. Many of these initiatives were businesses that aimed to sustain the livelihoods of their owners and workers without external supports from the government. While many of the CSAs did not aim their products at Guatemala’s poorer consumers who are burdened by both under- and over-nutrition, they did collaborate with local communities or support other social projects with the profits they made from their farms.

The projects were also not isolated from each other but formed parts of a loosely-connected professional and personal network. The leaders of Atitlán Organics, Caoba and IMAP all knew each other and occasionally shared permaculture knowledge and seeds. Elena had visited IMAP during her time in the women's organic farming group. Kumi's assistant had previously worked at the Agrofemenal project. Kumi met her husband, who is working on scaling up agroecology extension at the University of San Carlos, at a permaculture workshop.

COMING TO XELA

This brings me to Xela. I travelled to the city to visit my American friend Jim who opened a small restaurant that sources local organic vegetables. Jim has been living and working in Guatemala since 2006. He first worked on remote health projects in the Rio Dulce before taking on a director position in GuateSchools, a growing educational NGO in Panajachel. After a year in the job, Jim grew dissatisfied with the limits he felt the group's location placed on the impact of the NGO's work. The American non-profit aimed to use collaborative and participatory approaches to build schools and educational programming in rural communities. However, asking people to contribute labor and funds to building projects proved difficult. The saturated NGO market in the lake area meant that many communities typically received materials and buildings for free. In addition, some of the beneficiary villages secured multiple classroom building projects from different NGOs. This exceeded their needs, leading to newly-built structures idling unused as it is typically easier to build a school with one-off funds than to sustain multi-year costs of paying teachers.

Jim wished for the organization to reach more remote villages and towns where fewer NGOs ventured. He was also increasingly dissatisfied with life in Panajachel, which he saw as too touristy and gringo-heavy for someone like him who was serious about making Guatemala

his permanent home. As a result, Jim relocated the organization's headquarters to Quetzaltenango. From there, GuateSchools worked in towns like Nebaj and Zona Reina, up to 12 hours' drive north of Xela. In my subsequent time in Xela, I repeatedly heard NGO workers echo Jim's sentiment that those choosing Xela as a base and those focused on serving more distant communities were doing "better development work." That value judgement marked themselves against other foreigners who were seen to run or work for NGOs in order to enjoy easy living in picturesque environments rather than aim to make real impact among people who need it the most. Xela's foreign NGO workers distinguished themselves as harboring more authentic motives behind their development work. The proof of that authenticity lay in their personal sacrifice and greater exposure to the kind of risk that many Guatemalans endured. In their view, they gave up the trappings of touristic amenities and breathtaking beauty of places like Lake Atitlán for the less scenic but more rugged and dangerous conditions of life in Xela, a city that one informant described as in need of a bath.

After relocating to Quetzaltenango and living there for a couple years, Jim decided to quit NGO work to open his socially and ecologically oriented restaurant in 2015. He aimed it to be a social enterprise on multiple accounts. It would try to source organic products from local farmers, paying them a fair asking price in the process. It would pay its employees living wages. It would use ecological cleaning and hygiene products.

When I visited Jim, I quickly learned that he had other friends and acquaintances, mainly in their twenties and thirties, who had opened cafes, restaurants and stores focused on healthy, fair trade and organic foods. Within a few days, I met nine such entrepreneurs to ask about their missions, customers and supply chains. All their businesses were located within a few blocks of Xela's historic center in Zone One of the city. A young French woman started a sugar-free juice

bar. A French man set up a gourmet food home delivery service. A Japanese woman partnered with a female Guatemalan pastry chef on a healthy bakery, later partnering with an Australian who settled in Xela. A Quetzalteca woman sold soups and salads from a hip little lunch spot. Another returned from studies in the United States to open a health food store with her parents. A second health, fair trade and organic shop and cafe was run by a Guatemalan man in his forties who, like Jim, quit NGO work to focus on the business. A third health food and products space took up a portion of a wine bar owned by a young Guatemalan man who also used the store to distribute CSA boxes to 15 Xela customers of the Antigua-based permaculture spiral project described earlier. Two male Quetzaltecos opened two successful social enterprise restaurant-cafes that provided training and employment to at-risk youths. Another tried his hand at creating an upmarket tea shop with his own, expertly branded loose-leaf teas that are native to Guatemala.

Most of the enterprises that sold foods prepared them with fresh vegetables sourced from two local farming projects: XelaCosecha and El Proyecto Orgánico. El Proyecto Orgánico is the brainchild of Matteo, a ladino man in his late forties and Merced, his K'iche' wife. As Matteo would describe it, he is the brawn of the operation and she is the brains. He works the land, she keeps the books. Their three teenage children are occasional helpers. Before starting the project, for two decades Matteo served as a leader in the military, focusing on agrarian development projects. He holds multiple degrees and keeps up his self-education in philosophy, anthropology and political science. The farm is located on a plot of land opposite the couple's home in a community on the outer edges of Xela. It produces greens, tomatoes and other vegetables. It also has some birds and small farm animals and the couple grow oyster mushrooms.

Matteo worked closely with my friend Jim on ensuring a stable flow of the produce that Jim's restaurant needs. To do so and to supply the weekly orders from their other business and

private customers, Matteo aggregates produce from other small farmers in the area who commit to non-chemical growing methods. Matteo finds this part of the process both rewarding and frustrating. Not all his partner farmers can be relied upon, especially during fluctuation in conventional product prices. Matteo's products are more expensive than conventional ones, but stability rather than price per se are more important for his business clients. So, he generally tries to keep his prices steady for them, offering also to pay even prices to his aggregate suppliers. While the farmers are onboard with the agreement in theory, in practice, when a product's national price spikes they often choose to sell it at the higher price in municipal markets, leaving Matteo and his clients short.

Matteo is committed to non-chemical forms of farming both as a life project and a social one. He works to develop markets for the products throughout Xela and wants other producers to farm organically. To realize that goal, Matteo runs free workshops from a small room on his farm's indoor structure on different aspects of organic farming for local indigenous and non-indigenous smallholders. Given that his home is not easily accessible by public minibuses, he provides free transportation to and from the nearest bus stop. Despite his efforts, however, he is frequently frustrated at the sporadic nature of producers' participation, who fail to attend all classes in a given series and who are prone to dropping out completely.

The other farm supplying many alternative food businesses in Xela is XelaCosecha. When we met in 2015, Jon Luc, the son of a prominent Xela family, had been running the farm for a year and a half. At that point he was doing it with the weekend assistance of another male 20-something, non-indigenous Quetzalteco.

Jon Luc speaks English with perfect American diction, which he learned while growing up attending the Inter-American School (IAS) on the outer edges of Xela. IAS was established in

1961 as a Christian school aimed at educating American missionaries, but now catered to the children of elite Guatemalans as well. Jon Luc estimates that now around seventy percent of the school's students are local.

Jon Luc counts Shad at Atitlán Organics a close friend and mentor. He met Shad at an all-expenses paid organic agriculture training in Florida, which was run by a Church-funded agricultural research center. Shad, Jon Luc and another Xela-based ecopreneur were selected to participate as representatives from Guatemala. Jon Luc found it ironic that the center that typically trains missionaries chose to fund the three men for the training given that they see themselves as “not at all religious.” After returning to Guatemala, Jon Luc and Shad stayed in close touch, sharing experiences, knowledge and inputs. Sometimes they also engaged in such exchanges with the leaders of IMAP in San Lucas Toliman and Caoba in Antigua.

Like Caoba, Jon Luc innovated by growing a wider variety of lettuces and greens than is available in Xela's municipal markets. Such crops are particularly amenable to the city's cooler climates and to the palates of the city's younger foreign populations and cosmopolitan Guatemalan crowd. Jon Luc sorts, washes and separates his lettuces in four-ounce bags for delivery either directly to his customers or for sale through the café and health food shop businesses of his friends. The farm is a side project for Jon Luc who also manages the commercial leases of businesses like McDonald's that rent his family's buildings in Xela's central areas.

These were just some of Xela's people and projects that I encountered in a short space of time in 2014. Xela's landscape for alternative food networks had a lot in common with what I saw elsewhere. Like in Antigua and lake Atitlán, foreigners were a large part of the story. They were starting alternative food businesses, they were patronizing those businesses and they were

consuming produce from ecopreneurial farms. Just like in the other places, an alternative ladino Guatemalan contingent was also important. They too were both the purveyors and consumers of alternative farm and food businesses. In that way, it seemed that the projects were unfolding much like in the United States: at the behest and for the benefit of the privileged in society. In Guatemala this involves upper-middle class Guatemalans and wealthy, typically white, foreigners, many of whom arrive in the country through development work.

On their own, these initiatives around the country made for a straightforward research project and social analysis. The activities could be read as a kind of organic neocolonialism. They could be seen as a proliferation of elite projects whose leaders are succumbing to a long-standing “allure of the foreign:” since at least the independence of many Latin American countries, middle class residents aspiring to modernity have eschewed local alternatives in favor of foreign goods and ideas (Orlove 1997). They could be critiqued for doing little to appeal to or help the most disadvantaged in Guatemala.

But such an analysis would miss another important part of the Xela alternative food landscape. Two other market projects made the city stand out: a monthly organic market called Dia Orgánico and a bi-monthly CSA initiative called Las Hojitas. Rather than being run by wealthy individual farmers, these markets included a couple of dozen poorer producers from indigenous and ladino backgrounds. At the same time, the CSA consumers were organized as a group, making the effort to pick up their shares directly from the producers. And the markets were connected to a larger collective of NGOs and other organizations that worked on development issues in Guatemala. These differences suggested that perhaps a different version of organic markets and CSAs was operating in Xela, one that seemed to include a different configuration of social relations of organic food production, distribution and consumption to the

projects I witnessed elsewhere. This warranted further investigation, so I settled on Xela, CORO and its markets as my primary research sites.

THE CORO MARKET DIFFERENCE

Dia Orgánico is a monthly event. To set up the market, some of the vendors, who hail from all around the department of Quetzaltenango and from further afield, gather at the offices of one of the organizations that supports them. Male, female, young, old, these early risers load the necessary equipment—tables, chairs, aluminum poles, vinyl awnings—onto the back of a truck. They then meet the other vendors at each market’s location, which, due to local political wrangling, has moved from a highly-visible spot in front of the Cathedral of the Holy Spirit. Sometimes the market takes place on the ground floor of Xela’s Cultural Center on the opposite end of the park, where the staff do not always come on time to open the doors and where the foot traffic is low. Sometimes it is tucked away inside the court yard of “The Big House” restaurant a block up the street, where the glass rooftop creates an uncomfortable greenhouse effect, wilting greens and melting chocolate. Wherever they end up, word spread through Facebook and WhatsApp social media networks so that regular customers can find them.

Typically first on the scene are a few families who come early to guarantee their share of chicken and eggs from two K’iche’ sellers. The customers perceive a higher quality than the goods they can get in the regular Xela market or the supermarkets. The young men sell out early, spending the rest of the day socializing with other vendors.

XelaCosecha is also fast to sell their produce because of superior marketing networks and active salesmanship of Jon Luc and his partner, Milo, a 20-year old K’iche’ youth who will take over the farm when Jon Luc moves to the United States to live with his American fiancé. They are particularly known for their bagged salads and unusual produce varieties, like the lemon

cucumber. XelaCosecha's table attracts many young foreign NGO workers and their ladino friends who are part of the cosmopolitan, alternative scene of the city. They stop by to stock up on produce and to catch up with Jon Luc, who also partners with a British resident in running a popular bar, night club, and mingling spot three blocks from the square.

A couple of non-indigenous vendors sell soft cheeses, butter, and yogurts they make using milk from their own or their neighbors' cows. Doña Vera makes a natural, unsweetened yogurt for her foreign customers, while her Guatemalan clients prefers her sweetened peach and orange varieties. She usually sits with Doña Rosa and her niece Maria on one side, who make and sell banana bread and granola, and Doña Zara on the other, who makes artisanal chocolate of normal and diabetic varieties.

A few middle-class, male health-food shop owners and NGO-affiliated sellers of fair trade and artisanal products sell their goods on a few long tables, while a family from Sololá spread out their living, dried, and processed medicinal plants that people buy up to treat what ails them. A few other female vendors sell teas, shampoos, and amaranth flour and popped seeds, and some women sell homemade refreshments and snacks to both customers and vendors. Occasionally present at the market is an American couple vending hot sauce produced through an NGO project and a French man selling home-baked baguettes and sourdough breads that cannot be found anywhere else in the city.

Goods at the market can be purchased for a variety of prices, from Q60 bottles of honey to the native greens that a K'iche' seller and her grandson sell for one quetzal a bunch, earning the nickname from the other vendors of "el mundo de quetzal," *one-quetzal world*. They are part of the most competitive sector of the market: fresh produce. Several producers sell vegetables, herbs, and fruit, and a few bringing pork products, eggs, and chickens.

The market's customers vary from regular foreign and Quetzalteco clients to people stopping by to peruse the event. A smaller version of the market pops up every two weeks in Zone Three of the city outside a Women's Center building. Most of the fresh produce and prepared foods vendors are also part of the Las Hojitas CSA project.

Now in its second iteration after its collapse from growing too big too fast in the late 2000s, the Las Hojitas CSA project involves around 25 Xela families and as many CORO producers. Every other Friday, the vendors make their way to Zone Seven of the city to the rooftop of the offices of SerJus, a CORO organization that secured funding from a well-known European INGO, which I call Poverty Action, to build out the organic markets. Poverty Action wanted to support local economies, SerJus wanted to support agroecological production. The market projects served as a compromise and synthesis of the two organizations' goals: promoting local, agroecological markets.

On CSA day, after setting up their tables, with the guidance of Rita, one of CORO's market coordinator, two of the vendors take charge of distributing the sellers' produce between the clients' bags. They note down who contributed which product, how much, and at what cost, dole out the appropriate funds to each seller at the end of the day, and post the day's prices and quantities on social media. But the planning begins well before each market day. Rita and others call each of the produce vendors to confirm participation, ask what they plan to bring, and try to ensure a variety of produce for each CSA share.

Customers signed up to either a large or a small share whose prices fluctuate depending on what produce, in what quantities and at what prices the producers bring. The cost of small shares ranged from Q40 (\$5.33) to Q60 (\$8) and large shares from Q60 (\$8) to Q90 (\$12). It was no small feat to ensure that every producer had the opportunity to sell some goods while every

consumer received an equal share and variety of produce. The NGO coordinator, Rita, typically called the producers in advance to ask what they could bring and harmonize their sales. Eventually, some of this work transitioned to a couple of sellers who took an interest in contributing organizational work to the project. The amount of money each producer received varied greatly and depended on the kinds of products they brought. Individual seller's gains varied from Q14 (\$1.87) to Q152 (\$20.26) on any given CSA day.

Around midday the clients begin to trickle in. The arrival of the main organizers of the consumers is typically signaled with gregarious laughter and affectionate exchanges of hugs and cheek kisses with the producers. Since their CSA shares only include fresh produce, the women, and some men, spend time purchasing the other available goods, like chicken, eggs, banana breads, cheeses, yogurts, and jams. The women linger for an hour or so to catch up with one another. Their kids play in the background. While some of the social interaction occurs between the customers and the vendors, most of the sociality is among the customers themselves. This is especially the case with the European women who helped found and continue to run the consumer side of the initiative. They have settled in and around Xela, building their lives and raising their families with their Guatemalan husbands. It is a space that they regularly use to catch up with each other, the friends who they can be too busy to see otherwise.

Not all of the families who purchase a CSA share make it to the markets. The organizing foreign women pick up several bags each and drop them off in a more central Xela location for others to pick up after work. Some of the other clients are foreign, like an American woman who runs a Fair-Trade weaving store and her Guatemalan husband who has worked in various capacities in the development sector. He is skeptical of the project. It does not make sense to him to pay more for organic produce from the CSA when he thinks that "organic by default" foods

can be found in the municipal markets from poor women who can't afford to apply chemicals to their gardens. She cannot leave her shop unattended to pick up her CSA share, which she buys into because she trusts that it is healthier and it saves her time as the length of her weekly ingredients shop in the municipal market is reduced. Her store is one of the locations where bags are dropped off for others to pick up.

Most of the clients who relied on the drop off of their vegetables at a central location were the 10 or so middle-class Guatemalan families who participate in the project. When they did attend the market, they were less social. They sometimes purchased one or two additional items from the vendors. Typically, though, they quietly picked up their CSA share and left.

This social cleavage between the CSA consumer participants came into stark relief at the annual consumer meeting held in January of 2017. All 10 of the participating women of the picnic potluck in a field on the edges of Xela were foreign resident of Guatemala. They came with their children who played while the mothers talked and shared food. None of the Guatemalan families attended. Only three Guatemalans were present. One was an indigenous man who collaborates with a Dutch woman on healthy school initiatives in the community of Cantel. The others were Doñas Vera and Rosa, the two ladina producers from the CORO market who sell dairy products and banana bread, respectively. They were invited last minute to help better link the consumers with the producers.

The disparate goals and priorities of the foreign and Guatemalan women help to explain their different market participation rates. During interviews, everyone stressed the health and safety benefits of buying fresh organic produce. However, the foreign women also frequently described working from a deeply held environmental consciousness about negative effects of contemporary production. As most of them came from non-profit and aid work, the European

women in the project further emphasized the need to support the rural poor, especially indigenous women, to build what they called a “solidarity economy.” Such an economy required the maintenance of relationships of physical and social proximity. For the European women, consumer-producer trust based on friendships forged through ongoing sociality were key to the endeavor. Physically going to the market and to the annual meeting was important to them, a time investment they tried to regularly make despite their personal sense of endless, stress-inducing businesses.

Meanwhile, most of the Guatemalan women who signed up to the project were middle class professionals with careers in law, nutrition, and medicine. When asked, they could articulate the solidarity economy goal of the CSA project. Each of them received a briefing on its general aims when recruited to join. However, they did not volunteer solidarity as a reason for participating in the CSA, nor did they stress it as particularly important once our conversations turned to the topic. This was underscored by the womens’ absence from the other parts of the project. They did not physically participate in the markets. They did not volunteer to help organize it (the European women dealt with the finances and logistics). They did not come to the annual meeting.

The same dynamic occurred during three different fieldtrips that CORO organized as part of its work to establish a participatory guarantee scheme for the project. The group was unwilling and unable to gain expensive third-party certifications. However, it wanted to create processes that would put consumers at ease about the organic authenticity of the products. They were also hoping to discourage producers from “cheating” by using chemicals or reselling conventional market products as their own organic ones. While instances of such activities were never

confirmed, the stakeholders felt that the mere existence of rumors to the contrary was jeopardizing the project's future.

CORO's various stakeholders met on several occasions to discuss ideas for forging ahead on their own path. They decided on a scheme whereby consumers would periodically visit the producers in their homes and gardens. The goal was not to systematically check their processes, although some questions about their activities would be asked. The aim was to build trust, friendship, and respect. The group reasoned that developing these relationships would establish honesty and transparency as key bases of the project's solidarity economy ethic.

When it came to the trips, the Guatemalan CSA subscribers did not attend the trips. Overall, they held a more transactional and economic orientation to the bimonthly basket as a commodity they purchased every two weeks, a commodity that allowed them to feel at ease providing safer food for their families. Solidarity economy was also not a priority for all the foreigners in the group. The American woman whose store was used as CSA drop-off location, for example, bought into the project for health and convenience reasons. She did not attend the January gathering.

SARA'S RESISTANCE

The goal of building a solidarity economy was most strongly promoted by Sara. While other foreign women shared much of the organizational work of maintaining the project, as the group's president, Sara is undoubtedly the key leader of the initiative. The Spanish transplant has lived and worked in Guatemala for several decades. Her two children go to school in Xela.

Sara's convictions about the need to build solidarity economies grew steadily over time but began with an abrupt life lesson that changed the course of her personal and professional

trajectory. I heard her tell this story at the Organic Congress that launched this dissertation. She later committed the memory to writing in a CORO blog post.

Right after graduating veterinary school, Sara arrived in Guatemala to work for a few months with Veterinarians Without Borders in the community of Todos Santos. She joined a team of American experts who sought to improve food security in the region by increasing family production of sheep. In her own words, the experts—a word she emphasized with eye rolls and air quotes—were excited to bring with them:

A North-American breed of super-productive sheep that were three times the size of the small creole sheep that lived in the communities at the time and thus could provide three times as much meat to eat and three times as much wool to weave into the beautiful bags that all Todosanteros carried during that time. My job would be to teach them to take good care of those sheep so that there would be no problems upon arrival: good food, good facilities, vaccination regimens, etc.

Her first project was to teach the community how to castrate a ram. “We had to castrate the creole bucks,” she wrote, “so that the ‘foreign’ males left the tiny creole sheep loaded and so would better animals would begin to be born.” She goes on:

I remember well that I arrived in the community with a large plastic box full of medications (healing, antibiotics, etc.), perfectly sterilized surgery instruments (scalpel, suture thread, etc.) and books on the best castration techniques I had learned in college.

I began to explain the correct way to castrate to a group of 30 shepherds, who watched in amazement as wonderful things came out of my box, when I realized that an elderly Mam [man], who was sitting behind the group, was muttering and shook his head negatively at the men around him. I worried for only a few minutes as they had warned me that some people in the communities were reluctant to change and “develop.”

Sara goes on to explain how she conducted the same workshop in two more communities and the same old man attended, disapproving looks in toe. When she inquired about him, she learned that there were no doctors or vets in the communities. Instead, “traditional healers” who learned their craft generation by generation attended to human and animal health.

Sara did not worry about the man because she was also told that he was illiterate and so “his knowledge could not be compared to what I had learned at the University.” However, the differences between their practices became a topic of debate in her workshops, so, in her own words again:

I decided to cut the problem off at the root. We agreed that in the next castration workshop instead of one we would bring two males to castrate. The old man would castrate one of them in his "way" and I would castrate the other (with my wonderful plastic box full of medicines and very expensive materials). And after a week we would see which of the two animals was in better condition (if not one had died). I had no doubt, at that moment, which one was going to die!

On the day of the workshop, hundreds of shepherders from all the surrounding communities had gathered around the two animals to see the great competition between the old man and Dr. "Gringa;" traditional knowledge against modern knowledge!

To my surprise, the old man appeared with his hands in his pocket. He brought absolutely nothing! Already scared, I thought! But when I asked him he told me that he had everything he needed. And he took a small plastic bag filled with green dust from his pants pocket. The only surgical instrument he asked for a kitchen knife! This is won, I thought.

After neutering (that is, removing the testicles from the male), I injected him with all the modern medicines I had to prevent infections while the old man filled the wound with the green dust he was carrying in his bag. And we agreed to return in a week.

The following week, again hundreds of people had gathered in the community to see how the animals were. The owner of the two males appeared with one in each hand tied with a bow. Both were still alive. One was jumping happily, the other was walking slowly, still in pain.

When we saw the wounds closely I could not believe it! The male that I had castrated was fine but still had the inflamed, reddened wound, with some small drops of dried blood around it and some flies. The ram that the old man had castrated was perfect! No inflammation, no redness, no flies, not even looking at the wound. When I asked the old man what was that miraculous green powder, he replied that it was simply *epazote*, a very common plant in the area that grows wild. It doesn't cost him a penny to pick up when he is on his way to some castration.

That day changed my life! That day I decided that this knowledge that the elder had, and surely many other elders in the country, could not be lost. That it was very valuable and that it could no longer be that it was not written in any veterinary book and was not taught in universities (not even in Guatemalan universities).

As a result of that experience, Sara dedicated her life to cataloguing, studying, and revalorizing traditional indigenous knowledge in animal husbandry. Twenty five years later she is still a force in recuperating and promoting Ethnoveterinary Medicine in Xela and around Guatemala. She has also linked with other veterinary professionals around the world who have come to doubt the efficacy of the formal training they received and now promote other forms of animal care. For her, Ethnoveterinary Medicine represents:

A much more environmentally friendly way (because only natural resources around communities are used), a much healthier way (because it does not use chemicals that later reach our stomach when we eat meat, milk or eggs), much more economical (because they are resources that cost little money), a much more respectful way of culture and ancestral knowledge (because they do not laugh at "customs" but value them), a form that produces quality food (because the taste of an egg or a Creole chicken cannot be compared to the taste of an egg or industrially produced meat).

Sara's convictions align with some of the other currents of thought that Aré was enmeshed with since the 1970s. Ethnoveterinary Medicine, Appropriate Technology, Permaculture, Agroecology all in one way or another emphasize a way of life that makes intelligent use of locally abundant resources. Through our many conversations, it also became clear that Sara holds a well-developed critique of elite economies, especially the oligarchic control of industrial foods in Guatemala and their marketing tactics for driving demand in rural and urban communities. She sees her work as central to countering those powerful interests in the country.

Sara's resistance was layered. It was not just a reaction against a US-dominated global food regime or food from nowhere. Nor was it only a response to negative health and ecological

effects of contemporary food systems. Sara also dedicated her life to counter the arrogance of industrial, biomedical, “modern,” food production that proceeded apace by marginalizing other—indigenous Maya—ways of knowing and living. Sarah’s most profound resistance took on the contours of locally—not globally—felt struggles.

THE SOLIDARITY ECONOMY OF THE LAS HOJITAS CSA

The Las Hojitas CSA project is an extension of this work to her own and her friends’ consumptive activities. Sara’s story reveals different dimensions to the idea of a solidarity economy that drives the vegetable share. Social relationships between consumers and producers are just one part of the vision. These are subsumed in a broader ethic of eco-social relations between a physically proximate community of human, animal, and plant bodies.

However, as demonstrated earlier, not everyone who participates in the project shares the depth and breadth of her critique of development coupled with a commitment to a specific path for changing it. This was sometimes a source of frustration for the organizers, especially for her. They recounted how hard it was to get Guatemalan families to do more than simply pay for their produce. Even timely payment was sometimes an issue, forcing the treasurers to send frequent reminders of accounts in arrears through the group’s social networks. While these tended to resolve quickly enough, it racked the organizers’ nerves as a reminder of the kind of activity that contributed to the eventual death of the original CSA project some 10 years before. Some put the unequal foreign/Guatemalan women division of labor in the project down to intractable race-class-gender hierarchies in the country and the persistence of a consumerist logic whereby people only wanted to shop through convenience.

There were also differences in ideas about how the CSA project should be run. In CORO board of directors’ meetings, Sara frequently emphasized the solidarity economy goal of the

project. This was in response to developments in the market that she saw as harmful to the aim. One example of this was the appearance of a Guatemalan woman unknown to the organization who arrived early to buy multiple 36-count cartons of eggs.

There was nothing inherently wrong with the inclusion of someone new. To the contrary, new clients were welcomed as they could possibly be developed into CSA subscribers, a selective and slow process as the organization was wary of growing too big too fast. Ordinarily, the market was not open exclusively to the CSA consumers either. NGO workers and other people who had heard about the project stopped by to pick up a few things. Like all of the market's other animal-based products and prepared or transformed foods, like yogurts, jams, and teas, the eggs the new woman purchased were not included in the CSA share. As described earlier, the CSA subscribers added those as extras during the market day.

What bothered Sara about the woman was that she seemed to only buy eggs and not other products. Sara took the bulk purchase to be an indicator that the woman was probably reselling the eggs elsewhere for a higher price since non-industrial eggs are hard to come by in the city and the right customers would be willing to pay an additional premium. The Spaniard was also frustrated that the woman's early arrival left no eggs for some CSA subscribers who wanted them.

During subsequent meetings with CORO leaders and with producers, Sara proposed that the situation went against the solidarity economy principles of the market. Those principles meant that while the consumers signed up to provide a regular outlet for the producers' goods, the producers too had a responsibility to the consumers. In her view, people like the egg customer eroded the values and practices upon which the project was built because she did not make the same long-term commitment to the market. Her participation was detached,

transactional, and possibly profit-seeking, behaviors that Sara and others saw as antithetical to the purpose of the CSA share. In the end, a compromise was reached. Since the woman, like anyone else, could not be prevented from coming, the producers would take phone and text orders for non-CSA additional items from the regular customers to ensure they received what they needed.

Sara shared other frustrations at the direction of the CSA market. In her vision, she wanted a project that did not rely on any outside help or funding. She had become convinced that the more external money is involved in any program, the more problems are created. She liked to recount a story of a community in the Northern Petén region of Guatemala that decided to reject all offers of outside development help, committing instead to communally-derived solutions. It bothered Sara that the CSA project she helped start was housed on the roof of a non-profit, that it was partially funded by Poverty Action, and that its producers were organized by an NGO employee rather than amongst themselves.

The kind of project that Sara imagined is reminiscent of Italy's Solidarity Purchasing Groups (GAS) that Cristina Grasseni and others have documented (Grasseni 2013; 2014; Brunori, Rossi, and Guidi 2012). GAS are groups of consumers who initially came together to create new circuits of provision by buying farm produce *en masse* directly from farmers. As their networks grew and spread all over Italy, they also created spheres of exchange for a range of crafts and services, including home-baked goods and dentistry. The groups pay producers more than what large chains offer, negotiate standards of transparency and build trust, engaging in what they call "co-production." Through their combined purchasing power, they also offer loans and other supports to farmers looking to shift to more ecological production practices or those facing temporary crises. Grasseni sees this as active citizenship through economic practice.

Chartered GAS group numbers grew from 153 groups in 2004 to 1,000 in 2012, with twice as many estimated to be non-chartered, and they are collectively worth about EURO80million of Italy's economy. The networks circulate substantial amounts of money, goods, and services, "liberating the economy from capitalism" (Grasseni 2013: 143).

While individual members rely on the GAS groups for a very small portion of their overall needs, they do so without the support of external organizations or the government. Back in Xela, although she was not aware of the Gasista movement in Italy, Sara idealized the same kind of *independence from* outside actors but *interdependence between* geographically-proximate farmers and their customers.

In this way, while Sara has lived and worked in Guatemala for several decades, her vision betrayed her distinctive European outlook. As noted, anthropologists and others have documented the plurality of ways that food projects unfold in different places and at different times. This shows that alternative food networks tend to be historically specific responses to food system changes. For example, American alternative food networks have a historical basis in the 1960s counter-culture and anti-war and civil rights protest movements and an idealization of farming as a lifestyle, which helps explain their relative whiteness (black communities have more morbid associations with farming as slavery). That is, a colorblind "agrarian imaginary" of an idyllic rural past informs participation in Northern organics and farmers markets (Guthman 2004). It is an imaginary that romanticizes white agrarian histories, remaining blind to how, given the history of slave and migrant abuse, people of color might not share the nostalgia of toiling in the soil (Guthman 2008a). Similarly, Fair Trade feeds into Northern consumers' romanticized "Third World agrarian imaginary" (Besky 2014) that essentializes an unchanging, indigenous, ecological other (Wilson 2010) through gendered and racialized desires (Fischer and

Benson 2006; M. K. Goodman 2010). At the same time, alternatives in the UK, the Netherlands, and Germany are based on more contemporary and commercial definitions of quality that stress environmental sustainability (ecological modernization) or animal welfare, and are based on innovative (and retailer-led) forms of marketing (Sonnino and Marsden 2006). Meanwhile, in Italy, Spain, and France, alternatives are built on regional quality production and direct selling with long-lasting traditions, emphasizing spatial and relational qualities of food (ibid). At the risk of essentializing Sara's experience, it is possible to see how her convictions find an easy fit with her Spanish heritage.

This is not to say that Sara's desires are entirely pre-determined by her background. Clearly, her life experiences have shaped and reshaped her trajectory in unpredictable ways. However, it is helpful to recognize that her origins and travels have long-tails in history that can be both productive and create blind spots. They have been productive in profoundly changing her outlook on the world. Yet, they have also created a blind spot in her assessment of the ability of the CSA project to realize the independent while interdependent model that she idealizes.

WHY LAS HOJITAS NEEDS THE AID SECTOR

CORO is unique among the other CSA and farmers market projects I visited in Guatemala. Its uniqueness stems out of the stated commitment to a solidarity economy by Sara, the consumer organizers, and the Guatemalan NGOs and their producers. They seek to form that solidarity economy across race-class-gender divides, especially among the women of the project who recognize their relative intersectional positions in Guatemalan society and consciously act to subvert them. They do this in more ways than exchanging goods in the market. They engage their bodies and their senses to achieve that goal. This is the subject of the next chapter.

This commitment to a solidarity economy has shaped the makeup of the market. All of the other CSA projects I visited looked more like the kinds of CSAs found in the United States. They consisted of one or two producers who had built up a small customer base for products from an individual farm or garden. While the consumers also tended to be split between settled or temporarily resident foreigners and elite Guatemalans, they were not organized among themselves. In most cases, the producers delivered their vegetables boxes directly to their customer's homes. One of these CSAs was run by an American transplant and his Guatemalan colleague. The rest were run by Guatemalan producers of considerable means and with extensive travel for education or pleasure to and from the United States and other countries. Only one of the CSAs was run by an indigenous woman who was linked into a foreign consumer base through her participation in development projects.

The CORO CSA, on the other hand, included well-organized consumers who participated in the co-creation of the project. It also included a couple of dozen small-scale producers of indigenous and ladino origins and of variable but generally humble means. While they operated under the direction of a Guatemalan NGO worker, as my time in Guatemala progressed, the producers increasingly took on logistical and organizational roles. The project was part of a larger organizational coalition made up of state, aid, and commercial groups that all attempt to change food systems in the region.

This brings me back to Sara's independent while interdependent vision. The needs of a couple of dozen consumer families that are part of the Xela CSA at any one time could not support the economic needs of a couple of dozen producers who are also involved in the organization. For most of the producers, food production for the CSA market is one economic activity in a diversified livelihood portfolio that characterizes lives in the Global South today

(Ellis 1998; Hussein and Nelson 1998). At the same time, although ideas of additional supports for the producers were floated during the annual consumer meeting, the project is not large enough to be able to help the farmers in times of crisis with loans and other provisions that the Gasistas are able to realize in Italy.

Here, the NGOs become important. For example, in July 2019, I received a desperate message on WhatsApp from Bella, a CORO producer whose water had been shut off by her municipality. She needed to find around \$500 to file a petition with the local government to re-establish her water supply. Even if she could find the money quickly, which she feared she could not, the process was going to take several days, if not weeks, threatening her crop of thirsty, delicate vegetables and leafy greens. She asked the consumers for help but they were unable to lend her the money and did not have any political clout to hurry the municipality. She was also initially turned down by one of the supporting NGOs who said that there were no funds for such farming emergencies and who admitted that they were, in any case, reluctant to help her because she had stopped participating in their training programs. After the initial rejection, the NGO offered a workaround by lending Bella a gas generator that she could use to pump the water that had collected in the cement water tank, a tank that the organization had installed in her garden a year earlier, but which she had, until that point, underutilized.

The NGOs that support the CORO project are important because change takes time and material resources to enact. Producers need land, equipment, and know-how to transition towards or learn from scratch sustainable forms of production. Irrigation and greenhouses are expensive to install. Few people know how to compost. Organic and heirloom seeds are expensive and hard to come by. Building up a customer base takes unfamiliar forms of entrepreneurship and the ability to relate to people across considerable historical difference and divides.

These barriers to entry are more easily overcome by those with the economic means, social networks, and cultural capital to do so. This can explain why most of the other CSA projects around the country are run by wealthier individual farmers who have extensive linkages to the United States. For conventional producers all around Guatemala, there are few government options of extension services and no structural supports like loans or price guarantees. For the producers of Xela's organic markets, there are fewer government options still. Although NGO involvement can cause some frustration for the CSA organizers, it has been necessary for building up the vegetable share and the other markets run by the organization.

CONCLUSIONS

The case shows that although some stakeholders in the CORO CSA envisage a co-produced, mutually dependent solidarity food economy of direct trade that is independent of outside help, this is not possible in the context of the socioeconomic differences between consumers and producers in the project. The relatively poor producers cannot afford to shoulder the costs of alternative agricultural infrastructure and to absorb the risks of production. They need help and that help is not forthcoming from the generally absent state. In any case, it has long been postulated that alliances with non-government organizations, local and international, are an important part of peasant resistance and change. They help to lessen the grip of traditional patronage relations (Brockett 1988).

In Xela, the mix of foreign and local consumers, NGO workers, and Guatemalan producers comes with both benefits and drawbacks. As the next chapter shows, the founding consumers decided early on to subsume their dietary preferences to producer-led agroecological decision making. The next chapter demonstrates the sensory work required to weave together

forty families across multiple and intersecting race-class-gender configurations in ways that do not simply displace or appropriate local agroecological and culinary traditions.

The drawback of the particular mix of people and organizations in the Xela project is that heavy NGO involvement comes with its own set of challenges. Many of these are endemic to the development enterprise at large. They include the tendency towards hierarchical patronage relations, ineffective development interventions, and frictions between rigid bureaucratic exigences and fluid on-the-ground dynamics. The final chapter of this dissertation provides a larger panoramic view of the vast aid infrastructure that has built up around organic and agroecological farming in the region, demonstrating how different actors manage the tensions it produces.

CHAPTER 11: *THE FLAVOR PREMIUM: MOBILIZING THE SENSES TO DO FOOD*
OTHERWISE

The previous chapter considered the differences between the Las Hojitas CSA market and other Alternative Food Network projects around Guatemala. I argued that the project organizers' commitment to a solidarity economy shaped the practices of those involved. The project's social configurations arose from an explicit desire to change who produces food for whom and through what kinds of processes. However, the consumers' differential levels of commitment to the project's various goals created a split in their participation. European foreigners did much of the intellectual, administrative, and logistical work, investing time in face-to-face interactions. They held a stronger commitment to creating a solidarity economy. Meanwhile, the Guatemalan families engaged in a more distanced and transactional relationship with the project. They were driven more by the goal of providing non-chemical food for their families.

Yet there was more to the project than physical proximity through direct sales between disadvantaged producers and class-conscious consumers. This chapter details how the desire to valorize local, native and creole varieties of edible plants formed an essential part of the eco-social solidarity ethic of the CORO CSA project. Rather than expecting produce varieties to suit their established tastes and cuisines, to express solidarity with local farmers and ecology, the foreigners opted to receive whatever greens, vegetables and fruits the producers grew. Over time, in turn, the producers also acted in solidarity with the consumers by diversifying their production and incorporated new foods into their diets. As a result, both sets of actors engaged in active sensory and culinary labors to learn how to cook each other's foods and to learn to enjoy them. I argue that through a politics of solidarity, CORO's consumers took control of and shaped their

practices and desires. They thus actively shaped their habitus as an act of resistance against more colonial, consumerist, and detached forms of food provision.

I set this argument within a broader theoretical claim of this dissertation that the body is an important site of resistance. I aim to show that the resistance is not always as political and conscious as is implied by the Las Hojitas examples. I thus start this chapter by demonstrating how bodies come to register changes in food systems in ways that alert them to their contradictions. Moreover, I show how the senses can act as galvanizers of changes in food behavior in ways that challenge process of agri-food capitalist accumulation.

It is important to remember that the CSA project is not the only market outlet for CORO's producers. The monthly *Dia Orgánico* and other weekly sales spots are some of the other places where the producers sold their goods. The CSA consumers did not shop there, which is to be expected since the point of receiving a regular produce share is that it provides enough food for each family to last fortnight. Those other locations had an entirely different clientele that hailed from different walks of life and purchased different kinds of products. This chapter thus draws on interviews with many different food system actors, including those who were not connected to the CORO markets. It does so to argue that sensory memory can drive food system changes, as it did in driving sales of Tortrix and Pollo Campero reported in chapter five. This chapter shows how sensory labor in the service of solidarity can help transform the eco-social relations underpinning food provision. I start with the story of Ernesto.

ERNESTO

As many fieldwork encounters tend to be, my conversation with Ernesto was serendipitous. We were both staying at a hostel located just a few hundred yards from the La Guardia international airport in Guatemala City. The middle-class neighborhood is surrounded

by airport and government buildings, a military academy, and gated schools. It is also awash in advertisements, especially for Coca-Cola. The facades of many corner stores, *comedores*, and bus-stops within a short radius of the hostel bear the soda's red and white colors and globally-recognizable logo. Four such decorated buildings appeared within eyeshot each time I walked out of the residence to a crossing of three quiet roads. It is Coca Cola town but few seem to mind it. This is just the way things are, my host would tell me. Maybe uneducated, rural people are affected by the marketing but not people like her, she would claim. Coke is her favorite though, over Pepsi, and the advertising does no harm if it helps the shopkeepers, she said.

The store owners had their own take. Sure, the paint job was free and the company supplied them with state of the art refrigerators to chill Coke products. But there were no other perks. On the contrary, the fridges devoured expensive electricity, raising the shop-keepers' bills far above the usual amounts they paid for a flickering light bulb or two. The company's cost amounted to a fraction of the hundreds, if not thousands of dollars, it paid for the brand to inhabit one of the oversized billboards lining the promenade out of the airport.

As is true of much of the rest of Guatemala, this neighborhood is full of uneasy entanglements that represent the co-existence of different lived realities. It is relatively quiet and seemingly peaceful, but it does not take a long stay to hear of a fatal shooting or a mutilation occurring just a few blocks down the street. A modern airport nests nearby. It symbolizes freedom of movement for some, yet most of the people living nearby will never set foot inside. In this community, modern shiny fridges and freshly-painted Coke store fronts contrast against the shops' dirt floors, plenty of other dusty, dilapidated structures, and familiar informal food stands that young indigenous women run to feed the area's workers with tamales and hot plantain juice. The area is a perfect example of combined and uneven development. It

demonstrates the coexistence of markers of the dualities that in the minds of many cluster at each end of a linear trajectory of progress: developed and undeveloped, globalized and local, formal and informal.

Ernesto is one such worker. He is the first person in his family to get educated beyond primary school. His father was a smallholder coffee farmer and Ernesto worked with him during the week, going to school on the weekends. Eventually, he proposed to his parents that he either continue studying or emigrate to the United States. With his father's help, Ernesto first trained as an agronomist at the Central National School of Agriculture (ENCA) and then furthered his studies at the University of San Carlos. He learned about both conventional and organic systems and thinks the latter is important environmentally, but the former is more practical. He now works for MAGA in airport biological security that attempts to ensure that unwanted plants and animals do not enter the country. His story is reminiscent of Aré's, the composite character with whom this dissertation began. Ernesto's family lives in a small town in Huehuetenango, so he commutes twice monthly, room and boarding at the hostel for a week at a time and breaking up the job with time back home. We got talking about the importance of family to the Guatemalan way of life and Ernesto described how his parents, cousins, and uncles all live near him in Huehuetenango. His 93-year-old grandfather and 90-year-old grandmother do too. I asked him to share their secret to such a long life. He said:

My grandparents say that they consumed a lot of natural things and no chemicals. Before, they did not fertilize, did not fumigate, did not apply a single chemical to plants, to the crops. They say they did a lot of exercise. They walked a lot. Before, there were no vehicles, there were no *motos* [mopeds or motorbikes], there were no planes... They borrowed donkeys and horses to take their products to market. It took them 15 or 20 days to get here [to the capital]. They say that this helped their organisms a lot. They were very active.

I asked Ernesto if his grandparents drink soda or eat packaged foods. “No,” replied Ernesto adamantly, “they still eat their own eggs, from their own *criollo* [creole] chickens. They don’t know what it means to eat a pizza or a hamburger. I don’t like it, they say. They are not used to it.” Ernesto went on to tell me that it is the same story with his parents. When his uncle brought a burger to his mother, she looked at him indignantly and said: “I am not going to eat that. That is not my food. I don’t like that.” Ernesto’s parents still “eat what they produce. More *típica* food like eggs, beans, etc.”

The post-world war industrialization and corporatization of foodways wrought massive changes in what, how, and where people eat. Industrial food has spread far and wide. Much farming has become mechanized, monocultured, and chemically-intensive. Animal production has moved indoors and has become intensified and medicalized. Food is increasingly sold in senseless packages that give few hints of the smells, flavors or textures inside, allowing only for visual assessments from labels whose ingredients lists read like foreign languages. Even unpackaged produce relies on a visual aesthetic of blemish-free uniformity. The effect, Carolan (2016) argues, has been to tune bodies into industrial food and to privilege sight as the arbiter of product quality.

The pace of change has been more recent and more rapid in Southern and post-socialist countries, its effects persisting in the memories and bodies of those alive today. Yet, the spread of that change has also been uneven and incomplete in places like Guatemala. As previous chapters detail, while “*la porquería siempre viene,*” soda and processed food options exist side by side with *típica* offerings. While most egg and chicken production in the country has been industrialized in factory-farm style operations and concentrated in the hands of a few elites, many people living in smaller communities, like Ernesto’s grandparents, keep a chicken or two

for their own consumption needs. While many people consume burgers, Tortrix, and Pollo Campero, and the identity markers associated with them, there are still plenty of people, like Ernesto's mother, who reject them as "not my food," preferring *criollo* varieties and flavors.

Embodied food politics is posited to level a challenge to industrial food through bodily tuning into alternatives (Carolan 2011). Scholars who center the body in social analysis of alternative food networks have begun to unpack exactly how that change occurs. For example, Abbots (2018) has shown how British craft cider producers define both corporeal taste profile of the drink's quality and the social good taste of its consumption. Meanwhile, others (A. Hayes-Conroy and Hayes-Conroy 2010; J. Hayes-Conroy and Hayes-Conroy 2013; A. Hayes-Conroy 2010) have argued for a recognition of affect and emotion as visceral components of social difference that can help explain the relative homogeneity of Alternative Food Networks in Northern countries (in that they served largely the white middle class.) They have also argued for seeing the body not as a docile recipient of social forces, but that the body—through its senses, like taste and smell—can too be an active agent in producing (political) food subjecthood (A. Hayes-Conroy and Hayes-Conroy 2008).

This chapter focuses on the processes of embodied change in Guatemala by highlighting flavor as a food systems' change agent. I show how flavor interacts with individual bodies and with social structures to drive different forms of food production and consumption. The chapter begins by detailing the role of the senses—especially but not inclusively the taste buds—in registering shifts in agri-food systems. It goes on to show some of the ways that businesses, like industrial chicken producers, appropriate local flavor varieties and use narratives of hygienic discrimination to tempt mouths, bodies, and purses towards industrial food. Yet, I go on to

illustrate how flavor can mobilize the senses through what I call sensory labor to build solidarity-based local economies that pose a challenge to industrial food on the visceral, bodily level.

BODIES TRACKING CHANGES IN GUATEMALA'S AGRI-FOOD SYSTEMS

When assessing the state of health in Guatemala, most people can either remember life without planes, burgers, and aggressive Coke propaganda, or point to parents or grandparents who have fed them differently from the current trends and who continue to reject pizza and hamburgers as “not my food.” Like Ernesto, many people marvel at their elders’ health, vitality, and longevity, even as they do not necessarily have an accurate take on average health improvements of recent decades. Like his family members, many identify use of agrichemicals, sedentary lifestyles, and fast food as culprits in rapid rises in diabetes, expanding waistlines, and various chronic diseases they hear about.

In interviews and conversations my participants frequently evoked such narratives of times past and memories of farming and eating across generations. Gerónimo, for instance, is a Duwest employee who promoted the Guatemalan agrichemical company’s products at an organics conference in the capital. He told me that he comes from a lineage of farmers. When I asked him why organics is important to him he framed his answer by recalling his earlier life:

I grew up as a child in a very healthy environment, right? There was not so much use or excessive use of harmful products. My grandparents, I saw them be healthy until they were 92 years old... I now see many young people sick of many things, cancer, things that sometimes are not explained so easily... A lot of those, I think, have to do with what we eat... [because of] how we have abused the animal, livestock, and agricultural sectors with chemical inputs, right?

A Xela organic market customer also linked chemical usage to diets and to longevity when explaining why she buys from CORO: “I remember my grandfather, he always ate well. He had his land... he did not use much chemical and he reached an advanced age. Now, one

realizes that it is difficult for most people who do not have a good diet to reach an advanced age.”

Others placed the history of chemical adoption in Guatemala to its promotion by the companies behind them. In a meeting of CORO producers, Doña Julia, the sixty-year-old Maya K’iche’ producer of greenhouse tomatoes, described her turn away from using chemicals this way:

Previously, our parents, grandparents had this [agroecological] system, but... the [chemical] entrepreneurs changed us and we let ourselves be carried away by them. In the long run we are realizing that they [the chemicals] are harming us, but it was not like that with what was done before.

Similarly, when talking about growing up listening to marimba music with her *traje*-wearing grandmother, Gabi, a CORO middle-class CSA consumer in her thirties, turned to a conversation she had with her father about how prior generations farmed:

They did not have university education or data on chemicals they could give, but they knew when things had to be planted and how to take care of everything [the crops.] Then business and money came, modifying [agriculture] with chemicals and new things... down to new seeds. But everything we have right now is thanks to the people who lived in the past.

The accuracy of the participants’ assessments about the overall and average state of human and environmental wellbeing between generations is not as important as the roles that the narratives played in their lives. As I documented earlier, life expectancy has risen while chronic diseases have joined infectious ones as leading causes of premature death. What the above quotes show is that a spritely ninety-year old relative can appear a model of health and vitality against a backdrop of the rise of diabetes and other illnesses people are aware of. People’s comparisons served as a basis of their understanding about the factors that have shaped Guatemala’s current food systems and their effects. For many, they also served as potential blueprints for how things could be different. Frequently encountering—in person and in

memory—difference in food practices in their own and in other families served as a constant reminder that doing food otherwise is possible.

Yet many also encountered such changes first hand, experiencing them in their own bodies, with their own senses. Fernanda, a Xela CSA subscriber, recalled finding herself in very different food environments and practicing very different eating habits at several points during her lifetime. Although she is only 33 years old, her dietary practices have shifted drastically twice: from growing up in the countryside to going to an urban university and then moving back to Xela to take care of her sick father, especially through healthy food.

After introducing myself and the project, I began the conversation by asking Fernanda to tell me a little about herself. “Well, I am from here, from Quetzaltenango,” she began...

I am an architect. I am 33 years old. My grandparents are from San Marcos. They grew vegetables. They had vegetables, fruits. They had cows, chickens. I got used to eating like that from a small age. They died and things were already changing: no longer traditional but already with chemicals and more modern processes. I also went to study at the university in Guatemala City. It is completely different there. It is a city where the countryside is hard to find... and [my] diet was not what I was used to. [I ate] a lot of fast food, pizza, hamburgers, fried chicken. Nothing healthy, a lot of grease.

Fernanda’s move to university left her with what she sees as unhealthy food options. Her subsequent move to Xela to take care of her father who fell ill with gastrointestinal issues made the pair of Quetzaltecos seek out healthier foods. She describes how the process necessitated two forms of sensory labor: training their palettes to like new foods and engaging and trusting their senses to locate better quality, tastier ingredients. Her father “had to undergo a drastic medical treatment and he began to learn to eat... more vegetables, not much fat. He was like a baby.”

Fernanda joined her father in a search for healthier foods:

We were just the two of us, so I also went to search for healthy options... because the taste of [chemically-produced] vegetables without butter, without olive oil, only steamed tasted bland, like chewing fiber without any taste, because of the

chemicals... The taste is why I started to look to see if there were places that sold organic vegetables.

Fernanda searched for such produce for three or four years before in 2016 a friend connected her with Anna at CSA market, which at the time happened to have space for one more consumer to join the project. Having noted the flavor premium of the CSA share, Fernanda and her father have been loyal customers ever since.

In cases where industrial products have all but replaced all other versions of the good, it becomes a process of looking for alternatives to begin to understand the types of flavor differences they engender. Learning to like those differences is the conscious process of bodily retuning, the embodied food politics that Carolan discusses. In narratives like those of Fernanda, there is a sense of consciously retuning taste buds and bodies in a way that takes control of the process. It is a process of claiming what I call taste sovereignty: consciously deciding which tastes to know and like. As the following story indicates, this process can require sustained sensory labor.

When I asked Jerónima how she came to learn about healthy food, she explicitly put it down to Xela's cosmopolitan social networks. But she also talked about beginning to question her automatic food habits and more consciously training her senses to new tastes.

You know the saying "you are who you hang with?" So many foreigners come to Xela and they ask you questions that no-one had ever asked you and you think "huh?" For example, hot chocolate for me was so normal and so tasty, but I made someone a hot chocolate and she said "wow, this has a lot of sugar.

They say "not good"?

Not good, not normal, exactly. So, I began to realize about various things, like brown rice and things like that. I started to open my eyes about many things. I have been a vegetarian for four years. It was a big change. I began to realize about animal processing. For thousands of years we did not eat chicken every day, we did not eat meat. Because if I wanted chicken, I would have had to find it, kill it, pick off the feathers, cook it, and eat it, or a cow. Do you get me? But now it is

really easy, fried chicken or beef. People forget that it comes from an animal... I began to investigate for myself and to question “maybe this is not so good.” I tried to improve my own diet little by little.

Jerónima went on to describe the process of actively retuning her tastes and preference to the foods she now saw as better for her own health.

Three years ago I did not like ginger. I hated ginger. Now I love it, you get me? It's like going back to knowing your own body... It is one way to make changes, you change [your diet] and realize that it does you good, you feel good, it works for you. Or for example, I remember maybe 10 years ago I saw a foreign woman eat bread with avocado and I thought “what are you doing?” Because it is not part of my culture, you eat avocado with tortillas, with maize. So, when you see bread, you think “it cannot be.” And now, that was my lunch [today]! Do you get me? So you change, little by little, like, I dunno, to become more “picky,”... to say “I don't eat that because it has this and that in it.” In the end, you self-educate. You want to be healthier, you want to be better, you want to have a healthy body. And it is not just about health or a diet. I don't think that I ever ate consciously in my life. It was always like “I like to eat everything that I like; eat, eat, eat.” But there is a difference between eating and eating well and I like this “eating well.” I learned a lot from my friends, from people who make you question things you had never questioned before. It's one of those things, you think “why did I not think about this before?” And you start to piece everything together. For example, I used to drink a lot of milk. Then I started to research the milk they sell you and watch documentaries that show it's not really milk. You realize that it's mostly marketing.

And you studied marketing?

Yes, I studied marketing and it is a negative thing how they sell things, because they tell you that it is cow's milk, but you look below and it says “this and that formula,” percentage of I don't know what, and a ton of super long names... of enzymes and preservatives that I don't think cow's milk has. I didn't used to think like this. But then you research and start to realize that often the things you loved the most... like I was a normal teenager who said “ah, McDonald's, ah Burger King.” I liked it all, but I have not eaten McDonald's or fast foods for three years now. You realize that not everything is good, not everything can be so nice. But you look [at the restaurants] and they are full every single day. You see the families with their five children and their happy meals.

RECUPERATING FLAVOR

As already noted, participants frequently recalled sensory differences in the texture, shape, size, and taste of products of their youth and those available today. They recounted the changes their mouths registered as methods of food production modernized and pointed to the flavor differences of *criollo* variants found in Guatemala and organic products sold by CORO producers. For many, tastiness, achieved through a combination of flavor, texture, and appearance characteristics, was a primary goal and effect of recuperating non-chemical food production methods.

Helena's narrative demonstrates how the senses—through remembered and ongoing experiences of flavor—help to guide those looking to do food otherwise. Helena and her family live in a township north of Quetzaltenango. They are Maya K'iche' and produce much of their own food, including an array of vegetables and greens, and, through composting, much of their homestead's fertility. Like many CORO producers though, such production is a relatively new venture for the family. It was Helena's husband, Luis, who five years before decided to quit work as a janitor to begin making their own organic fertilizers from animal dung, household wastes, and vermiculture.

Helena was not initially convinced of the value of the enterprise; she spoke of being annoyed with Luis and ashamed when he came home from a meeting at SerJus and announced that he was going to start making *abono* for themselves and for sale. She expressed the same mix of emotions when he went on to say that they would start growing vegetables. She was afraid because they were not used to growing vegetables, only *milpa* (which to her is maize, beans, and squash).

Helena's participation in CORO's markets started by selling bunches of amaranth before she and Luis started growing a total of half a cuerda of vegetables. They now produce enough *abono* for the vegetable garden, for sale, and to use on their six and a half cuerdas of milpa, which is enough land for the needs of five people who live in the house and occasionally share with others in their family. She is glad that they now produce their own *milpa* using mostly organically-derived and "only a little" chemical fertilizer. When I asked her how they farmed before, she said:

I knew before that organic *abono* was good... Because my late grandfather only used organic... Because we had animals... Twice a year we went [into the fields] to apply fertilizer.

And how did you control pests before?

There are almost no pests now... Before, when we had pests, I used Volaton⁵⁷ for maize.

What kinds of pests?

The goatworm (*gusano*)

Why do you think the worm came if there was none before?

For the reason that people apply a lot of [chemical] *abono*⁵⁸... Now [since going organic] we do not have pests. You can save your corn without a problem. Now I don't use Volaton for maize. The Volaton... takes out the flavor of the maize. So, I now use slaked lime (calcium hydroxide)... and the corn lasts.⁵⁹

And what is the difference in taste?

⁵⁷ Volaton is a variant of Phoxim, a Bayer-produced organophosphate insecticide and acaricide that is used for controlling stored-product pests but that is not permitted in the European Union (PPDB n.d.).

⁵⁸ She used *abono* as a catchall for fertilizer and pesticides, which is how some producers in (Carey 2009) article also lumped them together. Here she says "abono," which strictly translates as "fertilizer," to also refer to the Volaton insecticide.

⁵⁹ Morales, Perfecto, and Ferguson (2001) tested farmer claims and found organic maize plots had less insect pests. Altieri and Nicholls (2003) argue that plant pest resistance is linked to soil health. In their meta-analysis, Garratt, Wright, and Leather (2011) showed that scale rather than the type of production increased pest numbers.

My late grandfather had five cuerdas and he did not use any foreign *abono*... only his own: *abono* from horses, from pigs. That's what he applied to the corn. And what corn! What beans! What squash! But then I did not work with that *abono*. I started to use chemicals.

And is the product different?

Yes, it is different, because when the product is organic it is very sweet. Now, when maize has [been produced with] chemicals it almost does not have the flavor of maize.

Helena's narrative is typical in that she ties a multitude of factors into her assessment of the benefits of non-chemical production methods compared to chemical ones. For her, flavor of maize was inseparable from other qualities, like durability or hardness against pests. Rigoberto, a K'iche' gardener for CORO recalled a similar difference in the maize of his childhood. Although by the time he was a child most of his neighbors were already using chemicals, he helped his family grow *milpa* using animal dung, *brosa*, and other natural inputs.

I realized that [the land] gave better maize... It did not grow goatworm. The maize did not pop, did not come down, nothing. But today the ears of the maize are small. The grains are rotten. They have a lot of worm. And the maize does not have much taste.

Carmina also located the tastiness of produce as an important driver for wanting to grow food without chemicals. She is a 24-year-old Mam leader of a youth organic garden project in the community of Paxtoca on the edges of Xela. I asked her how she learned about organic production methods. In her response she linked the past with the present in terms of agricultural practices and the subsequent taste of food:

Apart from practice, [we learned organic production] from our grandparents and parents. My father in law has a big piece of land where he has never used chemical fertilizer, so the taste of the plants and the corn ears is more delicious. We saw this and asked him "how is that done?" He uses a lot of compost but does not use chemical fertilizer, only compost for all his *milpa* production. That is what we want, to recuperate that culture of production of our ancestors.

CORO's market participants repeatedly brought up taste and flavor. Several of the producers recounted that their local customers, those who bought from them in their communities and not through the Xela markets, returned to them primarily because of the sensory qualities of their produce, especially the taste. Rosa, for example, turned to the qualitative differences in her produce when I asked whether her neighbors inquire about her production methods. "Some, yes," she said. "I tell them that it is organic, that you can feel the texture is softer, it cooks quicker, and has a sweeter taste."

A CORO producer of vegetables, pork, and dairy products, Don Cristian, centered tastiness as the explanation for why his neighbors and repeat customers were willing to pay the slightly elevated price of his produce, just as he is willing to do when shopping for food. He described his experience during a meeting of CORO producers in February 2017:

I do not worry about it [the higher price], because quality has its price. I see a lady in the [regular] market who sells cheese all day and sometimes does not sell everything by the end of the day. Another lady arrives at seven in the morning and by seven thirty she sells out of cheese and she sells smaller and more expensive cheese. The other one sells larger, cheaper cheese but cannot sell it all. But the other one with her tiny cheeses, those are the cheeses I buy.

Don Cristian went on to recall that when he began to grow broccoli his clients liked the taste and paid his higher price. It was the same with his beans.

I grew my beans, I did not spray them [with pesticides], I did not fertilize them, I just applied some compost. Customers said "when will you bring us beans again?" "and what beans!" People pay for quality, so we do not worry if someone sells cheaper. When people try our produce they know it is quality and sense the difference in taste and come back again.

Lidia, a CORO organizer and customer, also spoke to the durability and taste of the produce from the organic market compared with municipal ones. She identified tasting the organic flavor difference as a key agent in creating return customers for the markets:

People have realized that apart from being healthier the products last longer. If someone buys their vegetables or tomatoes from the [conventional] market, within three days the tomato is completely overripe. But if they buy it at the organic market, it lasts the two weeks, or sometimes a month later you still have a little of something left from the month before. People have started to differentiate. It is very difficult to convince people just with information, but once they buy the product they realize the flavor that the vegetables have compared with the conventional market and, they have said themselves, that they come back to buy again.”

When I asked Mikail, a middle-class organic farmer with his own CSA customer base, why his clients buy from him, he also put it down to the flavor distinction that his customers perceive in his produce:

Because they like it. They like the taste, right?... Many have told me “it is not the same as buying over there at the [municipal] market than to buy from you here.” So, this helps all of us because it helps [me]... and it helps those who consume. We all win and “win-win” is a fair exchange.

Many consumers confirmed that taste was important to their purchasing decisions and worthy of higher costs. Dani, a social worker from Xela who spent some time studying in Germany, started to change her relationship with food upon moving in with a Spanish friend in Xela: “She started teaching me... how to be a little more conscious about food, to look where the fruits come from, where the vegetables come from, to read labels in supermarkets.” Dani later became a CORO CSA customer accidentally: another customer asked her to take her box when she was traveling. Dani was always aware of the benefits of organic products but did not think the market would work for her because of work commitments. Receiving her friend’s box for a couple of months allowed her the opportunity to experiment without initial commitment. “In truth, I really liked the experience because definitely the taste of the vegetables is different.” I followed up later in the conversation to ask her to expand on her claim about the taste difference. Dani replied:

I had heard that organic vegetables have a more intense flavor... Once I had the experience [of the canasta] I became more aware of this and what left me fascinated was the avocado. An organic avocado is an experience – you do not need salt, nor lemon, nothing, no bread. It's something you want to eat just with a spoon.

Dani went on to describe the organic beets as sweeter and in need of no seasoning, while the larger beets from the municipal market needed seasoning for taste. Organic onions, for Dani, also carried a stronger flavor that she could perceive in her dishes.

Meanwhile, Anna, a university-educated Guatemalan owner of a small soup and salad bar in Xela bought her vegetables from Mikail. She justified paying his higher prices based on the taste and durability of the organic produce compared with ingredients she could buy at the regular markets.

I have the example of the tomato... When you cut the Q2.50/lb tomato, it is white inside. When you cut a tomato that is organic or agroecological, you see it. Wow! You see the difference. This is a tomato! You try it and it tastes delicious... You try them and they are sweet, they are so good you say “wow...” and the tomatoes last a long time.

I asked another CORO market customer if she knew why the prices were more expensive. She said: "because there are no chemicals." I followed up to ask if that also meant differences in the time needed to grow the produce, but she turned the conversation to taste: “Yes, there are differences. But do you know why? Because this [organic] has more flavor. You can sense it. On the other hand, the chemical [version] is *pura agua* (pure water).”

Others too described the taste of organic produce as more flavorful compared to conventional produce as *pura agua* to denote a flavorless, watery taste. One market customer discussed the differences this way:

For example, a carrot: with chemicals it is a big carrot. An organic carrot is a little smaller, but the taste and the quality is much better... It is much sweeter, meanwhile the chemical [carrot] is bigger but the taste is not too, not good quality.

Viktor, a taxi driver who spent three of his 15 years of living in the US working in Wholefoods in Portland, Oregon before coming back to be with his family in Xela described the difference this way: “It’s different. In the case of the carrot: when you eat an organic carrot, it has a better taste, a sweeter flavor, more delicious. On the other hand, the carrot that is grown with chemicals, no. It is a little more tough, tasteless.”

Like Helena’s earlier description of chemically-produced corn lacking the flavor of maize, others too shared the sense that chemically-produced foods lacked in their essential, characteristic flavors. On the flipside, they perceived organic products as retaining their qualities of maize(ness), carrot(ness), and tomato(ness). When I asked Fernanda what she thinks of the CSA’s prices, she explained the value proposition in terms of the flavor premium that she perceived the basket delivering:

I don’t go to the [municipal] market anymore. The CSA basket lasts me the two weeks and is almost the same price as the market. Obviously, the size of the market carrot is much bigger than of the organic carrot, but the taste, the quality is different. The seeds of the tomato have an acidic taste. Delicious. There are [sometimes] small cherry tomatoes that taste very sweet. If you buy the boxes [of vegetables] in the supermarket or the market you can’t eat them. They are more like water. *They do not have the characteristic flavor of the vegetable.* The [organic] carrot is sweet, you can make it into a juice and can taste the sweet flavor of the carrot. You fry the beets into a chip and can taste⁶⁰ the sweetness of the beet. But in the case of the vegetables from the [regular] market you don’t taste very much those flavors because they lose them due to the chemicals they carry. Obviously, the size is bigger, but you lose the flavor (*emphasis added*).

Fernanda’s response highlights her privileging taste as a marker of value over other signals such size. The size of produce, especially of carrots, was a contentious issue that came up dozens of times during my research. Large carrots represented value for money because they could fill more plates. As detailed in chapter nine on strategies for navigating Xela’s hazardous

⁶⁰ My participants used the verb “sentir” when talking about tasting different taste qualities: “sientes el sabor de remolacha.” I translate it here as “to taste” even though “to sense,” “to feel,” or “to perceive” are perhaps more accurate literal translations of the verb.

food ecology, smaller carrots became symbols of lower chemical usage. For CORO market customers, the smaller size, irregularity, and imperfection of organic vegetables signaled their safer production methods. Yet, it was their better flavor that communicated their higher value.

Teaching people to taste the difference in organically-produced goods was seen as an essential part of promoting alternative food systems. It was a way to engage people's senses in the process of differentiating flavors. For instance, in the 2017 annual Las Hojitas consumers' meeting, Sara, a young Panamanian woman described the taste tours that she organized when she worked as the coordinator of smallholder organic markets in Panama City:

We went to visit the producers and the producers went to visit other producers... so that we created a more solid base for a collective movement. Then we began evaluative visits, so that producers began to share [their knowledge], and the consumers began to get informed about how things are actually produced. In Panama they produce a lot of coconut oil in many different ways. The consumers began to ask "how is coconut oil produced?" They began to differentiate the taste [of organic oil]. I called these initial tours, *giras de re-conocimiento*, "re-cognition tours."

With her play on words, Sara conveyed that the visits aimed to rekindle a sensory cognition of taste of coconut oil produced differently to mass-scale conventional oil.

Like Lidia, who located the market vegetables' flavor as the creator of repeat customers, Mikail contrasted taste vs size in promoting organic production and consumption in poor rural communities. A well-educated man in his 60s with interests in philosophy, anthropology, and religious humanities, he ran rural development programs in the Guatemalan military before choosing to farm himself. Mikail runs free courses for producers interested in learning about non-chemical methods and on our visits together he often recalled teaching others about the flavor premium of organic production:

I would say: taste this one: it is organic. Now this one: it is chemical. This one [chemical] is bigger; try it, a carrot. It is like cardboard. Now try this small one. It is sweet. Which one do you want to eat? [They say] this [organic] one because it

is sweet, but this [chemical] one fills more plates [because it is bigger]. Yes, it fills more, but I like this one more.

Mikail is convinced that through personal investigation, reflection, and purposeful tasting, people would choose his produce over conventional foods. He is a proponent of encouraging others to trust their palates to guide them to better foods rather than visual cues, like the size of the product

The size issue of carrots needs to be understood in the context of its pricing mechanism. In Guatemala's markets, produce is priced either by weight or by unit. As indicated earlier, carrots are typically sold by the unit for around Q1 each. There is typically little reduction in price for smaller carrots, so a smaller carrot for the same price seems less economically sound. At the same time, there is a value premium placed on larger products. For example, regular market tomatoes and potatoes are typically sorted into small, medium, and large sizes, with the price per pound rising with the size of the product. This may be because prior to agrichemical usage larger product size indicated a healthier soil and more vigorous plants. However, the use of hybrid seeds and agricultural chemicals have sped up and enlarged production of vegetables like carrots while compromising its taste qualities, as another organic farmer had explained.

Milo is a young, K'iche' producer from Zunil, an agricultural community nestled 10 kilometers south of Xela. His parents farm vegetables with chemicals on small monoculture plots that are so characteristic of the highlands' countryside. But Milo chose a different path, taking courses in permaculture and gaining experience on an urban organic farm in Xela before buying his own *cuerda* of land for a diverse polyculture production. He now runs his own CSA subscription service, delivering produce by bus to foreign and Guatemalan customers throughout the city. When I visited him on his plot, he explained the difference between the methods of conventional and organic agriculture as one of time given to the production process. He

explained that artificial inputs stimulate rapid plant development, but that this comes at the cost of taste:

Conventional is faster. It [organic] takes more time... but the flavor is concentrated... because you are not stimulating it [for faster growth] and the whole process is more natural... That's why there is a difference between the tastes of conventional and organic.

THE TOMATO TASTE TEST

This chapter has shown so far that CORO's producers and consumers talked about "more intense," "more palatable," "sweeter," "more concentrated," "more like themselves," in the flavors, colors, smells, and textures of organic lettuces, beets, avocados, carrots, cauliflowers, potatoes, and cabbages. Their chemical versions were frequently said to be "tasteless," "pure water," "dull," "bitter," and "flavorless." Yet no food was singled out more for its difference in taste qualities compared with its conventional variant than the organic tomato.

In a conversation with Doña Julia, who grows hothouse tomatoes for the organic market, she asked me whether I buy more organic or regular produce. I told her that I get most of my produce from the project, so she asked: "Do you perceive a difference in taste?" I told her yes, especially in her tomatoes, to which she replied: "it is denser... sweeter. The core inside is not hard." She went to discuss some of her local customers in the community of Cantel, saying that they never asked about how her tomatoes were grown, instead they bought them because of their taste. "They sense the difference," she asserted about her clients.

The flavor difference of Julia's tomatoes reverberated throughout the CORO network and Xela at large. Omar, a Guatemalan NGO leader who shops both in the local outdoor and the canasta market, said this when I asked him if he perceived any quality differences in the products from the two markets: "For me," he said spontaneously, "the taste that is marvelously distinct is

the tomatoes!” On another occasion, Paul, a British transplant who owned a local bar, hurriedly crossed a busy street to let me know how tasty the market’s tomatoes were from the previous weekend.

For many then, the materiality of different vegetables and how they experienced them viscerally was important. But was there really a difference? Or did the perception stem purely from other considerations, like the knowledge that it was organic and healthy or the fact that it was consumed by local tastemakers, such as cosmopolitan, foreign progressives who are worth emulating. In other words, was there a sensory basis to taste as well as a social one?

To understand further the desired qualities of a tomato, I now report on the findings from a blind tomato taste test I conducted during fieldwork. Twenty four participants blind tasted two different tomatoes, describing what they were sensing along the way. One of the tomatoes came from CORO’s organic CSA. The other from a supermarket. Participants were randomly assigned the order of tasting: whether they tasted the organic or the supermarket tomato first. As they tasted each of the tomatoes, the participants described the qualities they perceived. After the tasting they were asked to say which tomato they preferred before being told that one was organic and the other was conventional.

Ten of the participants were CORO producers (eight female and two male) and 14 were from the general public (five female and nine male). The producers and three members of the general public tasted roma tomato pairings in a meeting in April of 2017. The rest of the taste tests occurred at a CORO promotion booth at a culinary convention in Xela in July of 2017. There, the CSA tomatoes were of a different, smaller sort, while the supermarket romas were riper than those available in April. These differences affect people’s perceptions of the tastiness of the tomatoes. This makes the test less controlled than one that might be done in a lab, but it

makes it more realistic in terms of more closely resembling the judgments people make about food quality in the course of their lives. Despite this natural variance in available tomatoes, the following results help to confirm some of the market customers' claims.

Overall, 18 out of 24 tasters (75 percent) preferred the organic tomato over the supermarket version, with nine out of 10 of the CORO's producers (90 percent) preferring the organic tomato and nine out of 14 tasters (64 percent) from the general public.

When making a decision about which tomato they liked more, people did not focus on just one quality, but made an overall impression after considering several qualities. When describing their perceptions, the respondents bundled between two and five descriptors together for each tomato tasting, with most offering three or four. Overall, tasters volunteered descriptors that fell into five pairings relating to taste and texture: 1) soft versus hard; 2) juicy versus dry; 3) sweet versus acidic; 4) more acidic or less acidic; and 5) more flavorful or less flavorful. Four of the quality pairs appeared in both organic and conventional tomatoes but tended to appear more in one over another type of tomato. For example, different levels of acidity were attributed to both tomatoes, but the organic ones were more likely to be described as juicy and less likely to be described as dry than the conventional product. I do not report all of these results in detail as the important point the results show is that flavor was the only quality that differentiated the two tomatoes 100 percent of the time. CORO's tomato was identified as flavorful 10 times while the supermarket tomato was never identified as being flavorful. Meanwhile, the organic tomato was never described to lacking flavor while the conventional tomato was perceived as flavorless four times. This lends support to interviewee claims that the tomato they bought from Xela's organic markets were superior in flavor compared to those the bough from other sellers.

In their daily lives, consumers who claimed a flavor premium of organic produce formed their impressions with a temporal delay: they relied on their taste memories of eating conventional produce when tasting the organic alternatives and judging the latter to be more flavorful. The tomato taste test imposed the condition of a side-by-side comparison of an organic tomato with a conventional one. The findings support consumers' claims that CORO's produce is more flavorful than the produce they can get in other places. This lends credence to the flavor distinction hypothesis: there is a sensory basis of preferring some organic products as well as a Bourdieuan social sense of what is tasteful to eat.

Better flavor was also a vital differentiator of some animal-based foods. As I will detail next, whether purchased at the CORO markets or elsewhere, many Guatemalans retain a sense that *criollo* varieties of products like poultry and eggs produce a tastier product. As a result, food corporations have attempted to capitalize on the persistence of preference for *criollo* foods, as chapter seven detailed. Unlike organic vegetables, like carrots and tomatoes, however, *criollo* animal species also carry associations with rural traditions, with *típica* foodways, and with backyard rearing methods. I have also shown that rather than claim equal or superior flavor, some businesses market their industrial substitutes as "cleaner" alternatives. The implied hygienic discrimination of the advertising messaging marginalizes producers of *criollo* varieties, who are typically poor, rural, indigenous women.

THE *CRIOLLO* TASTE DISTINCTION

Many Guatemalans still, at least occasionally, consume *criollo* varieties of backyard-raised chickens and their eggs, especially during special occasions or by eating *caldo de gallina criolla* in *comedores* and *restaurantes típicos*. Some claim the superiority of taste of such products and see the higher price they demand as justified. "You know where I taste the biggest

difference?” Marco, an NGO worker, asked me after discussing the need to educated people’s palates to higher quality foods. “In eggs... A *criollo* egg has a big difference in flavor.”

When talking about the difficulty of changing people’s shopping and eating habits, Fernanda, for example, a Guatemalan CSA subscriber, described how superior flavor made the process easier for her:

Yes, but when you try the food... When you make eggs... You first see that it [the *criollo* egg] is a little smaller... but [you can tell the difference] with the taste, the color, the texture when you prepare the eggs, like sunny side up eggs... Those they sell in the [city] market or the supermarket, sometimes when you break the egg it has little dots, as if from dye, more reddish than should be; something from the food they give the chickens... and you can sense the taste, the flavor of organic [compared with] the one they sell [that is raised] with chemicals.

When I asked Delmy, another middle-class Guatemalan CORO customer, which of the market’s products caught her attention, she replied with:

Eggs! The consistency of a backyard egg is definitely different from an egg you buy at the supermarket. A farm egg is, I don’t know, its consistency is firmer, the color of the yoke is yellower, the shell has a deeper color. The supermarket has a taste that we are more accustomed to, but it is more watery.

In CORO’s markets, Pablo and Pedro, two K’iche’ youths, sell eggs that they call *semi-criollo*. They buy hatchery chicks but raise them on corn diets in a small enclosure outside their hilltop home. The young men in their early twenties always sell out quickly to market regulars who come early—frequently before the market setup is complete—to ensure the ability to buy their share of eggs and chicken. When I asked what differences their clients perceive in their products, Pablo described it this way:

They are different in that the egg white is thicker, not *pura agua* like in the store-bought egg, right? And the color of the yolk is different as well and the chicken has a different taste. They [our clients] say that they can taste the *criollo* flavor, which is why they buy from us.

Like *criollo* eggs, *criollo* chickens are smaller than factory-bred hens.⁶¹ They typically live outdoors near their owners' homes where they scavenge for grubs and worms. Because women also feed them corn kernels that they scatter on the ground, the meat of the chickens tends to be yellow in color. As a result, people synonymously refer to "criollo chicken" as "yellow chicken." The poultry's meat tends to be leaner and sinewier due to the high physical activity of the birds. Yet, many people prize the chickens for their flavor even though the texture of their meat is more muscular and tough. Two older K'iche women dressed in Xela *traje* who were shopping at the CORO market explained the distinction as follows when I asked them whether the market's products differed to regular goods:

Woman 1: The taste!

Woman 2: Criollo is a little more delicious, more *rica*.

Woman 1: The taste of white chicken [for example] is completely different. It does not have the same taste as of criollo chicken. Moreover, the meat of criollo chicken is *más consistente* (firmer). On the other hand, white chicken meat is *más suave* (more tender). So, yes, it is different.

Woman 2: Yes, it's more *rica*. For me, the flavor of criollo chicken is tastier.

The fact that many Guatemalans differentiate and value *criollo* flavors is further evidenced by food companies' attempts to appropriate the variety that chapter seven documented.

The next section shows how CORO participants seek to valorize the people behind the production of *criollo* and native varieties. In their bid to build a local solidarity economy, organizing consumers engage in boundary-crossing sensory labor in order to tune into the foods of small scale, often indigenous and frequently female, producers. In return, the producers too

⁶¹ This is not to give the impression that *criollo* is just one variety; there are many different species of *criollo* chickens in Guatemala.

engage in boundary-crossing sensory and other labor in order to respond to consumer needs by learning to grow—and eat—imported varieties, such as kale.⁶²

SENSORY LABOR IN SERVICE OF SOLIDARITY ECONOMIES

Revalorizing native varieties is one of the goals of numerous CORO and non-CORO organizations working on food sovereignty in Guatemala. But these native varieties come with negative connotations of backwardness and rural tradition that hang heavy in Guatemalan society. Taken together with identity-building marketing forces and historical promotion of a modern, ladino identity, the prejudices get in the way of the adoption of healthier and more environmentally-friendly dietary practices, like the consumption of amaranth, *bledo*, *hierba mora*, and other herbs. The solidarity economy goals of foreigners and their lack of prejudice towards, and in fact a high valuing of, traditional foodways meant that the same barriers did not plague the CSA project.

As a result, consumers engaged in the sensory labor of trying, learning to cook, and starting to like unfamiliar produce varieties. This was especially the case early on in the life of the project when leaders wanted to support farmer decision making in what to grow. This means that early CSA shares came with many bunches of native varieties of greens and herbs that the consumers did not possess sensory knowledge of or have the culinary tools to utilize. For example, when I asked Cecilia, a French CSA subscriber, whether her cooking habits had changed, she said: “Yes, because the basket comes with many [native] greens. In the many years

⁶² It is of note that some CORO organizers also attempted to use hygiene to differentiate the organic market from regular markets (see Chapter 12 on “Acts of Translation”). Producers were asked to sign on to a code of conduct that included hygiene practices, like showering and hand washing. They were also asked to wear uniforms supplied by Poverty Action, a move that many of the producers successfully resisted. But, the market did not go on to advertise itself as a more clean and hygienic alternatives that can be trusted over regular markets, making its hygienic boundary distinct from the hygienic discrimination evident in Pollo Rey’s promotion of yellow chicken.

I have lived here, I never bought them because I did not know how to cook them. Since joining [the CSA] we eat a lot of soup with the greens.”



Figure 37: Native and Non-Native Greens in the CSA Share

Others enjoyed the process of learning how to cook new varieties as this lined up with their ethical convictions of eating local produce that is native to the area and is therefore both ecologically and culturally more sustainable. For example, Edith and Hannah were two Dutch CSA consumers and friends. Anna is married to a Guatemalan and has lived in the country for 18 years working on community development projects. Hannah was getting ready to leave after a five-year stint working for a Dutch NGO. We walked and talked about the CSA in La Esperanza, a community lying eight km northwest of Xela’s historic center. Hannah described her experience this way:

One thing that I did not say about the canasta is the change in consumption and cooking. It is something that the organic canasta taught me and it is one thing that I really like about the canasta is that I learned to cook a lot more with things from here. Local vegetables and, above all else, *hierbas*. At the beginning we always

had a lot of *hierbas* left over, but now I have learned to prepare them in good ways. And if I don't cook them all one week, I want to cook them the next time. That is a change, something that I did not do before. If it was not for the canasta, I would never buy so many *hierbas*. I would have never bought them. Not because I wouldn't pay for them, but because I didn't know what to do with them. I cooked much more with the vegetables that I know, that are not from here and that are often imported. I don't do that anymore and that is also a wealth in a way.

Because Edith has spent many years in rural areas of Guatemala, her experience was different from Hannah's. Her family has been regularly eating *hierbas* for a long time: "In that sense it was not the canasta that changed the way we eat... In that sense it was the rural area that taught me, because, ay! A good soup with *hierbas* and tortillas!"

The learning process was not the same for everyone. For example, one Guatemalan CSA customer, Marta, did not cook the vegetables herself. Instead, her indigenous maid prepared the produce into meals, using her existing knowledge of preparing such food. Nevertheless, Marta's family ate many more of the *hierbas* than they would have otherwise.

While the consumers wanted to act in solidarity with the farmers, which meant respecting their agricultural processes, the producers in turn wanted to act in solidarity with the consumers by providing them with products that they needed and wanted. The canasta began to diversify to include products that the customers felt were needed as a base for common dishes, such as onions, carrots, tomatoes, and potatoes. CORO's participants actively reached out across their networks to look for producers who already grew those things organically. At the same time, existing producers learned to grow new varieties.

One of the effects of committing to the nutrition of repeat customers who need a wide range of produce is the biodiversification of the farmers' production systems. This was an explicit goal of the project organizers from the start and is a major differentiator of the Xela CSA

compared with eight others that I visited in Guatemala City, Antigua, Lake Atitlán, and Xela. As Alexia explained:

One of the things that we said at the beginning—something that is not done in the capital city [projects]—is that we had to promote the recuperation of eating products that are native and that originate from the biodiversity of this country, which are typically the *hierbas*. They are called *hortalizas nativas*.

The project's commitment to this process meant inconvenience for the consumers, especially at the beginning when the CSA share included mainly *hierbas* and only “a carrot or two and a cabbage here and there.” Over time, the principle of solidarity flowing both ways between the producers and consumers meant that the former were more than happy to diversify, engaging in boundary-crossing sensory labor of learning to grow and eat new varieties, like kale and unusual vegetables. Many enjoyed doing so and continued to look for avenues to produce new crops. When she learned that I would be taking a trip to the United States, Lucia asked me to bring her back some seeds. When I asked her what kinds of seeds she wanted, she said “everything colorful. Vegetables that are every color of the rainbow. I like everything with color.”

The other effect was more learning by Guatemalan consumers who had not encountered the varieties that farmers began to grow as a result of the informal seed exchange between foreign consumers and Guatemalan producers. For example, Fernanda, who joined the CSA with her sick father, had to learn to cook some varieties, like kale, that she had never seen before:

[When I joined the CSA] there were things that I didn't know. For example, kale. I had seen it in the market but did not know what to do with it, like having it in salads. Even with potato. In lasagnas, things like that. So, I changed. There were different flavors and I have now incorporated them into my diet.

And do you like kale now?

Oh yes. It was something new for my dad as well. When we got it, I said wait, I will ask the others how to cook it and get some recipes.

The producers too changed some of their cooking and eating habits as a result of participating in the projects. In a meeting of CORO's producers, Heidi recounted that "we used to use *consommé*, *savarín* or *ablandador*, all the things that give flavor to dishes. Today, we make all our own seasoning out of oregano and thyme." Meanwhile, Lucia began to love making and sharing salads with different varieties of kale from her garden.

But, like many others, CSA producers and consumers did not become organic fundamentalists. Parents still reported eating in fast food restaurants because they enjoyed being able to socialize with other adults while their children entertained each other in the restaurants' play areas. Others confessed to giving into their kids' badgering for soda and chips. Others still were simply confused, like Maria who brought the beverage Tampico to a community meeting instead of orange soda because the soft drink had images of oranges on the label. Since she could not read or write, she took that label to mean the product was made from real fruit. In reality, Tampico is an artificial and very sweet beverage reminiscent of Sunny Delight.

At the same time, not everyone perceived the flavor premium of *criollo* and not every organic version delivered the taste distinction. Chus, a CSA customer, for example, described that while he could sense a better flavor in many of the organic vegetables, some foods, like cilantro seemed the same to him. Meanwhile, one of the two K'iche' women who preferred *criollo* as more tasty than normal chicken also said that "unfortunately, my family likes white chicken. They don't like yellow chicken very much... The truth is some like it and some do not." And when I brought the smaller, white *criollo* eggs to an American friend instead of the organic market's larger, brown *semi-criollo* versions, she was disappointed. For her, she could not perceive enough of a flavor difference to justify the smaller size at double the price.



Figure 38: Kale Growing Alongside Native Plants in Lucia's Garden

CONCLUSIONS

These variations demonstrate the complex lines of tension running between the pushes and pulls of different products. Nevertheless, this chapter has sought to tease out the embodied, sensory, and material basis of taste preference. People's narratives and the tomato taste test allow us to see that, in the Guatemalan context, the widely accepted claim that organic, agroecological, and *criollo* is more flavorful is supported in embodied experience. The judgement that all organic must therefore be tastier or better is of course unlikely to hold up in all places and at all times. But it did in Xela in 2016 and 2017 with the exact produce that was available in that place at that time.

Research from Europe shows that many Europeans do not have experience with the sensory attributes of organics; they do not compare them on the basis of flavor and taste is not a big driver for purchasing decisions (Stolz et al. 2010). Where people imagine those foods came from matters more. Hypothetical visions of a distant idyllic past inform some Americans' participation in organic farmers markets (Guthman 2008). Meanwhile, many Northern consumers who buy Fair Trade products base their decisions on fantasies of far-flung contemporary worlds full of essentialized and romanticized ecological others (Besky 2014; M. K. Goodman 2010; Wilson 2010). These imaginaries are part of the promise of an alternative way of farming and eating that helps to connect consumers with producers who purport to make good on that promise.

This chapter has shown that, in many cases, Guatemalans' participation is more strongly shaped by their own and their families' visceral, sensory, bodily experiences. Their mouths remember the tastes of foods before they were industrialized. Most know the taste difference of criollo backyard chickens and eggs. For those who have tried organic versions, like the ones sold in CORO markets, the flavor distinction is palpable.

And engaging the senses has been crucial in CORO's attempts to build the local food movement on the basis of solidarity with local producers and agro-ecosystems. Consumers engage their bodies in sensory labor to learn to taste, cook, and like new varieties. That sensory labor was part of the route to reclaiming taste sovereignty on the route to health and longevity. To return the favor in regard for each other's needs, producers have also learned to farm, eat, and like new varieties that grow well in their local climates.

This chapter has thus shown that, in Guatemala, industrial food has not entirely colonized people's taste buds and preferences. While important, visual cues are not the only criteria for the

assessment of quality. Some people value alternatives not only for their invisible, abstract, and time-delayed characteristics, such as reducing risks of chemical exposure and providing long-term health benefits. Instead, many Guatemalans are attuned to immediately-perceivable sensory differences in alternatively-produced foods, like eggs, poultry, and vegetables. They measure quality by a constellation of interrelated factors with flavor, rather than appearance, at the helm. And flavor inhabits their sensory memory, traveling with them across time and space to provide an embodied basis for doing food otherwise.

In other words, while future health benefits might be a driver for seeking alternatives, for many people it is alternative products' immediate flavor premium that justifies the elevated effort in their production and the elevated cost in their procurement. People's narratives and the results from a tomato taste test further illustrate that real differences in alternatively-produced products' flavors—compared with their conventional counterparts—work in tandem with attuned bodies to keep CORO's customers returning time and time again.

The organization's organic market and CSA projects bring together a diverse constituent base of foreigners and Guatemalans of varied socioeconomic and ethnic backgrounds. This social diversity comes with an equally diverse set of culinary practices and gustatory preferences. This chapter has shown how CORO's participants build solidarity across difference by putting their mouths where their politics are: working the senses to tune their bodies into each other's foods and their flavors. Next chapter considers the role that the development sector plays in supporting these processes.

CHAPTER 12: ACTS OF TRANSLATION: NAVIGATING XELA'S AGROECOLOGICAL DEVELOPMENT NETWORKS

The past two chapters have shown the variation in goals and social configurations of different types of alternative food networks in Guatemala. I have argued that Xela's CSA market differed from many others in that the people involved aimed to build solidarity across different socioeconomic positions in society partially by mobilizing their senses to like each other's foods. The project was led by foreign women with visions of a grassroots interdependence between urban consumers and rural producers weaving sustainable local food economies without outside help. However, with little material help available from Guatemala's impoverished state apparatus, the producers needed NGO supports to transition to agroecological farming practices and build additional markets for their products. The institutional involvement comes with its own set of hierarchies and challenges. This chapter takes a closer look at the role that the development sector plays in promoting organics and agroecology in the Quetzaltenango region. It takes up the question of how people negotiate bureaucratic exigences and power differentials to achieve their goals.

COOKING THE BOOKS

Sergio⁶³ took me inside Doña Rosa's house, nervously bit his fingernails, and quietly explained our predicament. We were hoping for 50 agroecological farmers to attend the morning's workshop. But, knowing that participation could be low, he ordered 30 meals for the culturally-obligatory *refacción* (snack) that broke up the two-hour session. Only 11 adult farmers turned up, four with their children. Thirty meals were thus prepared, but only 20 people were

⁶³ All names and some identifying details have been changed to protect the privacy and anonymity of informants.

listed on the sign-in sheet, which already included Sergio and me, as well as Doña Rosa, her sister, and her young daughter who prepared sandwiches for the occasion. The food had to be paid for, Sergio clarified, but he could not pay for more meals than the number of people who officially ate them. He had only been working for the organizing NGO for a few months and was still learning the ropes, but he had experienced this situation before. Faced with a shortage of partakers at a different event Sergio had paid the caterer in full but failed to match the expenditure to the attendance sheet, an oversight that led to a vigorous tongue lashing from his supervisor, Marly. The young man came away from the confrontation with the unspoken understanding that the only way to fairly pay the cook was to cook the books.

As other NGO workers tended to also do, Sergio complained that their international funders were “very demanding,” especially when it came to paperwork. Accurately balancing financial records was important. To properly account for the day, he suggested filling up the attendance sheet with fake names and, where needed, fake finger prints, which illiterate farmers typically supplied in lieu of signatures. Since I worked with the NGO’s leadership as much as with him, I understood that Sergio was asking for my discretion. This was not my first time providing it. Just a few weeks before, I had spent the day visiting farms with Sergio’s supervisor, Marly, and four other managers. We stopped for lunch at Albamar, a pricey chain restaurant that serves everything from fried chicken and burgers to more “traditional” fare like *caldo de res* (beef soup) and *pepián de pollo* (chicken stew). When the bill exceeded the permitted maximum of \$40 (\$6.67 per person), the men and women casually agreed to invent an additional eater to bring the on-paper lunch cost in line with the official per-person allowance.

These experiences were underscored by the stories that others told me, like Alexia, a French woman who has lived and worked in rural Guatemalan communities for almost 30 years.

An outspoken critic of development, and capitalism, she refused to spend her organizational lunch allowances at expensive formal restaurants that could provide receipts. To her, the paperwork requirements are out of step with many aid and non-government organizations' professed missions to work for Guatemala's poor. Instead, Alexia ate her lunches in informal cheap eateries run by local women and used a friend's business receipt book to produce the necessary documentation for her employers.

On the one hand, the NGO workers' falsifications of documents represent the development order's persistent disjuncture (Lewis and Mosse 2006a), in which writing constitutes bureaucratic acts that reproduce development programs rather than promote project effectiveness (Gupta 2012; Rottenburg 2009). On the other hand, they can be read as examples of "weapons of the weak" (Scott 1985), demonstrating daily resistance against and contestation of the "very demanding," externally-imposed organizational requirements of global development assemblages (Ong and Collier 2004). In my research, such examples emerged as routine, quotidian practices in a plethora of daily accommodations, large and small, that professionals, farmers, and other actors engaged in while participating in regional and national efforts to promote agroecology and organics. Like the manipulation of attendance sheets that mediated between lived reality and bureaucratic exigencies, the daily accommodations often occurred at contact points between disparate groups and situations. As parts of such "cultural encounters" (Crane 2014), these accommodations allowed people to translate between different sets of needs, desires, goals, and expectations. I thus trace how the development sector emerges from continuous processes of collaboration, conflict and compromise rather than acting as a monolithic entity that imposes its will onto a powerless beneficiary base (Nugent 1994).

Focusing on metrics, language, and resource flows, this chapter details the work that acts of translation do in maintaining the loose coherence of the CORO network while sustaining internal variations in the human actors' understandings and practices. It is based on evidence from a large survey of agroecology efforts in the western highland region of Guatemala, interviews with over 100 of their participants, including farmers, consumers, and development workers, and participant observation in dozens of their meetings and activities during 16 months of ethnographic fieldwork. As I will show, development agents are not the only ones who take on the roles of brokers and translators in sustaining the enterprise (Lewis and Mosse 2006b). Consumers, farmers, and their organizations also engage in multiple acts of translation to derive desired benefits.

By considering acts of translation by multiple different actors, this chapter answers calls to address "the challenge [of] recompos[ing] enduring questions of who is involved in agri-food, why, how, where, when, and in whose interests" (Heron et al. 2016, 2). I focus less on *what* or *who* makes up CORO, although that data provides important background to understanding it, and more on the *how* of its coming together. That is, I seek to illuminate some of the connective tissue, the glue, that holds the network in place.

In particular, I show how resource flows across the region's development sector and societal race-class-gender hierarchies help condition the nature of the interactions between CORO's participants. I also demonstrate how human actors flexibly deploy discourses, metrics, and practices to counteract and subvert these structural forces in a way that allows for a relatively small number of alternative farmers to support a large alternative agri-food aid infrastructure. This is not to say that the connections between different actors are thus illegitimate or inauthentic, or that the actors do not make progress towards their stated goals. But it is to

recognize that such groupings are influenced by material flows through social structures of inequality that even the most progressively-intended projects can reproduce. This chapter thus considers social power differentials in questions of who is able to participate in networks like CORO and how they are positioned to do so relative to others.

The people encountered in this chapter span the production-distribution-consumption chain and frequently do not neatly fit in one role over another. Everyone, after all, is a consumer of food even if their other primary position in the assemblage is one of a producer, distributor, or support worker. Most of the actors are connected to organizations that are officially part of CORO (the Western Regional Organic Collective). Others are associated with other institutions that are more loosely connected to CORO but that nevertheless work towards stated goals of somehow improving the region's food systems. Throughout, I interchangeably use the words "organic" and "agroecological" without drawing a sharp distinction between them. This allows me to write from the viewpoint of my participants rather than color the text with my own assumptions about what the labels, and the philosophies and practices behind them, should represent. As will become clear shortly, CORO's participants differentially understand, use, and contest these and other related terms. As I will show, the fluidity of the terminology and its lack of strict codification is one of the factors that pulls the network together (and sometimes apart).

TRANSLATING PROJECT METRICS

The scenarios that opened this chapter occurred during my 16 months of ethnographic fieldwork (2015-2017) in Xela. By 2015, the city housed the only remaining Regional Organic Collective (COR) out of the 10 that the Ministry of Agriculture (MAGA) created as part of its "National Strategy for the Development of Organic and Agroecological Production in the Republic of Guatemala 2013-2023" (MAGA 2012). Guatemala has exported organic products

like coffee since the 1970s (Lyon 2010), but the new strategy turned the policy eye inwards. Looking to promote domestic organics, part of the plan was to unite in regional collectives the public, business, and non-profit organizations that variably encourage organic or agroecological farming, promote responsible consumption, and develop local markets. The public-private partnership, the National Commission for Ecological Agriculture (CNAE), helped to author the document, which positioned the CORs as central to policy success as “key actors and change agents for the dissemination, invigoration, and implementation” of the ten-year plan (MAGA 2012, 17).

While other CORs disbanded soon after formation, the Western Regional Organic Collective (CORO) that covers the highland departments of Quetzaltenango, San Marcos, and Totonicapán is still going. Representatives from local NGOs, international aid organizations, commercial intermediaries, and a consumer group form the collective’s Board of Directors. While the CORO is largely independent from government efforts like those outlined in the 2013-2023 strategy, it partners with regional ministries of agriculture and the economy on various initiatives. In monthly meetings, the board discusses strategies for promoting organic consumption, supporting small-scale agroecological farmers, and running three periodic organic markets in Xela. Outside of such collective endeavors, using funds from international public and private donors, each member organization runs its own programming with farmers throughout the surrounding countryside, like the workshop that I attended with Sergio in May of 2017.

Aside from helping to balance the NGO’s books, Sergio’s manipulation of attendance records performed the additional task of artificially inflating the attendance rate in the morning’s workshop. Higher participation helps to make the projects appear more quantitatively successful, an important metric for securing additional program funding from donors. The result is a change

in the roles that the metric played as it travelled from Sergio's pen in the field to the NGO accountant office where it would join other numbers before arriving in the funders' grant offices. In other words, the meaning of the metric was translated between the moment of its construction and the various moments of its reception. Other practices by farmers, farmer groups, and NGOs further showed similar translations of metrics. They represented a slightly altered reality to the one that originated them. Yet, as the subsequent account of Charles' research project shows, the numbers contributed to tangible outcomes by enrolling multiple actors into the network and affecting daily practices within it.

My research plan before coming to Guatemala included a stakeholder analysis of organizations involved in the CORO. Upon arriving, I connected with a British consultant called Charles who worked with SERJUS, one of the CORO's most active organizations, on a Poverty Action-funded project to do just that. Charles was interested in systems approaches to drive local agroecological production. Driven by questions about farmer needs in the region, he had spent more than a year collecting data on CORO-associated farmer groups, NGO support networks, government services, and market distribution channels.

The project was intended to be participatory. Charles planned to recruit a representative from each farmer group to collect the needed data from their leaders and members and to put it together into an evidence-based proposal for more support from the regional MAGA office in Quetzaltenango. The project was relatively successful. The data were collected, the proposal was written, and the Ministry opened its first Office for Ecological Agriculture, staffing it with one *ingeniero agrónomo* (agricultural engineer/ agronomist) supported by a full-time consultant from the German development arm, GIZ.

Not all went according to plan. Charles struggled to get community buy-in for the project, as leaders of farmer groups would participate only if they could benefit financially. The research funders provided the necessary financial resources but while some groups returned the data most did not, keeping the money but not coming up with the data. Charles ended up doing much of the legwork himself, surveying group leaders on the phone and in person. In the end, he came up against a local reality of a saturated development market where NGOs and aid offices compete for beneficiaries, where organizations frequently circulate benefits without community buy-in or contributions, and where local groups are often internally divided due to resource capture, power struggles, and clientelism.

The unfolding of Charles' research project provides a glimpse into the translation practices that can occur behind the scenes of projects that end up appearing compliant with funder speculations, at least on paper. Project reports and the elements that make them up, like specific policies, language, and metrics do not make up a fixed and well-defined entity. Instead, they are flexible enough that different actors can bring to bear upon them their own interpretations, mediating rhetoric and practice so that officially they appear as intended. Charles' project served as a springboard for my own as I travelled within the network of producers, consumers, NGO workers, business interests, and state actors to better understand the glue that held the network in place.

The organizational agroecology network in Quetzaltenango is much larger than many would expect. CORO's final report detailed 71 producer organizations whose work loosely corresponded to the technical, if not always the political, objectives of agroecology (Copeland 2018). Overall, the farmers produced 91 different subsistence and cash crops, like maize, vegetables, and fruits, and animal products like eggs, milk, and meats. In theory, many followed

at least some agroecological techniques in their production methodologies, such as adding minimal chemical inputs, planting diverse polycultures, and rotating crops. The groups were supported by a larger network of organizational stakeholders and marketing channels totaling more than 50 separate entities.

Charles' report celebrated the growing regional interest in agroecological production but also detailed the considerable additional supports that farmers said they lacked. This suggested that a large assemblage of more than 50 organizations that was supporting 71 producer groups representing 960 members (57 percent of whom are women) with a total land holding of 5,300 acres was failing to meet some of the farmers' basic production needs. As I attended field visits, meetings, and workshops, and interviewed 110 stakeholders across farmer, consumer, and NGO groups, it became clear that the goals, language, and metrics within this movement concealed as much as they revealed.



Figure 39: Some of The Local, State, and Foreign Organizations Supporting CORO Farmer Groups

POWER STRUCTURES WITHIN THE AGROECOLOGICAL NETWORKS

It was breacktime during the first day of the Seventh Convention on Organic Agriculture, which was held for the first time in Xela in October of 2016. The morning began with the typical standing rendition of the national anthem and formal introductions by representatives of the organizing groups. CNAE's President enthusiastically reported that demand for organic exports had thus far converted nine percent of the country's land into certified organic production; the goal for the following year was to increase the coverage to 14 percent. Representatives from MAGA's Guatemala-city based Department of Organic Agriculture (DAO) spoke of the need for a formal, state-defined, domestic certification system, a sentiment that was echoed by speakers from GIZ. The only woman and indigenous person to speak, the representative of the national Network for Food Sovereignty in Guatemala (REDSAG), proposed that the way to achieve community autonomy was to revive local economies through revitalizing the production of creole seeds. Her point was underscored by the University of San Carlos (USAC) lecturer who emphasized community organization to recover ancestral practices in line with the *buen vivir* philosophy.

As suited servers passed around coffee and sandwiches for the mid-morning break, I asked Roberto, an NGO founder and CORO member, what he thought of the conference so far. After a few seconds of small-talk platitudes—"it is great, very good"—Roberto hushed his voice and offered a deeper critique. A well-educated and well-traveled religious man of K'iche' Maya origins in his late 60s, he proposed that the last 500 years on the continent have seen only one strategy: divide and conquer. "We all talk about community and organization, but we are very divided," he lamented. "We are each to their own." During his almost 50 years of work for social causes, he has experienced the changes the country has gone through first hand. He has survived

the 36-year Civil War and genocide against indigenous people. He has lived its aftermath. He has seen “universities infiltrated and academics divided.” He has witnessed movements, however small, “beheaded”—“their young organizers killed.” Looking around the busy banquet room, Roberto proclaimed that NGOs are “the worst of them all.” “We all think we do something good, but we are on our own. We work without [a common] vision. We are divided because of money. We compete for resources. We all make careers. But that is all.”

Roberto’s comments hit at the center of the CORO network in the Quetzaltenango region and beyond. The following analysis traces the nature and flows of resources and relationships within the networks, demonstrating how these both pull them together and push them apart. It further shows how discourses and practices circulate between and within organizations, and how different actors, even the least powerful, translate them to further their own goals.

The organizations making up the CORO network in the Western Highlands can roughly be split into seven groups: 1) international organizations (foreign aid agencies, NGOs, and Foundations); 2) Guatemalan NGOs; 3) domestic public and private educational institutions (universities, training agencies); 4) state actors (including different ministries and municipal offices); 5) producer associations (including producers who are farmers and those who process ingredients into value-added products like jams); 6) intermediary organizations that commercialize products; and 7) consumer groups. In addition, traditional open-air and differentiated markets, coffee shops, restaurants, and stores, and community-supported agriculture (CSA) projects help producer products reach final consumers. Resources and products within the networks tend to flow in one direction (left to right in Figure 43).

Most funding comes from international groups that support Guatemalan state and NGO entities and that occasionally directly fund producer associations. NGO and government workers,

like extension agents of MAGA and the Ministry of Health, channel non-financial resources to farmer groups and individual farmers. These include donating agricultural infrastructure, technologies and inputs such as seeds, greenhouses, and irrigation tanks, and providing agricultural knowledge in the form of workshops and on-farm consultations. Farmer products that are destined for commerce circulate from the farming groups and individual producers either to intermediaries, like NGOs and businesses that commercialize such alternatives, or directly to consumers through markets and CSA schemes.

Financial and non-financial resource flows represent powerful actors within CORO. Few organizations that provide them are committed to participatory approaches to program delivery that engage communities in deciding how resources should be allocated. Such a commitment would be difficult to implement, in any case, due to the fragmented organizational landscape.

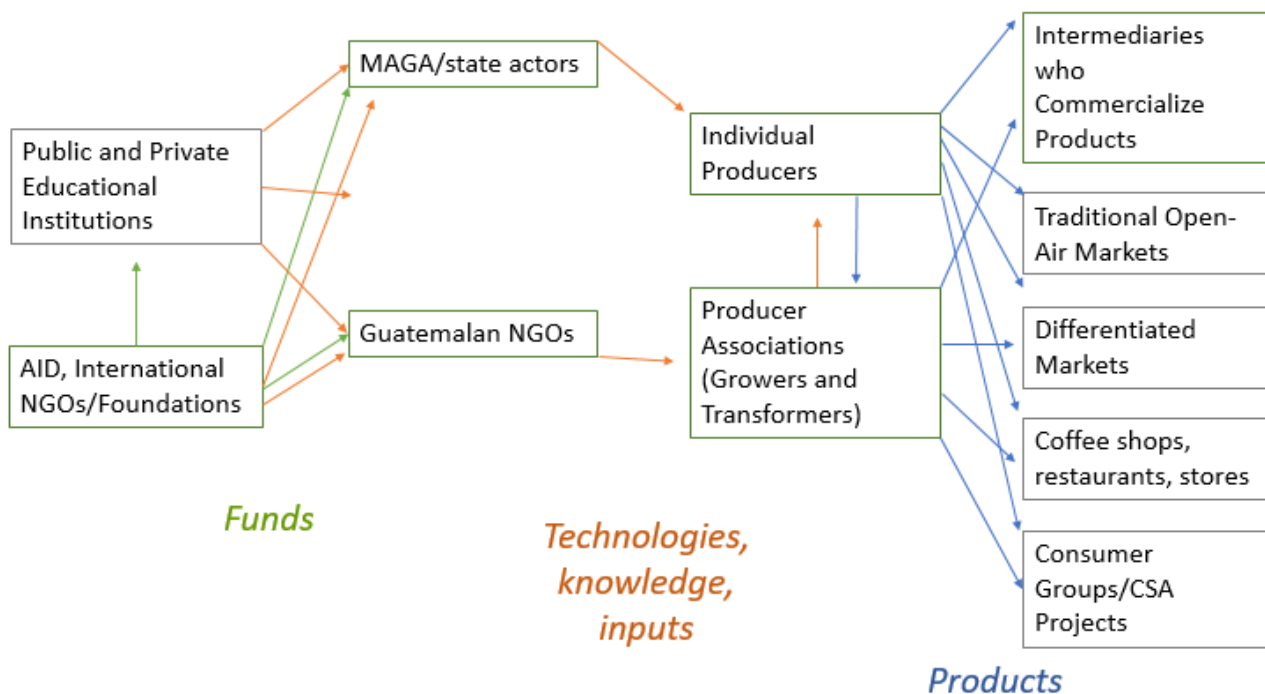


Figure 40: Resource Flows in Xela's Agroecology Aid Sector

While the CORO provides a space for some inter-organizational interaction, articulation of common goals, and creation of shared projects, as Roberto suggested in his evaluation, most entities operate as separate NGOs with their own funding streams, governing principles, staff, and programmatic plans. Indeed, in many cases they compete directly with each other for financial and other resources provided by international entities. In turn, they also compete for beneficiaries to whom to deliver workshops, technologies, inputs, and other non-monetary materials.

Relationships of competition and dependency thus flow through the networks, typically in the opposite direction to resource flows. Individual producers compete against each other for participation in producer associations that grant access to NGO resources. With few other avenues for gaining additional resources and earning a livelihood, producers become dependent on the farmer groups they participate in, who become dependent for their survival on the NGOs who supply them, which are, in turn, dependent on securing international funding. But since most funding organizations, local NGOs, and producer groups articulate their own goals, strategies, and approaches, which are not always perfectly aligned, other forces are at play that allow CORO to persist. These involve acts of translation within the networks, including the translation of metrics, goals, and terminology.

The supporting organizations vary in the type of help they give to farmers, including providing inputs, infrastructure, and technical assistance. Only eight NGOs and aid groups provided assistance specifically in agroecological practices and only a quarter of interviewed farmer organizations reported receiving such training (CORO 2016). The organizations also varied in the number of farmer groups that they supported, with many reporting just one or two beneficiary farmer groups while four supported 10 groups or more. At the same time, different

farmer groups proved differentially adept at securing relationships with supporting organizations. Just over half (55 percent) reported receiving support from just one or two organizations, while nine groups (14 percent) commandeered help from five or more. Among groups for whom full data was available ($n = 66$), the quantity of interorganizational relationships that the farmer groups maintained was unrelated to their number of participating farmers ($r = 0.11$, $p = 0.98$) or to the total hectares of land under production ($r = 0.16$, $p = 0.99$). For example, the organization APROSADC reported membership of 200 farmers but received help from just one supporting organization. Meanwhile, Grupo Zaculeu ADIF consisted of just three producers but was supported by five separate organizations. With 30 farmer members but help from eight organizations, the most supported farmer group of all was Red de Productores EIAQ.

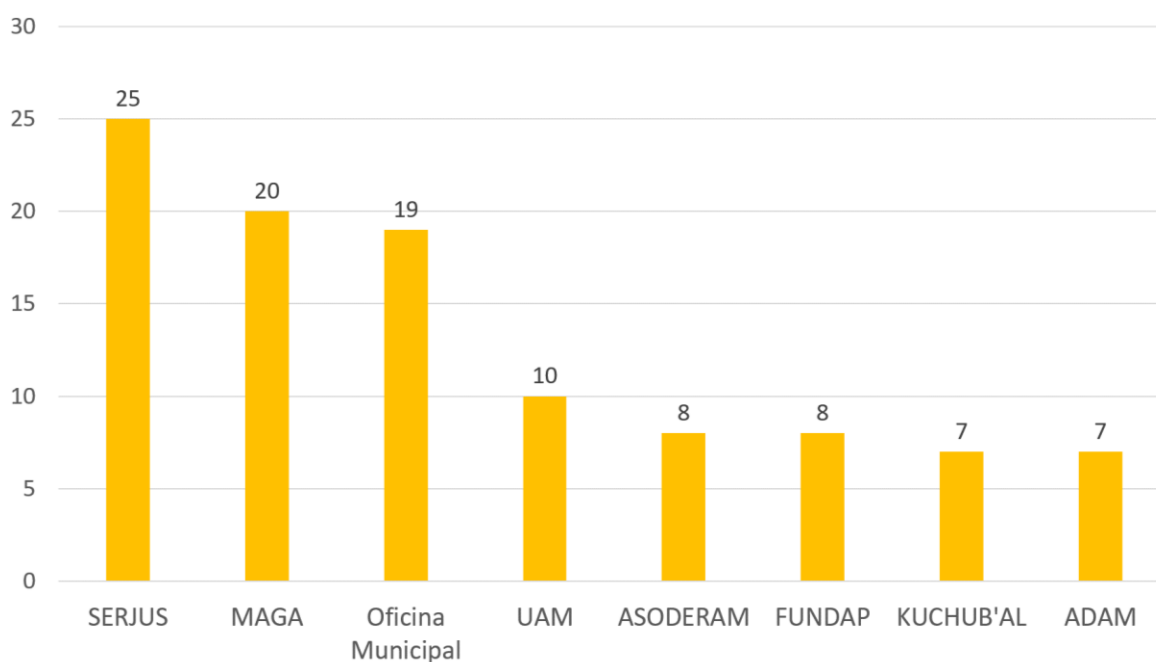


Figure 41: Number of Farmer Groups Different Organizations Support

To understand how individual farmers worked with different organizations, I collected data on support received by 15 producers participating in Xela's bi-monthly organic market. This

too revealed that some received material help or participated in the workshops of more organizations than did others: most with just one or two organizations, but some in four or five. For instance, during our conversation in February of 2017, Doña Rosana, an indigenous K'iche' grower for CORO, detailed numerous additional trainings that she had attended through NGOs, municipal offices, and her local church. These included workshops on egg production, home making of ointments, and painting. Rosana was proud of her participation in the classes and enjoyed learning the various skills, even if she self-admittedly rarely applied them in her own life. Since each aid, NGO, and government group tended to have multiple departments and priority areas, the same farmers who attended their farming-related workshops were called upon to participate within each organizations' various work streams, such as talks on gender sensitization and racial discrimination.

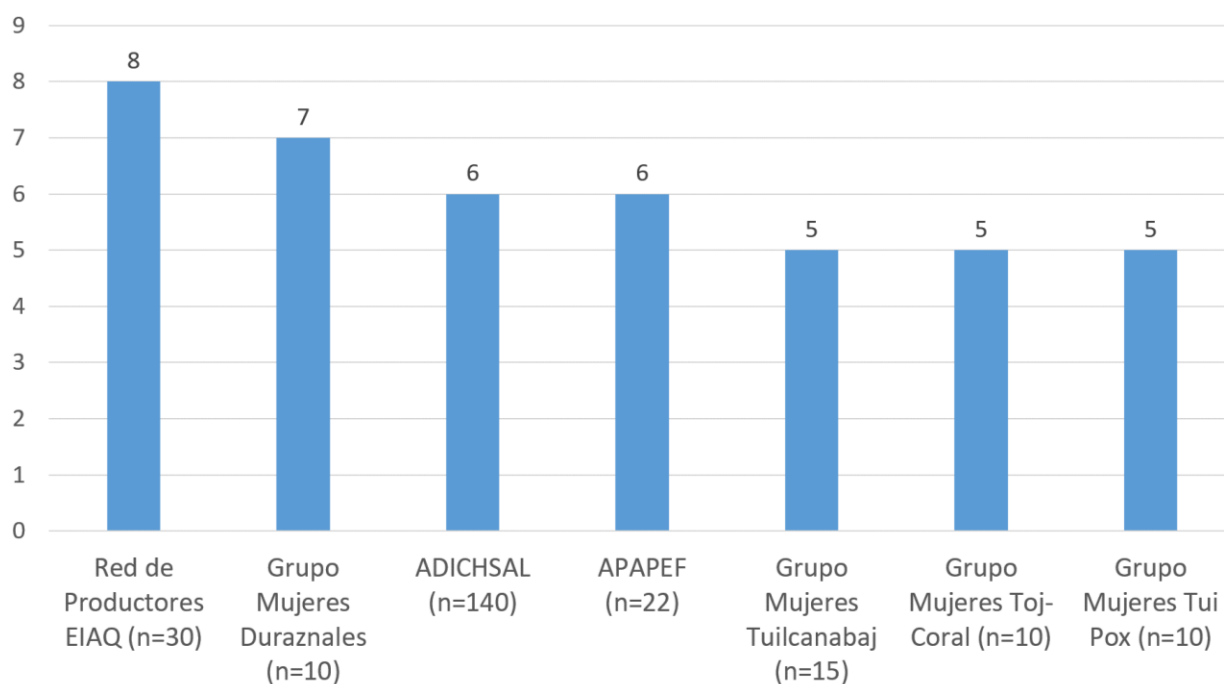


Figure 42: Farmer Groups with Highest Level of Organizational Support (# of Orgs)

Since the region's supporting organizations rarely coordinated their programmatic efforts, farmers became the objects of interventions from several organizations. Multiple NGOs visited the same farms during donor and beneficiary field trips and showcased the same producers in reports as exemplars of project successes. By attending many events and workshops, producers demonstrated their reliability and could thus be kept in mind for receiving future material benefits. Having received help from multiple sources for several years, some producers thus became "show farmers" (Flachs 2017; Stone 2014) who were used to highlight the potential of agroecology for the region. Fernando, for example, is one such person who had received seeds, animals, apiaries, a biodigestor, and a greenhouse from several organizations while his wife learned cheese making and mushroom growing in associated workshops. Ironically, once they reached relative self-sufficiency, the family began to withdraw from many of the NGO activities and Fernando became more vocal in his criticisms of development programs and farmer organizations. Like Fernando, few farmers progressed significantly towards relatively closed-loop, diverse agroecological systems without substantial external aid.

Participation in the NGO programs was time consuming. Many workshops lasted half or a full day. Producers received no compensation for participation, albeit their bus fare was refunded and they received free meals and *refacciones*. As we saw with Rosana, not everyone applied the skills they learned in the workshops. Not everyone actively participated in the sessions either. Several of the older producers napped through some two dozen sessions that I attended, regardless of whether the meetings were dealing with abstract concepts or the practical issues facing the farmers. Rooms with poor acoustics that diffused voices made it harder to pay close attention during the events. Sessions during which organizational representatives tended to monologue at their audience rather than engage them in conversation were also hard for some

people to actively follow. On one such occasion, for example, a university-educated K'iche' NGO worker rushed through a busy PowerPoint presentation that aimed to remind the attending farmers about the organization's drivers and goals. She casually referenced concepts like "mercantilism," "neoliberalism," and "neocolonialism" to a group of producers of whom few had completed education beyond primary schooling. After an hour of talking at the men and women, there was no follow up to ensure comprehension and no time for questions, only time to confirm attendance of the workshop by signing or thumb-printing the participation sheet. In another meeting with farmers, many of whom do not read or write Spanish, the same NGO worker and her colleague read out loud from text-laden PowerPoint slides the rules for market participation that they recently drafted without consulting the producers. Some producers nodded off during the one-way flow of information, instruction, and direction from NGO workers. Not all meetings were like this. Several engaged producers in discussion as active participants. Others included interactive workshop that many farmers enjoyed and stayed present for. Nevertheless, the bureaucratic pressures faced by the NGO workers to generate workshop participation meant that they sometimes ran farmers through esoteric presentations rather than ensuring quality and effectiveness of the trainings. When that happened, the sessions obviated a chasm between the better-educated professionals, the gate-keepers to the NGO's resources, and the less well-educated farmer beneficiaries.

I observed similar patterns in other organizational meetings. For example, during a foreign-aid-funded event in Santa Catarina Ixtlahuacán, six university-educated male representatives from NGOs and a local government office sat behind a panel table at the back of a municipal hall. One by one they took turns to speak through a microphone about how their particular organizations seek to use agroecology to address environmental degradation, human

health, local poverty, and climate change issues. Two of the presenters spoke in K'iche', the Maya language spoken in Santa Catarina. The other four spoke only in Spanish, without K'iche' translation. Their audience was a room of around 40 women and their children recruited from the local community. After a couple of hours of presentations, the floor was handed over to the women to ask questions, which three of them did, all in their native K'iche'. The speakers underlined that while their organizations have many goals, they do not have money or other resources for any projects that the community might want to instigate. The session ended with a customary free lunch before everyone went their separate ways.

Social hierarchies, including the lower standing of women and indigenous people in Guatemalan society, not only shaped the nature of some the meetings, but also conditioned who was present at some gatherings and who was missing. Michael, a European aid worker who was interested in my research, invited me as his guest to participate in seven internal meetings of Xela's Ministry of Agriculture (MAGA-Quetzaltenango) that focused on planning the strategy for pivoting the office's regional rural development approach to agroecology, appropriate technology, and *campesino-a-campesino* methodology. The meetings were mainly concerned with setting up the Appropriate Technology Unit within MAGA-Quetzaltenango, with putting together the department's first agroecology training program for farmers in the region, and with reorienting the education of the office's part-time extension workers to focus on alternative agri-food perspectives. I also participated in three INTECAP planning meetings to design the first national Certificate in Agroecology, a train-the-trainer program aimed at full-time employees of state offices, NGOs, and aid groups.

In all but one of the MAGA and INTECAP meetings I was the only female present. Most of the men were not of indigenous origin. The one or two who were shared education and

socioeconomic status with the rest of the participants. The one meeting to include two female workers from different community NGOs, Claudia and Melinda, highlighted what else could be missed in meetings whose participants are homogenous and of a privileged group in society. The purpose of the gathering was to outline the rules of farmer participation in a seed saving workshop series. One of the MAGA agronomists suggested that because of the noisy disruptions they often cause, children should not be allowed to accompany parents who are receiving such trainings. Melinda and Claudia successfully argued against the suggested stipulation by pointing out that vast numbers of their NGO's female producers have no childcare options and have to bring their children with them. Had no women been present in the planning meeting the seed saving course could have excluded a substantial portion of the region's female agroecological producers who made up 57 percent of the network that Charles measured.

Similarly, towards the end of my fieldwork, I was the only female participant in an INTECAP meeting during which the group put together a list of potential instructors to deliver the planned trainings within the Certificate in Agroecology program. After the meeting during which the 10 men brainstormed suitable candidates, I pointed out to Michael that no women and very few indigenous men had made the list. Having become very familiar with the various reaches of Xela's alternative agri-food networks, I knew of several local leaders representing the two missing social groups who had vast experience in practicing and teaching the topics of the course that we designed over the previous INTECAP meetings. I gave Michael a list of individuals as starting points of contact, many of whom were known to the INTECAP committee but who were not in the forefront of people the men immediately thought of as experts in the field. With Michael championing a diverse educator pool after our conversation, of the 16

individuals who completed INTECAP instructor training in May of 2018, seven were women and four were men who identified as Maya.

Finally, the lower socioeconomic positioning of many producers drove their desires to participate in the networks despite inconsistent returns. With few other options for income and resource generation, farmers were motivated to continue to attend organizational events by the promise of potential future gains. For example, when I asked Rosana how she became involved in agroecology and with CORO, she framed her answer this way: “Because of necessity... We, women who want to help our families, we have to be the same ones who see how [we can do so]. For my children, for my family, I have to search how I can help.” Like Rosana, Julia had been involved in various women’s projects producing eggs, milk, and other foods for local markets before she joined CORO. Most of Julia and her friends’ activities had been driven by necessity. Julia needed to support her aging mother and her husband. Little by little, though, she was able to invest in a greenhouse to grow tomatoes. Her nieces, Vicky and Letti, eventually moved in to help her produce a roma tomato monocrop using chemical inputs. When joining the CORO they changed their practices to the use of mainly organic fertilizers and alternative pest management techniques. The women frequently participate in NGO meetings and workshops associated with the CORO and their sales contribute to Vicky’s and Letti’s education.

Others too expressed the desire to help their families as the main driver for seeking out opportunities with NGOs and other groups promising to provide resources. Valera, for example, spent most of her twenties taking care of her household, her husband, and their two sons. She had wondered about starting work, but her husband’s job as a manager at a national beer brewing factory covered the family’s expenses. That was until their youngest son went to school and the couple agreed that they needed more money. Valera reached out to a neighboring family to buy

some of the milk that their three cows produced and began making yogurt, first selling it door to door to neighbors until a CORO member tried and liked her products. She was invited to attend a CORO meeting after which her methods of production were questioned and observed by the organization and she began to sell in the organic market and CSA program. She continues to participate in CORO NGO trainings and planning meetings as her income from dairy product sales helps relieve some of the financial pressure on her husband.

Fernando, the show farmer discussed earlier, too had become a producer out of necessity to provide for his family under stressful circumstances. For many years his main income came from driving a taxi in Xela. However, one day he was violently assaulted, suffering multiple knife injuries and losing two fingers. His family insisted that he find something else to do. His son, Jesus, suggested that he try to become a farmer and learn about agroecology through a course that was running in his community. Fernando is both proud and sad that out of the forty people who attended that course he is the only one who persevered to become an agroecological producer. Since beginning to farm, he has attended many more trainings and provided a spacious spare room in his home for NGOs to educate others. Becoming a producer allowed him to provide for his family in a new way, to become self-reliant, and to earn a living in a less dangerous way than driving a city taxi.

These cases show that many of the producers began producing for CORO's agroecological markets because of the need to provide for their families. However, the lack of transparency or community participation in the distribution of NGO, aid, and state resources fueled resentment between farmers, accusations of cheating by using chemicals, and diagnoses of *envidia* (jealousy) as the central cause of lack of cooperation between the producers that many reported to me. Nevertheless, seeing that resources still flowed to someone sometimes, farmers

continued participating in organizational activities in the hopes, and sometimes with outright promises, that some resources will flow directly to them, eventually.

This discussion highlights some of the structural forces that help shape the makeup of and relationships within Quetzaltenango's alternative agri-food networks. Flows of financial and material resources structure relationships of clientelism, dependence, and competition between different groups. Meanwhile, existing race-class-gender hierarchies affect not only who is present or absent in decision-making processes, but also the nature of interactions between participants in meetings and workshops. Producers engage in the networks out of material necessity to support their families, even as they often remain disadvantaged and rewards of participation flow unpredictably.

However, these forces are not deterministic. The networks' participants engage in acts of translation to draw out benefits that help to meet their needs and desires; the same conditions of competition, dependency, and inequality create gaps of opportunity that individuals can take advantage of. Some farmer groups and individual farmers are better than others in recruiting help and securing resources from NGOs. Many actors, like Sergio and others, mediate metrics to be able to fit into the structural frameworks and demands of organizational bureaucracies while flexibly responding to local conditions. One additional way that many translate is in the language that they use to maintain the legitimacy of their participation in the networks.

TRANSLATING THE LANGUAGE OF THE MARKET FOR ALTERNATIVES

It was a sunny day and Claire offered to walk me to my next appointment several blocks from her office. We decided to walk and talk to continue our conversation about her five years of experience working in sustainable agriculture projects in the country. Claire was one of a small number of American staff at an NGO focused on providing improved seeds and other modern

technologies to smallholder farmers. She came to Guatemala to find a job supporting smallholder organic practices. She had some training on the topic and completed a permaculture course with Guatemala's Mesoamerican Permaculture Institute (IMAP). Now she no longer sees organic polycultures as a viable route towards more productivity and out of poverty for Guatemala's neediest farmers.

Her current NGO employer, Seeds of Change, takes a different approach. It addresses malnutrition among Guatemala's smallholders and rural residents through biofortified, higher-yield seeds. As well as developing a national network for the biofortification approach, the organization partners with international and domestic seed research centers in a methodology and philosophy they collectively call "sustainable intensification." The idea is to substitute existing inputs in a way that does not burden the farmers or asks them to radically alter their practices. Claire has been convinced by the organization's more technological approach. Besides, she says, "organics" is a foreign concept to most ordinary Guatemalans, if they have ever heard of the word at all.

Claire and I had already been walking for over 20 minutes and were approaching La Lancha, the restaurant where I scheduled my next meeting. The restaurant was run by a French couple and was the meeting place for foreigners and Guatemalans interested in organics who were part of La Hojita, a national online network of consumers. It also hosted a small produce market where a Japanese woman with a small farm outside of the nearby tourist city of Antigua sold her harvests. Her husband, a Guatemalan academic, was at the forefront of pushing local universities to develop agroecology and sustainable agriculture programs to train both farmers and extension workers.

Claire could not remember exactly where the restaurant was, but she knew that we were close. We stopped to ask an older man and his wife who were minding their outdoor stall on the side of the street. “Excuse me sir, do you know where the La Lancha restaurant is?” asked Claire. The man was not sure, so he turned to his wife to confer. “Where is La Lancha?” he asked, “you know, that restaurant that sells... what do they call it? Organic?” The woman pointed us up the street. “You see, that there is a perfect example of the state of organics here,” Claire offered as the sound of rolling thunder hurried us in the direction of the woman’s extended arm.

Claire had become convinced that organic is largely a foreign concept in Guatemala and was thus not the way forward in the country. In the span of a short interview Claire also mentioned “permaculture,” “agroecology,” and “sustainable intensification” approaches. Organizations supporting changes to farmer practices in the Xela region and beyond also used many different terms to describe their work. While the CORO network used the word “organic” in its name, paperwork, and markets, the organization mainly promoted the “agroecological” approach to production. At the same time, in their organizational titles, in meetings, and in official and unofficial documentation, groups inside and outside of CORO also talked of “natural,” “Maya,” and “ancestral” practices, of “appropriate technology,” and of “ecological” and “conservation” agriculture. Others discussed biodynamic and biointensive farming.

The multiplicity of technical terms points to the multiplicity of approaches that compete for the attention of farmers, consumers, and policymakers in Guatemala. Similar to the market for justice that flourished between organizations working to improve conditions on Darjeeling’s tea plantations (Besky 2014), a market for alternative approaches to farming and eating have flourished in Guatemala. Each one comes with its own philosophy and sets of practices. Each comes with its own history and future goals. Frequently though, in Guatemala, the terms are used

interchangeably with the understanding that the underlying approaches overlap in their concerns for rural poverty, food insecurity, malnutrition, ecological decline, and climate change.

Indeed, what terminology should be used dominated a portion of one sub-committee session of a CORO Board of Directors meeting attended by nine members, including four foreigners (three consumer representatives and NGO workers and a GIZ employee) and five Guatemalans, among whom were two producers, two NGO workers, and a MAGA representative. The Certifications Committee was scheduled to discuss plans to move forward with a participatory guarantee system for CORO's farmers to build trust between producers and consumers without rigid, impersonal, and expensive third-party oversight.

Through a partnership with Poverty Action, the organization had developed a label for the products, distributing it to market vendors in the form of stickers. The center of the circular logo read "100 percent local" while in smaller letters on the outside the following words appeared: "natural, fresh and agroecological product." One of the committee members expressed dissatisfaction with the word "local," asking why it was chosen since by itself it can mean little when producers from nearby communities who were focused on chemical agriculture could also be called "local." CORO's treasurer pointed to the surrounding words saying that they offer clarification that apart from being local the product is also natural, fresh, and agroecological. The interactions spurred on a 20-minute discussion about the right terminology for the group and its goals, including:

Committee Member #1: In our organization we do not say agroecological because no one will understand what that means... And we cannot use "organic" legally.

Committee Member #2: Or we start to compete with regulations... [with] certification norms.

Committee Member #1: You can even go to jail, right? [for using "organic."]

Committee Member # 3: But that does not stop us from developing our own [guarantee] system... Take someone like Rosie... the agroecological guarantee works for her because she loves all the producers and she is very involved in the process [as a consumer]... But [a consumer] might also say that producers are lying [about their practices].

Committee Member #4: For me it is important that the farmers are... at least doing some agroecological systems. I know that the plot is not 100 percent agroecological, that they are not all fully integrated. But at least... they are in transition... They are in process. They have some systems. Maybe they manage a polyculture or they cover the land [with cover crops or mulch]... If they cover the land, it's a very good thing, or if soil and water conservation systems are used. Those are small things. To a consumer outside the system, a person passing through the market... we have to give some sort of guarantee.

This excerpt highlights several themes that other evidence confirms. I focus here on people's usage of "organic" and "agroecological" as these were the two most common words that circulated among the networks. In total, I asked 102 people in five roles within CORO networks what "organic" and/or "agroecological" meant to them. While organizations flexibly used these words, consumers and farmers too were able to utilize them to participate in the network's activities despite harboring variable understandings of the terms.

*Table 3: Main Roles of Respondents to Questions About the Meaning of the Terms "Organic" and "Agroecological"**

Interviewee Role	#
Alternative Consumers <i>(including CSA subscribers: Guatemalan (n=8) and foreign (n=10) and farmers market customers (n=9)</i>	27
Alternative Producers <i>(including CORO growers (n=11) and other organic/agroecological producers (n=6)</i>	17
Alternative Middle Groups <i>(including commercial organic input makers (n=6), restaurateurs (n=5), and NGO, aid, and government workers (n=18))</i>	29
Conventional Producers <i>Chemical vegetables farmers in the community of Almolonga</i>	12
Conventional Consumers <i>Customers in McDonald's and TacoBell restaurants in Xela</i>	17
TOTAL	102

**These roles sometimes overlapped since, for example, an NGO worker could also be a CSA customer, or an NGO worker could also be a producer for the markets.*

As table four demonstrates, disparate sectors of the population vary in their understanding of the different words that are used routinely by organizations in the alternative agri-food networks. As committee member one expressed, despite their NGO officially supporting agroecology, they do not use the term with their producers or the lay public because there is little awareness of what it means, and its use might only cause confusion. Organic was also problematic because among specialists it has come to mean a strict, foreign organic certification, such as USDA Organic or France's *biologique* label. Claims the organizations make also carried the risk of misunderstandings and possible breaches of trust with consumers who might expect verified practices and 100 percent organic production when the organizations supported more flexible arrangements with producers as long as they were transitioning towards agroecological systems. Few in the general population of consumers or producers understood either organic or agroecological in the ways that the organizations did. Finally, the producers who grew for Xela's organic markets too had different levels of understanding about the terms they were using.

Table 4: Samples of Differing Understandings of the Term "Organic" and "Agroecological"

Participant Details	Excerpt from Interview
Gerbert: a conventional indigenous male producer	<i>Have you heard about organic production?</i> The truth is, not so much. <i>Does the word mean anything at all to you?</i> The truth is, I do not know, and I could not... tell you why I don't know.
Lucia : a conventional non-indigenous female consumer	<i>What does organic mean to you?</i> Ehm... for me organic is, well how ehm natural I guess, aha. Right? Fruits, vegetables... these [other] foods [McDonald's etc] ... ehm... are like food that is more junk food, right?
Maria and Claudia: alternative non-indigenous female producers	<i>Is there a difference between organic and agroecological?</i> Maria: Agroecological is a word, agro is... What? What? I forget, ecological is something that does not contaminate, it is something that is producing naturally, right? So, I feel like, the two are related. <i>And organic?</i>

	<p>Maria: Organic? Organic is Claudia: Something that does not have chemicals. Maria: Something that does not have chemicals, free from poisons, that is free from poisons, whichever class of poison, yes, that's it.</p>
Raquel: an alternative indigenous female producer	<p><i>Is there a difference between organic and agroecological?</i> Well this, this has been difficult for me to interpret... I think that agroecological is all that is - what do you call it? – all that is raised with organic, I think that's what they call agroecological. <i>And organic is?</i> For example, eggs, meat, vegetables, all that. Organic is [also] a type of fertilizer, that which is grown with fertilizer, more or less.</p>
Julia and Mildrid: alternative indigenous female producers	<p><i>So, when you explain to consumers [about your products], do you use the word organic or agroecological?</i> Julia: We use "organic." <i>Is there a difference between the two?</i> Mildrid: Yes, because not many people understand agroecological. Julia: Some understand agroecological as a process of change... a mix of chemical and organic... When we say "organic" people understand it as more natural. Mildrid: Aha. Julia: They understand it differently.</p>
Diana – an alternative European female consumer and NGO worker	<p><i>Is there a difference between organic and agroecological?</i> Diana: Yes, I feel that the human factor takes more presence [in agroecology]. I do not have [?] a university definition, but I perceive that, yes, the social takes more importance and that [agroecology] accepts that sometimes chemicals are needed [in farming], so that you do not lose the whole harvest and put the life of a whole family in danger, right? I mean, I understand it a bit like that... it's like creating a better world step by step, right?... It's less strict ...</p>
Chus: a mestizo male NGO worker on agroecological projects	<p><i>Is there a difference between organic and agroecological?</i> Well... in Guatemala... organic can be any product that does not have chemicals, right?... And it can be produced even by a large producer... For example... the huge certified coffee growers who are now producing organically, right?... While agroecological... has to do with... a life project... more sustainable and related to the cultural forms of the people.</p>
Manuel: a non-indigenous male MAGA agronomist	<p><i>Is there a difference between organic and agroecological?</i> Yes, well, we use them synonymously in the case of production. In the case of commercialization... organic has to have a stamp, like a brand, a seal. This stamp means that a certifier or some people have gone to see the product and that there are norms for producing it... they can be organic products or organic inputs that have been produced industrially, so there is an aspect of commercialization ... [in which] you have to make profit. On the other hand in agroecology there is another more human</p>

	aspect ... a relationship between people and with nature... the biggest difference is commercial... Agroecology does not have a certification that pays for inspectors.
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The different understandings of the terms translated to different expectations about accepted practices of the farmers themselves. For the NGO workers and some of the consumer organizers, building what they called a solidarity economy was the larger goal, to be achieved by supporting small-scale production by marginalized producers. For those less involved with the organization of the groups, health was the bigger driver of participating in the direct producer-to-consumer initiatives and buying in the periodic organic markets. Their understanding of organic production was one of zero chemical use. Yet CORO organizers accepted a more transitional and flexible approach to “meet the peasants where they are at” (Copeland 2018) that would accept occasional chemical use should the farmer need to apply synthetic pesticides or other inputs in cases of emergency or possible harvest loss.

Overall, even within CORO, understandings and usages of the terms were fluid and varied and applied to a variety of practices and processes. Many kinds of products were sold side by side at the collective’s organic markets, under Poverty Action’s “100% local: natural, fresh and agroecological product” sticker. Julia and her nieces sold a small monocrop of greenhouse tomatoes. Rosana vended eggs from her patio chickens that she raised from factory-raised chicks on a combination of corn and industrial feed diet. While Julia offered yogurt made from her neighbor’s cows’ milk, Fernando sold vegetables and honey from one of a few examples of a fully-integrated, self-sustaining, agroecological show farm.

For some of the CORO’s organizers, this fluidity in terminology and practices did not matter. Alexia, for example, who helped launch this chapter, is a stern proponent of a solidarity economy between consumers and producers and a flexible interpretation of acceptable practices

that puts the farmers' needs first. She put it this way: "For me, in the end, the word... is not the most important thing, as long as we are clear about what we want." Ilyia, a European transplant and an organizer of the Las Hojitas online organic consumer network echoed Alexia's sentiment when he said: "Many times two people or a hundred [people] use the same term and think of very different things or otherwise use different terms but agree in practice." What mattered, he went on to emphasize, was progress towards healthier, more sustainable, and more just food systems in Guatemala.

For others, flexible interpretation and usage of terms is not only unproblematic, but is to be desired. The website of Atitlán Organics, the farm, guest house and farm-to-table restaurant in Tzununa, uses the word "organic" in its name and to describe its products to its consumers and visitors. It also runs permaculture courses and "permaculture" is the word the farm's founders most frequently use in person. For them, different applications of the terms in practice are part of the diversity that is needed to achieve sustainability. This can be seen in how the founders describe themselves in writing. The "About Us" page of the project's website answers the question of "What is permaculture?" like this:

There are literally hundreds of definitions of permaculture and as far as we are concerned, they are ALL VALID. Part of respecting and valuing diversity and self-regulation means tolerating ideas or interpretations that one may not agree with. While we spend a lot of time in the garden and working in nature, permaculture is applicable to all aspects of life. A more technical approach to permaculture suggests that we mimic nature and natural patterns to design and implement ecosystems that meet our collective needs. A deeper definition considers the whole of human culture and suggests that permaculture is a tool for designing new ecological culture, considering the whole of the earth in all of its strategies. Whatever definition works for you is cool. We like to say, it doesn't matter what you call it, just so long as the work gets done!

On the flipside, the philosophy of accepting multiple interpretations of words like organic and permaculture opens their usage up to abuse by actors who wish to capitalize on the terms'

value without holding the intentions of originators. It opens the possibility for organic greenwashing (Northen 2011). In such a case the labels would be used but the “work” that Atitlán Organic refers to would not, in fact, get done. In extreme but common cases, organic fraud happens around the world even with formal certifications, whereby conventionally-produced goods are sold under labels like USDA Organic (Whoriskey 2018). Such scams join thousands of others around the world that sell “fake food,” such as wood pulp masquerading as parmesan and honey cut with corn syrup (Olmsted 2016). Observers call out the widespread business practices as both immoral and illegal (Allison and Ronald 2018).

On the other side of the coin, the diverse meanings philosophy would be against a codification of any of the terms into law. It would be against Juan-José’s project to establish a national organic law in Guatemala. Legal codification could see the word “organic” prescribed into a long list of allowable inputs over the broader cultural and ecological project of permaculture that Atitlán Organics refers to. Such a dilution is what happened in the United States, where 1940s organic pioneers and subsequently the hippie, countercultural organic movement of the 1960s brought organic food into broader public view. As a result, how the new sector should be regulated was fiercely fought over and reduced to the substitution of chemical inputs with organic ones in the USDA Organic label. This allowed larger players to capture the value of the term “organic” that the organic movement generated without adhering to the latter’s social and political goals (Guthman 2002). It also marginalized smaller producers who could not afford to meet strict standards or pay for expensive third-party certifications. It moved American organic production from the margins to the mainstream (O’Sullivan 2015). It also moved its regulation from an accountability platform of trust to one of verification, two approaches that can be held in productive tension from the viewpoint of food buyers (Barlett 2017). Verification is

part of the rise of “audit cultures” in sectors as diverse as food and academia (Strathern 2000). It is this codification into the USDA Organic standard that made American organic agriculture compatible with large-scale, commercial monocultures, a model that came to Guatemala in the 1970s. This conventionalization of organics (Guthman 2004) is what agri-food professionals in Guatemala identify as fundamentally different from agroecology and from permaculture. Organics for them is a foreign model that only marginally changes the ecological relations underpinning commercial farming, leaving its economic, social and political bases intact. Yet they will still use the word with consumers because it is more widely known than terms like agroecology and permaculture.

CONCLUSIONS

In summary, some NGO workers concede that perhaps it does not matter what words are used as long as everyone is working towards the same goal, the fluidity of understandings of terms like “organic” and “agroecological” help to bring together different sections of Xela’s alternative agri-food networks. Like Sergio’s, Marly’s, and Alexia’s fabricated lunch metrics and receipts, words change their meaning as their travel between users. Like Charles’ CORO network statistics, the terms represent altered realities between the practices that originated them and the imagined realities they represent for others who hear and utilize them. When farmers use “organic” or “agroecological,” they do so in order to translate their practices into a language that NGO workers, donors, and consumers can understand, securing their legitimacy within the networks in order to provide for their families. When NGO workers use falsified documents and favorable metrics, they do so to translate the demands of local realities and their desires to live up to their own philosophies into a quantitative language that accountants and funders want to hear to maintain the flow of resources to the organizations. When those funders go on to publish

success statistics and display show farmers, they too speak a language that continues to loosen the purse strings of their donors. These various acts of translation help human actors navigate a hierarchical and unequal social order in order to secure their livelihoods while furthering the network's social and environmental goals.

CONCLUSION

This dissertation has sought to contribute to our understandings of the unique temporal, spatial, and social dimensions of the unfolding of Food Regimes in a given location in the Global South. The view from the Guatemalan periphery shows the particular ways that Guatemala has been “America’s backyard” (Way 2012). The United States has impacted Guatemala both directly, through interventions, and indirectly through soft power that captured the aspirations of the country’s ruling political-economic elite. Changing both production and consumption were key components of modernization that was to follow, but in many cases it has taken a much more national and regional orientation than Food Regimes Theory currently encompasses.

Tilzey (2019), for example, includes imperial transnational capital’s linkages with periphery’s agro-exporting elites as part of his 1980-2010 fourth international, “neoliberal,” food regime. This is true of non-traditional agricultural export crop production in Guatemala outlined chapter three. But it was not only export oriented. Foreign companies have profited from the adoptions of chemicals into both commercial and subsistence production. Plenty of Guatemalan non-traditional agricultural produce is exported to the United States. However, despite occasional American projects with Guatemalan farmers to improve on-farm chemical and sanitation practices, sellers face risks of shipment rejection due to the inability of farmers and transporters to maintain food safety standards. With no such standards as barriers in more local systems, a large portion of the non-traditional agricultural trade is national and regional to countries like El Salvador. Intermediaries from Guatemalan communities like Almolonga dominate these vegetable circuits, bypassing transnational agri-food capitalism at the point of distribution. The trade has contributed to the inclusion of new varieties of vegetables in diets and the disappearance of different native greens.

Accompanying, and sometimes predating, the chemicalization and export-reorientation of the smallholder-dominated highlands, were US-Guatemala elite linkages in the consumptive sphere. These are evident in how Guatemala's elites both captured local operations of international brands and copied American-style techniques. While foreign food franchises have operated in Guatemala since the late 1960s, their spread gathered pace after the armed conflict. They have especially expanded their reach in the new millennium. These businesses required domestic partner-clients who would take the risk at opening new franchises

However, it was Guatemalan-created brands that became the most popular during the war years and that continue to be market leaders in their segments today. These are businesses like Tortrix and Pollo Campero that were started by Guatemalan economic elites with close links to the United States. The business owners learned American-style food production techniques and implemented them successfully in the country. This also includes brands like Pepsi beverages, which have been bottled, marketed, and sold by the Guatemalan-owned Embotelladora La Mariposa since the 1940s. It was the domestic elites' emulation of the United States in a transnational order of social climbing that contributed to the higher availability of meats and of processed foods and drinks.

The acceptance of the foods among the general Guatemalan public, however, has relied on associating the brands with positive experiences and the national identity. With long-standing slogans like "Feeding your love for Guatemala," Pollo Campero both capitalized on and reinforced emerging national identities. The constellation of other messages that echo across Guatemalan brand advertisements in food and other businesses that are connected through Merjoremos Guate reveals the promotion of a specific kind of Guatemalanness. It is a Guatemalanness that strives to get ahead while living (and consuming) like there is no tomorrow.

This reflects a general precarity that many are too familiar with. As people experience the contemporary mix of poverty and violence as “worse than the war,” consuming food luxuries and inhabiting elite food spaces serve as momentary releases from a multiply precarious existence.

How different agri-food fixes serve capital is just one part of the story. The global chemicalization of agriculture and the introduction of various other *químicos* in food provision, for example, served as a fix to the agroecological contradictions of the spread of capitalism, especially the metabolic rift that Marx theorized (Bellamy Foster 1999; 2013; Marx 1976). At the same time, as Julie Guthman has theorized, the consuming, and especially the obese, body has become a socioecological fix to capitalist overproduction of industrial foods (Guthman 2015).

The acceptance of new products—whether agricultural chemicals, chips, or fried chicken—also represent fixes for human bodies trying to survive and thrive in their ecologies. Guatemalan smallholders, for example, reluctantly adopted agrichemical inputs in their milpa fields and turned some of their land to export vegetable production as an ecological, social and spatial fix in their own lives. The promise of higher yields on exhausted soils and more cash income also contained within it the ability to stop participating in migration labor that was tearing apart the fabric of rural families and communities. Meanwhile, I have shown how Guatemala consumers variably use industrial foods as a precarity fix.

In a sense, bodies become sites of accumulation by resistance: businesses profit as beings exert their existence against an impossible tomorrow that has been created through the multiple processes of uneven and combined development this dissertation has described. People of all means across the ethnic spectrum in Guatemala have become good eaters and drinkers of

different industrial consumables, including luxury goods, becoming valuable to the business elite as consumers and not just sources of superexploited labor. Marketing campaigns have closely followed war-time and post-war shifting socioeconomic terrains, reinforcing the consumptive relationship while disciplining both tastes and emerging identities and expanding corporate foodways.

Yet, those capitalist agri-food goods are increasingly revealing their double-edged nature. Some of the fixes are short-lived and unevenly distributed along and between the fault lines of stubborn but shifting race-class-gender configurations. Meanwhile, the *químicos* interact with bodies—and all their unruly livingness—to create yet more contradictions, chemically compounding the biological precarity of the food ecology. These *químicos* have their own unruly natures and have become associated with metabolic disorders that have joined infectious diseases as degraders of human bodies.

As a result, there has been little by way of transition from one nutritional state or epidemiological profile to another. Instead, new risks compound with old ones through the supertoxification of peripheral ecologies. Metabolic disorders hit hardest those at the periphery of the periphery who are, ironically, core users of agri-food capitalism's most hazardous products.

This dissertation has positioned chronic disease as one part of the ecological contradictions of capitalism. It might be productive to think of chronic human diseases as symptoms of a planetary metabolic disorder rather than a rift. A rift assumes a separation of humans from nature, a disorder places the negative effects of anthropogenic actions within a global macrobiome. Conversely, it might be useful to reimagine Climate Change as a planetary chronic disease. Both result from the toxification of all ecologies and from the supertoxification

of peripheral ones. The sickness of the planet and the sickness of human beings are parts of the same processes of organizing productive human activity primarily for the purposes of growing profits.

Not only are they parts of the same processes, but they are intimately, biophysically, *metabolically*, connected. People use the Earth's surface to produce goods that feed, clothe, and otherwise sustain the global human family. It is well known that the social and material relations that bring those goods into being—their production, processing, packaging, and distribution—pollute, damage, and degrade, rather than sustain, the planetary commons, including human bodies. The associated metabolic disruptions help fuel further accumulation through high health expenditures on expensive disease treatments, like insulin for diabetics. Poor health that is stratified along lines of socioeconomic difference is not a structural failure, but a structural exigency embedded into the logic of unbridled capitalist expansion. It is accumulation by dispossession of health through the toxification of global ecologies.

The Guatemalan example has also shown, however, that the process has an Achilles heel. As concern about the health dangers of *químicos* travels across local ecologies, some bodies engage in self-protection. Resistance brews. But it is not a simple equation of rejecting one system over another. It is not so black and white. Each food option confers benefits and drawbacks that must be traded off. In their daily lives people manage the hazards by dealing with their perceived proximate causes. Those afraid of agrichemical contamination on their ingredients might differentiate who they buy from at the market. Those concerned with biological risks sometimes turn to packaged foods and formal restaurants as presumed safer alternatives. Those becoming concerned with current or future metabolic dysfunction might reject industrial food options instead. Engaging in such long-range self-protection requires a

confidence in the existence of a future. For many, the multiply-precarious context of their lives makes more appealing marketing calls to throw all caution to the wind by consuming like there is no tomorrow. Choosing only the best, tastiest, and most desired products fits well within contexts of poverty and precarity. Why waste your time on anything less?

This focus on quality over economy—however quality is defined—helps recruit people into alternatives too. Here, the speed with which Guatemala’s food ecology has changed has embedded within it another path of resistance. Many people can remember what corn, chicken and eggs looked, felt, and tasted like before families adopted *abono* and *veneno* on their milpa fields and bought factory-farmed poultry. The sensory memory of *criollo*’s sensory qualities draw both producers and consumers to CORO’s projects who judge them to be superior. Seeking the best versions of these ingredients runs along the same logical path as seeking the best available, aka most desired meal, in a chain restaurant.

At the same time, Las Hojitas’ processes of two-way solidarity economy play another important role in the local ecology. Almolonga’s farmers cannot imagine growing vegetables without chemicals because they have always grown them this way. The diversification of CORO producers’ agroecological plots into also producing foreign varieties for their customers serve as important local examples that things can be different. They can prove to farmers from Almolonga and other communities that the lettuces, broccoli, and carrots that they are used to growing can thrive without the use of toxins.

The Guatemalan case also shows that resistance or alternatives do not always involve a process of re-embedding a distant, impersonal market in social and spatial relations by replacing “foods from nowhere” with “foods from somewhere.” From the viewpoint of the eaters whose voices have resonated throughout the preceding chapters, much of the food they consume is

always “food from somewhere.” This is the case even if those associations are mistaken due to incomplete information or because of a false consciousness that is carefully cultivated or maintained for the purposes of profit generation. The vegetables that Xela’s native or foreign residents buy in the municipal markets are from Almolonga or Llanos del Pinal, three miles away. The Tortrix chips, Pollo Campero chicken, or green-carton eggs that Chapines seek are from within the borders of their beloved Guatemala, sourced within a radius of less than 300 miles no matter where you live. For the K’iche’ of Todos Santos, McDonald’s, Pizza Hut, and KFC are *kaxlan wokbal*, “places of foreign food,” foods from somewhere *else*.

This means that theorizing food regimes and their change from the vantage point of the Global South requires us to critically evaluate imported concepts for they can fit awkwardly in markedly different contexts. Our theories matter because, if we are lucky, they resonate with practitioners who adopt them into their own vernacular and *modus operandi*. This includes traveling ideas about possible solutions to food system problems. We can see that awkward fit in CORO’s “100 percent local” sticker. Dominating the center of the logo is the distant goal of a foreign NGO to build geographically-proximate food economies. This foreign aim displaces to the logo’s literal periphery locally-defined qualities of “natural, fresh and agroecological.” The former aims to reduce the physical distance between production and consumption. The latter seeks to also restructure the socioecological relations of food provision.

This shows a small way in which a well-meaning project to improve Xela’s food systems reproduced the core-periphery logic. Yet, the logo also served as a compromise that ultimately allowed the Xela-based organization to subvert such social relations in pursuit of its own goals. The 100 percent local logo was an act of translation. The visual concession made little difference on the ground where few people pay attention to food labels, but photos of the sticker could

travel back to the donors. The proof of work completed could help keep the sponsorship flowing. Such visual artefacts joined other words and numbers that circulated through acts of translation that maintain the fabric of Xela's agroecological aid infrastructure.

There have been other ways in which imported versions of alternative food networks can run the risk of reproducing their logics and social structures. Various interviewed stakeholders expressed a wish that organics would not follow the US path where such food is marked as mainly for the wealthy. Yet, many of the alternative agri-food projects I visited in Guatemala consisted of networks of producers and consumers of the same, higher socioeconomic status. Moreover, the relationship defining many of the CSAs was primarily transactional. Farmers delivered their produce to the homes of their customers with little other interaction. And while the producers were linked into a loose national network of alternative growers, they did not collaborate beyond material exchanges. Their CSA projects and markets were their own private businesses. The collective unfolding of these projects followed a path of uneven development. Only the wealthier segments of the population were included as participants in the markets. The indigenous and poor majority was not deemed ready for or worthy of inclusion.

This shows that an alternative path is difficult to forge within unequal and nested core-periphery economic and social structures where things like poverty and ill-health are seen as individual moral failures. It is hard to reach out from the core to the periphery at any level without reproducing the imperialistic logic. There have been 500 years of practice of seeing difference as inferiority, otherness as backwardness. It is hard to step out of this mindset and practice onto a more horizontal playing field. It is hard, but it is not impossible.

CORO's CSA project in Xela serves as one example of how the pattern can be challenged. There, part of an ethic and goal of solidarity economies, foreign and middle-class

residents vowed to accept whatever produce local farmers provided. In many cases they were excited to learn new flavors and cooking techniques and discover the high nutritional qualities of native and creole varieties. The foreigners' acceptance of and enthusiasm for crops and products that have long been denigrated as backward poverty foods help mobilize a subtle restructuring of culinary social relations. Just as with Sara's ethnoveterinary medicine, the revalorization of native and creole crops and animals recasts them as foods of a sustainable and healthier future. Conversely, this recharacterizes industrial foods, which have been historically promoted as markers of modernity, as forming a part of an undesirable, unhealthy and unsustainable past.

There is a delicate balance at play, however, between culinary valorization and gustatory dispossession. The latter is evident in the well-told story of quinoa. It shows how origin communities can be denied their cultural heritage when wealthy, health conscious, foreign consumers "discover" indigenous "superfoods" (Drew et al. 2017). There are similar tendencies in Guatemala. For example, many consumers at the Antigua market pursue modern subjectivities not through conscious consumption of alternative—read "ethical"—foods, but through participation in alternative food spaces primarily as a matter of class-based sociality. This was true both of foreigners who were happy to have the kind of market they were used to "back home" and of wealthier Guatemalan visitors enjoying the food, drinks and entertainment. These spaces were comfortable for both elite groups because they were status marked. The consumers enjoyed the foreign and white dominated market that excluded indigenous-presenting Guatemalans except in their essentialized, easy-fitting forms as male farm workers and female indigenous cooks of *típica* dishes that were up-priced and hybridized with hip-sounding, foreign vegetable varieties. At the same time, though, they help to valorize traditional foodways among people who are arguably thought leaders for policy and other change.

After classifying corporate and alternative agri-food projects, Holt Gimenez and Shattuck concluded their paper by suggesting that the progressive and radical factions of the latter need to unite to further stall liberalization and enact food regime change (Holt-Giménez and Shattuck 2011). Specifically, they suggested that this convergence within the movement can only happen on the basis of class interests that link the underserved in both Global North with the underserved in the Global South. The CORO CSA example shows how alliances across socioeconomic class—not just within it—can work on the ground. At the beginning of the project, the consumers dethroned their own culinary preferences in order to fit into the agroecological niche of the city. They acted from a place of humility in order to consciously avoid imperialistic tendencies that can come from encounters across hierarchically-structured difference. This led to reciprocal acts of solidarity from the producers who recognized the consumers' additional food needs. Growing more crops for their clients helped to diversify the farmers' gardens, contributing to their ecological resilience. NGOs stepped in where consumers could not, providing trainings, equipment, and emergency help when producers needed it. A cycle of solidarity ensued as the producers, consumers, and support workers responded to each other's' needs. The CORO CSA example shows how collaboration across social difference can help bring about transformative alternatives that challenge imperialistic tendencies and seek to avoid ground-level replications of core-periphery economic and social relations.

One notable fact about Food Regimes Theory and other analyses about food systems change is that it tends to be quite “heady.” Capitalist accumulation of edible wealth, its negative effects, and people's resistance to it is theorized from an intellectual standpoint. However, this dissertation has sought to also foreground the corporeal dimensions of those processes. I'd like to end this dissertation by stressing the role of the senses and affect in driving food systems change.

LAST WORDS ON EMBODIED KNOWLEDGE PRODUCTION

Even before he had taken it he knew by the smell that it was very unusual chocolate. It was dark and shiny, and was wrapped in silver paper. Chocolate normally was dull-brown crumbly stuff that tasted, as nearly as one could describe it, like the smoke of a rubbish fire. But at some time or another he had tasted chocolate like the piece she had given him. The first whiff of its scent had stirred up some memory which he could not pin down, but which was powerful and troubling.

George Orwell (1949), "1984"

I cried three times during fieldwork. Once was at the very start of the adventure. I was trying to settle in. Fit in. I was lonely.

It happened again one month in after I returned from my overnight trip to Almolonga. I sobbed for Mario. My tears wet my keyboard upon researching Amistar and Mirage 45, the chemicals he was using without protecting his body.

I cried one more time a month after that. This time the tears were conjured up by a glass of milk. Two glasses of milk, to be precise. Two very different glasses of milk drunk a few hours apart in very different surroundings.

I want to end this dissertation by an afterword that highlights the importance of the body in producing anthropological knowledge. My own sensory and emotional experience played no small part in guiding some of the insights found in this dissertation.

I will describe one event that jogged a memory of the taste of milk that I drank as a child growing up in communist Russia. The flood of sensory and emotional responses that accompanied the memory helped confirm, in a first-hand, visceral way, what I was hearing from my Guatemalan respondents. I felt for myself the power of sensory memory in galvanizing consumption choices and change. I also saw the difference in food-systems experiences of people who have tasted foods grown outside of corporate-industrial production and distribution systems from those who grew up with the latter. The event helped confirm a long-standing

nagging feeling I had that my own personal food history and politics, and those of some of my interlocutors, did not line up with theories that put alternative consumption repertoires primarily down to class distinction (e.g. Bourdieu 1984; Finn 2017; Guthman 2003).

THE TASTES OF TWO MILKS

It was daybreak on Saturday. I awoke to the same array of sensory stimuli that had greeted me for the previous two mornings. The smell of burning wood under the large pot where the women cook. The clonking of someone washing up the previous' night's dishes in the *pilar*, a concrete sink out in the yard. Bird song piercing the rhythmic sound of a corn grinder banging away in the distance. All the while the chickens clucked, the cows mooed, a generator hummed.

I had just spent three days with a family whose life comes as close to an agroecological ideal as is possible in contemporary, rural Guatemala. Maya Granja, their home, is located in rural Aguacatán, in a community four-hours' drive from Xela. Four generations and 14 people live in the same household, ranging in age from Tommy, at age three, to great grandma Lydia, aged 85. Five of the neighboring homes belong to their extended family.

Maya Granja's small back yard is filled with fruit trees, chickens, and geese. A large array of native herbs live in old car tires. Güisquil vines generously drape over sheds and fencing. In a dugout in the middle of the garden sits a biodigester the family purchased from a Xela-based social enterprise organization. The contraption converts cow dung into cooking gas and liquid fertilizer. Across a dirt road at the back of the house, the family has used recycled materials to build enclosures for their livestock—several breeds of cows, goats, pigs, rabbits, and ducks. Breeds I had never seen before. Breeds the family purposefully reproduces to preserve as heritage the biozoological diversity of Maya farmers.

Attached to the back is a *cuernada* of land where they grow beans. Over the valley they rent six more *cuernas* to grow their supplies of *milpa*. Maya Granja's definition of sustainability is the least possible dependence on external inputs, but they still grow their *milpa* with the addition of chemical fertilizer. Like other farmers had said to me during fieldwork, Lydia's daughter and the matriarch of the family, Mina, explained that "la tierra no da," "the earth does not give." For farmers like her, the earth's natural fertility has been stripped through decades of chemical use, lack of fallow periods, and the growing of maize as a monoculture instead of a sibling to beans and squash, a more traditional polyculture called "the three sisters."⁶⁴ Many are now convinced that maize cannot be grown without chemical fertilization. For the residents of Maya Granja, the *milpa* land's distance from the home prevents the family from applying organic fertilizers, which they say would be needed more frequently and in larger quantities than industrial fertilizer pellets.

Mina's oldest son, Rene, works for a Xela-based organization that supports smallholder farmers. I spent three days at the farm observing him and his family teach a group of 25 Salvadorian producers about lunar effects on crops, how to kill a chicken and inspect the health of its carcass, and how to turn native plants into medicines, shampoos, and pesticides. We rested in bunkbeds in shared rooms where large groups of visitors sleep who come to learn about the farm's way of life. It is a way of life that is so different from the smallholder monocropping plots around them that their own community had collected signatures to shut their operation down. Rene said that people were afraid of the unknown. In his assessment, they are detached from diverse and nature-dependent farming practices, so Maya Granja is too different from what they

⁶⁴ The meaning of *milpa* varies in Guatemala. While some scholars and farmers refer to *milpa* as the three sisters of maize, beans, and squashed intercropped together, many producers asserted that *milpa* refers only to maize. In fact, several of the farmers I spoke with had not heard of the intercropping system at all, demonstrating the loss of local agroecological knowledge in the highlands.

are used to. He said that he just had to persist to patiently explain and show his neighbors what they were trying to achieve.

Rene does not advertise his services. The farm has no online presence either. Yet, hundreds of visitors come each year having learned about the project through word of mouth in Guatemala and neighboring countries. He is down to earth and honest about his life. Aside from passing on practical skills, Rene shares the events, social networks, and pathways that have led him and his family to attempt to live a radically different life to their neighbors, countrymen, and producers in much of the post-Green Revolution world. His wife died from cancer. His five-year old nephew Ernesto suffers from leukemia and might not survive the year. Rene wanted to understand why and came to see the chemicals surrounding people—on their farms and in their homes—as blameworthy. On his own journey of rediscovery, Rene says he learned everything he knows from the local work of Sara at Veterinarians Without Borders, the Spanish transplant who organized consumers around the CORO CSA project.

The El Salvadorans had left the night before. I accompanied Rene's son, Dima, to the animal enclosure where, after some basic instruction from the nine-year old, I helped to unskillfully collect milk from one of the cows for breakfast. When we returned to the home, Mina asked what I would like to eat. I told her I would have whatever she has, so she led me to the courtyard to collect chicken eggs and *ayote* plant leaves and flowers, which she boiled into a simple soup. She handed me a bowl and offered me milk that she had gently heated with a cinnamon stick on the wood-burning cement stove around which we gathered. As my mouth's taste buds were coated in the sweet liquid I had a visceral urge to drink it in quickly and greedily to satiate a deep hunger I did not realize I had.

It was at this point that I choked, welling up with emotion. I took in a shallow short breath, the kind that unconsciously accompanies attempts to hold back tears. It was to no avail. I could tell that I was not fooling Mina. It was clear that she saw through me. Her gaze welcomed a confession. Her silence held the space.

I explained that I had not tasted milk like this since I was a child when I spent entire summers living with my grandparents in a rural town in southeastern Russia. I told her of how I helped my grandmother tend to her herb, vegetable, and tree garden. How I accompanied my grandfather to the dacha to pick off by hand the orange Colorado beetles that threatened to destroy his potato plants. How I screamed for my ninety-year old great grandmother when a cockerel I teased with a stick flew over the door of the hen house and chased me around the courtyard, pecking at my heels. There too we ate simple soups of greens and eggs and drank raw milk from the neighbor's cow. There too we spent weeks at a time as four generations growing our own food and tending to our own birds. There too we eschewed chemicals in favor of organic production processes.

The experience was contrasted just a few hours later when I returned to Xela. The city was disorienting after three days in the peace and quiet of the countryside. Xela was busy, loud, dusty.

I stopped into the regional bakery and café chain, XelaPan, to process the disorientation. I ordered a cup of tea with a little milk, a food habit shaped by my emigration to the UK at the age of 11. The milk was warmed, like Maria's had been earlier that morning. I tried it without expectation. It was the kind of milk I had been drinking in Xela for months and in Guatemala over the course of many years. Yet, I was struck that now, somehow, it did not taste "right." Bland. Weak. Not quite milk. Those were the best words I could come up with in comparison to

my sensory experiences on Maya Granja. XelaPan's milk felt like a poor approximation of what perhaps milk "should" be. It was as different from Maria's milk as the city was from her rural home.

The tastes of the milks were, as in the opening quote from 1984, both powerful and troubling. Maria's milk was a taste that I once knew but had forgotten. But unlike the 1984 quote, I could precisely pin down the origins of the taste recollection. Its sweetness, fattiness, and flavor qualities were powerful actors on my body that day. Those qualities were inseparable from the equally visceral memories, emotions, and images they conjured. These revealed much about my own experiences. Maria's milk powerfully evoked deep affective and bodily recollections of a life lived elsewhere, long, long ago. XelaPan's milk provoked a troubling aversion, causing me to reject it in a pang for a different way of doing food. The tastes of both the milks that Saturday were "event-full" (Carolan 2011, 81).

Those event-full experiences reveal the embodied nature of anthropological knowledge production. When feeling my way through Guatemala's food system, I relied on more than intellectual engagement. My intuitive compass came from all of me: my senses, my memories, my emotions. In that sense I was no different from my participants.

My event-full experiences offer a window into some of the ways that food production and consumption are embodied, experienced, and memorized in Guatemala and elsewhere. When asked about the differences in organic versus conventional produce few Guatemalans simply listed their qualities. Instead, they offered up eventful memories of people, processes, and tastes of the past. They narrated changes in their sensory food experiences in light of wider transformations of Guatemalan society. They described in detail how their bodies recognized more flavorful alternatives whose sensory qualities, durability, and safety warranted their

consumption again and again. Many people's stories that have colored this dissertation show how embodied food politics works through the minds and mouths of farmers and eaters. It is a visceral type of food politics. Like in my own milk case and the cases of *criollo* eggs and organic tomatoes, it relies in part on the perceptions of taste that are not reducible to processes of social distinction.

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