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AVOCADO MANIA:
THE RISE AND COSTS OF OUR OBSESSION WITH
AVOCADOS

by

Rosa Lourentzatos

A master's capstone project submitted to the Graduate Faculty in Liberal Studies in partial
fulfillment of the requirements for the degree of Master of Arts,
The City University of New York

2021

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LOURENTZATOS

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Avocado Mania: The Rise and Costs of Our Obsession with Avocados

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Rosa Lourentzatos

This manuscript has been read and accepted for the Graduate Faculty in Liberal Studies in satisfaction of the capstone project requirement for the degree of Master of Arts.

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ABSTRACT

Avocado Mania: The Rise and Costs of Our Obsession with Avocados

by

Rosa Lourentzatos

Advisor: Dr. David T. Humphries

The past two decades have seen a surge in global demand for avocados, which have become popular among middle- and high-income fractions of society in developed regions of the world. Avocados are predominantly consumed far from their centers of origin and out of their traditional cultural context. The United States imports 87 percent of its avocados from a single region in Mexico, Michoacán. The systems of production and provision that have risen to meet the demand for this fashionable fruit have had devastating social and environmental effects, including deforestation, biodiversity loss, water scarcity, pollution, displacement of indigenous populations, food insecurity, cartel violence and human rights abuses. Although the costs associated with avocado production are significant, consumers in the U.S. cannot clearly discern them in part due to complex, opaque global food systems. This project takes the form of an ESRI Story Map – a digital platform that blends text with a variety of visual content – in order to provide a comprehensive, multi-media account of the avocado’s rise to fame and the costs that arise along its path from the fields in Michoacán to an eatery in New York City. This project is intended for a broad audience and hopes to bring transparency to the avocado supply chain and awareness to the social and environmental impacts driven by our demand for this green fruit. The following white paper provides an overview of the project, along with a review of concepts, methodological tools, and coursework that helped frame the project’s scope and provided the impetus behind its creation.

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levelheaded advice, and for always believing in me. To Emily Covington for inspiring my topic, and to all of my friends and acquaintances who sent me numerous news and social media references to avocados – your interest in my project kept me going.

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I am most of all grateful to my parents, who have been constant role models throughout my life, for their compassion, their curiosity, and their enthusiasm for the various subjects of my studies throughout my academic career, and for always making me feel like what I had to say mattered. To my mom – thank you for your unconditional love, for listening to me talk through my ideas and my process day after day and somehow never seeming to tire of it, for providing me with many a delicious meal throughout the journey, and for your most enjoyable company during much-needed ice cream outings. And to my dad – my biggest cheerleader, who would have been so proud – your memory will serve as an inspiration to me for the rest of my life.

And finally, this work is dedicated to all the laborers in the food industry – from farmworkers to retail and restaurants workers – whose work is all too often undervalued, yet undeniably essential. Thank you for keeping the world going and for nourishing us, body and soul.

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DIGITAL MANIFEST

I. Capstone Whitepaper (PDF)

II. Project Website

The ESRI Story Map can be accessed at the following URL address:

<https://www.arcgis.com/apps/Cascade/index.html?appid=681834639c9d44e6b156402624607>

[68a](#)

III. Archived version of the project website (PDF)

A NOTE ON TECHNICAL SPECIFICATIONS

The technical specifications for this project are simple. The project was created using ArcGIS StoryMaps, which is a WYSIWYG web application made by ESRI that allows users to build a website that blends text with all types of visual content – photographs, illustrations, graphs, videos, etc. – in order to tell a story. ArcGIS StoryMaps has several templates to choose from; this project uses the Cascade template. The interface is extremely user friendly and includes built-in instructions to guide users as they create their stories.

INTRODUCTION

Avocados today seem to be everywhere. They are a common ingredient on restaurant menus and recipe sites around the world – whether spread on toast and tacos or turned into sweet treats like ice cream and smoothies. Popular as a health food and a favorite Super Bowl snack in the form of guacamole, the avocado has even exceeded its use as food to become a key ingredient in skincare products and a stylish theme in fashion and home decor. It also dominates social media: A search for the hashtag #avocado on Instagram currently yields over 12.1 million posts, and around 1.2 million posts for the hashtag #avocadotoast – a dish whose popularity among millennials has garnered widespread scorn, prompting criticisms of how millennials are spending their money and debates over how many avocados toasts it would take to afford a home.

For a generation that grew up with the avocado as ubiquitous as the banana, it's hard to believe that one hundred years ago, the avocado was scarcely known outside of its ancestral homeland of Michoacán, Mexico. Demand grew steadily over the past century, but really began to accelerate over the past two decades. In the United States – the largest consumer market for avocados – consumption climbed from an average of 1.6 pounds per person throughout the 1980s and 1990s to an average of 8 pounds per person in 2018, an increase of 400%, far exceeding all other fresh fruit products (Carman, 2019; ERS, 2020). Americans consume a total of about four billion avocados per year (Miller, 2020). And it's not just the United States: According to the UN's Food & Agriculture Organization, between 2010 and 2016, global imports of avocados grew by around 120% (Mansharamani, 2016).

But there is a dark side to the fruit's rapid rise to fame. The United States imports 87% of its avocados from Michoacán, and though the rise in production to meet U.S. demand has

brought economic benefits to a region where 46% of the population lives in poverty, it has also had devastating consequences for the local environment and the wellbeing of its inhabitants (Cho et al., 2021). Avocado production has been linked to deforestation, biodiversity loss, water scarcity, displacement of indigenous and peasant populations, food insecurity, cartel violence and human rights abuses. These consequences don't end in Mexico, but rather follow the avocado through every step of the supply chain, including our very own city, where the daily movement of avocados by diesel-fueled trucks through the Hunts Point Distribution Center in the Bronx contributes to the significant air pollution – and its associated health effects – in the area.

Although the environmental and social costs associated with avocado production are significant, consumers in the U.S. cannot clearly discern them in part due to the complexity and opacity of our global food supply chain. The intention for this capstone project is to bring transparency to the avocado supply chain and awareness to the social and environmental costs of our demand for this savory fruit. This project takes the form of an ESRI Story Map – a digital platform that blends text with a variety of visual content in order to tell a story. The Story Map provides a comprehensive account of the avocado's rise to fame and traces its path from the fields in Michoacán to an eatery in New York City, and is presented through a combination of narrative text and visual media, including photographs, illustrations, graphs, and videos. This project is intended for a broad audience in both academic and non-academic settings, and its engaging and relatable format allows readers to take in the material through an immersive, multi-media reading experience.

Impetus for the Project

The motivation behind this project grew from an interest in food trends and a desire to

shed light on the dissonance between the often positive associations ascribed to trending foods and the devastating impacts of their production. Food is complicated. It is profoundly entangled in economic systems, social structures, and power dynamics that determine where our products come from, how they get to us, who has access, and where they end up. Globalization processes have produced transnational supply chains that allow consumers to purchase food items from across the world all year round. Our increasingly globalized food system, with its need to produce and sell more cheaply, comes at serious environmental and human costs—from the health of consumers and the labor conditions of farmers and workers, to the degradation of natural ecosystems and depletion of land, water, and other resources.

However, many central and critical issues in our contemporary food system remain largely invisible to the public, and they are hard to grasp because they are systemic, often originate in long-term historical dynamics, and have global implications that require familiarity with the intricacies of international markets. We often don't realize that our food choices – driven by a desire for convenience, access to cheap food, and a susceptibility to food fads – have consequences in terms of how supply chains are structured—influencing what's grown, how it's grown, and how it gets to us. The opacity of these supply chains in turn makes it hard for consumers to know the environmental and social impacts of their choices, and this disconnect makes it challenging both for consumers to consume sustainably and for companies to source responsibly.

I chose the ever-trending avocado as a lens through which to explore and make sense of these various complexities – from the reasons behind its year-round availability to the influence of media and marketing, and through the steps of its production, processing, distribution, preparation, and consumption. The avocado serves as a particularly interesting example because

of its association with health and wellness. Avocados are often consumed because of their nutritional value. What's more, consumers consider avocados as being "natural" products, i.e., produced using traditional practices with little impact on the environment, thus fulfilling both dietary and ethical concerns (Magrach & Sanz, 2020). This stands in powerful contrast to the devastating social and environmental impacts of their resource-intensive production, transportation, packaging, and distribution.

An important step towards a more sustainable and just food system is to make it transparent, so that environmental and social costs can be revealed and responsible parties held accountable, thus creating the possibility for positive change through grassroots campaigns, regulatory tools, public policy, or other initiatives that promote a more environmentally and socially just food system. This project is grounded in my belief that awareness is a powerful tool, and it is my hope that this project encourages readers to further their understanding of the intricacies of the global food system and the factors that influence their food choices.

THEORETICAL BACKGROUND

Sustainability

Sustainability is the fundamental guiding principle of this capstone project, but it is a broad concept for which numerous definitions and critiques exist. Used often by politicians, economists, ecologists, urban planners, and scholars across a range of disciplines, the term was first given global prominence by the 1987 report of the *World Commission of the Environment and Development* (the "Brundtland" report), which raised concerns about the eventual exhaustion of finite resources and the damage to ecosystems caused by the exploitation of such resources. The Brundtland report defined sustainability as the idea of meeting the needs of the present while

ensuring the ability of future generations to meet their own needs (Thompson & Norris, 2021). The definition of sustainability has developed over time to refer to not only environmental protection and resource conservation, but also long-term economic viability and social equity (Johnston et al., 2007). Today, sustainability is generally understood as consisting of three pillars: (1) environmental, (2) economic, and (3) social. Lewis (2016, p. 5) defines sustainable development as that which protects the environment, facilitates economic welfare, and ensures social wellbeing.

Numerous scholars and activists have argued that our modern capitalist society, which is structured around a growth-based economy, is fundamentally incompatible with sustainability, and that sustainable development would mean balancing the drive for individual profit with collective costs and benefits (Daly, 1997; Gould et al., 2008; Klein, 2014; Lewis, 2016). As far as it relates to food, Freudenberg (2021) argues that modern capitalism has converted food into a commodity that must bring profits to its producers, while imposing a cost on human and planetary wellbeing. Food sustainability requires that food be produced and sold in a way that is profitable throughout (economic sustainability), brings broad-based benefits for society (social sustainability), and has a positive or neutral impact on the natural environment (environmental sustainability) (Nguyen, 2018).

Food Systems Approach

The complexity of our modern food system demands a change of mentality and a shift toward systemic perspectives. A systemic approach provides a framework to look into the wider context or system – and specific parts within that system – and guides us to understand the main causes for problems or failures, and not just their symptoms. Sustainability has various

dimensions – economic, social and environmental – and often requires large-scale and long-term impacts. A systemic approach is therefore relevant to achieving sustainability because it takes into account the causal relations among economic, social, and environmental issues comprehensively and illustrates how activities in any sector can affect other sectors – directly and indirectly, good and bad.

This capstone project uses a food systems approach to address the environmental and social impacts of avocado production and consumption. Food systems refer to the entire range of actors, institutions, processes, structures, activities, and relations that determine the production, processing, transportation, distribution, marketing, sales, consumption, and disposal of food, as well as the broader economic, societal and natural environments in which they are embedded (Belasco, 2008; Nguyen, 2018; Parasecoli, 2019; Parsons & Hawkes, 2018). Issues related to public health, the environment, climate change, social justice, etc., have roots in dysfunctional food systems, and thus a food systems approach is essential to understand and address the causes of these critical challenges, rather than just mitigate the consequences. Likewise, since the causes of societal ills are located within larger systems, a food systems approach implies that solutions require systemic changes – such as public policy interventions and changes in corporate decision-making processes. There is room, however, for ground-up efforts to enact change, and social movements and civil society can put pressure on legislators and business leaders to promote more sustainable food systems (Parasecoli, 2019).

No research to date has provided a comprehensive food systems analysis of the avocado. Existing research has focused on either a particular environmental or social consequence of avocado farming or a particular site of production. For example, research on avocados supply chains has focused on the ecological consequences of avocado-driven deforestation in Mexico

(Bravo-Espinosa et al., 2014; Hansen, 2017), the water footprint of avocado production (Sommaruga & Eldridge, 2020), and the organized crime and violence related to the avocado export market (Ornelas, 2018). This project synthesizes the existing research and fills in the gaps by identifying some of the major social structures – including government policies, marketing boards, and the media – in order to provide a more comprehensive understanding of the transnational avocado supply chain. This project also uses examples from New York as a way to examine the end points of these systems, their consequences, and the ways in which they play out in local institutional structures and individual behaviors.

Environmental Justice

Given the broad scope of a systemic approach, I decided to apply an environmental justice lens in order to spotlight the socio-environmental inequalities that emerge along the avocado supply chain. Environmental justice refers to the disproportionate impact of environmental crises on poor communities and communities of color (Pellow, 2004). The term is based on the premise that many social problems have origins in, or are related to, human impact on the environment. Importantly, it incorporates the idea of justice or fairness by coupling the risks of exposure to pollution and resource depletion with the vulnerability that members of socially marginalized groups face in their inability to prevent or control exposure to these risks (Thompson & Norris, 2021)

Environmental justice problems are often associated with efforts to improve sustainability. The idea here is that environmental risks and health effects resulting from unsustainable means of production are unfairly distributed along lines of race, ethnicity, gender, and wealth; thus, efforts to improve sustainability must not favor advantaged groups but must

protect all members of the public. Food justice is a special class of environmental justice related to the production, distribution, and consumption of food. Food justice typically relates to issues of access to healthy, affordable food and of diet-related chronic illnesses, such as diabetes and heart disease, both of which are experienced disproportionately by racial and ethnic minorities (Thompson & Norris, 2021).

The value of applying an environmental justice lens is that it is a binding ideology that synthesizes both social and environmental agendas, and thus it not only provides an effective strategy for streamlining and organizing the different components of the project around a common theme, but also serves as a powerful tool for disparate social and environmental justice movements to move beyond the single-issue focus by finding common ground between civil, human, and environmental rights. Ultimately, environmental degradation and social inequalities are both symptoms of a society run by unjust institutions. The single goal of justice can unite the diverse interests of environmentalists and justice activists alike (Pellow, 2004; Scott, 2014).

Food as a Methodological Tool

This capstone project uses food – specifically, the avocado – as an example through which to illustrate the themes and concepts discussed above. The issues of sustainability, food systems, and environmental justice are complex and intertwined, and the avocado serves as a tool to ground these complicated systemic issues and to enhance our understanding of them and how they relate to each other (Miller & Deutsch, 2009). Food in general is a powerful connector: It is something people can easily relate to, insofar as they interact with it on a daily basis, and it also unites the three pillars of sustainability—its production provides for livelihoods (economic); it is a natural resource and thus depends on a healthy ecosystem (environmental); and it is essential to

human health and wellbeing (social).

Food is also used as a methodological tool to gain insight on personal, group, ethnic, or national identity. In her work on the “food voice,” Hauck-Lawson (2004) argues that food choices can communicate aspects of a person’s identity in a way that words alone often cannot. What one eats or, as importantly, chooses not to eat, can reveal who we are, where we came from, and what we want to be. Following Woodward’s (2007) analysis of material culture, individuals may use objects such as food to establish and negotiate identity; establish or challenge one’s place in society; signify one’s social affinities, perceived social status, or occupation; and facilitate one’s relationship with other individuals or groups. More broadly, foodstuffs can tell us much about the culture that uses them and help us to understand the beliefs, values, attitudes, and lifestyles of a particular community or society at a given time (Belasco, 2008; Miller & Deutsch, 2009). My analysis also looks closely at the different aspects of culture, specifically digital culture and social media, in which consumption patterns and food preferences are increasingly shaped.

OVERVIEW OF THE PROJECT

The Story Map begins with a discussion of today’s avocado craze and the fruit’s ubiquity in our society, setting the scene with examples of popular avocado dishes, avocado-themed merchandise, and social media references that illustrate how deeply various avocado trends – from guacamole to avocado toast – have penetrated the cultural Zeitgeist. Here particular attention is paid to the food voice, i.e., what the consumption of avocados reveals about personal and cultural identities, ingrained associations, and aspirational lifestyles. As Greenslit (2011) argues, “We don’t consume individual objects; we consume the social order they belong

to...when we buy [a product] we consume assumptions about genders, households, families, and social status.” Whether due to the fruit’s status as a nutritional superfood, or its association with the “clean eating” ethos of consuming foods that are “pure” (good for health and the environment), or the glamour conveyed by its celebrity endorsements, the consumption of avocados has become a way to signal one’s health, morality, and social status. Furthermore, the fact that people are willing to pay a premium to do so – despite prices that average more than \$2 per fruit at retail and several times more at many restaurants, Americans continue to buy more avocados at grocery stores and eateries each year – indicates the extent to which the avocado has become entwined with our sense of identity (Ferdman, 2015).

The next section provides a comprehensive historical account of the avocado’s rise to fame, starting with the biological and geographic roots of the avocado in Central Mexico and providing an overview of its place in Mesoamerican peoples’ diet, mythology, and culture. In today’s world of global foodways, the avocados we purchase at supermarkets and order at eateries have travelled to us far from their centers of origin and out of the cultural context in which they were traditionally consumed. What’s revealed is that the historical uses and prominence of the avocado in these early societies is very similar to the position it holds today, from its revered status as a symbol of fertility, to its many uses in traditional medicine and beautification practices (Mansharamani, 2016; Miller, 2020). The purpose is for readers to realize that what is now a global agricultural commodity – readily available year-round and popular among the middle and high-income fractions throughout the developed regions of the world – has been a traditional staple used for millennia by indigenous communities. However, today the fruit is becoming increasingly out of reach for traditional consumers: A large, good-quality avocado now sells for about the equivalent of a day’s worth of Mexico’s legal minimum

wage, effectively pricing out ordinary Mexicans from the market. In fact, per capita consumption of avocados has dropped from its peak of over 46 pounds per year to only 13.5 pounds per year (Miller, 2020).

Taking the food systems approach, the historical account then goes on to trace the various political, economic, and social factors that led to the avocado's popularity in the U.S. These include the passage of NAFTA, which opened the U.S. market to avocados exported from Mexico, allowing for year-round availability; the development of the Hass variety, which proved more viable as a mass-produced fruit due to its thick skin and long shelf life; industry-sponsored nutritional research to promote the fruit as a "superfood," tapping into the values and practices of an increasingly health-conscious public; and a dogged effort to market guacamole as the ultimate Super Bowl snack, creating an "all-American" association and transforming the avocado from a food for the affluent into a mass luxury good (Ferdman, 2015; Miller, 2020; Parasecoli; Sommaruga & Eldridge, 2020). All of this goes to show that today's avocado fad was not an accident; rather, consumers' preferences and behaviors are shaped by numerous and interwoven elements that are rooted in larger structures, institutions, and businesses whose main goal is to make a profit.

The final section follows the food systems approach to track the avocado's path through the supply chain from Michoacán to New York City, applying an environmental justice lens to narrow the focus to the socio-environmental conflicts that arise along the way. In order for production to keep up with the growing demand for avocados, growers in Michoacán have had to revert to intensive agricultural practices – the clearing of native forest lands, the exploitation of water resources, and the heavy use of agrochemicals – each of which have important social and environmental impacts. Of significance is the inequality in the distribution of the costs and

benefits of the mostly export-oriented avocado production: Small farmers, agricultural workers, and local communities receive a minimal proportion of the profits but undergo the various externalities of pollution, violence, displacement, loss of livelihoods, and problems of public health (Cho et al., 2021; la Vega-Rivera & Merino-Pérez, 2021; Magrath & Sanz, 2020; Miller 2020; Sommaruga & Eldridge, 2020). This pattern continues further along the supply chain, as avocados make the long journey to the Hunts Point Distribution Center in the South Bronx—where more than 60% of the daily stock of fruits and vegetables that feed NYC residents is gathered and stored before delivery to wholesalers, food service outlets, grocery stores, and restaurants. The story provides an assessment of the distribution center’s impacts on air quality and the associated health consequences that fall heavily on the low-income and minority residents of Hunts Point – adding a local dimension to our otherwise obscure global food system (He, 2020; NYC Food Policy Center, 2018).

The story concludes at Avocaderia, a health-focused, all-avocado eatery with locations in Brooklyn’s Sunset Park and Manhattan’s Chelsea. With its stylish interior and Instagram-ready dishes (including multiple renditions of avocado toast), the scene at Avocaderia stands in stark contrast to the environment where avocados are actually coming from, driving home for readers the dissonance between the avocado’s associations with health and nature, and the true costs of this prevailing food fad.

RELATIONSHIP TO MALS CONCENTRATION AND PREVIOUS COURSES OF STUDY

My studies in Sustainability Science and Education at the Graduate Center had a significant influence on my decision to pursue this project. My rationale for creating the Story

Map was to put into practice the theories and concepts that I absorbed in my core and elective courses in a way that is engaging for broader, non-academic audiences, bringing to bear on my work as an educator as well. My core course, Sustainability and Human Ecodynamics, provided a grounding in the basic literature and vocabulary of sustainability science and exposed me to a range of multi-disciplinary perspectives on the subject, which helped to inform the scope of my research. This course helped me think of global environmental crises as more than just an ecology-based hard science issue, but also as political, economic, social, cultural, and justice issues, and enlightened me as to how problematic the concept of sustainability becomes if it gets divorced from these other aspects of society.

The works of scholars such as Julian H. Steward (1955) and Karl Butzer (1982) inspired me to think about how the nature of human-environment interactions have changed over time (the *longue durée*); how the structure of our modern, post-industrial society has distanced us from nature, obscuring the impacts of human behavior and systems on the environment; and how those environmental impacts have in turn affected humans – certain groups more than others. From Rachel Carson's *Silent Spring* (1962) to Naomi Klein's *This Changes Everything: Capitalism vs. the Climate* (2014), people from a range of disciplines have raised the concern that as climate change magnifies and exacerbates existing environmental and social problems, the resulting issues, tensions, and challenges fall hardest on those at the very margins of the society.

Political Ecology of Social and Environmental Justice taught me a systems-oriented approach to thinking about environmental and social stresses. Within a political ecology framework, these stresses are viewed as symptoms of problems that originate in the various political, economic, and social systems that structure our society. For example, we discussed the

role of global corporations and governments in promoting the neoliberal agenda of unhinged capitalist growth, driving a level of natural resource extraction beyond the carrying capacity of the Earth, which in turn has resulted in a number of socio-environmental conflicts. Political ecology proved to be a useful framework through which to examine the roots of our avocado obsession and its subsequent social and environmental impacts, and it guided my research to account for the role of government policy, industry marketing, social media, and consumer culture in ramping up demand and production.

Given political ecology's top-down approach to socio-environmental crises, it was important not to lose sight of how these crises are experienced at the level of community. My learnings from *Anthropological Approaches to Nature and the Environment* encouraged me to examine the different ways in which local communities experience and respond to socio-environmental crises, while paying attention to the role that gender, class, race, ethnicity, and culture play in that experience. I was inspired by Ulrich Beck's (1992) risk society thesis as a conceptual starting point for understanding not only the politics behind socio-environmental crises, but also the effects of unhindered production on people's lives and livelihoods. According to Beck, causes of environmental crises lie deep within modernity, assigning responsibility is often difficult, and the risks are distributed unequally among local communities. What Beck describes as an unequal distribution of risks has been the lived reality for local communities in Michoacán and Hunts Point. In both cases, those bearing the brunt of the various socio-environmental crises have done nothing to cause them. Additionally, these communities are at the forefront of climate change, despite their negligible carbon footprint.

This class also introduced me to work of psychoanalyst and political activist Felix Guattari (2008) and his discussion of the subjective experience of "Integrated World Capitalism"

(IWC), a term he used to describe the way in which capitalism – beyond structuring our international market and political structures, eroding social relations, and destroying the natural environment along the way – also permeates culture and influences the attitudes, sensibilities, and minds of individuals. In his view, market forces work in tandem with mass media to mold individuals into consumers, spreading the false belief that assimilation into the lifestyle of the middle class can be achieved through acts of consumption. This view relates directly to the project's discussion of the role of industry-sponsored marketing and social media in driving consumer demand for avocados.

Finally, the Food, Culture, and Society course provided the lens through which to illustrate the various concepts learned in my other coursework in a way that everybody can relate to, insofar as food plays a fundamental role in our daily lives. This course covered a range of theoretical approaches to food studies and explored the way in which foodways—food habits from production through consumption—invoke issues of class, labor, race, gender and cultural identity. Through our readings and discussions, I learned how food – and rituals surrounding food – function symbolically as a communicative practice by which we create, manage and share meanings with others. For this reason, I found it important that the project highlight the way in which our avocado rituals shed light on our attitudes, beliefs, and identities. This course also introduced me to the work of Fabio Parasecoli (2019) and his discussion of food systems, which helped me to identify the various stages in the food supply chain, as well the various actors and structures that undergird and shape those stages, all of which I attempted to address through my research.

Overall, my coursework in the sustainability track gave me tools to think about a complex issue – our global food system – the reasons behind it and the affect it has on local

communities; influenced the development of my research questions and the content to be presented; and inspired the primary impetus behind the project: to mobilize these research findings for public education and to effectively connect education with activism for sustainability.

PROJECT EVALUATION AND CONTINUATION

There were aspects of the project that at the outset I conceived of differently, but as I gathered the research and selected a viable web application through which to display the material, my initial vision began to evolve. Originally, I had planned to frame this capstone project as a proposal for an exhibition at a museum or presentation space in New York City. My intention was to create a digital presentation that would outline the conceptual framework and provide a blueprint for how the different sections or “panels” would be laid out. Using a map as a visualization guide, I had planned to organize the sections based on geographic location: Starting in New York City – to set the scene with examples of the avocado’s popularity in Western cultures – the presentation would then take participants to the site of the fruit’s geographic origins in Central Mexico, providing a brief history of its place in Mesoamerican culture and then going on to describe the current conditions of avocado production in the region. From Mexico, the exhibit would move on to other the leading sites of global avocado production: Peru, Colombia, Chile, and the Dominican Republic. Participants would then “walk” through the steps of the avocado supply chain – including processing, packing, and transportation – and ultimately end up back in New York City, with an analysis of the Hunts Point distribution center in the South Bronx, as well as local retail, consumption, and disposal patterns.

As I began my research, I found that there was so much material that I wanted to include

for the sake of being thorough, but at the same time I felt that such an extensive presentation would overwhelm participants with too much information and would ultimately lose sight of the overall aim of the project. I realized that I had to narrow the scope and decided to focus only on Mexico as the main avocado production site. Thus, I decided that a map visual would no longer serve to drive the presentation of the material, as participants would only be moving between two main geographic locations.

In order to select a suitable digital platform that would provide a more useful way to present my research and allow me to integrate images and narrative text into one experience, I had a consultation with the Graduate Center Digital Fellows, who introduced me to ESRI's Story Map web application. Story Maps were initially made by ESRI (an international supplier of GIS mapping software) to help its users contextualize their maps, but it could be used more broadly to blend text with all types of visual content – photographs, illustrations, graphs, videos, etc. – in order to tell a story. The reason I chose Story Maps was that it is an open-source tool, it is very easy to use, and the resulting product is visually very appealing and allows the audience to really engage with the material. Readers experience the Story Map by scrolling through narrative sections composed of paragraphs of text supplemented with in-line media, alternating with immersive sections that fill the screen with images while floating panels of text move over them as readers continue to scroll.

Given the sequential layout of the Story Map template, it made sense to present my research in a more narrative, structured format, particularly when considering the audience perspective, as the Story Map structure is most effective when it feels like the user is reading a story. I decided to conceive of the project more like telling a story, which meant that I would have to provide enough textual context in order to make sense of the images and how they

related to each other so as to maintain the narrative flow. Thus, the narrative began to take precedent over the images. This approach ended up lending itself well to the kind of research I was uncovering. When it comes to cultural references to avocados, the volume of content is vast and ever-evolving – from magazine and newspaper articles about avocados to daily social media posts – so the pop culture section ended up covering more issues than anticipated. The history section also took on more importance and became much longer than originally planned. Beyond illustrating the biological and geographic origins of the avocado, I also thought it crucial to provide a history of the modern avocado industry so that readers could understand the social, political, and economic factors that over time led to the fruit’s popularity in the U.S.

Another obstacle I encountered was finding visual content to represent certain parts or details of the presentation. I was able to find a wealth of suitable images for topics within the pop culture section in particular; in that case the challenge was deciding which images to include in order to best represent the material and which to exclude, so that readers wouldn’t be inundated with too many visuals. In contrast, I struggled to find enough visual content to illustrate certain topics within the history section and the section detailing the environmental and social impacts along the avocado supply chain. The discussion of early European written references to avocados, for example, and issues such as food scarcity and cartel violence were difficult to represent visually, and thus those sections ended up being more text-based. In those cases, I tried to streamline the writing to make it more concise in order to preserve more of a balance between text and images.

In the end, my project had evolved from a more concise digital presentation to a more long-form, narrative-focused project, and thus it no longer made sense as a proposal for an exhibition; instead, I decided to broaden the scope of the project to serve as a comprehensive

foundation that could be modified in a variety of different ways to serve a variety of different contexts by reducing or changing the textual content to better suit a given audience. In its current or standard form, I wanted the Story Map to have the broadest appeal to a lay audience. With that in mind, I went through a process of deciding whether to include in-text citations of sources for the sake of precision or to exclude them for the sake of audience accessibility, and in the end opted for the latter as I believe that in-text citations would distract from the overall experience of the Story Map. However, all of the sources I used are listed at the end under “References,” and I have kept a separate “working” document of the text that includes the in-text citations. That way, were I to share the Story Map in a more academic setting, I would add in the in-text citations from the working document.

In terms of other contexts or uses for the Story Map, I am still considering the option of converting it into an exhibition proposal. By streamlining the text and advancing the visual content, I would be well positioned to pitch this project to a museum or presentation space in New York City. Possible venue options include The Museum of Food and Drink (MOFAD), The Climate Museum, or Governor’s Island (which offers indoor space for public programs and could present an interesting juxtaposition to the island’s urban farm and teaching garden). In the case of MOFAD, I would emphasize the material on pop culture and history while simplifying the social and environmental impacts, since the venue focuses more on the culture and history of food. I would do the reverse in the case of the Climate Museum or Governor’s Island, since there the focus is more on social and environment justice with the mission to inspire dialogue and action.

The Story Map could also be geared toward the classroom, serving as a lecture, presentation or reading assignment for students in elementary and secondary schools and

universities, or for adult students as part of a literacy class or culinary arts class. Again, the story content would be adjusted depending on the age of the audience and the scope of the class. I could also adapt the local component of the project to accommodate different geographic locations so as to be relevant in cities other than New York – simply by substituting a local distribution center in place of Hunts Point and a local avocado eatery or dish in place of Avocaderia. The very benefit of creating such a comprehensive piece is its versatility – it can be customized for different audiences and different venues, and still ultimately serve its function as an educational tool. Furthermore, I will continue to monitor the incessant cultural and social media references and the varying statistics in order to update the project’s content so that it remains current, for the story of the avocado is forever unfolding, and it appears that its popularity will last for years to come.

Overall, the challenges that I encountered encouraged me to think more deeply about the audience’s experience of the project, and as a result what I have created provides readers with an appealing and meaningful educational experience in and of itself, but which also lays a very strong foundation for future adaptations. I look forward to carrying out the various iterations of this project and to hearing my audience’s responses.

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