OTHERWISES AT SCHOOL AND IN THE COMMUNITY: PUBLIC SCHOOLS AS LEADERS IN RURAL FOOD SYSTEM RELOCALIZATION

A Dissertation
by
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Abstract

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This action research study looked at the role that rural public schools can play in the relocalization of food systems. The school cafeteria is an oft overlooked site of privatization in public education and the State's agricultural management curriculum affects an erasure of knowledges of self-sufficiency. This study explored what Mignolo and Walsh (2018) call a "decolonial otherwise" to the existing relationship between public education and food systems.

During the 2018 growing season, over 120 students at a high school in rural, southern Appalachian grew food that was served in the school's cafeteria; at the same time, a group of six high schoolers and I visited with local, old-time farmers and spoke with them about the heirloom seeds they save. Data was generated in the form of interviews and participant observation field notes. The qualitative, ethnographic approach enabled me to describe 1) how a rural high school could feed itself, 2) how local, traditional agricultural practices inform students' experiences engaging in food

system work, and 3) what those experiences of engaging in local food system work were like for students.

The study highlighted the ways in which the high school's agricultural education curriculum and participating community agencies were aligned to integrate with a global, not local, food system. The two local food system projects spoke to an acute loss of cultural knowledge of place and self-sufficiency that both the students and adults in the study perceived. However, for the youth in the study, their interactions with elder seed savers were sites of continuity and connections with their own family traditions. Both the student food growers and the seed savers perceived the benefits of their participation in the local food endeavors not in terms of personal benefit to them personally, but in terms of how their participation could benefit their community; I describe this perspective as an "embedded agency."

Serving student-grown sweet potatoes in the school cafeteria introduced pride, learning, resilience, generosity and community connection into the students' experience of school lunch. Those non-economic valuations dethroned the profit motive in the school cafeteria, challenged the hegemony of capitalist values in public education and created an otherwise to the coloniality of power (Quijano, 2000) as manifested in 21st century food and public education systems.

This dissertation presents a rare application of the theories of food sovereignty and decoloniality to a white, North American population. In doing so, it highlights the deterritorialized nature of the neocolonial agent and opens an opportunity to recognize solidarity across contexts of struggle. It also recommends a relocalized pedagogy as an adaptive and mitigative response to climate change at the local level.

Acknowledgments

Thank you to my committee members for their encouragement and invaluable feedback throughout this process. I own an enormous debt of gratitude to my chair, Dr. Greg McClure. Not only can his support and guidance be read throughout this work, his influence extends to what is not legible as well. His was the unenviable task to entertain all the permutations and directions that this work did not take - truly a yeoman's job.

Dedication

To my mother, who learned how to live off the land and died before I could ask her about it. And to Tres Magner, who wanted to grow more farmers.

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Section I: Introduction

This section introduces the study, its questions and guiding methodologies. A thorough treatment of my theoretical framework follows.

Chapter 1. Introduction

"The immediate objects are the total destruction and devastation of their settlements… It will be essential to ruin their crops now in the ground and prevent their planting more."

- George Washington, May 31, 1779

"For lunch today the cafeteria will be serving chicken nuggets, Pizza Hut pizza and grilled cheese."

- Second period lunch menu announcement, Highland High School, Sept. 20, 2018

"We're losing generations of children that don't know how to provide for themselves…. How many of the kids in this high school would know how to break a green bean and put it in a jar to pressure can it to put it on a shelf?"

- Ms. Deene, HHS cafeteria staff, Dec. 16, 2018

High, wispy clouds traced across the September sky. The last of the morning mist rose off the South River and evaporated at the foot of the mountain named after the Cherokee Corn Mother. I was standing in a field of plowed red clay soil when the green and white activity bus stopped dead on the rural highway that ran along the field and the high school's second period agriculture class streamed out.

This was the day we had been waiting for for nine months. I called the students around me as the agriculture teacher parked the bus on the far side of the field. I introduced them to the farm, told them how it had been placed in agricultural conservancy and how the FFA program had been given a plot to farm. I also told them that our county's population had been

disempowered for generations by their school's silence around self-sufficiency farming and that this farm, and what they were about to do on it, was kind of revolutionary. Then I gave them directions for harvesting the sweet and white potatoes: four kids on each row except the top row; that one got a crew on each end working toward each other. Everybody had to wear a pair of gloves to remain in compliance with hygiene regulations.

They got to it; they bumped into one another in the beginning because of the closeness of the rows. I joined a crew of four girls on the bottom row. I worked out ahead of them for a bit until I realized that the more successful I was at getting sweet potatoes out of the ground, the less successful they were coming along behind me. I left that crew and played a support role of taking pictures and bringing crews empty boxes.

Brad, a red-headed Junior, farmed the plot next to the FFA plot with his father. Brad had brought his tractor to the FFA plot and he and a small crew of boys were on the search for a half-row of potatoes that several of us remembered having planted back in the spring. No one could remember exactly where the half-row was or even which type of potato it contained, so the boys plowed exploratory rows between the sweet and white potato plots.

I was working with two Seniors, digging deep into the still-wet clods, when I looked up and saw a couple community partners - the farm manager and an Extension agent - working a row. They were kicking the mounds that the tractor had raised and then bending down to pick up the potatoes that appeared. That looked to be much easier and more efficient, so I started doing it as well. I wish I could say I became a proselytizer of the kicking method; I showed it randomly to a few kids when I was working near them but in no way circulated this new harvesting technology widely.

The class period seemed to end just as quickly as it began. The withdrawal from the farm was lingering; the agriculture teacher, Natalie, and I hung back with the Extension agent, Steve, and assess the harvest. We all agreed that there was most probably a lot of fruit still in the ground; Steve said, “If this were a commercial operation it wouldn’t be worth fooling with.”

But it was worth it for us. We were not a commercial operation. We were a school trying to grow our own food and a community trying to support that process. We were not well organized to complete the task. Knowledge of the best way to do it was not being passed around effectively. And as Steve the Extension agent was to put it later: our efforts gave students the experience of farming rather than actually teaching them to farm. The dirty sweet potatoes we’d just pulled out of the ground would soon be transmuted into a “commodity;” they were to be sold to the school district's child nutrition program and served on the lunch line at the high school. But because we grew them, they were much more than a commodity.

We would send another class out at a later date to glean whatever they could. To find a few more Beauregards with clumps of red clay stuck to them so hard that it reminds you that the tuber itself was very recently the dirt. To replicate the human ritual of survival that many of the students’ ancestors had enacted for generations not far from that farm. To remember through performance what it means to keep yourself alive, here. We, the school, sent the children to the field to be guided by the spirits of our ancestors whose whispers of aching backs and encouragement we heard faintly on the wind.

Here is where our story begins, with public school children, during public school hours, calf-deep in a furrow of red Appalachian clay. Our story is about the education system and the food system as they manifest themselves in rural Appalachia in the early 21st century. It is a story about the forces that shape both systems and bend them and stuff them into the mold of

"commodity." And this is a story about intersections between the two systems that creates new molds.

Problem Statement

The problem addressed by this study is tridemic:

Public education is complicit in the collective forgetting of how to feed ourselves. Since 1988, official US agricultural education curriculum has shifted away from the teaching *of* agriculture to the teaching *about* agriculture (National Research Council, 1988). The focus on agricultural literacy has left the school age population largely "agriculturally illiterate" (Kovar & Ball, 2013).

The processed foods served in U.S. public school cafeterias contribute to diet-related disease. The 21st century American diet – heavy with processed foods (Steele et al., 2016) - has been linked to heart disease, diabetes, obesity and cancer (Anand et al., 2016; Fiolet et al., 2018). Lunches served in U.S. public schools rely heavily on processed foods and participation in the national school lunch program has been linked to the overconsumption of salt and fats (Briefel, Wilson, & Gleason, 2009, Gorden et al., 2007; Story, Nanney, & Schwartz, 2009;) and obesity (Ogden, Carroll, & Flegal, 2008).

Global climate change requires a relocalization of the food system. Agriculture is both a cause and a victim of global climate change. Currently, the process that produces our food is responsible for as much as 35% of global greenhouse gas emissions (Foley et al., 2011; Vermeulen, Campbell, & Ingram, 2012); if we rely on that process to feed an ever larger and richer population, those effects are expected to increase by 50% - 90% by 2050 (Springmann et al., 2018). Global climate change will impact the global food supply (Wheeler & Von Braun,

2013; Vermeulen et al., 2012) leading climate scientists to recommend the development of "climate-smart food systems" (Wheeler & Von Braun, 2013).

The denominator common to all three of these problems is the corporatized global food system (Hendrickson & Heffernan, 2002), its profit-driven desire to perpetuate the current structure (Stuckler & Nestle, 2012) and the commodification of food in general (Lyson, 2004; Vivero-Pol, 2017). Public education's participation in this dynamic results in the development of generations that are both malnourished and ignorant as to how to nourish themselves. In this way, the education system is complicit in the weaponization of food (Newman, 2017) to ensure a population's dependency on the corporate food model.

Research Questions

I am not ok with that. From the slaughter of the American buffalo during the white westward expansion (Isenberg, 2000) to the enclosure of native foraging ground by white settlers in Australia (Instone, 1999), history is replete with examples of the control of food being used to colonize populations. This study recognizes global corporate capital and multinational corporations as today's (neo)colonial agent (Dei & Asgharzadeh, 2001; Wallerstein 2005). There's no reason to assume that "multinational food and beverage companies with huge and concentrated market power," i.e. "Big Food" (Brownell & Warner, 2012, p. 1), will not exercise the same grab for power. The detrimental effects of processed food consumption (Anand et al., 2016) and students' self-conception as the perpetual consumer (Partick, 2013) are evidence that the power grab is already in full swing.

Therefore, I am desperately interested in exploring how public education could behave differently vis-a-vis both feeding its own children and preparing them to feed themselves. How could schools be leaders in the reinvigoration of local, more sustainable food systems? Could

they grow their own food? Could schools be centers of teaching and learning around community resilience in the face of ongoing and worsening climate change? Further, each locale has its own historic agricultural practices that were, before the rise of the global food system, more localized and self-reliant; how can those knowledges, traditions and workways of place inform a school community's investigation of an alternative food system?

The current investigation of how the U.S. public education system could play a leadership role in the relocalization of rural food systems is guided by the following research questions:

1) In an era of globalized corporate food systems, how can public schools grow and serve student-grown food in the school cafeteria?

2) How can local agricultural practices and food traditions inform a school's engagement in local food systems work?

3) What are students' experiences as curators and disseminators of local community knowledge?

Qualitative Ethnographic Approach to Decolonial Knowledge Generation

This introductory section spells out the methodological approaches I took to answering my research questions and how those methodologies worked in concert with my theoretical frameworks. I also briefly touch on the mechanisms of data generation. This section is not a robust treatment of the tools I used to generate and analyze data in this study; a full chapter on methods, methodologies and data analysis is presented in Appendix D. I am intentionally postponing that discussion until after the data presentation and analysis. I intend this organizational structure to privilege the study's findings and the way those findings work with the anti-colonial and decoloniality theories that structure it.

The decolonial perspective shaped the design and implementation of this research. I embarked on this project cognizant of the extractive and exploitative function that academic research has played vis-a-vie local communities (Sandoval, 2000; Smith, 2012). To prevent my project from following that pattern, I adopted a research posture and structure that benefited primarily the community with whom I conducted the research. Both local food system projects directly supported the community's capacity to feed itself.

My research interests were best addressed through a qualitative, ethnographic inquiry. Qualitative research has the goal of "interpreting the social world from the perspective of those that are actors in that social world" (Glesne, 2011, p. 8). In contrast, quantitative research, through its reduction of the human experience to a number value, is a form of dehumanization, of "thingification" as Cesaire (1972) would say, and, in that, is a form of colonization. In this study I was interested in the perspectives and behaviors of the adults and youth that participated in the local food system project and those perspectives and experiences are qualitative forms of data. The best way to get at those perspectives and experiences was through day-to-day, first-hand experience with the community doing the activities; therefore I took an ethnographic approach in this study. Willis and Trondman (2000) describe ethnographic research as drawing "on a family of methods involving direct and sustained social contact with agents, and on richly writing up the encounter, respecting, recording, representing, at least partly in its own terms, the irreducibility of human experience" (p. 6). My research questions required relational data and were only answerable through prolonged and close interaction with the study participants.

So for eight months, I immersed myself as a participant observer in the messy and unscripted process of these two local food projects and I made field notes (Emerson, Fretz, & Shaw, 2011) on the activities, interactions, opinions and struggles of the study participants.

Whether I was on the back of a tractor setting cabbage plants or watching students harvest beans with a seed saver, I was somewhere on the participant-observer continuum (Spradley, 1980). At the end of those eight months, I conducted twenty-five separate guided interviews (Patton, 1987) of the adults and students who participated in the processes. I used those two sources of qualitative, ethnographic data to develop a thick description (Geertz, 1973) of what it was like for a school and community to relocalize authoritative knowledge and student lunch.

As I alluded to above, I am not interested in generating knowledge solely for the academy. I follow decolonial researchers (Patel, 2014; Sandoval, 2000; Smith, 2012) and regard the generation of knowledge exclusively for the academy as extractive and, thereby, replicating the coloniality of knowledge (Richardson, 2012). I acknowledge the academic process of knowledge creation and dissemination and the academy itself are all products of imperialist systems and that academic research on Indigenous, traditional populations has often been used to reify the oppressor-oppressed relationship (Lynch & O'Neil, 1994; Smith, 2012; Wane, 2008).

I followed the guidance of Linda Tuhiwai Smith (2012) in the design of this study. First and foremost, I designed the activities of the research to benefit the community long before they benefited me academically. In a seminal work, *Decolonizing Methodologies* (2012), Smith highlighted the politics of methodology and urged that, "[i]t is at this level that researchers have to clarify and justify their intentions" (p. 144). My intentions for this research study were to practice the skills of seed saving, food growing and community required to reduce my hometown's dependance on industrial agriculture and the global food system. I conscientiously conducted the research in the context of public education to counter the state's generational, epistomocidal (de Sousa Santos, 2015) weeding of local knowledges of sustainability out of my

community. My research is a politics of alternative to the hegemonic corporate food systems, and in that, a politics of liberation.

"To liberate" is an action verb, therefore my study had to be one of action. There's a long history of action research supporting agendas of liberation (McNiff, 2013); therefore, to generate the data I used to answer my research questions, I designed and executed an action research project (Lewin, 1946; McNiff, 2013; Stringer, 2014). I follow Stringer's (2014) definition of action research:

> Action research is a systematic approach to investigation that enables people to find effective solutions to problems they confront in their everyday lives. Unlike experimental or quantitative research that looks for generalizable explanations related to a small number of variables, action research seeks to engage the complex dynamics involved in any social context. It uses continuing cycles of investigation designed to reveal effective solutions to issues and problems experienced in specific situations and localized settings, providing the means by which people in schools, businesses, community agencies and organizations, and health and human services may increase the effectiveness and efficiency of the work. In doing so it also seeks to build a body of knowledge that enhances professional and community practices and works to increase the well-being of the people involved. (p. 1)

First articulated as a methodology of physiological investigation by Kurt Lewin after the Second World War (McNiff, 2013), there is a long tradition of action research being used in educational studies (Mertler, 2009; Somekh, 2009; Stringer, 2008) McNiff (2013) cited Reason and Bradbury (2008) in describing action research as a "family of approaches" (p. 55). While each

study is different than the traditions from which they flow, a number of action research traditions shaped my study.

The Freirean approach of participatory action research as liberation (McIntyre, 2008) informed my study's goal of practicing alternatives to the hegemonic corporate food systems. As a doctoral candidate collaborating with "communities affected by the issue being studied" (Viswanathan et al., 2004, p. 3), this study certainly resembled community-based action research (CBAR). CBAR was used to document and contribute to Vancouver City Schools' role in the city's effort to transition to a more sustainable food system (Mikesell, Bromley & Khodyakov, 2013). Finally, critical action research (Kemmis, 2009) emphasizes the methodology's transformational effect on a study's activities, practitioners and "the social formation in which the practice occurs – the discourses (sayings) that orient and inform it" (p. 14). Not only was I interested in how students in the study would be affected by working with local knowledge, I was also interested in transforming the social practice around school lunch.

These approaches to action research my study and helped me decide what questions to ask. I filtered the methodology, the literature and the theory through my lived experience and the three combine to form my observational gaze. The interplay of these theories and methodologies informed not only the setup of the study but also the way that it unfolded and how I made meaning of those unfoldings. At times, my decolonial aspirations were more of a foil than guide star. I go into detail on those instances as the frameworks introduced in this chapter are embedded throughout the volume.

Setting and Activities

The study was set at Highland High School, the single high school in Bailey County. Perched atop the eastern seaboard, Bailey County is a rural, mountain community in southern

Appalachia. On one side of the coin, the choice of Highland High School is an example of convenience sampling (Patton, 1990). I worked at the high school throughout my time as a doctoral student and had the relationships required to make the project a reality.

On the other side of the coin, Bailey County offered a case study of exactly those conditions I was interested in studying. Bailey's relative isolation and rugged topography made it a late adopter of modern conveniences (Higgins, 1981). As a result, children in Bailey County schools still have elders in their family who either had childhood experience with or still practice subsistence-level farming. It is precisely these traditional agricultural practices, such as seed saving, that I was interested in exploring as sites of resistance to corporatized global food system and, more generally, corporate capitalist neocolonialism. The study site, therefore, can most accurately be described as a convenient example of purposeful sampling (Patton, 1990).

From April through November of 2018, I worked with 120 Highland High School students - along with a handful of adults from their school and from community agencies - to grow food that was served on the lunch line in the school's cafeteria. Parallel to that process, I spent the summer and fall of 2018 with a small group of youth from Highland; we met with elders in our community who saved heirloom seeds. Those students went on to found a seed saving club at the high school and the club put on a seed swap at the public library that November.

Both projects were local food system projects. Taken together, they represent a full growing cycle, from seed to tray. However, they represent different explorations, different tacks in to the ideas of local food, knowledge and education. The student-grown food project was largely rooted in modern industrial agricultural practices; with its tractor and fungicide sprays and state-prescribed regulations and commodity pricing, it embodied global food system

practices while experimenting with community resiliency. I address some of the tensions and consequences of growing local food in the context of the global food system in Chapter 20. The seed saving project, on the other hand, lived in the vernacular of small-scale, subsistence-level agriculture with its community connections, non-commodity sharing of seed, and non-scientific, almost neo-Pagan ideas of planting by the signs. Both, interestingly, involved concern for and focus on community, passing on knowledge and youth agency.

Organization of Volume

As an additional disruption of the colonial process of knowledge generation (Patel, 2014), I have eschewed the standard dissertation format. Instead, I present the data and my analysis of the data simultaneously as I move through the narrative of the research process. This was, after all, an action research project. We did stuff, and in doing things, we created newness - new patterns, new relationships, new perspectives- and it is in these newnesses that the power of the action dissertation lies. By organizing the dissertation itself around the story of those actions, I center the resulting newnesses.

The organization of the volume came about through an emergent, non-linear process. The original structure of the dissertation came from a drawing I made of a spiral with five lines pointing to the middle of the spiral (Figure 1). The spiral represented the narrative of the research story as it tightened in toward the concluding events of the study; each of the five lines represented a theme that framed the research project. Those lines were “community,” “local food and farming,” “21st century education,” cafeteria food,” “local knowledge and traditions” and “student agency.” Each time a through-line crossed the narrative, I named a chapter. By drawing literal and metaphorical through-lines through the narrative, I created a structure that allowed me the opportunity to discuss each of the five themes at different points in the narrative. The

structure continued to evolve throughout the writing process; chapters were reordered and conflated for narrative clarity. I go into a deeper discussion of the implication of a non-linear outline in Appendix D.

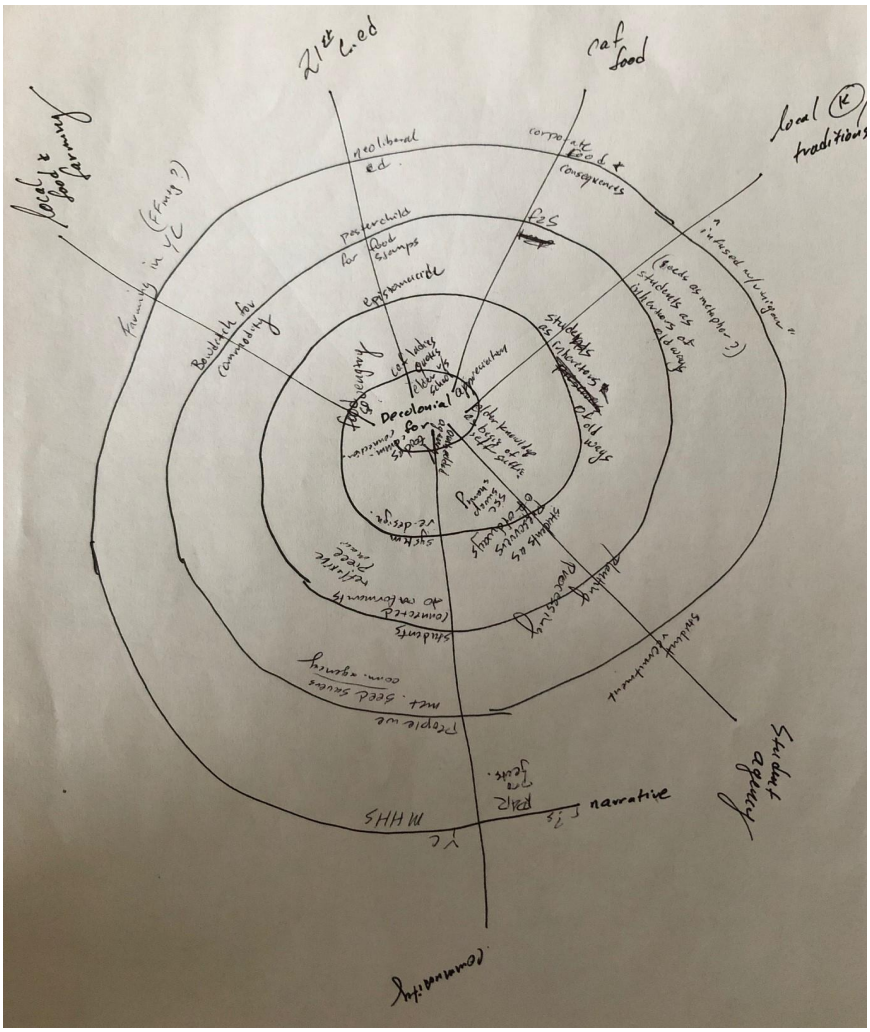


Figure 1. Original drawing of dissertation outline

The dissertation is organized into seven sections. In addition to this introduction, the first section also contains a deep dive into the theory that structures the rest of the work. Section Two is a protracted description of the modern/colonial state of U.S. public education in the early 21st century as manifested in my study site. There I develop a thick description of the physical,

cultural, political and epistemic context for the study. In Section Three I introduce the participants of the study including myself as the instrument of research and author of the volume.

In Section Four I go into depth on the root ontological and epistemological issues this study seeks to address. In doing so, I introduce the concept of epistemicide as the outcome of the historical, political and economic forces of neoliberalism that are eroding the agricultural traditions in Bailey County. Section Five retells the stories of what we did while working on our two local food systems projects - the student-grown food project and the seed saving project. I also hold those activities up to the literatures on farm to school and food sovereignty to help me locate our actions in larger discussions.

In Section Six I discuss what we opened up to, what surprises and newnesses came about through the process. In this section I lean heavily on my theoretical frameworks to craft both a critique of the current education system and an articulation of life- and community-affirming possibilities for public education.

After briefly summarizing the findings of the study, Section Seven faces squarely the most catastrophic challenge facing humanity - climate collapse. I pull forward some of the threads from the preceding sections to articulate how public education can remain relevant in the age of global climate change. I end by suggesting preliminary outlines of a climate collapse pedagogy.

It can be challenging to follow a narrative that spans eight months and involves almost 150 participants doing things in several locations. I've created aids to help the reader keep track of the whos and the wheres. Appendix A is a stylized illustration of Bailey County showing roughly where the action took place. Appendix B is a timeline of activities of the study; Appendix C is a chart of the major participants and the roles they played in the study; those

names are, of course, pseudonyms. I recommend the reader familiarize themselves with these before starting the rest of the study.

Finally, my positionality looms large in this study. All researchers are instruments of data generation, although interpretivist researchers may acknowledge that more readily than positivists. Further, action research locates the research as an active player in the study (Kemmis, 2009). As such, I take very seriously McNiff's (2013) reflexive charge that the action researcher should constantly be engaged in "honestly critiquing their practice" (p. 28). My decolonial stance makes me all the more aware of the risk I run of recolonizing the site and participants through my unreflexive research process. Therefore, I discuss my positionality at several times throughout the text. Chapter 8 is dedicated to unfolding how my background impacted the design and execution of the study; Chapters 9 and 10 take deep dives into the ways in which my own coloniality played out in my performance of the research.

Chapter 2. Theoretical and conceptual frameworks

The structure of this study and my analysis of the data it generated are grounded in the three theoretical frameworks of neocolonialism, anticolonialism and coloniality. In this section, I introduce these analytical tools and unpack some key concepts related to the three frames, specifically neoliberalism, globalization, indigeneity, colonial/modern, the decolonial for and otherwise, and re-existence.I spend a considerable amount of time tracing the development of neocolonialism from its inception during the post-WWII period to its current manifestation, neoliberalism. I then lean heavily on the robust, historic theorizing of neocolonialism to describe the mostly white, Appalachian school children who participated in this study as neo-colonized subjectivities. The combination of these theories also enables me to talk about the local knowledge present in my rural, Appalachian study site using analytical tools that are normally used in conversations around Indigenous research. But, first, I ground my understanding of 21st century public education in a clear-eyed assessment of colonialism's uses of and goals for the public education system.

Colonial Education

I enter the colonial story through the writing of African-Canadian scholars. The goal of the education system under 19th and 20th century European colonial administration was to marginalize and silence Indigenous/local knowledge (Dei & Asgharazadeh, 2001; Shahjanan, 2011; Wane, 2008). Reflecting on her own education in Kenya, Njoki Wane (2006) described the role of the education system under colonialism: "To control people's culture and way of thinking is to control their tools of self-definition in relationship to others. Colonial education can be characterized by a series of absences in learning about the multiplicity of knowledges" (p. 88). For Wane (2008),

> [a]ll the learning was embedded in a social structure designed to erode traditional knowledges and values. Colonial education succeeded in planting seeds for the expansion, growth, and sustainability of imperialism… [i]n other words, education was an organized form of imperialism that allowed colonization to continue by indoctrinating new subjects. (p. 185)

By teaching only the Western canon, the colonial education system established the colonizer's ontologies as the only valid knowledge (Dei & Asgharazadeh, 2001). Silencing local knowledges over generations eventually affected weeds the knowledge out of the culture all together. De Sousa Santos (2015) calls this killing off of entire ways of knowing "epistemicide." Not only was the primary education system used as a tool of colonial domination (Dei & Asgharazadeh, 2001; Shahjanan, 2005, 2011; Wane, 2008), the system of knowledge production, as a cultural product of empire, has been woven from the threads of colonialist discourse as well (Richardson, 2012). The Western academic system, after all, was forged in and is a product of the 500+ year story of Europe's colonialist expansions and contractions (Patel, 2014). Traditional Western academic research mirrors colonialist economics; academics extract resources - research data - from their research "subjects" in such a way that benefits the researcher and not the community in which they researched (Lynch and O'Neil, 1994; Smith, 2012). The reduction of a research subject or their opinions or behaviors to numeric data is quintessential thingification (Cesaire, 1972) and reifies the narrative of Western domination over the global "other" (Shahjanan, 2011).

Neocolonialism

These oppressive education and knowledge production systems did not end with the political independence from formal colonial administration; they just changed forms. As they

emerged from under the thumb of colonial rule and began to articulate their sovereign agendas, leaders of newly formed African countries ran headlong into international economic and political structures that functioned to perpetuate the colonial relationship between the former colonies and colonizers (Nkrumah, 1965).

Neocolonialism, as defined by the All-African Peoples' Conference in Cairo in 1961 (Phipps, 2012), is "the survival of the colonial system in spite of formal recognition of political independence in emerging countries which become the victims of an indirect and subtle form of domination by political, economic, social, military or technical forces" (All-African Peoples' Conference, 1961, p. 1). For the Conference, the ends and means of this new form of colonialism were clear: "Neo-Colonialism manifests itself through economic and political intervention, intimidation and blackmail in order to prevent African states from directing their political, social and economic programmes towards the exploitation of their natural wealth for the benefit of their peoples" (All-African Peoples' Conference, 1961, p. 2).

In 1965, the first president of independent Ghana, Kwame Nkrumah, echoed the tension between local and international/global loci of control as he described the reality of re-colonization: "[T]he State which is subject to it is, in theory, independent and has all the outward trappings of international sovereignty. In reality its economic system and thus its political policy is directed from outside" (p. 1). Importantly, Nkrumah's understanding of neocolonialism located at the crux of exploitation the colonizers' desire for profit and, specifically, a desire for profit that was divorced from the actions of colonizing countries. His book ended with a Parthian and prophetic warning about the '"uncontrolled action of international capitalism" (p. 26). In Nkrumah's writings, we see a recognition that the agent of neocolonialism was no longer the

nation-state seeking administrative control of geographic territory, but rather global capital scouring the globe for return on investment.

Theorizing neocolonialism

The discourse of "development" reifies neocolonialism. It continues to describe former colonies as inferior and backward and allows for only one path – the liberal capitalist path - to economic self-sufficiency. Political economist Paul Baran (1957, as cited in Young, 2001) pointed out the neocolonialist nature of the development narrative: "the real problem of development was not the infrastructure of the 'underdeveloped' society, but the tendency for any surplus to be taken as profit by international corporations rather than reinvested in the local economy for growth" (p. 50). It should be underscored that Baran's critique cites "international corporations" – not sovereign nations - as the perpetrators of colonial exploitation.

German American economists Andre Gunder Frank (1966) critiqued development theory by pointing out that the model was based on the first-world experience as a universal and did not take into account the histories of colonized peoples. Consequently, he concluded that

> "[u]nderdevelopment is not due to the survival of archaic institution and the existence of capital shortage in regions that have remained isolated from the stream of the world history. On the contrary, underdevelopment was and still is generated by the very same historical process which also generated economic development: the development of capitalism itself. (p. 9)

Frank's (1966) theory of underdevelopment described a structure of local, national and global "satellites" and "metropolises" that each "suck capital or economic surplus out of its satellites and to channel part of this surplus to the world metropolis of which all are satellites" (p. 7). Metropolises "impose and maintain the monopolistic structure and exploitive relationship of this

system" (Frank, 1966, p. 7) for the benefit of their own ruling classes. There is ample evidence that a satellite's historical development is in inverse relationship to the strength of its economic relationship with the metropolis (Alam, 2000; Bagchi, 1982). This is the anatomy of the vampiric relationship between a colonizer and the colonized.

World-systems theory ("WST") (Wallerstein, 1974) further developed Frank's satellite-metropolis model by adding a "semi-periphery" category through which a peripheral or core nation can move. In the words of world-system theorist Chase-Dunn (2017), the movement of a nation through the model "allows us to analyze the cyclical features of social change and the long-term patterns of development in historical and comparative perspective" (p. 1060). That is to say: the agent of colonialism changes over time. Chase-Dunn (2017) identified the current agent of colonialism as the "transnational capitalist class" (p. 1062) and observed that "[t]he world-system has now reached a point at which the old interstate system based on separate national capitalist classes exists simultaneously with new institutions representing the global interests of capital" (pp. 1061 – 1062).

Finally, globalization can be read as the most recent narrative of neocolonialism. Globalization is the idea that "capital has now become a free-floating entity, organizing production transnationally, independently of national boundaries" (Rao, 2000, p. 173). Undergirding the narrative of globalization is neoliberalism, the doctrine that goods and services – including education – are most effectively delivered by the/a free market and therefore should be privatized (Spring, 2008). Neoliberalism offers a "dramatic expansion of that eloquent fiction, the free market; the drastic reduction of government responsibility for social needs; the reinforcement of intensely competitive structures of mobility both inside and outside the school" (Apple, 2001). Neoliberalism is the philosophical justification for the subjugation of the nation-

state and its citizens to the profit desires of global capital and, as such, represents the current embodiment of neocolonialism.

Neoliberal education

Nhkumah's (1965) fears of unchecked global capitalism are readily apparent in neoliberalism's marketization of public services, including the service of public education. Through the neocolonialist/neoliberal lens, schools do not exist to contribute to the common good of society by developing an informed civic body; neoliberal schools exist as marketplaces in which private companies make profit and develop the human capital required for future profit. The neoliberal agenda for education is characterized by expansion of the free market (Apple, 2001; Giroux, 2010); reduction of government investment in education (Apple, 2001; Marginson 2002; de Oliver & Briscoe, 2001); competition between schools, teachers and students (Apple, 2001); centralization of curriculum (Marginson & Rhoades, 2011); corporatization of governance structure (Marginson, 2002); and an accent on testing (Spring, 2008; Marginson, 2002). With the colonialist pedigree of the neoliberal narrative clearly in view, the word "profit," when used in the context of public education, mutates from an everyday business objective to the driving force behind centuries of war, enslavement and subjugation.

Anti-colonialism

In the 2000s a group of African and Canadian educational writers articulated the framework of anti-colonialism as a platform of resistance to the persistent legacy of colonialism in education (Dei, 2008; Dei & Asgharazadeh, 2001; Shahjanan, 2005 and 2011; Wane, 2008). Anti-colonialism takes a transhistorical view of colonialism (Kempf, 2006) that rejects an understanding of colonialism as an historic, time-locked event. Because anticolonialism

identifies and highlights the oppressive structures that exist as legacies of colonialism, it is a powerful tool with which to interrogate neoliberal education.

The framework stakes out Indigenous knowledge and experience as a site of agency and resistance to colonialist oppression. Anti-colonialism

> interrogates the power configurations embedded in ideas, cultures, and histories of knowledge production, validation, and use. It also examines our understanding of indigeneity, pursuit of agency, resistance, and subjective politics… the anti-colonial discursive framework is an epistemology of the colonized, anchored in the Indigenous sense of collective and common colonial consciousness. (Dei & Asgharazadeh 2001, p. 300)

Dei (2006) reiterates the close connection between indigeneity and anti-colonial agency: "local agency resides in how the anti-colonial project uncovers colonizing practices as deeply embedded in everyday relations, and how local/Indigenous knowings become powerful sources of knowledge that allow for daily resistance" (p. 15).

Anti-colonial cultural commentators draw from the literary works of postcolonial African writers and their depictions of the violence of the colonial condition and the ways that violence structures one's understanding of one's self and one's relation to others (Cesaire, 1972; Fanon, 1952, 1961; Memmi, 1969). For anti-colonialists, the affiliation with place and local/Indigenous knowledge and experience are both sites of agency and resistance to modern colonialist oppression (Dei, 2006; Wane, 2008). It is exactly this understanding of "local knowings" that this study investigates. I do not describe the white, Appalachian settler colonialists in this study as "Indigenous." To assign the status of "Indigenous" to a group of white people who inherited land that was taken from the Indigenous population through war, bad-faith negotiation and

forced migration would be antithetical to the intention of this project. However, I do advance an understanding of local knowledge that inscribes modern, traditional Appalachian agricultural knowledge as a knowledge of place that is in a subjugated relationship to neocolonial power. Similarly, I understand rural Appalachian school children as neo-colonized subjectivities.

If I am going to make these claims, I have to be able to meet decolonial Maori scholar, Linda Tuiwai Smith's gaze. In her seminal work, *Decolonizing Methodologies* (2012) she warned against political cooption:

> by the descendants of settlers who lay claim to an 'Indigenous' identity through their occupation and settlement of land over several generations or simply through being born in that place - though they tend not to show up at Indigenous people's meetings nor form alliances that support the self-determination of the people whose forbearers once occupied the land that they have 'tamed' and upon which they have settled. Nor do they actively struggle as a society for the survival of Indigenous languages, knowledges and cultures. Their linguistic and cultural homeland is somewhere else, their cultural loyalty is to some other place. Their power, their privilege, their history are all vested in their legacy as colonizers. (p. 7)

It bears reiteration: I am not claiming that white, American school children in Appalachia are "Indigenous." Rather, I use the word "local" to describe a location in the relationship to colonial power in this neocolonialist age that the word "Indigenous" occupied during the settler-colonialist phase of the global imperial story and still does occupy today. As Smith's quote above so succinctly put it, in addition to knowledges of place and connection to land, language, race, religion and cultural all play salient roles in an Indigenous identity. For the white

Appalachians, their language, race, religion and culture are overwhelming validated by their society. Further, I reject any assertion of redneck as an ethnicity or minority status (Smith, 2004). I base my understanding of "local" on the neocolonial theories of a deterritorialized colonialism that recognize globalized corporate capital as the current manifestation of neocolonialism and neoliberalism as its driving ethos (Hill, 2004). I walk this narrow line so as to open an analysis of how these centuries-old patterns are playing out in one rural, Appalachian school district. Only by acknowledging the overarching dynamic that has shaped the conceptualization, canons, practices and structures of today's American education system - only by grounding it in its colonialist social, political, economic and militaristic context - can we critically assess its mechanisms and consequences and begin to exercise the appropriate agency to bring about life-affirming alternatives.

Coloniality

These understandings are reinforced by the concept of coloniality (Maldonado-Torres, 2007; Mignolo, 2000, 2002, 2007; Quijano, 2000 & 2007). While the anti-colonialist framework draws primarily from the subaltern experience of Anglo- and Franco-colonized Africa, theories of coloniality and decoloniality have been developed by a group of writers from the Americas in reaction to the Latin American and Caribbean experience of Iberian imperialism of the 16th century.

Because the Latin American colonial story began with transatlantic trade, the rise of capitalism and dawn of the modern age, coloniality theorists understand modernity and the colonial experience as inextricably intertwined (Mignolo, 2000). Prominent decoloniality theorist Walter Mignolo employs the compound concept "modern/colonial" as a way of emphasizing that "coloniality is constitutive of modernity, and that there is no modernity without coloniality"

(Tlostanova & Mignolo, 2009, p. 132). Coloniality is not colonialism itself, but a description of the ways in which the modern/colonial experience has patterned all identities, relations and interactions since. For Puerto Rican philosopher Nelson Maldonado-Torres (2007), coloniality "refers to long-standing patterns of power that emerged as a result of colonialism, but that define culture, labor, intersubjective relations, and knowledge production well beyond the strict limits of colonial administrations. Thus, coloniality survives colonialism" (p. 243).

Theories of coloniality were first articulated around the coloniality of power (Quijano, 2000). Peruvian sociologist, Anibal Quijano, coined the term to describe the way the 16th century transnational trade ushered in a new global power dynamic. That dynamic was organized around "two fundamental axes of the new model of power" (Quijano, 2000, p. 533): hierarchically organized understanding of race and a "new structure for the control of labor" (Quijano, 2000, p. 535). That new structure was capitalism on a global scale. Implicit in the coloniality of power were the ways that the colonial difference structured both ways of knowing and being. Maldonado-Torres (2007) continues:

> The idea was that colonial relations of power left profound marked not only in the areas of authority, sexuality, knowledge and the economy, but on the general understanding of being as well. And, while the coloniality of power referred to the interrelation among modern forms of exploitation and domination (power), and the coloniality of knowledge had to do with impact of colonization on the different areas of knowledge production, coloniality of being would make primary reference to the lived experience of colonization and its impact on language. (p. 242)

Maldonado-Torres (2007) builds on the writings of Argentine-Mexican writer Enrique Dussel's to unfold his understanding of the coloniality of being. Using Dussel's framing of Spanish conquistador Harnán Cortez as a subjectivity embodying a spirit of "ego conquiro," Maldonado-Torres (2007) points out that this violent and subjugating idea of self pre-dates the Cartesian idea of "ego cogito." Descartes "could not observe an ego conquiro at work in the consciousness of the European … and how it made everyone to take for granted the inhumanity of colonized peoples" (Maldonado-Torres, 2007, p. 252). The coloniality of being, therefore, points to a hierarchically organized and racially structured understanding of the humanity of the colonizer and the inhumanity of the colonized.

Even more important for this study is the idea of the coloniality of knowledge. This study revolves around epistemic questions of knowledge validity and whose knowledges are taught and whose are not; the coloniality of knowledge offers a framework for analyzing the privileges and punishment of different forms of knowledge. The coloniality of knowledge refers to "the normalization of the specific concepts and forms of theoretical knowledge which support relationships of subordination" (Richardson 2012, p. 540). Mignolo (2002) traces the roots of subordinate knowledge forms to "the macronarrative of Western civilization and its origins in ancient Greece" (p. 58) and points out that coloniality "brings to the foreground the planetary dimension of human history silenced by discourses centering on modernity, postmodernity, and Western civilization" (p. 61 -62).

This study interrogates the discourse of public education curricula and underscores the ways in which those curricula work to erase localized knowledges of place and simultaneously maintain the domination of the globalized corporate capitalism. I leverage the coloniality of

knowledge to center traditional Appalachian knowledges and workways as knowledge that support relationships of cooperation and community survival.

The Decolonial For and Otherwise

For my study, the "decolonial option" (Mignolo & Walsh, 2018) is particularly useful because it focuses on the creation of patterns that are different than and stand in "otherwise" to the coloniality of power. While I rely on the tradition of anti-colonialism for its clear articulation of neocolonialism and traditions of place as sites of resistance to the same, I am not interested in only critiquing or taking a stance against neoliberal educational practices. In conducting this action research project, I was interested in gesturing towards and opening up new possibilities of the role that public education can play in local food systems. The ideas of the decolonial for and otherwise (Mignolo & Walsh, 2018) provide me the thought-tools to theorize this step beyond mere resistance.

For Catherine Walsh, an American decolonial theorist living and working in Ecuador, decoloniality is "a form of struggle and survival, an epistemic and existence-based response and practice - most especially by colonized and racialized subjects - *against* the colonial matrix of power in all of its dimensions, and *for* the possibilities of an otherwise (Mignolo & Walsh, 2018, p. 17). It is these understandings of "for," this "otherwise," that I leverage in this study. Walsh continues to describe the decolonial *otherwise* as:

> modes that confront, transgress, and undo modernity/coloniality's hold. It is the for that fosters, signals, sketches pro-positions of affirmation and re-affirmation that disrupt and unsettle coloniality's negations. It is the for that takes us beyond an *anti*- stance. (p. 18)

The local food projects that this study engages were propositions, articulated by youth and adults, for ways of being in community with one another that were an otherwise to foods purchased from a corporate food distributor. We didn't engage in these local food projects to resist anything; we did it *for* something- specifically for better food and the living continuation of our agricultural heritage.

Both the anti-colonial and decoloniality frameworks investigate and critique manifestations of the colonial dynamic. They both emphasize the role of European colonialism in erasing the histories of non-European peoples across the globe and they both critique the Eurocentric system of knowledge as a mechanism that continues that erasure. Furthermore, both anti-colonialism and decoloniality acknowledge the transhistoric (Kempf, 2006) nature of colonialism and acknowledge the ways it defines human relationships in general. As Dei and Asgharzadeh (2001) put it, the "goal is to question, interrogate, and challenge the foundations of institutionalized power and privilege, and the accompanying rationale for dominance in social relations" (p. 300).

I'll use the metaphor of a card game to describe the distinction I see between the two perspectives. When you're sitting at a card table and realize the dealer has stacked the deck and you'll never win as long as you continue playing at this table, it is one thing to point out the injustice and demand it change; it is quite another thing to get up and leave the table. While the former could lead to the house changing its practices, it still leaves the agency in the hands of the house. The latter option leaving the table - locates the agency with the player. In this study, I was very interested in not only what would happen when agency is put in the hands of students, but I was also interested in what kind of game we could play if we left the table with the stacked deck.

Theories of coloniality also work with one more term that I find very powerful and useful in understanding what we did in the farm field and with the seed savers. Columbian artist and activist, Adolfo Albán Achinte coined the term “re-existence” and it has been picked up by a small group of decoloniality writers. Re-existence is “the redefining and re-signifying of life in conditions of dignity and self-determination, while at the same time confronting the bio politic that controls dominates and commodifies subjects and nature” (Mignolo & Walsh, 2018, p. 18). More succinctly, it is “a re-valuation of what has been made invisible or devalued by the modern-colonial order” (Mignolo & Vázquez, 2013).

Russian theorist Madina Tlostanova, (2012) suggested that post-socialist discourse look at re-existence “as a model of positive (re)creating of worlds, lives and subjectivities. Such an impulse is based not on negation or self-victimization, nor on violence, but on the creation of something different" (p. 138). A group of Afro-Latinx scholars also used the concepts to frame a dialogue “on the conditions of oppression experienced by Indigenous and Afro-Latinx peoples ….to point toward possible horizons of liberation from exchanges that can build networks of solidarity” (Bento, Ruiz Ponce, Sempertegui & Di Paolo, 2018). Other than these few references, re-existence is a relatively untheorized concept; this study’s application of the concept to the educational experiences of students engaging in local food systems in rural Appalachia will be a significant contribution to theories of decoloniality. It is my hope that, through our projects last summer, we re-existed into knowledges and practices of place that had been commodified and/or disappeared by the coloniality of power and the neoliberal education system.

In summary, this research project recognizes a deterritorialized manifestation of colonialism in which global corporate capital is the colonial agent and everywhere is a point of extraction. Further, it acknowledges that modernity and colonialism are co-constructive and, as a

result, our 21st century relations of power, identity and knowledge are coined by coloniality. We all live in the colonial matrix of power (Mignolo, 2012) and there is no privileged place from which to deconstruct it.

It follows that this study understands both the American 21st century public education and the traditional Western process of knowledge production as neocolonialist endeavors. The goal of these systems is to preserve an epistemic and ontological environment (coloniality of knowledge) that reifies hierarchical, extractive structures (coloniality of power). The public education system has the additional task of creating a society that accepts globalized capitalist extractions as righteous and is adequately prepared (philosophically and practically) to function in support of that extraction. To ensure dependency on globalized structures, the education and knowledge production systems work to eradicate localized knowledges of self-sufficiency. Conversely, anti-colonialism recognizes local knowledges and ways of knowing as sites of resistance to neo-colonization. Decoloniality highlights practices that create otherwises to the colonial matrix of power. This study regards the global corporate food system's administration of public school cafeterias and high schools' curricula silence around how to grow your own food as clear examples of neocolonial control. The activities of this study - students growing food for their cafeteria and gathering local heirloom seeds - are specifically and intentionally constructed to generate an otherwise to the global food system as well as a re-existence into our self-sustaining local food system.

Other frameworks from the literature

Although the theoretical perspective is the heart and backbone of the study, the project lies at the intersection of several academic conversations. I'll nest the event of the research in those literatures to help me articulate their significance. At its core, this is a dissertation about the

interactions of the U.S. public education system and the global food system (GFS). My analysis of the global food system is focused on commodification of food (Robbins, 2015; Vivero-Pol, 2017) through seed oligarchy (Howard 2015; Torshizi & Clapp, 2019) and biodiversity loss (Fowler and Mooney, 1990; Heald and Chapman, 2012). I am interested in cracks in the hegemonic system (Brownell, & Warner, 2009; Hendrickson & Heffernan, 2002) and explore the frame of food sovereignty (Desmarais, 2005; Coté, 2016; Patel, 2009) as a counter narrative to food as a commodity. I am particularly interested in its application to programming in the U.S. (Alkon & Mares, 2012; Cambell & Veteto, 2015; Meek et al., 2019) and as the basis for educational programming (Ahmed et al., 2017; Hilimire, Gillon, McLaughlin, Dowd-Uribe, & Monsen, 2014; Valley, Wittman, Jordan, Ahmed, & Galt, 2018).

At the nexus of the education and food systems is the school cafeteria and I use the literature around the National School Lunch Program (Lavine, 2008; May et al., 2013; Peterson, 2009; Ralston & Newman, 2015; Turner et al., 2017) to provide historic context and current evidence for framing the school lunchroom as an oft-overlooked space of privatization in public education. Agricultural education also is a bridge between the two macro conversation of food and education and I use agricultural education historians (Dimitri, 2002; Nolin & Parr, 2013) to help me understand agricultural education in the context of neoliberal education.

The farm to school movement (Joshi et al., 2008), particularly farm to school procurement programs (Conner, Izumi, Liquori, & Hamm, 2010; Gunter & Thilmany, 2016; Izumi, Wright, & Hamm, 2010; May, Standing, Chu, Gasper, & Riley, 2013) and the use of food hubs (Roche, Conner & Kolodinski, 2015; Schmit, Jablonski, & Kay, 2013) provide a rough analogue for some of my study's programming. I hold my work up to that literature. I also use a strand of the farm to school literature (Bloom & Hinrichs, 2011; Conner et al., 2012; Hinrichs,

2000; Izumi et al., 2010; Ostrom, Kjeldsen, Kummer, Milestad, & Schermer, 2017; Sage, 2003) that is built on Polanyi's (1957) concept of "embeddedness" to develop my own idea of "embedded agency."

As this is a dissertation in educational leadership, knowledge and power figure prominent. I rely heavily on the decolonial and anticolonial theorists to help tell the story of knowledge production (Dei, 2006; Wane, 2008) and knowledge destruction (de Sousa Santos, 2015; Paraskeva, 2016) in the modern/colonial age.

Finally, I place 21st century public education in its climatological, geo-temporal context (Herrando-Pérez, Bradshaw, Lewandowsky, & Vieites, 2019; IPCC, 2018 & 2019; Ripple et al., 2019; WMO, 2019) as I ponder how the institution can stay relevant in the age of global climate collapse (Burke, et al. 2018; Hansen et al., 2016; Kulp & Strauss, 2019; Steffen et al. 2018).

Section II: Study setting

Section Two is a protracted description of the modern/colonial state of U.S. public education in the early 21st century as manifested in my study site. There I develop a thick description of the physical, cultural, political and epistemic context for the study.

Chapter 3. Bailey County

For doctoral research in educational leadership, I spent an unusual amount of time in dirt. In fact, this dirt and the people who make their home on it are at the center of my research. This wasn't, of course, just any dirt or just any people. Qualitative research is about "interpreting the social world from the perspective of those who are actors in that world" (Glesne, 2011, p. 8). I conducted my research with the red clay soil of Bailey County, NC and the children of the white, settler colonialists that moved into the area approximately two centuries ago.

Those white settlers moved into a mountainous area that had been occupied by a people for thousands of years. The settlers called those people the "Cherokee" and white people today still call the first people of this place "Cherokee." That is, however, not what those first people call themselves. In fact "Cherokee" is not even a word in the "Cherokee" language. Before Desoto and the conquistadors brought their steel and their smallpox and before the Scottish and Irish refugees from European industrialization came, the people who lived in this part of the world called themselves "Giduwagi." "Giduwa" means "dirt that belongs to a third person." It indicates that the people who lived here did not own the land, that they were merely guests on land owned by someone else, specifically: the Creator. The suffix "-gi" means "the people of" or "belonging to" so the Guduwagi were the people of the dirt owned by the Creator (Tom Belt, personal communication). So it is as an acknowledgement of the violent colonial history of this place that I describe the site and participants of my research as the dirt and the people who now live on it.

This place, this dirt, is now known by the public administrative title of Bailey County. The lines of the County were drawn in 1833 to enclose a portion of land owned by John Blount. Blount was a merchant, politician, slave owner and, one of the largest landowners in U.S. history

(Masterson, 1965). Early white settlements of Bailey were sparse and unlawful. Until 1777, the Eastern Continental Divide was considered the border of white westward expansion (Holden, 2001). The rugged mountain terrain channeled most white settlers along easier passes that lead to Kentucky and Tennessee; whites entered Bailey mostly from the west through Tennessee (Schwartzkopf, 1985). The census of 1790 counted 300 white people living in the watersheds that form Bailey County; their Scotch-Irish and English surnames would be familiar to anyone living in the county today: Tipton, Higgins, Buchanan, Ray, Young, Anglin and Honeycutt, among others (Holden, 2001, p. 18).

Unlike central and northern Appalachia, there is no coal under the ground in Bailey County; while there was some mining, it was neither a significant contribution to the economy or environmental degradation of Bailey County. However, between 1912 and 1921, the mountains of Bailey County were denuded and their spruce, balsam and hardwood timber shipped out of the county on private, narrow-gauge railroads and turned into profit for Philadelphia investors (Schwartzkopf, 1985) Those railbeds have since been paved over and serve as a large portion of the county's roads.

The topography of the County is dominated by a u-shaped mountain range to the south; the range contains five of the ten highest peaks east of the Mississippi River all above 6,000 feet (Higgins, 1982). In Bailey County, the headwaters of headwaters form as vernal flows before gathering into creeks and branches and forming the county's two main rivers which wind through the county before joining together and rushing down a steep gorge into Tennessee and on their way to the Gulf of Mexico. The view from any of these mountains is amazing. The undulation of these ancient, green forms seems to massage your eyes and soul at the same time.

Despite the natural beauty, the populations of Bailey County has stayed relatively low; its 18,000 residents are spread out over more than 300 square miles. Nestled in the molars between mountain ranges, the county seat was created the same year as the County. With its one high school and bucolic town square, the population of the county seat more than doubles in the summer and leaf season and then quiets back down for the winter.

I center Bailey County not just to set the scene for my research; the centering itself is part and parcel of the theoretical perspective that I bring to my work. By centering Bailey County, I speak with the anti- and de-colonial writers who see place and the knowledges of place as sites of resistance to and liberation from the oppressive, exploitative relationships of the modern/colonial matrix of power (Dei & Asgharazadeh, 2008; Walsh & Mignolo, 2018).

With its irreverence for place, neocolonialism divorces the locus of exploitation from geography. In the discourse of 21st century neocolonialism, global capital is the colonial agent and the local (i.e. everyone else), the colonized (Wallerstein, 2005). Because the neocolonial global agent is divorced from geography, the colonized local is characterized by the act of identifying with any particular place at all. Just as the term "Indigenous" whitewashed the identities that the First Peoples of Africa or India or North America had before the arrival of European colonialists, a rhetoric of placelessness in a modern world is a tool of neocolonial domination. Therefore, I afford significant page real estate to the people, place and traditions of Bailey County, particularly the County's elders and the stories of their elders, to give context for a "reclamation of the past, previously excluded in the colonial" (Dei, 2006).

Chapter 4. Sternhill Farm

Lewis: Some of our neighbors, see, it was their land, but they let us use it to grow crops and they put, like, a little storage facility on it. And we've always saved seeds, so…

Me: So do you guys still grow and save seeds?

Lewis: Not so much because we ain't got no land to do it.

The farm on which the students grew produce for their cafeteria was located on the other side of the county from the high school. Sternhill Farm is a 25 acre tract of bottom land that runs for half a mile along a tributary to the South River. In recent years, the land was purchased by a wealthy family, the Greens, who wanted to see it placed in agricultural conservancy. Their reasoning was that "most of the land in WNC that is flat and desirable is priced for development. Farmers, in essence, can't afford it" (TRACTOR, 2016). According to the Southern Appalachian Highlands Conservancy, the organization that helped the Greens put Sternhill into conservancy, "[o]nly 2% of the soils in WNC are flat enough to farm and it's unknown as to how much of that 2% is already taken up by development" (TRACTOR, 2016).

This tension between residents of WNC wanting to use the land to grow food and capitalist wanting to develop the land for profit is as old as white settlement itself. North Carolina opened its western lands for sale after the Revolutionary War and that set off a "speculative rampage" on the part of Philadelphia capitalists and wealthy, eastern Carolina planters (Dunaway, 1996, p. 57). At one time, one family owned all of eastern Tennessee and much of southwest Virginia; one brother owned half of the land that is now Bailey County (Masterson, 1965). By the time poor Scottish and Irish settlers made their way up to the slim pickin's of the steep WNC mountains, the majority of the land was already owned by investors

(Dunaway, 1996). This, of course, is not a uniquely WNC story; the enclosure of the commons in the English-speaking world dates back to the 14th century (Vasudevan, McFarlane, & Jeffrey, 2008) and, as such, has been a primary mechanism of colonialist appropriation for hundreds of years.

Today, capitalist markets continue to exert pressure on Bailey County farming. With the rise of post-WWII consumerism, farming in the county has declined precipitously since the middle of last century. The number of farms in the county dropped from 2,152 in 1954 to 369 in 2017; total acres in agricultural production is a quarter of what it was after WWII (USDA,1954 & 2017). The real estate market has known exactly what to do with the fallow land. According to a prominent local realtor, "view" is the primary variable that drives Bailey County's real estate market (Heather Hat, personal communication). The Green family was reacting to this pressure when they acted to preserve the Sternhill land for agriculture use.

Sternhill is managed by PLOW, a local, non-profit food hub. A food hub is “a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand” (Barham, Tropp, Enterline, Farbman, Fisk, & Kiraly, 2012, p. 4). PLOW was created by the County government in 2012 to support the local farmers and foster local food as a driver of economic development for the county (Tuschak, 2018). PLOW’s central function is to give local, small-scale farmers access to larger markets by aggregating and distributing the produce from Bailey and surrounding counties (TRACTOR, 2019). Food hubs have sprung up nationally in the last decade as an organizational model to support the local food economy (Schmit, Jablonski, & Kay, 2013). Although they note a “paucity

of data detailing actual improvements in farmer income," Sitaker, Kolodinsky, Pitts, and Seguin (2014) offer that food hubs "show promise to benefit all participants" (p. 12).

Food hubs have also been involved in connecting farmers with their local schools' cafeterias. An evaluation of a USDA farm-to-school grant in Vermont provided a landmark analysis of food hubs' involvement in schools institutional purchase of locally-grown food (VAAFM, 2015). The report gives particular context for PLOW's involvement in this current student-grown food project. Each four of the food hubs in the Vermont study supported schools' procurement of locally grown food differently. Their activities ranged from matchmaking between farmers and school staff; aggregation and delivery of produce to schools; provision of shared facilities, storage and processing capacity; development of special product for schools; and fostering community support for and engagement with the farm-to-school programs (VAAFM, 2015).

None of the food hubs in that study or in any other food hub literature mention working with students who are growing food for their cafeteria. This is an area in which the current study makes a unique contribution to the discussion of local food systems. In their secondary analysis of the Vermont farm-to-school program, Roche, Kolodinski and Kay (2015) site "social capital in the form of viable partnerships and relationship-building" (p. 81) as a key benefit of the food hubs' involvement in the schools' institutional procurement of local food. The rare presence of students in the current study introduced a different kind of social capital than had otherwise been reported in the literature. While Roche, Kolodinski and Kay (2015) focused on how the development of relationships between farmers and school staff improved outcomes for farm to school projects, our project unearthed how the students' involvement improved relationships between the food hub and the community at large. The social capital created by 100+ smiling

kids growing their own food on PLOW-managed land was invaluable for the politically embattled food hub.

In addition to its aggregation and distribution services, PLOW also manages the Sternhill property. The farm is divided into several tracts and those tracts are leased, rent free, to Bailey County farmers under the condition that they will distribute the produce they grow there through the hub. From the inception of the project, one tract had been made available to high school's FFA program as a site on which students could get first-hand experience growing commodity produce for market. Importantly, before this research began, PLOW had gone through the process of getting the Sternhill Farm "GAP certified." GAP certified farms submit to voluntary audits that the produce grown on the farm is "produced, packed, handled, and stored as safely as possible to minimize risks of microbial food safety hazards" (USDA, n.d.). Farmers are required to have GAP certification when selling directly to the USDA.

Almost all school cafeterias in the U.S. are part of the National School Lunch Program (NSLP) and the NSLP is a program of the USDA; therefore, all produce sold to schools' cafeterias must be grown according to GAP standards (USDA n.d. a). The time and expense of becoming GAP certified is often cited by local farmers as a central hurdle in providing local food to school cafeterias (Feenstra et al., 2017; Thompson et al., 2014). The Sternhill Farm was already GAP certified through PLOW; with the federal bureaucracy already negotiated, all we had to do was grow and process the food.

Chapter 5. Highland High School

I was able to set up these local food projects in BSC because of my position in the schools. For six years prior to the start of the research, I worked in Bailey County creating and executing student programming as part of federal grants in the district that help get more kids to college. I was a known entity to the kids that I recruited and trusted by the district and school administrations.

That access was key to the success of the program because Bailey County Schools, like many rural schools in Appalachia and across the country, can be very insular. A small, rural district, BCS serves 8,000 students in 5 elementary schools, 2 middle and one high school spread out over a 300+ square mile landmass. Every school day, BCS students get on buses that follow creeks down hollars to join the county's single east-west highway that parallels the tributaries of the country's river systems. It is not odd for a student to be on a bus for an hour or more both to and from school.

When a BSC child gets off the bus, they have a 50/50 chance that the principal of their school is immediately related to half of the other principals in the district. Before the last Superintendent retired, the district's chief executive was married into the dynasty that has run the district for decades. I think the factor that got me my job in the district was the fact that the senior member of the search committee had been my 8th grade PE coach. Although the district was recently commended for the percentage of its teaching staff that has earned Nationally Board certification (NBPTS, 2019), the majority of BCS teachers and administrators got their degrees at one of the handful of regional colleges within an hour and a half drive.

Highland HS is two main buildings connected by an elevated corridor with a walkway underneath. The original architectural plans were drawn for a school in Florida and "the

breezyway" was intended to provide kids the opportunity to be outside as they changed classes. In the 1980s it also offered kids the opportunity to terrorize other students by hanging them off the breezeway. I can remember seeing more than one kid dangling upside down 30 feet above the pavement with a couple wise guys holding onto their ankles. As society became more litigious and risk averse, the breezeway was closed in with windows. It is now much nicer to walk from one building to the other during the Appalachian winter.

Building A houses the administration offices, the auditorium and most of the classrooms including a full auto garage, a huge bay for the wood shop and an equally huge bay for the agriculture classes. Building B houses the science and early childhood education class, the gym and the school cafeteria. Approximately eight hundred kids and a hundred faculty and staff walk the halls each day. In a small community like Bailey County, teachers and students frequently know each other outside of school as well, either as a coach, a family member or they go to the same church. That multiplicity of roles translates into students receiving a particularly high level of personal attention and care from the staff at their school. I have never worked with more sincere and well-intentioned people.

Pedagogically, BCS is firmly rooted in the educational zeitgeist of our time. The district and high school's mission both state an intention "to help all students to achieve their full potential as life-long learners and global citizens." In its focus on global goals for local education, the district's mission statement is in lockstep with both state and federally articulated goals for public education. For years, the explicit goal of state and federal education policy was to prepare children to compete in the global marketplace (NC State Board of Education, 2017; Mechaber, 2011; National Governors Association, 2010; Partnership for 21st Century Skills, nd). The rhetoric of global citizenry firmly roots the focus of BCS and U.S. public education in the

narrative of globalization. Globalization is the idea that "capital has now become a free-floating entity, organizing production transnationally, independently of national boundaries" (Rao, 2000, p. 173). Undergirding the narrative of globalization is neoliberalism.

The basic tenet of the neoliberal doctrine is that goods and services – including education – are most effectively delivered by the free market and therefore should be privatized (Spring, 2008). Neoliberalism includes "the dramatic expansion of that eloquent fiction, the free market; the drastic reduction of government responsibility for social needs; the reinforcement of intensely competitive structures of mobility both inside and outside the school" (Apple, 2001). In short, neoliberalism is the belief that the commons should be enclosed; this includes the commons of public education.

The neoliberal agenda for education is characterized by expansion of the free market; reduction of government investment in education; competition between schools and between teachers and between students; centralization of curriculum; corporatization of governance structure; and an accent on testing (Apple, 2001; Giroux, 2010; Spring, 2008; Marginson, 2002; de Oliver, M., & Briscoe, 2001). Further, the marketization of education positions global capital as the arbiter of valid knowledge to the exclusion of other, local knowledges (Richardson, 2012). The neoliberal push to privatize public education shifts the locus of curriculum creation away from the school districts and into the boardrooms of private, educational resource and testing companies (Hill & Kumar, 2009). Giroux (2010) warns that what is lost with the neoliberal marketization of education "are the economic, political, educational, and social conditions that provide a supportive culture for democracy to flourish" (p. 188- 189).

My experience in BCS has taught me to recognize "instructional time" as a piece of neoliberal education argot. It is measured by the minute each day and jealously guarded from

such threats as excessive bathroom breaks or field trips. BCS leadership takes as gospel Raleigh's neoliberal, edumetric directives regarding end-of-grade test scores, attendance and graduation rates and, more recently, ACT scores. In staff meetings and faculty observations, EVVAS growth scores are used as an operationalization for school and teacher effectiveness. Created by a global business and data analytics software company, the EVVAS software uses a student's end-of-grade test scores as input for a "value-added model" that is meant to describe a teachers "effectiveness" (SAS, 2020). Value added teacher evaluation models such as EVVAS have been roundly criticized for their assumption that teachers are responsible for and control student leaning and for their heavy reliance on state-administered end-of-grade testing; reliability and construct-validity have also been called into question (Robinson, 2017). Moreover, the tool applies a corporate capitalist vocabulary and approach to the inherently non-business activity of teaching. The fact that it is used by the State of NC to describe the quality of a teacher's teaching is a crystalline example of private, corporate inroads into public education.

To increase its performance on these metrics, Highland High School has dedicated significant resources to para-curricular programming such as school-day ACT prep sessions and summer credit recovery bootcamps. These interventions almost always use corporately produced, publicly purchased online preparation and/or remediation software. These activities center neoliberal metrics as the school's learning goals and normalize the narrative that schools should be run as businesses.

Ironically, these edumetric prep programs at Highland High are paid for by the federal grant that I administrate, the GEAR UP grant. The core of GEAR UP's service provision model is the cultivation of "public-private partnerships" in participating schools (Chough, 2018). "Public-private partnerships" have long been recognized as neoliberal wolves in sheep's

clothing, because they provide an avenue for private corporations to establish their product as a core service of public schools (Linder, 1999; Miraftab, 2004). Private companies participate in the grant-funded, time-limited partnership on that hope that, once the grant money runs out, the schools will be so dependent on their service that the district will pick up the cost with hard money. I have sat in meetings in which well-intentioned people have discussed at length the administrative acrobatics required to continue funding services that had been provided by expiring grant programs; it was as if the well-being of the service provider was paramount.

A huge beneficiary of the public-private partnerships are educational technology companies (Juneman & Olmedo, 2019). As a 1-1 school, Highland High puts a Chromebook in the hands of every Freshman when they walk through the door and that laptop stays with the student through their Senior year. While the cost of the Chromebooks don't distract local resources (they are paid for with grant funding), they act as a portal and technological platform for numerous pieces of educational software - USATest Prep, Tutor.com, PLATO - to which the school subscribes.

In a truly macabre twist, the grant funding that pays for Highland's Chromebooks comes from the Golden Leaf Foundation. The Foundation was established through monies paid by cigarette manufacturers to the state of NC as part of the Master Settlement Agreement (Jones et al., 2007). The Master Settlement Agreement of 1998 was the largest civil litigation settlement in U.S. history in which four cigarette companies settled with 46 states, four territories, Puerto Rico and DC to "recover costs incurred to treat sick and dying cigarette smokers" (Public Health Law Center, 2019). So the penance paid by one corporate industry for knowingly decimating the health of entire generations with an addiction to nicotine now is enabling another corporate

industry to get entire generations addicted to the dopamine hits they get from the digital experience (Tschaepe, 2016).

As it turns out the new addiction is even more deadly than the old one. As Dr. James Lavine of the Mayo Clinic told the LA Times: "Sitting is more dangerous than smoking" (MacVean, 2014). Prolonged sitting is associated with increased risks of cancer, type 2 diabetes, cardiovascular disease, and back pain (Van Uffelen et al., 2010). Chromebooks themselves require students to be stationary, and by giving digital devices a central role in the education process, schools are signaling to students that they not only condone but place high value on interacting with the digital. Indeed, every time I walk through the commons area at Highland HS during mid-class breaks, it is like I am walking through a sea of silent cranes. The student's heads are bowed in mute interaction with their phones. We've traded one deadly addiction for another. The logos of the profiting corporations have changed, but this time public education - Highland HS included - is pushing the addictive substance.

By focusing the attention of the public education system on the agendas and technologies of the global economy, neoliberal public education privileges the desires of multinational organizations over the development of local, community economies (Schafft, 2010) and the epistemology of global capital over local ways of knowing (Wane, 2008). In this respect, neoliberal public education exhibits the intention and mechanisms of a colonial education system. In the next chapter, I trace the metamorphosis of territorial colonialism into economic neocolonialism and frame the neoliberal education model as the rightful inheritor and embodiment of its colonial pedigree.

Chapter 6. Highland HS's cafeteria

In many ways, Highland High's cafeteria is like school cafeterias across the U.S. It is a rectangular box with brick walls and one-by-one flecked floor tiles that mask dirt and wear. The wall that runs along the breezeway is almost all windows and gives the room a fishbowl effect. The space can hold about 200 kids. The tables are low, grey Formica structures with small circular, plastic seats fixed in positon; the tables fold in half and roll around for easy floor cleaning. The walls are lined with posters of teen pop stars of the 2,000s sporting milk mustaches and cajoling kids to drink more milk.

The back wall is cinder block painted the school's kelly green. The wall has two "In" openings and two "Out" openings to allow kids to snake along dual lunch counters and past one of two cash registers. The lunch counter themselves are 20 foot long stainless steel units with warming baths and a sign on the glass breath guards letting students know they may take two servings of fruit and two vegetables however they must take at least one serving of one of them for it to count as their meal. What counts as a "meal" in school cafeterias is a big deal and I'll come back to this at length soon.

Behind the lunch counter the floor turns to red ceramic tile and everything else - ovens, sinks, sterilizers, an enormous draft vent in the middle of the space - is stainless steel. HHS's cafeteria has enough kitchen equipment to cook approximately half its meals from scratch. Five women work in the lunchroom to prepare and serve an average of 80 breakfasts and almost 280 lunches per day. Ms. Vale manages the group of women who range from their mid-40s to their late 70s. Like the majority of cafeteria workers in the U.S. (Gaddis & Coplan, 2017), the women who prepare and serve lunches at HHS are all part-time employees and not eligible for benefits. Although they don't always cook from scratch at work, at home all of the women are or have

been actively engaged in self-sufficiency agriculture. They put out gardens at home and can what they grow.

Along the back wall of the dining room, propped up on a table underneath the certificate touting a 99.5% sanitation rating, is a Pizza Hut poster. It is about 3 feet square, printed in the trademark red, black and white and framed in black plastic. The poster declares that Pizza Hut is "Now available for lunch;" a 8½ by 11 sheet of paper stuck into the frame says students can get Pizza Hut pizza in the cafeteria every Monday and Friday.

The cafeteria is also home to four Aquafina drink coolers - one by each register and two along a side wall. The coolers at the cash registers are stocked with Mountain Dew, Coke, Diet Coke and bottled tea; the ones along the wall have a mix of bottled water and Pepsi products. There's a sign on the side of one of the coolers by the cash register letting kids know that they can now buy five new flavors of Mtn. Dews energy drink "Kickstart." Much like the grocery store checkout aisle, the space around the cash registers is crowded with coolers of ice cream and racks of cookies, chips and other snack foods for sale.

All of these foods - the pre-packaged snacks and the commodity foods that are prepared by the women who work in the cafeteria - come off the back of a US Foods truck. That truck is driven by a guy named Randall. Every Wednesday, Randall backs the truck up to the cafeteria's loading dock and handtrucks packages of foods that were prepared far away into the cafeteria.

Like 97% of public schools in the US, the cafeteria at Highland High participates in the National School Lunch Program (NSLP) (Murdoch et al., 2016). In 2014, approximately 30.5 million school children ate lunch in the school cafeterias across America; those lunches represent a federal investment of $12.2 billion in child nutrition (Murdoch et al., 2016). The NSLP creates a regulatory environment that determines what ends up on kids' lunch trays.

The NSLP began in 1946 with Congressional passage of the National School Lunch Act; the Act aimed to "safeguard the health and well-being of the Nation's children and to encourage the domestic consumption of nutritious agricultural commodities and other food" (Richard B. Russell National School Lunch Act, cited in Peterson, 2009, p. 629). The Act created a system in which the USDA purchases commodity foods directly from U.S. farmers and then donates them to school districts across the country to be used in school cafeterias. This marriage to the USDA commodity market leaves the NSLP open to the critique that school lunch in America is - at its core - subservient to the profit considerations of the agricultural sector as well as corporate food and food-service industries (Lavine, 2008; Mortazavi, 2011; Peterson, 2009). Over the decades the bill has been amended several times, most recently as the Health and Hunger-Free Kids Act of 2010 (Ralston & Newman, 2015).

The NSLP's operational structure also makes this public program susceptible to encroachment by private interests. By law, local child nutrition programs (CNPs) that participate in the NSLP are required to function as stand-alone, non-profit entities; their budgets are separate from the rest of the school district's and they're required to operate a balanced budget (May et al., 2013). School districts pay out-of-pocket for the provision of the meals and are reimbursed by the USDA for meals they provide. The content and composition of the meal must meet nutritional guidelines to qualify as reimbursable; the amount per meal that the federal government reimburses a CNP varies by the family income of the child receiving the meal. This operational structure creates the basic challenge of school cafeterias – what Ralston & Newman (2008) call the "trilemma": How do you serve meals the students will want to eat and meet the nutritional guidelines at a cost that is covered by the USDA reimbursements?

The private market has always been more than ready to help the NSLP solve its dilemma. “By the end of the 1970s, many school lunch advocates saw privatization as the only way to keep lunchrooms afloat” (Lavine, 2008, p. 8). Today almost a quarter of CNPs contract some or all of their food service operations to a private catering companies in the hope that the companies will be able to run the cafeteria cheaper than they will (Murdoch et al., 2016). Highland High does not contract with a catering company but it does serve a lot of competitive foods.

The sale of “competitive foods” in the lunchroom is another private market tool that CNP use to balance their budget. Competitive foods are any foods sold in the school cafeteria and outside of the NSLP; these include vending machines snacks or commodity foods served a la carte (Ralston et al., 2008). The ice creams, cookies and Kickstart Energy drinks in HHS’s cafeteria would all fall under the umbrella of a competitive food; the BCS’s CND prefers to call them by the other NSLP designation: “a la cart choices.” Unlike food served through the NSLP, districts can not apply to be reimbursed for the competitive foods they sell.

Despite substantial evidence that the presence of competitive foods reduces participation in the lunch line and increases the food wasted from NSLP trays (Ralston et al., 2008) as well as leads to a higher intake of total saturated fats and a lower intake of fruits, vegetables and milk (Story et al., 2009), corporate food companies are able to exercise sufficient legal pressure to keep their products in schools. In 1983 the USDA attempted to regulate soda and candy for sale in schools and the case was struck down by a federal court (Mortazavi, 2011). The plaintiffs from the soft drink industry successfully argued that the NSLP legislation did not authorize the USDA to regulate other foods in public school.

The most recent reauthorization of the National School Lunch Act, the Health and Hunger-Free Kids Act of 2010 (HHFKA) allowed the USDA to regulate nutritional standards for

competitive foods and ended the practice of them being sold below costs (DiSiena, 2015; Ralston & Newman, 2015). HHFKA also increased the rate for a reimbursable meal by 6 cents. However, a number of studies have found that the additional 6 cents are not enough to off-set the costs of the updated meal pattern that the reauthorization mandated (Ralston & Newman, 2015). During the first year of HHFKA's implementation, a quarter of all public school food programs were reimbursed for less than 90% of their cost expenditures; small, poor districts were the most likely to fall below the breakeven point (May et al., 2013).

With only meals and snack sales as income, child nutrition directors often find themselves tasked with making the lunches more attractive (Ralston et al., 2008). Again, the private market is happy to help with NSLP-compliant versions of popular corporate food brands. In fact, the Pizza Hut pizza that's served twice weekly in HHS's cafeteria is not a competitive food. "A+ Pizza" is a Pizza Hut product made especially for school; it conforms to the NSLP guidelines and is servable as a "Smart Snack Entree" (Pizza Hut, 2019). Indeed, Lacee Fox, HHS's child nutrition director, reported that more kids come through the lunch line on "Pizza Hut days" than on regular days making those days her most lucrative.

Public school cafeterias are frequently-overlooked spaces of privatization in public education and HHS's cafeteria is no exception. There is a gaping irony, though, in the contrast between the private and professional lives of the women who cook and serve the food at HHS. By day they put their love and care into feeding students food from the global food system and "of an evening" they work their own gardens, tending the skills passed down to them from their own elders.

The following exchange captures the double lives that the women in HHS's cafeteria live. It also foreshadows a major theme of this dissertation: that southern Appalachia finds itself in an

acute moment of intergenerational loss of cultural knowledges of place and self-sufficiency. The passage below is an excerpt of the interview I conducted with the women who work in the cafeteria. We spoke a couple weeks after the sweet potatoes had been served; due to their time constrictions, the interview was a group interview. The exchange below describes that loss as a function of the technologies of the global food system and it establishes a timeframe for the loss. Both Deene and Ms. Vera are in their early 50s; Jackie is in her late 60s.

> Deene: When this [elderly] generation is gone, my generation doesn't know much about it. I was shocked when I worked for [local farm stand owner] Harold that my generation didn't know how to cook and can…. We got some soup beans in a pack that was already cooked. All you had to do was stick it in a microwave for 5 minutes and it was done. Soup beans. And they was an older lady that come in, and she said, "There is no wonder our children don't know how to cook." And she held up that pinto bag. She said, "It's microwaveable."
>
> Jackie: It's just like quilting or anything; it's passing.
>
> Denne: We're losing, we're losing generations of it.
>
> Ms. Vera [Standing up] I'm gonna let you'uns finish talking with him and I'm going to cut these pizzas. (Interview, December 16, 2018)

Knife to the heart! There's a lot going on in this short conversation about traditional Appalachian foodways and knowledge. Jackie grounds the art of scratch cooking in a habitus (Swartz, 1997) of Appalachian workways like quilting. There is broad consensus and lamentation that these traditional workways and knowledges are not being passed down to subsequent generations. Deene's claim that her generation "doesn't know much about it" means that her children's generation - who would be slightly older than HHS's current students - stand

even less of a chance of knowing about it. This dying out is now in its third generation. Importantly, these workways are not just precious to the women, they're necessary for survival. And from this robust and poignant conversation, Ms. Vera had to extract herself to prepare corporate food system produced Pizza Hut pizza for the children they serve in the cafeteria.

I will return to this theme at length but, at this juncture, it bears stating the obvious: This conversation happened in a building that was built and is used for the sole purpose of the intergenerational transfer of knowledge. The people who so lovingly feed our children are aware of and abhorred by the intergenerational demise of local knowledges of place and survival. Yet this very building and these very people - because of their role in the neoliberal public education system - are required to act in ways that suppress, either actively or by omission, those local knowledges. The public education system is like tonsils during chronic tonsillitis; the organ responsible for keeping infections out of the body has become the producer of the infection. The school cafeteria is the front line of the war against neocolonial corporate capitalism and its agenda of hegemonic control through the weaponization of food.

Section III: Study participants

I introduce the participants of the two local food systems projects and reflexively discuss issues of coloniality that surfaced around recruiting them.

Chapter 7. Student-grown food participants

Approximately 120 students were involved in the growing and selling of produce to HHS's cafeteria. Students participated for one of two reasons; some participated because they were taking agricultural classes at the high school during that growing season and worked on the project as part of their class. Other students were on the officer team of HHS's FFA chapter at that year and worked on the project as service to the chapter. Although I call it the "student-grown food project," a number of adults worked on the project as well. The adults who participated in this study did so because of their role either in the schools or at one of the community organizations with whom the school partnered to grow the food. In this section I introduce the adults who played a key role in the study and who I quote frequently as well as the students who feature prominently in the project. These key players and their roles are synthesized in Appendix C.

Of the two groups of students, the FFA officer team were much more involved in the project. This stands to reason: they weren't doing it for a class; agriculture was their thing. They were in the field over the summer on work days and frequently hung around the agriculture classroom during free periods and after school. Hillary was a Senior and had been a surprise win for the FFA presidency in the spring and really grew in to her leadership role over the summer. By the fall she was the first to speak up in a group and her positivity seems bottomless.

Steven was the FFA sentinel and probably the most "good ol boy" of the cast. Also a Senior, Steven is a hunter and a fisher and has made his own knives since he was in middle school. Bella, Derek and Erin were the other three Seniors on the FFA leadership team. Derek and Bella were Tweedle Dee and Tweedle Dum. It was clear that they were not dating, but I rarely saw one without the other and, frequently, Steven was with them. Erin was friends with

the Steven-Bella-Derek trio, but very much marched to his own drum. Prim and precocious, Erin's values and vocabulary were so anachronistic that, at times, it was like there was a grandmother trapped in a 17 year-old boy's body.

Erin mostly connected with the Junior, Daphne. Daphne was a powerhouse. Her father was one of the few doctors in our rural area and mother tutored in the schools and Daphne had achievement bread into her. She was so erudite and articulate it was hard for me and other adults around her to not put her in charge of everything immediately. She told me once that she had to really focus on not being the only person in a group doing the talking. Daphne also participated in the newly formed HHS Seed Saving Club.

Brad was the only student that I interviewed extensively who was not involved with the FFA program. He was a quiet and earnest guy with a red beard that made him look older than he was. At 17 years old, he was an accomplished farmer. He and his father farmed a two acre tract of land next to the FFA plot on Sternhill; he and his girlfriend farmed four other plots all over the County. He said they had one exclusively in beans and he was very aware of the commodity prices he could get for those beans. My salient memory of Brad is him on his father's tractor, pulling an attachment that unearthed the rows of sweet potatoes. He was leaning over the side of the machine to make sure he was staying in the rows and wearing a t-shirt that said, "We used to have Regan, Bob Hope and Johnny Cash. Now we have Obama, no hope and no cash."

Natalie Brown was the first person I approached about the student-grown food project and I very much feel like it was her and my joint project. Natalie is the agriculture teacher at Highland High School; the study would not have happened without Natalie's willingness to try it and the boundless energy she put into it. She and I have known each other since kindergarten and had worked at the high school together, while not closely, for five years. I had a crush on her in

the first or second grade; she had a Scooby Doo lunch box and I remember thinking she looked like Daphne. As an adult, Natalie is humble and good natured, almost to a fault. She's the kind of person who has a hard time saying "no" and, as a result, seems to be constantly in motion, like she's being chased by the fear that some lack of action on her part would lead to her students missing an opportunity.

BCS's Child Nutrition Director, Lacey Fox, is simultaneously at the heart and on the periphery of the study. A spindly woman in her early 50s, Lacey is soft-spoken and cautious, as if her greatest fear - the food poisoning of a child at school - is only a moment's lapse of her attention away. Her willingness to purchase the student-grown food was the ultimate greenlight for the project. However, after communicating about what specific crops she could use in the cafeteria, she only appears again when it came time to purchase and serve the crops.

Lacey oversees the five women who work in the HHS cafeteria but does so from afar. The cafeteria manager, Ms. Vera, has supervised the lunchroom at HHS for several years and kept it running like clockwork. In her late 50s with whitening hair; Ms. Vera is welcoming but no nonsense. Ms. Vera and Denne are about the same age, but Denne is the spitfire to Ms. Vera's reserve. Denne is always ready with a smile and "how are ya?" as she races from one part of the kitchen to another. And, finally, Ms. Angie is the elder in the high school's cafeteria. 78 years young, she is still working because she "enjoy(s) being around children." She raised her kids to garden and is very proud that her grandchildren also garden and "can can and do things and work. You know, they know how to work and make a living."

Two community organizations were instrumental in making the project happen: PLOW food hub and Bailey County Cooperative Extension. The executive director of Cooperative Extension, Travis, cut an odd silhouette on the farm. Pushing 50 with a desk-jockey physique, I

never saw him in anything but khakis and a button down and it was not odd for the button down to be pink and be accompanied by a bow tie. An aficionado of bad puns, he had an affected bumble about him, like he felt most comfortable being known as the least knowledgeable person in the room. As a result, he was completely disarming and amazing at bringing people together.

In contrast, Extension's two agricultural agents - Steve and Adrien - are the local guys who provided the farming know-how for the project. Adrien was especially ready to take the instructional lead. A self-described "fat boy" in his late 30s, Adrien has a buoyantly sardonic way about him. He gives instructions once and then takes off, expecting the kids to keep up with him; he's like a country version of the stingray school teacher in *Finding Nemo*. Steve is the straight man to Adrien's dark jokester. Steve does not seek the limelight, but if asked, he has an encyclopedic answer for every topic I brought up. Steve is nearing retirement and no one expects him to stop dispensing agriculture advice once he does retire.

Finally, at the time we did the research, Sternhill Farm was managed by James Page. Sternhill is administered by the local food hub, PLOW, and Jimmy was PLOWs farm coordinator. Red-haired and sinewy, James bears no resemblance to his famous namesake. James is a young father in his early 30s, and has the kind of restlessness that keeps him moving. His restless nature eventually moved him out of Bailey County; when I interviewed him at the end of the project, he let me know that he had taken a job managing the student farm at a small Pennsylvania college.

Chapter 8. The seeds saver of Highland HS

For the second local food project of this research study, I recruited students at Highland HS who were interested in learning and practicing the traditional foodways of Bailey County. Those foodways include growing your own food from seed that has been passed down in your family and community for generations.

I recruited kids to the seed saving group by personally inviting them to join; that process relied heavily on my positionality. At the time of recruitment, I had been developing and conducting educational enrichment programming in the district for years. If the teachers were *in loco parentis* at school, I was *insanus avunculus* ("crazy uncle"). I had been popping in to their classrooms to pass out permission slips for trips, camps and extra-curricular activities for years. When I knocked on their classroom doors and asked their teacher if I could have a few minutes with the kids, the floor was mine and the kids were primed. Throughout the month of May and into early June, I stood in front of every 8th grade classroom in the school district and told them about the project.

I only went in to 8th grade classrooms because I limited enrollment in the project to rising 9th, 10th, 11th and 12th graders. From years working with kids, I know that older students generally match my temperament better than younger ones and, because I was interested in students' agency in local food system work, I wanted to work with students who would approach the project with a greater level of maturity.

I was not able to present the project to students as systematically at the high school. The size and schedule of the school made it impractical to go from class to class and there was no all-school assembly during my recruitment phase. Unable to invite everyone to join, I targeted sub-groups of students that I thought would be predisposed to the project; I gave presentations to all

of the agriculture classes being taught that spring semester and I presented the project at meetings of the FFA and Eco clubs.

I ended up recruiting seven kids who were interested in gathering heirloom seeds with me: Tina, Meghan, Chris, Ikard, Gary, Larry and Niles. All but Niles belong to old Yancey County families. Half of that group - Gary, Meghan and Chris - were rising high school freshmen at the time. All three are precocious and energetic and all three are active inside school and out. They're all tracked into honors classes and all three are heavily involved in their families' agricultural heritage.

Gary's family was some of the first whites to settle the Jack's Creek area of the County. His and Meghan's families are close and the two children grew up almost as cousins. Their mothers came together to meet me at their middle school and sign the research consent forms. One could be excused for thinking they are related; both are blond and lanky and both very into gardening. Gary is so into gardening that he grows lettuce in his bedroom; it is his strategy for "extending the season." Two years prior to our researching together, at the age of twelve, he asked for and got a greenhouse for Christmas. Gary described how his farming moved from indoors to out:

> Grandpa told me: "Why don't you take my field, at the bottom of our house and you can grow a garden there?" And I got really excited. So I did that this past summer and I had the garden all to myself. He helped me; he'd stand on the front porch and yell at me, tell me what to do and stuff. (Gary, interview, December 18, 2018)

An avid farmer in her own right, Meghan told me about her experience growing up on a farm:

> It was my great aunt and uncle's farm and then my grandfather married my grandmother and they came and moved here after my great uncle and great aunt died. And so they kept, the farming going. We've gone through pigs and cows - we still have cows - I even have chickens here. We've had so much, we have like seven different gardening fields and stuff. (Meghan, interview, December 11, 2018)

The Christmas after Gary got his greenhouse, Meghan asked for and got one as well. At the start of our research project, these two thirteen year-olds had matching greenhouses.

The other Freshman, Chris, has an almost encyclopedia knowledge of the western side of Bailey County and a seemingly insatiable need to share it. His stories hug the contours of the mountains like the old train tracks that have long since been ripped up and paved over to serve as the county's state highways. Like Meghan and Gary, Chris also comes from a family steeped in mountain farming traditions.

> "I grow a lot at my paws house. He grows up a garden. He'll cut into a tomato and he'll say: "Now, this is what you do to save the seeds. He'll tell me how to do that and he'll tell me about other plants and other vegetables and things like that. I think that's really neat." (Chris, interview, December 12, 2018)

Our heirloom seed harvesting group was also comprised of two rising Seniors: Tina and Ikard. Ironically the two of them are good friends as well, though not as close as Meghan and Gary.

My salient memory of Tina occurred years before our research project. She attended a summer camp on Appalachian heritage workways that I had put on five years earlier. The last day of camp was a trip to visit a weaver and fiber animal farmer who husbanded a heritage breed of sheep whose wool was used to make the Confederate uniforms during the Civil War. That morning Tina's mother had called and asked if she could meet the group at the farm rather than taking the bus from the school. I was fine with that. As our bus turned off the windy road onto the steep, rutted dirt driveway, we saw Tina clip-clopping down the paved road on the back of a horse. She lived in the area and that was how she got around her neighborhood. Five years later she had grown into a strong, confident, if somewhat quiet young woman who had found her niche in the FFA club, and agriculture and JROTC classes.

Her compatriot, Ikard, is the son of a local preacher who, a few years before, also had been an assistant superintendent in BCS. Ikard is a bright young man with a mop of blond, curly hair and, like the others seed savers, had deep ties to the community through his family. Also like the others, Ikard came to the project with a strong background in agriculture.

> I do a raised box farming and so basically I grow carrots and tomatoes, onions and a lot of different kinds of herbs at our house. But other than that, all of the other agricultural work I would typically do would be for an extended family or going out and helping a neighbor, or a friend, just personal plots and stuff. (Ikard, interview, December 10, 2018)

The sixth member of the small seed saving group was a rising junior, Larry. Larry's mother was a Baker of the Bakers of Crooked Creek, one of the main watersheds in the county. His grandmother was the executive director of the local arts counsel so his ties to the community also ran deep but in different ways than the others. Larry is a rocker; his uniform is blue jeans

and a band t-shirt. He and a couple of friends do sets of Beatles covers at a local pizza place from time to time. Although he personally had very little direct experience in agriculture, his familial ties to the land are not far back.

The hazards of industrial production have left scars on Larry's family. His paternal grandparents were subsistence farmers in Potter County, two counties away, and they also farmed Christmas trees. Larry told me the story of how the legacy of Christmas tree farming has played out in his family.

> My grandfather had to get out of it because the pesticides in turn gave him long-term problems. He developed, like, hard lung problems 'cause he was having to breathe it in….. and that's why my dad doesn't want to have a real Christmas tree now is because he grew up around all of that pesticides that now he's like: "We can't have that in the house. That's not good." (Larry, interview, December 19, 2018)

The seventh child enrolled in the seed project, Niles, attended the first three visits with local elders but then stopped participating. He cited conflicts with marching band practice as his reason for not continuing. Meghan, Larry and Gary were also in marching band and they were able to continue both activities, so I interpreted his reason as an excuse for bowing out and didn't press him on it.

These seven kids formed the nucleus of the seed saving group; throughout the summer we went together to visit with seed savers in the county. When school started in the fall they formed an official Seed Saving Club at the high school and the club hosted community members visiting them during the lunch period. The original group recruited several new members to the club; I'll introduce them as they show up.

Other than Niles, the students who participated in the seed saving project were (to me) surprisingly familiar with the traditional agricultural processes of Bailey County. This held true for some of those who participated in the food growing project, but was particularly true for the seed savers. The kids knew and loved the same food as their informants and had had some experience with some of the food preservation methods they talked about. Sometimes they knew or knew of or were even related to the elders with whom we visited.

Sometimes their familiarity was evident in the communication patterns they shared with the older folks. I once asked the group to read some vignettes I had written based on a previous visit with an elderly farmer; after reading a couple pieces of text, Tina said: “It’s hard to read but then that’s how I talk so it just flows.” As it turns out, all of the students with whom I collected seeds came from families with backgrounds in either small-scale or commodity farming; some of them had some experience with seed saving in their own family.

Chapter 9. The storyteller and his positionalities

Having introduced the kids, this is an appropriate juncture to introduce myself as well. As a qualitative researcher, I am the instrument of data generation (Lofland et al., 2006). I am the observer in the ethnography (Van Mannen, 1988) and a key participant in this action research (McNiff, 2013). Finally, as the author of this dissertation, I am the sculptor of the story (McNiff, 2013). My personal perspectives, experiences, biases and roles coin this study so I take some time here to articulate the lenses through which I have conducted this dissertation.

Like the students I recruited to the study, I also grew up in Bailey County and I, too, have significant family background in small-scale, subsistence farming. My background is, however, significantly different than theirs. My parents were 1970's back-to-the-landers from the industrial North; they moved to Bailey County in 1975 because they wanted to live off the land and lead a family-centered life and that's just what they did. They bought an old farmhouse on an acre of land in town with a creek running through the middle of it. In the years since, I've tracked the white ownership of the property through court house records back to a cousin of Daniel Boone.

My mother plays a huge role in this dissertation. She grew up among the rows of shotgun, factory housing in Dayton, Ohio and knew nothing about farming. However, she was tenacious in her desire to learn and humble enough in the pursuit that Bailey County old-timers opened up to her. She raised goats on the other side of the creek and put out a garden big enough to feed our family year-round. She learned to can and make bread and yogurt. When the town restored the old swimming pool across the street from our house, they put a Lance snack machine in the lobby. My mother objected to the meager nutritional value of the snacks and began selling Dixie

Cup-sized goat yogurt popsicles for a quarter to dripping wet children who knocked on our side door. She did a steady business.

At the beginning of my Junior year of college, she died suddenly of a brain aneurysm. It was only decades later, after the trauma of losing a beloved parent had softened into the acceptance of adult life, that I became interested in what it would mean to be able to feed myself off the land. It was then that I realized I had not paid attention to what my mother was doing. As a kid I had done my chores, done specific tasks when she asked, but had never bothered to learn the methods and means that she had spent the second half of her life learning and mastering. All that knowledge was gone from our family lineage because she didn't teach it and I didn't learn it.

This loss has driven my dissertation process. On a personal level, many times during this project I've felt like I am following in my mother's footsteps and I've had to notice and keep in check my tendency to idealize or even fetishize southern Appalachian foodways. For me, they come cloaked in magic robes of mother-memories. In those moments, calling out to my mother helps me distinguish between what is me missing her and what is going on in front of me. On an epistemological level, I know first-hand that knowledge, if not passed down, dies out. I see what happened in my family happening in my community. To that observation I bring my background of academic inquiry into the colonial mechanisms of control. The consequences of one person's passings are sad but not horrible; there are many who still remember and practice subsistence-level agriculture. But if that knowledge were to die out of the community all together, the consequences would be food slavery.

My complicated insider/outsider status also permeates this study. Moving to Bailey County when I was three years old created an insider/outsider dynamic that has stuck with me my whole life. When we moved here, we spoke differently than the folks who lived here. We ate

different foods; went to a different church; had different values and expectations, different enjoyments. I grew up feeling like an outsider; I think that's why I never acquired a strong mountain accent. As a kid I was smart and different and that was a dangerous combination in rural Appalachia in the 1980s; my friends and I were the outcasts of the school. Summer camps showed me that there was a bigger world down off the mountain and I left Bailey County at seventeen. I came back only for short annual visits before I moved back to start graduate school.

I am "in" in Bailey County in so many ways. A woman whose lawn I mowed as a kid is the mayor; my high school friend's mom is the director of the arts council; the lifeguard that taught me how to swim is the school district's attorney. Ironically, I now work for the school district that I couldn't wait to get away from as a kid. I've been in the schools for over seven years now, so I am "Mr. Klein" to an entire generation of Bailey County-ians. But I am also "out" in so many ways as well. I don't perform the rituals at the heart of Bailey County civic life: church, youth sports and hunting and fishing. My upbringing and life outside of Bailey County have given me perspectives and interests that very few people here share.

In short, I am from Bailey County but I am not of Bailey County and that hybridity is the fabric of this dissertation. The following excerpt from a field note is a good example of the ways I was cognizant of my insider and outsider status during my time in the field.

> All of these micro ways that I belong and I don't. I pulled into the HHS parking lot, my work (in), and the high school I graduated from (in) with a covered dish (in) and joined the ant trail of attendees carrying their dishes (in). I was asked by the door operator if I was there for the FFA event (out) and availed myself of his services. In the breezeway I was joined by C. D. She asked suspiciously what I brought. I said, "I mowed and my wife made pasta" (in, married, outdoor

> domestic labor). She laughed and said, "With you you never know." (out) I joked about bringing 2 pounds of kale (out). (field note, May 22, 2018)

My insider/outsider status impacted my relationships with the kids I recruited. Although I could tell them stories about going to school with their parents, I still feel like they belong to a club that I do not, the Club of Bailey-ian Last Names. As a result, I think I looked at them as mystical oracles of Bailey County-ness. The fact that I never felt "authentically" from Bailey County led me to look for "authorities" on Bailey County traditions in places that were far away from me; I address that phenomenon in the next chapter.

Chapter 10. Reflexive reflections on student seed saver recruitment

When I recruited students to the seed saving project, I told potential participants that we were going to try to learn old timey farming ways from Bailey County farmers. At no point did I assume that "traditional Bailey County farmers" and the students I was recruiting could be one and the same. I was wrong. During the final interviews, several kids described the ways they had worked with the elders in their families to grow their own food. For instance, when I asked Meghan if she saved seeds she said:

> Meghan: Oh yes. Yes.
>
> Me: All right. So, so that was really, like, nothing new to you whatsoever?
>
> Meghan: Nope.
>
> Me: Very cool. So how did it feel to be doing this project at school that you guys do at home all the time?
>
> Meghan: It felt a little different considering, like, being with people that don't know how to do it. (Meghan, interview, December 11, 2018)

When I pressed her about how it felt for her to participate in a project that was, essentially, estranging the knowledge to which she felt so close, she said:

> I felt a little outside the circle, just because I'm still, like, I know more since they don't know because a lot of kids they'll go around and they'll look it up on Google and stuff whenever it's not the actual real thing you can get from talking to people. (Meghan, interview, December 11, 2018)

Meghan's quote underscores a poignant example of how my own coloniality impacted the research process. During the data collection period, I had so much anxiety around finding "elders" to "help"; now I realize that that worry was a product of my monopolization of what

counted as an “authentic” informant. I feel so foolish that I wasn’t seeing the treasure trove of knowledge hiding in plain sight among the very kids to whom I was plotting to give an experience. As a consequence, Meghan “felt a little outside the circle” of my research agenda. Subconsciously, I had fallen into the trap of thinking of those kids that summer as “my students.” The possessive term belies a colonialist idea of ownership that hordes all agency for myself and fosters blind, paternalistic feelings of responsibility. Specifically, I was blind to the fact that “my kids” were far from being empty vessels to be filled. Although I cited Paulo Friere’s (1970) critique of the “banking model” of education in my research proposal, I was blind to the fact that I was replicating that dynamic with those students. I had not worked through it sufficiently inside myself. I was still working on an idea of “teacher” (or, at least, “educational professional”) as the knower and “youth” as ignorant, blank canvases, personless subjectivities.

Another example of this tendency in me was evident in my final interview with Chris. In the beginning of the interview Chris’ answers were rich and full of detail but, after a certain point, he became clipped and distant, eventually whittling his responses down to “No comment.” The pivotal moment for me was this exchange:

> Me:... the folks that we talked to this summer, did they influence your opinion about saving seeds and if they did, how?
>
> Chris: Nope, I was always in to it.
>
> Me: Okay. All right. All right.
>
> Chris: I'm just learning more ways to do it. You know what I mean? You know, I never did really know many anyways. Like tomato seeds and potatoes, you just throw them in the ground and wait. [laughter] You'd throw them in the ground and then you can dig it up later and eat them. Did you know that? After you just

> dig them up, just dig a hole, put it in to save it, cover it back up, you got potatoes until they rot. And then you cut off the eye of them and you just throw it in the ground and it grows up again. It's neat isn't it? You really have seeds for potatoes.
>
> Me: Hmm. So what was your favorite part of what we did over the whole, the whole experience here?
>
> Chris: I dunno. (Chris, interview, December 12, 2018)

Eventually I was able to coax him back to longer answers but a breech had occurred and he never regained the easy flow he had at the beginning of the interview. I suspect his change in attitude came from the fact that I glossed over his potato knowledge, of which he was obviously proud. I didn't join him in celebrating how "neat" the potato planting method was; I didn't acknowledge much less honor his retelling of a venerable traditional Appalachian food preservation technique. Perhaps he became tight-lipped at that point because, unlike Meghan, he couldn't tolerate being "a little outside the circle." The official script of the research project held too little appreciation for his familiarity with the knowledge of the old ways.

The deep irony was that I had intended the seed saving project to be an experience that challenged the colonialities of power (Quijano, 2000) and knowledge (Richardson, 2012) at play in traditional public education. I was consciously trying to create an experience that (re)located valid knowledge outside of the classroom and outside of educational technology apps. As Glesne (2011) points out, action research lends itself to framing the interactions between researchers and participants as more of a dialogical exchange. My methodologies were consistent with my intentions, but my coloniality blinded me to the ways in which what I thought I knew about Appalachian workways were preventing me from learning about Appalachian workways.

In retrospect, the radical part of myself sees the liberal part as complicit in the evil of good deeds. I had hoped that I was creating, or at least working in, a fissure in the landscape of coloniality (Mignolo & Walsh, 2018); I was blaming my difficulties in the process on a combination of my procrastination and an arrogant assumption that my/our actions were running so counter to the global, corporate-colonialist structures, that the invisible hand of capitalism must be throwing a monkey wrench in the works. In a way, it was, but the coloniality was an inside job. Although I had made the leap to recognize the mountain identity as a kind of indigeneity threatened by the same epistemicide that has been the cornerstone of every colonialist deculturalization schooling project for the last 500 years, it appears that the first step in my action research project was to be blind to the indigeneity in my project.

My failure to recognize my own coloniality becomes an important data point in the research. It is reflexive evidence of the persistent presence of coloniality in the nitty gritty, day-to-day educational experience. Patel (2014) and Lynch and Neill (1994) and Shahjahan (2011) and many more had warned me about academia's colonialist pedigree, and still I was blindsided by it. The fact that this happened in an otherwise-aspiring project highlights how pernicious the coloniality of being is. As Maldonado-Torres (2007) said: "[A]s modern subjects we breathe coloniality all the time and everyday" (p. 243).

Chapter 11. Recruiting community seed savers and reflexive reflections on that

The original plot for the seed saving group was to volunteer with a small number of elderly farmers multiple times over the growing season. It seemed so logical: there was a cohort of aging old-timey farmers that knew the old ways and I had recruited a gaggle of able-bodied youth, eager to learn what they knew. It was my hope that the extended exposure of the two groups to one another would build trust and facilitate the students being able to glean fantastic seeds and rich stories about them as well as hands on knowledge of how to work with the seeds to sustain their lives. To me it was a perfect alignment of county resources; what farmer would not want free labor?

To recruit community elders to the study, I reached out to county residents that I had known for years; they were elderly folks that I knew saved seeds and would be fantastic sources of knowledge for our project. In my mind they were my aces in the hole of the study; I thought the older farmers were one piece that I really didn't have to worry about falling into place. I could not have been more wrong. Although I began reaching out to folks in late April, the seed saving group did not meet with their first elder until the second week of July. I had underestimated the impact of age. Acquaintance after acquaintance reported being too sick, too injured or just plain too tired to put out a garden. On one hand I felt validated; here was empirical evidence corroborating my narrative that traditional ways of farming in Bailey County were literally dying out. On the other hand, I was dismayed that participant recruitment was so difficult.

After coming to the end of the list of farmers I knew and still having no luck, I followed the snowball protocol of participant recruitment (Patton, 1990). By relying on the people I knew as traditional gardeners to refer me to other people who put out gardens the old way, I followed a

precedent set for ethnobotanical research in Western North Carolina (Veteto, 2008, 2013). Unfortunately, I had no luck with that second tier of potential participants either.

The interactions I had with Mrs. Simmons were an exemplar of how difficult it was to get an old-time farmer to agree to have a group of kids come out and help them in the garden. Mr. and Mrs. Simmons had been recommended to me by multiple sources; I had one old-timey farming couple identify the Simmons as the people they go to with questions. I got Mrs. Simmons on the phone and she and I had an enjoyable conversation; she “allowed” that the project was a great idea but each time I pitched that we come out and help her, she deflected, saying, “Well, if I run in to anything we need help with, I’ll give you a call.”

After a month of encountering these polite demurs again and again, I realized the flaw in my study design. The plan to have kids volunteer for old-timey farmers was unconsciously rooted in an industrial production model of agriculture, a model that inscribes process inputs - "labor" - as uniform. In industrial commodity production, it doesn't matter who is staking tomatoes or hoeing your beans as long as the work is getting done. The "owner" of the farm should be happy to have the free help.

Traditional family gardens, of course, have nothing to do with industrial commodity production. Family gardens are intimate spaces in which family members perform the ceremony of raising the food that will feed them throughout the year. The people who work in the gardens are not anonymous, interchangeable units of labor. For all they knew we were bumbling neophytes asking to participate in a sacred ritual without being even a baseline initiate. Why in the world would a farmer want a bunch of gangly teenagers stamping around their precious gardens?

This second misguided assumption was borne of a marriage of unchecked academic arrogance and industrialist assumptions. Like my experience with Meghan, it is important to highlight these occurrences not just as instances of reflexivity, but as data that point directly to the perniciousness of the coloniality of being. To prepare for the study, I had spent months reading about coloniality's persistent structuring of our lives (Mignolo, 2007; Quijano, 2011) and paid specific attention to writings about disrupting the coloniality of being (Maldonado-Torres, 2007; Richardson, 2012). Still, my own colonial/modern assumptions ran deep enough to blind me to the ways in which I built colonial/modern assumptions into the study design.

The parallels between industrial agriculture and the neoliberal education are hard to ignore. As colonial/modern constructs, both reduce life to non-living entities, units, categories, anonymous roles in systems. It is frightening for me to think - and hard to admit - that my day job probably influenced my decision making in this project. Did I see the students as inputs in an industrial production process because I look at them all day as score sets on spreadsheet? Am I so indoctrinated by the habitus of 21st century neoliberal commodification, so hypnotized by processes of thingification (Cesaire, 1972) that I mistook a family's front yard for a factory floor? Apparently.

So I changed my model and began looking for traditional farmers that would be willing to simply meet with us and talk about gardening and seed saving. I advertised through the schools; I placed a flyer in the school mailbox of nearly 200 faculty and staff members at the middle schools and high school. I also continued to work through my own network of acquaintances. Ultimately we spoke with seven Bailey County residents either at their homes or, later on in the research period, at the high school during the students' lunch period.

Section IV: The collective forgetting

In this section I discuss how the historical, political and economic forces of neoliberalism are eroding the agricultural traditions in Bailey County.

Chapter 12. The fading agricultural traditions of Bailey County

In the 1980s, Bailey County elder Jeff Byrd was interviewed by the local paper about his memories of the county's economic life when he opened his clothing store on the town square in 1939. He recalled that "there was very little industry in the entire county at the time ... by and large people were living off the land" (Hensley, 1986, p. 239). Paved roads, electricity and modernization in general were slow to come to Bailey County (Higgins, 1982). The steep grade of the surrounding mountains seemed to delay the spirit of consumerism that swept over more metropolitan Pax Americana after WWII. As a result, the practice of homesteading and self-sufficiency farming stretched into the 21st century. In Bailey County today there are many people who remember growing up canning and pickling the vegetables they raised in their garden; a smaller number still practices the old time food preservation techniques.

In fact, pickled beans and corn figured prominently in my research. The seed saving kids and I heard the recipe for this local delicacy on several occasions from a number of old timers with only slight variation in methodology. The very first elder we spoke with, Ms. Randolph, an 85 year old great grandmother from up on Cold Mountain in the northern area of the county, gave her recipe:

> I pickle beans in a big stone jar. I learned from my mother. And I wash the beans and get them ready and cook em till I can mash the bean just a little. I don't want to get em too done, just barely mash it. I mix corn with them, maybe pepper if the family likes pepper. And cabbage sometimes, chop it up. And I put a kettle (??) I have to measure. And I put it with the beans and corn in that big stone jar. Then I get my salt, it's about a tea cup full, in my hand, and put around it and mash em

> down. Then I keep putting layers till I fill the jar at the top. And then I have me a clean white rag, mash it down over those beans, turn a plate over, and I have me a clean rock I put on that plate. Then I tie me a … fill it up with water, get it that much over the beans, then I tie me a rag on the top. But I have to fool with that. The third day I check it, take that rag out and wash it and put me a notherin and just keep on. And I pickle them about 9 to 10 days before I can em. (field note, July 9, 2018)

Another old timer, Mr. Huskins, lives just over the mountain from Ms. Randolph; as he described it: "It would be quicker to walk there then to drive." He recited the exact same recipe. In fact, as the seed saving kids and I were taking our leave from him, he asked us to wait while he retrieved his mother's "clean rock" from his garage. Another older timer, Ms. Baker, still actively uses her stone jar and clean rock to pickle vegetables, but she is staunchly against adding any water to her pickled beans and corn; "It has to make its own brine or it's not good." She also firmly believes in putting grape leaves as the last layer before the plate. "And that way it doesn't mold. Nothing gets in there; nothing gets past your grape leaves."

As Mr. Byrd's statement in the newspaper implied, however, the practitioners of the old ways are getting fewer in number and older in age. Both the adults and students that I worked with in the scope of my research recognized and spoke to this dynamic. Those who had the longevity described the change as happening generationally; both kids and adults expressed worry about it passing away all together.

Ms. Angie is the elder in the high school's cafeteria. 78 years young, she is still working because she "enjoy(s) being around children." She raised her kids to garden and is very proud that her grandchildren also garden and "can can and do things and work. You know, they know

how to work and make a living. But we've lost that." During an interview she told a story that succinctly described her concern about the loss of traditional agricultural workways in Bailey County:

> Several years ago I asked a girl that I went to church with, a lady, if she'd like to have some green beans and she said - she had two kids - "I wouldn't know what to do with them." [crosstalk] Shocked me to death! And she had two children. And I mean, you know, it's time that we teach children. (interview, December 16, 2018)

It is important to note that her dismay at the woman's ignorance about how to use non-processed food was peppered with two references to her as a mother. The last sentence of her story makes clear why the woman's children fueled Ms. Angie's consternation; if the woman herself did not know how to cook the beans, she was obviously incapable of teaching that to her children.

Ms. Angie's sentiment was echoed by several of the students in the project. They felt that farming in general - and particularly the practice of and knowledge around small-scale, substance- or community-level farming - is under threat of extinction. They see the fading of traditional agricultural knowledge as a trend over time. A Junior who was recruited to the Seed Saving Club, Daphne, said: "Everyone had to grow their own food in, like, the 1800s and everyone knew how to do it and now people don't." For another student, Erin, the decline in farming in the county was a direct result of knowledge not getting passed down to younger generations: "[O]ne of the major things, too: like, all of our farmers are either old age and dying or young age and lacking enough knowledge to kind of grow their business enough to fill the place of the people that are dying."

The kids who actively participated in farming and traditional food preservation saw themselves as out-of-step from the majority of their classmates. Meghan, a Freshman at the time, said: "Well, it's very different because [my family] know a lot of old ways and things that a lot of people won't know because, like, a lot of people don't live on farms anymore and they don't know how to plant certain things, can things, grow food and stuff."

The following exchange is a poignant example of how both elders and youth in Bailey County perceive the decline of traditional agricultural practices. It was recorded during a meeting of the Seed Saving Club at which Mrs. Baker gave the club a number of seeds. A reserved and intentional woman in her late 50s, Mrs. Baker is a local seed saver and self-sufficient family farmer. I had originally approached her about volunteering in her garden; she declined because of health issues but she was happy to meet with the Club one September day at lunch. Tina and I had recently attended a $125 per ticket fundraiser for the local food hub, PLOW; the "Farm to Fork" event featured Bailey-grown food that was prepared and presented as fine dining. It was at that event that Tina and I had the grapes she mentions below.

> Tina: I love everything pickled. Anything pickled I'll eat it. The only thing that I've had that was pickled that I didn't like was, it was at that…
>
> Me: It was grapes.
>
> Tina: It was those grapes!
>
> Ms. Baker: Oh I've never ate pickled grapes (laughs)
>
> [Lots of cross talk and laughter]
>
> Tina: I think it was just infused with vinegar.
>
> Ms. Baker: Probably. [more room laughter] Well, now that is kind of a thing of the past, too, is the crocks and the salt. A lot of people now does

> the vinegar. They go ahead and put it in their jar and put a little bit of vinegar in it. But if you've had the real thing, you know the difference.
>
> Chris: Tastes a 10,000 times better. (field note, September 13, 2018)

By inscribing the crock and salt method as a "thing of the past," this intergenerational exchange testifies to the loss of traditional foodways perceived by both the elders and youth. It is also a touching illustration of the affection that both generations feel for the fading art. The fact that Chris and Tina had enough exposure to the traditional pickling methods to "know the difference" tells a lot about the kind of kid that participated in these two local food systems projects. It foreshadows their intimate familiarity with and deep appreciation for the fading cultural practices of the mountain South.

Chapter 13. Seeds that remember

In late August, Tina, Chris, Meghan, Gary, Ikard, Niles and I spent an afternoon with a seed saver, Mr. Henson. Mr. Henson lives at the top of a mountain on the western side of the county five miles past the end of the black top. Our short activity bus barely fit up the narrow tunnel of oak, maple and mountain laurel; the noise of the engine's strain as we crawled up the mountain was almost drowned out by the storm that eventually blew an enormous branch down on the bus. Mr. Henson's was waiting for us on his porch as we all, somewhat shaken, filed off the bus.

Mr. Henson has the ease of a retiree that is doing exactly what he wants to do. Fit and well rested, he seemed to be always smiling. He shared stories of his family in earnest detail and the stories strayed back generations with ease. He received us on his gracious porch; far from being a backwoods mountain shack, his home was a retirement temple that he and his wife had recently completed.

We were there to talk with him about his cornfield beans. He told us he'd found the beans in his mother's basement spread out on a tray. He thought they were his dad's beans, and that his uncle had given them to his father during a time when the two of them were still putting out gardens. He thought his uncle had gotten it from his mother, Mr. Henson's great aunt, from Tennessee. He told us how to plant it:

> I plant my corn; couple weeks, about the time it comes up, I'll plant my beans right beside it. That's what we used to do growing up, too. These beans will probably grow twelve foot tall and continue producing until it frosts if you could reach them… Oh yeah, that old field corn will [grow that high]. We had white

corn that, when I was in high school, you could barely reach the first ear on the corn. Got pictures of it. (field note, August 30, 2018)

After speaking briefly on his porch, he led us off the porch down a narrow foot path that wound between recently placed borders and plantings, around the side of the house to his garden out back. He'd enclosed his crops in a high fence and given the beans a five by ten by twenty-foot rectangular structure of locust poles to grow over; they'd formed a tent of green that was highlighted with yellowish white beans. After showing us how to identify the beans that were ready to be harvested for seed, he gave the kids a bucket and turned them loose.

Without further ado, he and the kids beset the mass of vine looking for half dried cornfield beans; it was like they were on a laughing and giddy Easter egg hunt. At first they clustered around one wall of beans but eventually spread out to scour all three accessible sides. Meghan took the plunge and went inside the locus pole structure only to get showered when Chris shook the poles. There was a lot of directing one another to good clusters of beans that the other person saw, sometimes successfully retrieved, sometimes not. They marveled aloud at how many each other were getting, how sticky the leaves were. All the while rolls of summer thunder accompanied the giggles and chatter of discovery.

After about a half an hour in the bean patch, we crunched down the fresh gravel driveway to a space underneath a second floor deck. There Mr. Henson had hung a strand of leather britches from the bottom of the deck. Leather britches are cornfield beans that have been dried by being strung together with thread. He gave us brown paper bags to carry the pre-strung strands and a few more for the fresh beans that we'd just picked. Before he put the leather britches in the bag, he used them as a visual aid to show the kids which side of the bean to stick

the needle through to avoid piercing the pea inside. He told us about how he learned to preserve food:

> I guess I learned a whole lot from my granny. We lived so close and we was, she taught me how to cook; by the time I was 8 years old I could make biscuits. She was always always showing me how to do things: pickle and preserve and can.

Despite the material success and creature comforts that he had obviously obtained, the pleasure he took in sharing with the kids his family's food preservation rituals was equally as obvious. Although he no longer needed to grow and preserve his own food, the traditions around it were so precious to him that he practiced them in his daily life and sought the opportunity to pass them on. As we boarded the HHS activity bus, the brown paper bags we carried were heavy with the stories and traditions of his family and, by extension, the knowledge of the traditional agricultural practices of our home county.

Although Larry wasn't on that particular trip, he was very articulate (in his teenage way) about how the heirloom seeds that we'd gathered represented intergenerational replication of knowledge. In the following quote, Larry describes a new-found understanding of the ways in which heirloom seeds are sacred to the families that pass them down. His new understanding meant that he, for the first time, saw seeds as something besides a corporate commodity.

> [A] seed is, I feel like that could be just as important as like an old, an old person with stories. Because, because you, you grow from hearing stories…. I mean seeds have families - clearly - like now, like I've never thought about that in depthly until like we did all these strands and, I realized that, like, seeds come from parent trees and, and so, I mean, it's, and there's the story in the genes of that seed…. [I]t helped me, like, realize that seeds are much more than just a little

> packet of something that you can buy like a Walmart. Like, they're actually, uh, there's a lot of full belief into seeds. Like you, like, the people that have the seeds really believe in the seeds being much better than anything else. So it's like, so it's much like just watching someone, you know, kinda holding their heart in their hand with the seeds. (Larry, interview, December, 19, 2018)

The kids who participated in the seed saving portion of this study understood that, by gathering seeds, we were also learning traditional agricultural knowledge from community elders. We gathered the seeds that we did specifically because they had been passed down from generation to generation. Metaphorically, the seeds "remember" how to grow in this soil, just as the people from whom we got them remember how to use the seed to, in turn, themselves grow in this county. By gathering these seeds and the stories about them, the seed saving youth and I were "re-existing" into a way of life that affirmed community and fostered mutual support. We came to this exercise conscious that that way of being in the world is devalued and under threat, primarily from the commodification and then corporatization of food. Mignolo and Vázquez (2013) would call our activities a "re-existence," "a re-valuation of what has been made invisible or devalued by the modern-colonial order." That way of life was finding new life in us and we in it. We were existing into this practice of community in the wake of seed commodification.

I stop short of claiming that the seeds are metaphors for intergenerational learning. Intergenerational learning is the "systematic transfer of knowledge, skills, competencies, norms and values between generations – and is as old as mankind" (Hoff, 2007, as cited in Newman & Hatton-Yeo, 2008, p. 31). Intergenerational learning is a vital component in the preservation of culturally-based knowledges of place and sustainability, particularly of "community-level agricultural knowledge" (Elgar, 2013, p. 6). The intergenerational transfer of knowledge - similar

to the breakdown of intergenerational transfer of heirloom seeds - is threatened by demographic shift to more dual-income households and greater worker mobility (Newman & Hatton-Yeo, 2008); both of those are functions of a neoliberal labor market (Whitfield, 2001).

The expression “seeds as metaphors for intergenerational learning” is neat and tidy and, as discussed above, there is a profound connection between self-replicating genetic material and place-based knowledges of sustainability. However, there is a real danger in describing the dynamic as metaphorical. I harken back to Tuck and Yang’s (2012) clarion challenge that “decolonization is not a metaphor.” The authors argued that the practice of colonization is, at its heart, the practice of stealing land; therefore any project that does not address the returning of stolen land can’t claim to be decolonial. The authors reminded us that metaphorizing and theorizing a thing is a practice of imperialist epistemology, and, as such, a technology of erasure that affects the disarmament of the critical significance of a project.

The violent material reality that Tuck and Yang (2012) refuse to theorize is the theft of Indigenous lands by colonial powers; the violent material reality that I refuse to theorize is the existential threat to viable local food systems. It is one thing to associate the heirloom seeds that we gathered with the stories of our community elders and to talk about how the knowledge embedded in those stories is replicated in the telling to a subsequent generation. The material result of that process is the preservation of a sustainable local food system. But to relegate the seeds to the status of metaphor is to silence the physical power that they have to preserve a local food system, to silence, as Mignolo and Walsh (2018) would say, their power to enable a decolonial otherwise to the corporate globalized food system.

Chapter 14. 21st century agricultural education

Epistemological silences are not metaphorical; they have material consequences. Bailey County's agricultural education program is a strong case in point. HHS's agriculture teacher, Natalie, told me once about how the FFA program first started growing produce at the plot that had been reserved for them at Sternhill Farm. I was surprised to learn that the FFA was almost prevented from growing any food on the conservancy land. "Ms. Jenkins [Natalie's boss] was hesitant to do the farm because it doesn't tie to the curriculum" Natalie said. "If you ask the kids why they are taking ag, they say it is because they want to know how to grow their own food." However, according to Natalie, the focus of her curriculum is agriscience. What she is required to teach is tailored to large-scale crop production for the global food system and all but silent on small-scale farming.

Natalie's curriculum is a function of changing agricultural education policies. The structure of farming in the U.S. has shifted dramatically away from small-scale, diversified farms to large-scale agribusinesses. Over the course of the 20th century, the percentage of the U.S. workforce that is employed in agriculture fell from more than 40% to less than 2%. In that same time period, "the number of farms has fallen by 63 percent, while the average farm size has risen 67 percent" (Dimitri, 2002, p. 2).

Correspondingly, agricultural education has shifted away from a vocational approach. Nolin and Parr (2013) trace the root of the shift to a report by the National Research Council's Committee on Agricultural Education in Secondary Schools (1988). To ensure what the Council perceived as the "survival" of "a competitive agricultural industry" the report recommended a curricular pivot away from "education *in* agriculture" to an "education *about* agriculture (p. 1 - 2, italics original).

It is not surprising that this shift to an agriculture education policy that favors the needs of industrial agrobusiness over small-scale farms should occur in the late 1980s. That was, after all, the height of the conservative wave of Thatcherism and Reaganomics (Steger & Roy, 2010). According to the Council, vocational agriculture should be "reformed" to focus on "farm production; agribusiness management and marketing; agricultural research and engineering; food science; processing and retailing; banking; education; landscape architecture; urban planning and other fields" (National Research Council, 1988, p. 3).

The shift in curricular priorities - and its consequences - were evident at HHS 30 years later. In the following excerpt, Natalie described how she perceived the lasting shift:

> Natalie: You know, it, [student farming] had just not been done for so long that the kids hadn't even really thought about growing their own food. It was, everything had changed as far as FFA and agriculture goes to the point that growing their own food wasn't even a thought….
>
> Me: Do you have a sense of when the FFA got away from agriculture education in general, got away from teaching kids to grow their own food?
>
> Natalie: In the 1990s. Yeah, about the time we graduated. Yeah. The name changed in 1988 from "FFA Future Farmers of America" to "FFA organization." And at that point they started looking at more diversity of agriculture and farming was sort of a thing people wanting to get away from instead of go towards and students were encouraged to get off the farm instead of carry on the family farm…. At least here and around this area, kids didn't want to farm. I mean I had one person tell me, Shane Dixon, told me, he said, "I was in high school here in

> the 1990s, graduated in ‘90” and he said, "I farm every day of my life. Why on earth would I want to be in FFA?” (Natalie, interview, December 21, 2018)

During the six months I spent with HHS’s FFA chapter, I observed a heavy emphasis on the members learning how to operate within formal, bureaucratic structures. The officer team performed the formal Opening Ceremony at every public event. The Seed Saving Club had to postpone a number of meetings because many of our members were part of FFA’s “Parli” (Parliamentary Procedure) Team and they were preparing for regional and state competitions. The FFA Officer Team tried to incorporate the Seed Saving Club as an activity on their “Form 2” application for particular distinction that would have been recognized at the national conference. Finally, there was Natalie’s own refrain that her goal was “to raise leaders.” None of these activities had to do with growing food.

This pivot also was reflected in the agricultural curricula that Natalie was required to teach as well. I analyzed the pacing guides for the four agriculture classes taught at MHHS. The curricula are broken down by units and subunits and each subunit is assigned a percentage of the course grade. I was interested in how much of the agriculture education curriculum taught at HHS required or even allowed students to get their hands dirty and grow food. Only one class taught at the high school addressed hands-on food production and that subunit was accorded 5% of the total grade for the course. As one MHHS Senior told me shortly before they graduated: “I”ve taken every ag class they offer here and I never learned how to grow food.”

As Howard Zinn (1994) says: you can’t be neutral on a moving train. One episode in the late summer really drove home the destructive consequences of an agricultural system and educational policy that de-emphasizes and devalues the production of your own food.

I was talking with Natalie after school in the agricultural education classroom when Andrew came in; he'd been loading something into the back of Natalie's truck for her. He was wearing blue jeans held up by both a belt and suspenders and a blue t-shirt. The sweat dripping off his nose seemed to come from an unseen well-hidden underneath his baseball cap. Natalie gave him a paper towel to wipe off the sweat.

Natalie had told me about him; he and his brother were all-stars of the county's agricultural program. During the last growing season, in addition to participating in growing 4,000 pounds of winter squash on the FFA plot, the two brothers had planted and harvested 10,000 cabbages at Sternhill. I had heard their story a number of times; it had been touted not only by the high school but also by the Extension office and PLOW. She asked, "How much did you end up making off that cabbage?" and he said, "After boxes at PLOW and PLOW taking their divvy, $1,500." Natalie asked, "$1,500 each?" and he said that Adrien (from Extension) and Hank (a local farmer) had helped them out a lot in the beginning so they didn't have too much overhead outside of PLOW; they had cleared $3,000 total, $1,500 for each brother.

Then he said, "Mama was angry at us because it messed up our food stamps." Natalie said, "Yeah, it will" and Andrew went on to complain about how little food stamps they get: "$17 a week and that's about enough to buy a thing of soda!" Then Natalie started asking him if he had enough to eat. She told him about a food pantry and she said "I know it's not like the backpacks you used to get at Oak Creek (referring to the weekend food basket program run by the counselor at his middle school) but it's something." He talked about his brother getting food at the farm stand where he works. "My brother eats at Hank's" he said as he mimed picking through produce and putting it in his mouth. When Natalie pressed him again about the food bank, he said, "There are other people who need it more than I do." She insisted he get a water

and a drink from the refrigerator just outside the agricultural classroom. He refused; she insisted a couple times before he finally went out and got it.

Here's this kid, literally the poster child for local food and agricultural education in Bailey County, and the teacher who knows him best was concerned that he didn't have enough to eat. Beyond the heartbreak for his poverty and hunger, I wondered: Is this guy not growing food for himself? I followed up with him and his brother and asked if they put out a garden at home for personal consumption. They both looked at me like I was crazy and Andrew said: "After we've planted 10,000 cabbages?!?!"

In contrast to Natalie's story about kids farming so much at home they had no appetite to be involved with FFA, 30 years later - and after the fateful shift in agriculture education policy - we have the poignant example of a kid who is so immersed in and lauded for his achievements in commodity agriculture, he has no appetite to grow his own food at home and is hungry as a result. This is literally *The Hunger Games* (Collins, 2008).

Chapter 15. Seeds that forget

The violence of this curricular silence is best described as an epistemicide. “[T]he murder of knowledges” (de Sousa Santos, 2015, p. 149), epistemicide involves “the destruction of the social practices and the disqualification of the social agents that operate according to such knowledges” (de Sousa Santos, 2015, p. 243). Epistemicide is not an agentless occurrence; it is perpetrated by a party to create dependency and, through dependency, domination. As the institution responsible for the intergenerational transfer of knowledge, public education is complicit in this murder. Paraskeva (2016) builds off de Sousa Santos and develops an understanding of education’s role in epistemicide in the context of Quijano’s coloniality of power:

> As a mechanism (or should one say a mega-mechanism) of the exploitation and domination of modern-day capitalism carbureted by neoliberal policies, the educational and curriculum apparatuses cannot be dissociated from the coloniality of power… The coloniality of power produces and reproduces the hegemonic mind of eugenic dominance and control, a hegemonic cult anchored not necessarily on the so-called superiority of the Western modern Eurocentric epistemological perspective but shockingly on the eugenic claim that such epistemological perspective is unique and the only cognitive possible, a cognitive fascism that fertilizes subjectivities. (p. 3 - 4)

From the federally run resettlement school for the First Peoples of North America (Spring, 1994) to the education system in colonized Africa (Wane, 2006, Fataar & Subreenduth, 2015), the world is littered with Western epistemology’s eugenic approach to other systems of knowing. Wane (2006) described her experience growing up in Kenya under a colonial education

as marked by the absences left by epistemicide: “To control people’s culture and way of thinking is to control their tools of self-definition in relationship to others. Colonial education can be characterized by a series of absences in learning about the multiplicity of knowledges” (p. 88). Again Paraskeva: “Only a sociology of absences will be able to elucidate the limits of representation at work in each situation... where the alternatives did occur, we are dealing with silencings, epistemicides, and trashing campaigns” (p. 244).

In Bailey County an alternative had occurred; I warrant again that fateful newspaper article that quoted Bailey County elder, Jeff Byrd, as remembering that: “by and large people were living off the land” (Hensley, 1986, p. 239). A silencing is now occurring; it is a silencing by the state, more specifically, by the schools. Both the youth and adults in my study reported being aware of the “absences” around traditional agricultural knowledge in public education. The following exchange between two women who work in the high school cafeteria - Ms. Angie and Denne - presents a clear-eyed analysis of the cultural loss and implicates the public education system in that loss.

> Ms. Angie: Kids don't know anything about growing, making gardens, anything like that anymore.
>
> Deene: We're losing generations of children that don't know how to provide for themselves.
>
> Ms Angie: I think it's so important that the kids are involved.
>
> Deene: How many of the kids in this high school would know how to break a green bean and put it in a jar to pressure can it to put it on a shelf?
>
> Ms. Angie: My daughter's teaching at [a school in the next county over] and they're doing more family planning and stuff, home ec., you know.... cooking and

> things and that's good to bringing back maybe sewing and cooking for the girls and they can survive when they, if they can't go on to college, if they've got something, you know, a skill then they can....
>
> Me: Yeah, but we're, we're losing it.
>
> Ms. Angie: Well we are.
>
> Deene: We're losing it. We are. (Cafeteria workers, interview, December 16, 2018)

Students also perceived the absence and corresponding loss. They described traditional agricultural knowledge as fading over time and perceived an existential threat to the practice of and knowledge around small-scale, subsistence-level farming. "Everyone had to grow their own food in, like, the 1800s and everyone knew how to do it and now people don't" (Daphne). The following quote from Ikard shows just how successfully self-sufficient agriculture practices has been pushed out of Generation Z's collective consciousness:

> I guess I'd always just thought that sort of, like, this idea of preserving the environment, preserving biodiversity was, I don't know, kind of like a newer thing, but then hearing from the, like, people who were, like, isolated in the back of a holler for so long they were, are, they already knew all this stuff. (Ikard, interview, December 10, 2018)

Furthermore, the youth with whom I worked see themselves in an acute moment of losing the knowledge all together: "[O]ne of the major things, too: like, all of our farmers are either old age and dying or young age and lacking enough knowledge to kind of grow their business enough to fill the place of the people that are dying" (Erin). Meghan echoed Erin's concern for the consequences of this silenced knowledge: "Other people need to get involved with this

because a lot of people now, this generation of kids and stuff, they don't know how to do any of this and they need to. It's just very important life information."

The curricular silences around intergenerational knowledge are mirrored in genetic form by hybrid seeds. Introduced to the mass market in the mid-1920s (Ray, 2012) they were marketed on the promise of delivering a higher yield and more income for farmers (Gupta, 2013). Hybrid seeds are seeds that have been bred to present certain desirable qualities in a plant. However, the plant from a hybrid seed will not produce another generation of crops. Hybrid seeds are seeds that do not remember. They are corporate created absences of intergenerational knowledge.

Like all silences around self-sufficiency, they leave the user wide open to exploitation. Because hybrid crops do not produce viable seed, farmers that grow with hybrids are compelled to purchase new seed each year. According to USDA data, in the last 20 years corn seed prices have risen over 300%, soybeans over 350% (USDA ERS, 2019). That period has also seen massive consolidation in the global seed industry; six multinational seed companies now control 62% of the global seed market (Torshizi & Clapp, 2019). Torshizi and Clapp (2019) also point out that global corporate finance has stepped in as major players in the global seed industry. In 2016, “the 5 largest asset management companies – BlackRock, Capital Group, Fidelity, Vanguard, and State Street – collectively held anywhere from 12.4 - 32.7% of the shares in” the five largest seed companies in the world (p. 12). As dystopian as it sounds, we are facing the real prospect of global capital and amnesiatic seeds enclosing the process of food production on a global scale.

When we gathered Mr. Henson’s cornfield beans from his mountain-top home and the other heirloom varietals we were so generously given by community elders, the kids and I did so

as agents of the public schools for the explicit purpose of reconnecting public education with the possibility of feeding itself. As germplasm of local knowledges, the seeds we gathered were articulations, noises, sounds of individual self-sufficiency and community resilience and they rattled like snake tails in the silence of the state's curriculum. The local food projects that happened as part of this research were a collective remembering in the context of public schooling. Our actions incorporated, as Paraskeva (2016) would say, other cognitive possibilities in the educational apparatus. In doing so, we positioned Bailey County public schools, if just for a brief moment, as a space that held multiple epistemologies. This is in otherwise to neoliberal education's "hegemonic mind of eugenic dominance and control" (Paraskeva, 2016, p.3). Those beans in the brown paper bags were a virus of rebellion against a food system designed to keep a population malnourished and an education system complicit in silencing knowledges of how to feed yourself.

Section V: The actions we took

The fifth section retells the stories of what we did while working on our two local food systems projects - the student-grown food project and the seed saving project. With the exception of Chapter 19, passages of analysis are interspersed with the presentations of data.

Chapter 16. Kids take action to preserve elder knowledge

When I conducted my final interviews, one of the things I was really interested in was how these kids had experienced the traditional agriculture knowledges and practices of Bailey County, what we came to call "elder knowledge." I thought for sure that our investigation had provided them with a novel way of looking at the world. I was wrong.

In their final interviews they talked about what they loved about meeting with the elders and about what they'd learned through the process, but only rarely did a kid mention how they thought about things differently after having had the experience. Although they were enamored with it, they did not experience "elder knowledge" as something foreign. These students had strong social, familial and personal connections to the elders of Bailey County; metaphorically, the local seed savers with whom we met were their grandparents, their great aunts and uncles. The interactions with community elders and their knowledge were not sites of transformation for the kids; they were sites of continuity and connections with their own family traditions.

That heritage is a heritage of action. As inheritors of Bailey County's local agricultural traditions, the youth that were involved in these two local food projects were mandated to act. Of course, the actions they took looked differently than they did for their elders - the kids in this study were at least two generations removed from the day-to-day activities of Bailey County subsistence-level agriculture - but act they did. The next section is dedicated to the actions they took.

The seed savers were initially somewhat stymied in taking action. When I designed the study, I positioned myself as the only person on the research team responsible for identifying the activities of the group. As I discussed previously, that unchecked piece of coloniality on my part lead to a lot of personal heartache early on in the process; it also placed students in the passive

positions of being consumers of the experience, much like the traditional construction of school lunch. Thankfully, that dynamic changed fairly early on. Once we started meeting and talking with community seed savers, the kids quickly took active control of our work together in ways that I did not and could not have predicted.

The spark of their initiative occurred on the way back from meeting our second Bailey County seed saver, Mr. Vance. Mr. Vance is a lanky beanpole of a man in his mid-40s with a mountain of a beard and hair to match. Unlike the other elders with whom we meet, Mr. Vance is a professional seed saver. A professor of Anthropology and Cherokee Studies at a regional university, he's an ethnobotanist with a specialty in the WNC biome and he maintains, quite possibly, the largest collection of WNC seeds in existence. He also happens to live in Bailey County on an ancient heirloom apple farm that is coincidentally perched on the side of the Corn Mother mountain not more than two miles from the plot on which the FFA and agriculture students grew food.

We spent almost two hours touring the farm that Mr. Vance is converting into what he calls a "climate collapse garden"- a garden in which he grows heirloom varietals from the region's both settler and pre-settler periods while holding an eye out for edible plants in the forest. His assumption is that native plants and locally–adapted varietals will most readily adapt to climate change in the microclimate of his garden. A practiced teacher and down-to-earth guy, he connected naturally with the kids and kept them engaged from the fridge full of seeds through the lichened apple grove, and on to his grow-out field.

The following excerpt is from my field notes on that visit with Mr. Vance. The notes describe some of the varieties of Mr. Vance's collection - including varietals we had heard of from other seed savers - and the kids' reactions to his preservation efforts.

> We started at the top of the garden with the beans - bean in bushes, trellised on fencing 6 feet high, sprouting red flowers, narrow beans, purple striped beans - three rows of beans with names like little white bunch, lazy wife, turkey craw, beige crowder, and cornfield. He had the pink tip beans that Mrs. Randolph had said were her favorites from her mother's. When we were at the "greesy beans" he talked about how local names for beans - greesy, short tipped, etc. - were actually more descriptive about the plant than the scientific name. Greesy for instance means it doesn't have the tiny hairs that other beans do.
>
> The beans gave way to gourds - white cucumber, Coushaw squash, and rough bark candy roasters. Some varietals, like the kushaw, he had collected in the Ozarks from the western band of Cherokee who brought them with on the Trail of Tears and, when Mr. Vance asked to take them back to his farm in WNC, they agreed, saying that's where they came from.
>
> The kids ask questions when they had them; TP had several; you could tell she was very interested. There was some chatter in the back of the line but when I strategically placed myself there, the kids were talking about what they were seeing. I could have been making it up but particularly Gary and Meghan looked like kids in a candy store. (field note, August 8, 2018)

On the HHS activity bus on the way back to school, the kids and I debriefed the experience. I was kneeling backwards on a seat near the front of the bus so I could talk with the kids when Tina began to wax eloquently about how she loved "this stuff" and how she was concerned that people were not saving seed, how it would be a shame to lose the old lines. She ended her soliloquy with the admission: "I don't want this project to end." From a couple rows

behind her, Ikard piped up, “Maybe it doesn’t have to.” And Tina quickly said, “We could start a seed saving club at HHS!” Ikard immediately seconded the idea, the others chimed in with their support and the idea was born.

The planning of the club happened as we were engaged in the activities that I had planned for the group. On the bumpy, blustery bus ride to meet with Mr. Henson about his cornfield beans, the kids confirmed and solidified their intention to form the club. After meeting with Ms. Sally, the seed lending coordinator at the public library about her waning seed stock, the kids thought a seed swap to benefit the library’s program would be an ideal first activity for the club. And while we spent our lunch period stringing up Mr. Henson’s cornfield beans, the kids divided up tasks to make it a reality. Chris drafted a flyer for the seed swap; Ikard emailed the principal about being recognized as an official school club; and Tina wrote an article (Figure 2) for the local paper letting the community know that the new club existed and inviting seed savers to come speak with us.

“Club Day” at HHS was the last day of August that year and, that day, the kids stood behind a plastic folding table on the hot black pavement of the bus parking lot to recruit their classmates to the club. Gary brought two Cinderella pumpkins he had grown for the table and we added them to a couple of jars of Mr. Henson’s beans. Gary and Chris were there the whole time; Tina, Meghan and Ikard alternated between our table and tables for other clubs in which they were involved. For an hour and a half, the kids sweated and hailed their friends and talked with each other and ultimately signed up sixteen new members.

Page 6 --[redacted]--September 5, 2018

[redacted] students seeking heirloom seeds and stories

[redacted] students are showing an inspiring interest in learning old-fashioned techniques of agriculture. Students at [redacted] are highly interested in meeting [redacted] County residents who have a knowledge of seed saving. We want to start a seed saving club at the high school where we grow out heirloom [redacted] County seed and distribute them to people who want to grow those vegetables. We are looking to learn the wisdom of farmers of the older generations and to apply this knowledge to agricultural opportunities for high school students. Students who are participating would love to experience the process of seed saving. We would love come and talk to the seed saver in your family, learn their seed-saving techniques and borrow some seed to grow out at the high school. If you have heirloom seed and knowledge you would be willing to pass along, please contact club advisor Eric Klein at ([redacted].

Figure 2. Redacted article from local paper. Article solicited local seed savers to contact club.

The newly formed club met once every other week during lunch. Initially the meetings were visits from seed saving elders from the county. Mrs. Baker brought us corn that her family used to make hominy, seeds for dipper guards, Tennessee snowball cornfield beans and much more. Another day we met with an elderly couple who had read Tina's article in the paper and brought us beans that the husband's great- great- grandfather had brought with him when he immigrated to the U.S.

The club also used their meeting time to continue planning the seed swap at the library. The group identified the local AM radio station and the annual Old Timey Day fair as good places to advertise our event. Old Timey Day is an annual fair on the county seat's village green that highlights traditional mountain arts and crafts. Over the course of the six-hour day, six club members sat in the HHS Seed Saving Club booth; they passed out flyers and spoke with passers-by about the club and our upcoming swap. One older guy - who the students called a "hippie" - spoke with the kids for a while and then walked away declaring "There's hope for America yet!" Several people signed up to come to a club meeting and talk about their own seed saving practices. In mid-October, the manager of the local radio station brought his mobile recording equipment to the high school and Chris, Tina and I recorded a community interest spot to advertise the swap.

On the first Saturday in November, the Norwegian maple in my front yard had shed the top quarter of its deep yellow foliage and the tip of the Corn Mother mountain shone with hoarfrost till late in the afternoon. On that day the HHS Seed Saving Club gathered nuts. We held the swap in the county library, a lovingly restored structure that was originally built as a collegiate institute in the 1920s. That morning sunlight poured through the south-facing nine-over-nine windows and bounced off the blond, three-quarter inch slat, heart pine flooring. Mr. Vance brought a table full of seeds, a table full of literature and five undergraduate students with him. Hannah Branch, the director of Bailey County's community garden brought seeds and gourds and displayed them beautifully on a seed-print cloth. A community member, Bob, brought a friend, Jane, and tons of seeds. Larry and Lewis created a great atmosphere by playing guitar together for two hours straight. The other kids worked in teams - Ikard and Daphne, and Cary and Ikard's brother, Eric - to collect the seeds that had been brought to the swap and

interview the community members who had brought the seed. Ikard and Daphne were particularly methodical about taking two small amounts of each seed and putting one on a table for the Seed Saving Club and the other amount in a basket for the library seed lending program. Not as many community members attended as I had hoped, only six or seven over the two-hour program, but when I lamented about that out loud, Ikard's brother Eric immediately drew my attention to the amount of seeds packets in the basket for the library: "That was the main goal, to get the seed for them."

For the youth in this study, to act on their heritage meant to pass it on. The excerpt below is an exchange between Tina, Chris and Sally, the coordinator of the library's seed lending program. The exchange picks up as Sally, as a way of getting to know the kids, has asked them why they were interested in working on the seed saving project:

> Tina: ...being able to be part of the seed saving thing which is kind of cool because you get to go around and talk to the older people and learn how they save seeds and no money, not only how they save seeds but how they are sustainable. Be successful every year, new crops, that kind of thing. And to be able to take that kind of thing and, you know, just kind of bring it back because a lot of people don't do that anymore. And that's kind of cool.
>
> Chris: And that maybe we could spread that, too.
>
> Sally: Expand more on "spreading."
>
> Chris: Maybe we could take what we learned and teach it to other people so not only do we know but other people can learn it, too. (field note, August 15, 2018)

The connection that the kids made between learning about traditional seed saving and passing that knowledge on to others was immediate. Part of what's going on here is, I

believe, them living out their heritages of action. It is their turn to live on this plot of soil and, just as their parents and grandparents saved seeds and passed them down, so will they. Tina articulated this responsibility to in her first draft of the newspaper article requesting elders to meet with the Seed Saving Club: "We are looking to *expand* the wisdom of farmers of the older generations to apply this knowledge into agricultural opportunities for high school students" (my italics). Although that word was changed to "learn" through the editing process, her initial use of the word "expand" belies a raw belief in her mandate to be creative and actively develop and build something beyond what exists.

There's another, interrelated theme going on here as well. There is a definition of the beneficiary that does not stop at the children's skin nor the boundaries of our research group. When they conceptualized the benefits of seed saving, those benefits were always expressed in as a benefit for the community. Gary gave touching testimony to this idea when he realized that Mr. Vance had some of Ms. Ramsey's favorite bean that she had lost years before.

> Gary: Ms. Ramsey, she had those pink tip beans, her favorite. She never had them, like, because she just didn't have any seed for them. She didn't know where they were around. Those were her favorite beans going on, growing up. And when we went, um, where did we get the pink tips? Somebody brought some for us…
>
> Me: Mr. Vance
>
> Gary: Yeah, he had lots of them. And then that just shows you that we had thought the seeds were lost, but there is somebody that still has them. It's important that we save those.… it's important because we thought all was lost for

> that seed. We didn't know that there was any more until we found him. And he had them. He has no idea that she doesn't have any. *But now that we're a group and we know that, I think it's important to share them again. Because if we don't share them then they're going to go away.* (Gary, interview, December 18, 2018)

For Gary and the rest of the seed savers, knowledge meant a responsibility to act and that responsibility was to act for the benefit of his community. I will return to this theme at length in Chapter 23 and use it to expand to develop my understanding of "embedded agency."

Chapter 17. Seed saving and food sovereignty

A big question for me as I look back at my data was whether or not the seed saving project could be conceptualized as a food sovereignty initiative. Although there is considerable variation in what is described as food sovereignty (Patel, 2009) the term generally refers to a community's right to control the mechanisms and policies surrounding its own food production (Desmarais, 2005). Certainly incorporating the saving of heirloom seeds in public education is a concrete step towards independence from the corporate seed industry and a gesture toward food sovereignty. However, unpacking the framework exposes both overlaps and contradictions that complicate easy comparisons to our project in Bailey County.

Framed as a rights-based (Coté, 2016) response to industrialized and globalized agriculture (Altieri, 2009), food sovereignty is a reaction to the neoliberal globalization of food systems (Alkon & Mares, 2012; Ayres & Bosia, 2011) and the commodification of food itself (Robbins, 2015; Vivero-Pol, 2017). Through the development of a local, agroecological-based food system, the food sovereignty framework addresses not only questions of food regime but agrarian reform (Meek, 2015; Whittman, 2011), resistance to GMOs (Grey & Patel, 2015), biodiversity loss (Chapell et al., 2013), and the revitalization and leveraging of local and Indigenous agricultural knowledges and seed stock (Campbell & Veteto, 2015; Cote, 2016; Kloppenburg, 2014).

Rooted in the peasant agricultural movement of the Central and South America, the concept was first articulated by the peasant farmer group at the UN World Food Summit in 1996:

> Food is a basic human right. This right can only be realized in a system where food sovereignty is guaranteed. Food sovereignty is the right of each nation to maintain and develop its own capacity to produce its basic foods respecting

> cultural and productive diversity. We have the right to produce our own food in our own territory. Food sovereignty is a precondition to genuine food security. (Via Campesina 1996, as cited in Patel, 2009)

While the movement had its beginnings in the developing countries of Central and South America, the framework also has been used to describe efforts of communities in North America to resist and develop alternatives to corporate agribusiness food system in Indigenous communities in America and Canada (Cote, 2016; Daigle, 2017; Patel & Grey, 2015), in communities of color in the U.S. (Alkon & Mares, 2012; Meek et al., 2019) and among seed savers throughout the Southeast (Cambell & Veteto 2015).

Outside of Campbell and Veteto's (2015) work with white, Southern seed savers, applications of the food sovereignty framework to the actions taken by those who are traditionally privileged - such as white, middle class American kids - are rare. It is interesting, then, to map the ways that this project contributes to "diverse expressions across space according to specific histories, identities, and local socio-ecological realities and dynamics" (Daigle, 2017, p. 297). Like other expressions of the food sovereignty movement, my study's projects fostered the development of a local food system. They did so with the goal of increasing their community's ability to feed itself and they looked to traditional, place-based agricultural practices to pursue that goal.

A few students also reported an interest in and concern for the preservation of biodiversity. Though the number is somewhat debated, only between 3% and 7.5% of the varietals that were commercially available in the U.S. at the beginning of the 20th century were still available at the beginning of the 21st (Fowler and Mooney, 1990; Heald and Chapman, 2012). In this context, the students saw their work in seed saving as preserving fragile seed

stocks in an era of shrinking biodiversity and the privatization of genetic material. Daphne saw the lack of biodiversity as a threat to the food source and, consequently, to society at large.

> I also think that it's important to have heritage breeds. Cause, I mean with the [homogenization] of agriculture, that it's dangerous. And I think that there's going to be some disease that's gonna come and we're not gonna have a pesticide for it and the genetically engineered crops are not gonna be resistant to it. And I think that if we don't have these, you know, tried and true versions of seeds that it's gonna cause famine. (Daphne, interview, December 13, 2018)

Ikard echoed her concern:

> From, like, a scientific point of view, I think the more biodiversity that we have - I mean we have a ton of it here, like, living where we live - I think the more you have, the stabler of, like, an environment you're going to have. And, as like a farmer, you want your environment that you're growing in to be as rich as possible. And I think to preserve that richness that we have here, that we have to save a lot of the different kinds of species and varieties that we do have. (Ikard, interview, December 10, 2018)

Noticeably absent from our project, though, were perspectives that reflected the philosophical cornerstone of the food sovereignty movement: the social justice perspective. Our programming fostered acting locally but, as Robbins (2015) observed, “localisation is a necessary but not sufficient condition for food sovereignty” (p. 449). In their comparison of six food sovereignty education programs, Meek et al. (2019) described the educational approach of those programs as “emphasizing education as a tool for developing critical consciousness and encouraging students to learn from their own reality, recognizing the power structures that shape store their food

environment, and focus on transforming the social and economic inequities in their communities" (p. 617).

There were a few, rare instances in which the kids directly critiqued the global food system or questioned the benevolence of Big Food. Tina cited the sterility of modern seeds for the decline in the popularity of seed saving. Gary really, really did not like GMOs; he worried that they were

> "going to start causing issues in food, like food recalls" because "all the plants are being taken over by things that they aren't really are… It's scary because if we run out of seeds because they failed, something went wrong, I don't know what we would do." (Gary, interview, December 18, 2018)

Daphne was the only student who articulated any kind of food justice argument against corporate food system: "It's really big corporations that are forcing the pesticides and, like, I don't know, like, the CEO of Doyle, like, Fruit, is probably making a whole lot and the farmers that are growing, they're not." Generally, though, our projects lacked an explicit element of critical pedagogy. We never addressed the hegemonic desires and mechanisms of the global agrifood industry. The food growing project largely stayed within the market framework; the seed saving kids made almost no mention of the genetic manipulations of transgenic seeds as a threat to local agriculture. When we stood with him in his field, Mr. Vance showed and told us the story of the Red, White and Blue corn that had been given to whites in northern Georgia by Muskogee people as they left on the Trail of Tears. As powerful as the story was, it didn't spark a discussion among the kids and me about power and food or about knowledges and epistemicide. Without a critical perspective, the projects nibbled around the edges of food sovereignty.

Reflexively, this makes sense. At present, the food system is generally working for us. There are a number of grocery stores in Bailey County and, because multinational trade agreements include food, and include it on terms that are favorable to the U.S. (Whittman, 2011), the seed savers and I generally have access to the food that we need. I cannot help but think that our relative global privilege strongly informed our lack of critical analysis.

Interesting, though, the kids expressed very little confidence in the global food system's ability to continue. In his final interview, Brad predicted that "[o]ne day we might not have the freedom to go to a grocery store. Yeah. Something along that line. Something happens and people just don't, they don't know how to [grow food] anymore." His ominous prediction was echoed by a number of other students and they cited it as a reason to know how to grow your own food. As Ikard put it, "[w]e're very fortunate to have the security that we have in our food, but I don't think it's always going to be like that. So I think it's good to know on a physical level how to actually go out and do that stuff." Tina agreed and she identified the "stuff" that would be needed to be done clearly as traditional Bailey County workways: "[t]here's gonna come a time that we're - everybody's - going to have to rely on somebody for something. If we don't learn how to save things that can sustain life and I just think that seeds are very, very important things to have."

Can the seed saving project be read as part of the food sovereignty movement? Yes and no. It was conceived of as a project that would foster a local food system that would contribute to a decolonial otherwise to the global food system. In its design, therefore, there was an implicit critique of oppressive and destructive relationships among humans and between humans and their non-human surrounds as exercised through the food system. However, only in my own mind did I frame "seed saving and agroecology as political acts of resistance" (Meek et al., 2019,

p. 617). I didn't discuss that framing with the kids or with the adults whose consent and cooperation I needed to do the projects.

In many ways, the question of whether this research was an expression of a food sovereignty project serves to center my role, both as a specific individual involved in the Bailey County project and, more generally, as an action researcher flirting with a food sovereignty project. First off - while I conducted an action research project with youth and adults of the community in which I live, it was not a participatory action research project. The community did not have input on the goals or design of the study (McIntyre, 2008). Those outlines and contours were mine and I, to some degree, kept them secret. To Natalie, the BCS Superintendent or the folks at PLOW and Extension, I did not pitch this research as projects that would hopefully lay the groundwork for a rebellion against the for-profit, agrifood industry and globalized corporate capital in general. Had I packaged it like that, I don't think they would have seen themselves represented in that language and I don't think they would have agreed to do it. This was action research; I had specific things I wanted to get done and I relied on the knowledge I had as an insider in the system as to how it needed to be pitched to get it done.

One of the consequences of the way it got pitched (and correspondingly implemented) was that critical analysis was almost totally absent from the framework. This was a limitation of the study. The projects were framed as agricultural education and historic, place-based learning; they did not explicitly "teach[] and link[] a food sovereignty framework with Indigenous knowledge, decolonization, and gender equity" (Meek et al., 2019, p. 617). That was never the intent of the study. My intent was to acknowledge and leverage rural Appalachian elder knowledge in the context of public education to begin remembering and practicing those agricultural workways that would make our community more self-reliant and less reliant on the

exploitative, global food system. In this way, I hoped to speak with others who were acting in otherwise to the global food system - such as Via Campesina - but I kept that to myself.

In addition to being an analytic limitation, my choice to package the projects as I did had practical implications as well. Although both the seed saving and food growing projects would have been impossible without the buy-in and excitement and participation of over 100 other people besides myself, the impetus rested in me. I reiterate that this was not a participatory action research project; the actions that we took were not because the community had identified a need and agreed to collectively address it. First, this is another way in which the Bailey County projects did not overlap with the food sovereignty framework; food sovereignty initiatives are community initiated (Desmarais, 2005). Secondly, when the primary impetus - my need to generate data for my dissertation - ended, the projects themselves petered out. This points to a general weakness in non-participatory action research's ability to address systems-level issues like food system localization. At the very least, it is a testament to how carefully decolonial action research projects need to be designed if the goal of the project is to facilitate lasting systems-level change.

Chapter 18. Learning how to grow our own food

This action research study was comprised of two threads of action; both were designed to get students engaged in local food systems projects. The first thread- the seed saving project - was sketched out in the preceding chapter. The second thread was the attempt to get Highland High School students growing food for their high school's cafeteria. Given the dwindling of local agriculture in Bailey County, the student-grown food project was a gesture toward collective remembering as we attempted to answer the question: Could we as a school feed ourselves? All the elements were in place. We had the kids who were willing and able; the farm we were going to grow on had the GAP certification the NSLP required; we had the farming expertise in the form of County Extension agents; we had the GAP certified facilities in which to process the food; and we had a CNP director willing to purchase what we grew. All we had to do was fit these pieces together and actually grow some crops.

It turns out, I was the only adult involved with the project Pollyannaish enough to believe in the inevitability of our success. Unbeknownst to me, none of the other adults had very high expectations for our success. Adrien, one of the two Extension agricultural specialists that partnered on the project set the bar low: "My expectations weren't all that high…. you got to look at stuff like that realistic. I mean you, you're partnering with multiple agencies, multiple entities trying to do something that you're still relying on the weather, right? …. And you're like, eh, yeah, let's go to the moon." Adrien's boss at Cooperative Extension, Travis, was even more blunt: "it wasn't going to be worth the squeeze. I thought the difficulties... I didn't think we could do it." Even Natalie, the FFA teacher, had her doubts: "My expectations were all over the place, really, a little bit. I mean, I was hopeful, but I was definitely, um, a little reserved. Would this actually happen?"

There certainly were not a lot of precedents or models. None of the other 100+ school districts in our state was doing it. According to the youth specialist Extension agent who supports farm to school programming across the state, two high schools in different parts of the state had, in recent years, gotten their school gardens GAP certified but both had since abandoned the effort. There was one high school that was supplying their cafeteria with hydroponic lettuce. But at the time, no students in the state of NC were growing food for their cafeteria in the ground and subject to the weather.

The run-up to planting was substantial. I first broached the idea for the project in an email to HHS's agriculture teacher, Natalie Brown, in December prior to the research. I knew that Natalie was planning to have the FFA/agriculture classes grow food at the Sternhill Farm again the following year. I suggested that if BCS's Child Nutrition Director, Lacey Fox, were asked to identify crops that she could incorporate into a lunch menu at the high school, the kids could grow those specific crops for her. Natalie loved the idea and immediately pulled several other people into the conversation. All the adult players - PLOW, Extension, and both YCS's child nutrition and Career and Technical Education (CTE) programs - were on board before the new year. We adults met in January and again in March to establish a tentative planting and harvesting schedule and loosely spell out our roles and responsibilities. At those meetings, Adrien, Natalie and James steered the conversations. In the intervening time between the two meetings, the CTE and child nutrition directors communicated about what crops could be grown.

Parallel to the adult meetings, Natalie was also meeting with the FFA membership at the high school. According to the kids that were there, she brought it up in an officer team meeting in the spring. The idea received a warm and, at least according to FFA President, Hillary, an enthusiastic reception. However, the kids were also wary about whether it would work.

> I think at the time it was more: Do we want to do this? and, How can we do this? and, Are we going to be able to do this? So that's why we kept it real secretive until everything was in the works. (Derek, interview, December 19, 2018)

In contrast to the kids who participated in the seed harvesting project, the youth who participated in the student-grown food project were largely those students who took agriculture classes in the spring and fall semesters of 2018. There was also a handful of kids who volunteered their time on the farm during the intervening summer; they were mostly members of the FFA officer team. All total, approximately 120 kids had their hand in either the planting, tending, harvesting, processing or serving the food grown in during the data collection period.

With two weeks left in the school year, Natalie's second and third period horticulture classes boarded the groaning CTE activity bus and were shuttled to the Sternhill farm. We arrived as storm clouds scraped the top of the mountain that dominated the view to the south. The mountain's name is a form of the Cherokee word for "corn mother." At the foot of Corn Mother, and under the buoyantly sardonic direction of Adrien from Extension, 45 kids were able to plant four rows of Kennebunk white and four rows of Beauregard sweet potatoes.

It was a smooth start to an incredible roller coaster ride. Within hours of planting the potatoes it started raining and it rained for two weeks straight. Before school was out for the summer, we knew that we had lost the entire crop of white potatoes. Then, in early July, Natalie emailed the group of adults to say that she was out of commission; cysts were bulging against her spinal column, the repercussion of an old horse riding accident. She was to be in varying degrees of pain for the remainder of the project and, most probably, for the remainder of her life.

She also had more bad news for us: despite the black plastic that had been put down for weed control, a month of neglect had turned our four neat rows of sweet potatoes into four long

strips of weeds and sod. The folks on the email rallied with an outpouring of support for Natalie and the project itself. Within two days a group of involved adults met at the farm to survey the damage and discuss options. The Extension agent, Steve, suggested spraying the sweet potato rows with Pound; Pound, Steve described, is a narrow leaf herbicide that would not affect the broad leaf potato vines. I relayed Natalie's desire to spray only in last resort so we agreed to try to weed the rows by hand.

That next week, on a hot July morning, ten students showed up at Sternhill to weed the sweet potatoes and replant the white potatoes. Adrien, Steve, James, Travis and I joined them. The process that day was a microcosm for the whole project; it was well intentioned chaos. The whole operation had the feeling of an orchestra that just started playing a piece of music in the middle of its cacophonous warm up. The weeds were thick in between the rows and there were large clumps of grass growing out of the holes in the plastic where the sweet potatoes were. I tried pulling out two or three of the clumps but ended up pulling the sweet potato out of the ground as well. Extension director, Travis, and his intern weedeated willy-nilly - now topping weeds, now edging the rows, now moving over a row to attack a particularly large clump. Kids with hoes were gathered together at various places on the rows, sometimes hacking at the turf, sometimes standing around talking with each other like teenagers.

The replanting was relatively graceful. I looked up out of the wet row of dew and splattered vegetation to see the father of Brad - one of the kids - running an orange tractor to furrow new rows where the potatoes had been planted. Brad and his father farmed the next plot over; his dad was running for the Board of Education so it was an opportune time for him to pitch in. I was surprised how quickly the tractor ran; it was obvious that the dad, unlike those of us in the weeds, knew what he was doing. Adrian walked the rows with a similar determination,

laying down a steady spraying of chemical in the new trough. Two other students, James and Erin, walked the furrows, dropping potato chunks in; Brad and another student followed them. The two worked in a beautiful dyad, facing each other and pulling dirt from one another's side to cover the potato eyes and chemicals with red, Carolina clay soil.

After the last of the potato eyes were covered, I walked back to the sweet potatoes rows where Travis, Steve and Jimmy were hemming and hawing around the impossibility of the weed situation and the possibility of spraying weed killer. The conversation flowed with familiar mountain politeness; the spraying suggestion was soft pitched multiple times, always couched in the conditional. Different aspects of the suggestion were discussed. Me: "Will it affect our GAP certification?" Steve: "No, not at all." No one, however, came out and said: "Let's do this." It felt like water being rocked slowly in a tank; as soon as our collective wisdom arrived at one answer, our inertia seemed to move us in the other direction.

His patience with the process nearing its end, Jimmy said, "I've got to get to my other work." I began to realize that, because I had represented Natalie's opinion before, I was functioning as her mouthpiece in this conversation as well. I reiterated her position and observed that, as hopeless as the situation was, we were facing a dire need and therefore we should go ahead and spray. Steve followed quickly on: "I knew we were going to have to." As we were packing up, I said to Travis: "We wound around to what Steve had suggested" to which he replied, "Yeah, he's really patient with us."

A couple of weeks later a group of students and adults met at the farm to put out 2,000 red and 2,000 green cabbages on the lower part of the field below the white potatoes. Hillary, Daphne, Steven and another student, Allen, and I took turns on the back of a setter. A setter is a tractor attachment with a metal grid tray in front, a mechanized wheel under the tray and two

seats behind. The wheel in the front of the attachment pierces the plastic, makes a small hole in the ground underneath, and squirts some water in the hole. The people riding on the seats take a small cabbage plant - a “plug” - from the tray in front of them, put it in the hole and then pinch the soil (mud, really) around the top of the plug to bury its roots.

The trick is to complete that full cycle of motion as the tractor races down the row. Actually, the tractor is crawling along at its slowest pace possible, but only Adrian and one of his protégés who made a brief cameo, Andrew, could do it without leaving several gaps in the line. Adrien chided us from his perch on the tractor’s driver’s seat: if the crew in the back got to arguing, he said, he would start driving faster. The process is easier if someone walks along next to the tractor and hands you the plug, but even that system required a parade of followers putting plants in holes that had been missed and making sure the tops of the plugs had been buried properly.

After the third hour of planting, conversation dwindled and we quietly finished out the rows. Occasionally someone would speak, but it was just a sentence or two and then the group fell back into what felt to me to be a grateful silence, like the activity we were doing could or should be enjoyed on its own merits.

Six week later all 4,000 cabbages were dead. James and Steve had strongly advised spraying them with a Bt. Bt (Bacillus thuringinsis) is a microbiological insecticide that will “control” cabbage bugs; it is commonly mixed with a "spreader/sticker" to help it adhere to a crop (Steve, personal communication, 11/23/2019). Natalie took their advice and James had sprayed the plants once a week for a couple weeks. The cabbage turned yellow and puny; both Natalie and Adrien suspected that improperly mixed chemicals were responsible for damaging

the plants. James stopped spraying them and the plants started to recover but then another torrential two-week rain set in and flooded them all.

The summer of 2018 was the wettest summer on record in WNC (DeGrave, 2018). I talked to local farmers whose plants drowned in the tens of thousands that summer. The story of this student-grown food project is also the story of education in the age of global climate change, or, as some (Orr, 2009) describe it, global climate collapse. I return to this theme in the final chapter to discuss how this study suggests ways public education can respond to and prepare for not only the agricultural challenges but also the social, political, and economic consequences of catastrophic climate change.

Our troubles continued. In late September, Natalie admitted to me that she had passed off the job of bush hogging the cabbages to a stranger who had stopped by the farm while she was there; he volunteered to do it because he needed community service hours. She was not at the farm when he did the bush hogging and he errantly mowed off the tops of the white potato plants as well. The four rows of white potatoes that had been drowned and replanted had been mowed down before the tubers were big enough to meet the school cafeteria's size criteria.

Finally, in early October, Nicole's first, second and third period agriculture classes were bused out to the farm to pull the white and sweet potatoes from the ground. Brad turned the red soil with a plow pulled behind his father's tractor. He was wearing his signature t-shirt: "We used to have Ronald Reagan, Bob Hope and Johnny Cash - Now we have Obama, no hope and no cash." The kids wore blue non-latex gloves as they walked the rows, stooping over to pick the tubers and put them into cardboard milk jug boxes from Ingles. Those boxes were in turn dumped into a large cardboard container at the head of the field. The plastic that we'd used to cover the sweet potatoes was irreconcilably tilled into the ground.

James drove the enormous cardboard container on the back of a trailer to the high school where the teenagers formed human chains and passed each sweet potato carefully from one to the other to move them into the greenhouse. They cured there for three weeks before being brought to PLOW to be washed and sorted. Students from Nicole's agriculture classes lined the long conveyor belt of the washing and sorting machine. Some pre-washed the main dirt off; some stood along the machine to catch those that were sorted out as too small. Still others stood around a large carousel at the end of the machine and sorted the cleaned sweet potatoes into two categories: those that were within 2 ounces of the cafeteria-required 10 ounces, and those that were not. By the middle of the second class period it became heartbreakingly apparent that precious few exemplars would meet the cafeteria's requirement. We came away with only two 40 pound boxes of sweet potatoes that met the school lunch guidelines.

The washed sweet potatoes were stored in a cooler at PLOW while Natalie and I nudged and conjoined the staff at PLOW and Lacey Fox at the school board office to negotiate a price and set a date for them to be served. Two weeks later we were cc'ed on an email from Betty at PLOW to Lacey saying: "$13.75 per 40 pound box. This is what they are paying for 'local' sweet potatoes and it is within the market terminal pricing." After PLOW deducted their standard 20% cut and the cost of the wax-lined produce boxes that we used, the FFA program was cut a check for $10.30.

$10.30. At first I was completely demoralized. How could almost six months of farming by over a hundred people be valued at just over $10.00? I was devastated when I looked back at the labor that we had put in to the project and heartsick for the future; I was sure the paltry check was the death knell for any future farm to school programming in Bailey County. In short, I was caught in a neoliberal valuation of the project. It would take many days and many conversations

to remember that the program's valuation extended beyond the commodity price valuation of the produce; the program also could be judged on its values of learning and community. Instead of cashing the check, Natalie framed it.

The next day, Natalie's 3rd period class went to PLOW to wash the white potatoes that we'd harvested. There was less than one box, 32.3 pounds, of white potatoes that were of usable size for the cafeteria; Natalie decided that the FFA would sell all the white potatoes to school teachers and staff as seconds.

The next week the sweet potatoes received one more treatment - a wipe down with Clorox wipes. They had sat in the cooler at PLOW for so long they had begun to mold and apparently Clorox wipes are ok under GAP regulations. Finally, on the last full day before the Thanksgiving break, 240 portions of sweet potatoes were served to students in the high school cafeteria. The FFA officers were present in their blue corduroy jackets, ready to distribute bags of small white and sweet potatoes for free to their classmates. In a final hiccup, they were hijacked through almost the entire lunch by a newspaper writer who had the indiscretion to interview them during the event.

Chapter 19. Student-grown food is not farm to school

I came to the student-grown food project conceiving of it as a farm to school ("FTS") project, specifically a FTS institutional procurement project. I've since changed my mind. I realize now that student-grown food and FTS operate on differing underlying assumptions and open up to different sets of possibilities. But it is really interesting to hold the student-grown food project up to the FTS literature and see how it expands that discussion.

The FTS movement began in the late 1990s (Vallianatos, et al., 2004) as a decentralized effort to reconnect schools with their local farmers (Joshi et al., 2008). FTS is an umbrella term for a set of activities that include school gardens, farm visits, cafeteria taste testings and institutional procurement of locally-grown food (NFTSN, 2019). Because the food that the students grew was purchased by the district's Child Nutrition program and served in the high school cafeteria, the project could arguably be read as a FTS institutional procurement project.

FTS institutional purchasing programs traditionally take the form of districts purchasing from farmers directly or through local aggregation and distribution centers (Vermont Agency of Agriculture, 2014). FTS procurement programs across the U.S. received a boost in 2008. That year's Farm Bill amended the NSLP regulations to allow districts the flexibility to exercise geographic preference in using federal funds to purchase unprocessed, locally grown or raised agricultural products (LaCorte, 2011). The 2010 reauthorization of the school lunch program further expanded schools' access to local foods by expanding the USDA's definition of "minimally processed" local food to include foods that are washed, chopped and cut (RWJF, 2011). This change made it easier for cafeterias to incorporate locally grown food without hiring additional staff. Ironically, poor, rural school districts are the least likely of any size or geography category to exercise the local procurement preference (May et al., 2013).

Proponents of FTS programs frequently point to three benefits to argue their case: FTS programs provide children with healthier school lunches; they shorten food transportation distances and are therefore better for the environment; and they positively impact local economies (NFTSN, 2015, Bagdonis et .al, 2009, Tuck et. al, 2010, Vogt and Kaiser, 2008). A lot of FTS procurement literature tends to focus on the economic impact that a school's purchases have on the community's agricultural sector. The 2015 USDA Farm to School Census estimated that FTS programs across the U.S. generated $798 million in economic activity in their local economies (USDA, 2015). Although there has been no large-scale analysis of the economic impacts of farm to school procurement programs, numerous studies over the past several years (Gunter & Thilmany, 2012; Kane, Kruse, Ratcliffe, Sobell, & Tessman, 2009; King, & Pesch, 2010; Kluson, 2011; Tuck, Haynes, Wolf, Kane, & Stubbs, 2013) suggest that school district purchases of locally grown produce do benefit their local economies.

Noticeably absent from the literature on FTS institutional procurement programs is any discussion of student involvement. In 2015, the USDA conducted a national farm to school census; the questionnaire listed twelve ways that schools could potentially purchase local foods; school farms were not listed as an option (USDA, 2015). Additionally, the FTS literature focuses primarily on elementary and middle school students (Turner, Sandoval, & Chaloupka, 2014). With the younger aged children, the focus is largely on the impact that garden/farm-related experiences have student academics as well as nutritional and behavioral outcomes (Blair, 2009; Dilafruz and Dixson, 2013; Duncan et al., 2016). As Turner et al. (2017) note, the FTS literature becomes very thin when the students get old enough to take on active roles in the FTS process. Using data from the National Farm to school survey and the School Health Policies and Practices Study, Turner et al. (2017) also estimated the percentage of schools that incorporate produce

grown in “school gardens” in their school lunches is between 5% & 10%. There was no mention of who did the growing in those “school gardens.”

The silence around student involvement in the FTS procurement literature inscribes youth as passive consumers and creates a narrative of students as explorers in the world of local foods. As a movement, FTS is steeped in the political ecology of school lunch; it is ironic, therefore, that the procurement literature should exclude any discussion of students as agents who can learn about gardening as a way of feeding themselves or their community. Figure 3 is a poignant depiction of how the FTS narrative both engages the activity of students and then re-inscribes them as passive players in the school lunch game.

Figure 3. Picture from the farm to school literature. From *Going local: Path to success for farm to school* (Joshi, Kalb and Berry, 2006).

Although the students participating in this FTS program are dressed in aprons and hand-crafted paper chef’s hats, they’re standing on the receiving side of the cafeteria serving line. The picture seems to say that children’s engagement with local foods was a quaint act of make-believe complete with costumes. More importantly, their FTS experience didn’t change the

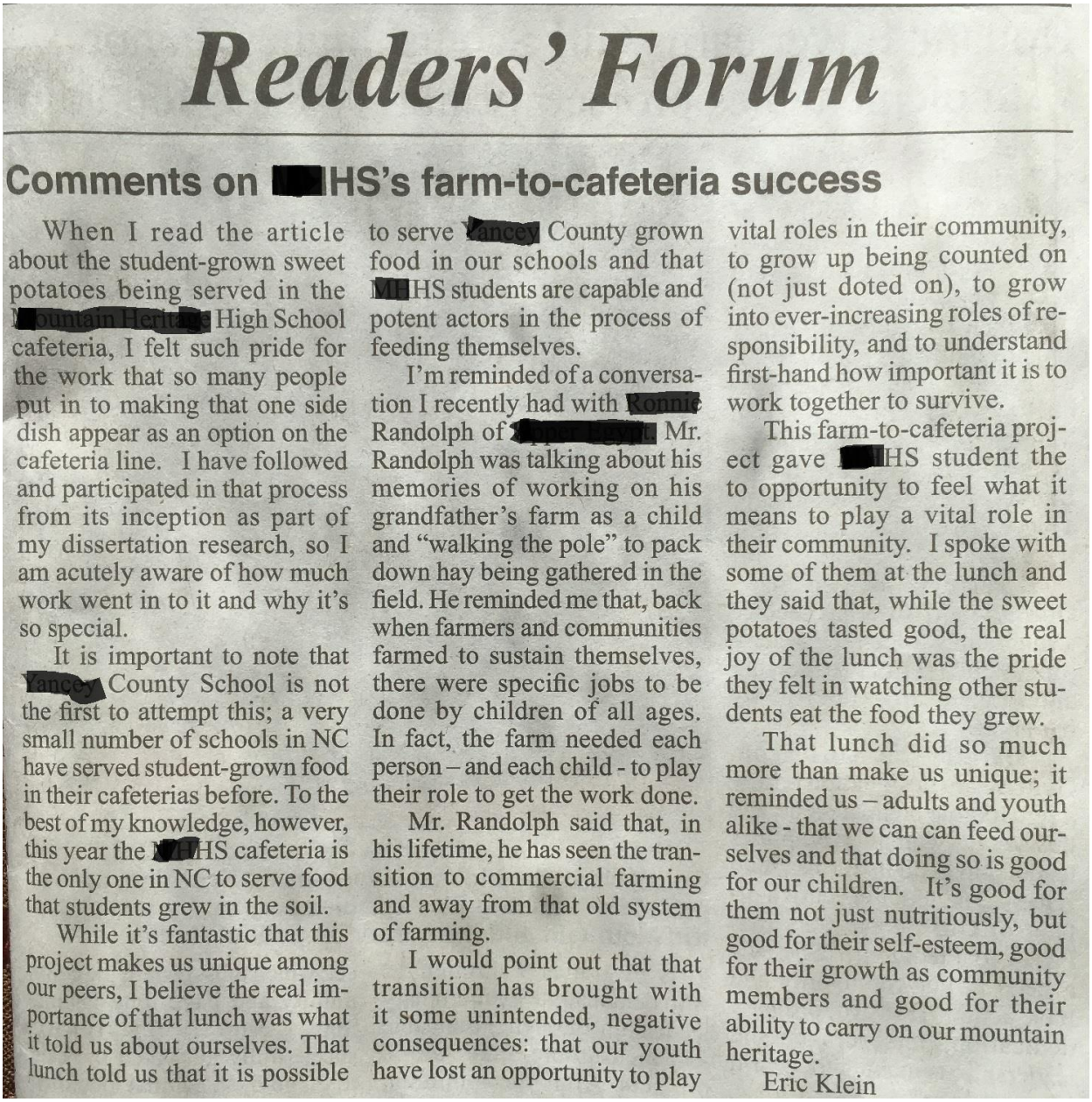
underlying dynamics of the school cafeteria. Despite their symbolic uniform of the creator/agent, at the end of the day, they find themselves re-inscribed as the consumer, waiting to be served food by older women on pieces of Styrofoam that will leach toxins into their - or someone's - community's soil for 500 years.

This was not the story of HHS's student-grown food project. In the HHS student-grown food project, there was no make-believe. While they, too, were ultimately the consumers of food served to them by older women on disposable paper containers, they had been active agents in the very real process of providing food for a school lunch. Although it was just a proof of concept, we started learning the physical, interpersonal and inter-institutional skills we need to not depend on corporations for school lunch. Our pedagogy was a pedagogy for independence and of liberation. Those knowledges and those liberatory possibilities could not have been affected had the school system bought the produce from a local farm.

Section VI: Analysis

In Section Six I discuss what we opened up to, what surprises and newnesses came about through the process. In this section I lean on my theoretical frameworks to craft both a critique of the current education system and an articulation of life- and community-affirming possibilities for public education.

Chapter 20. Comment on Farm to Cafeteria Success



Readers' Forum

Comments on [redacted] HS's farm-to-cafeteria success

When I read the article about the student-grown sweet potatoes being served in the [redacted] High School cafeteria, I felt such pride for the work that so many people put in to making that one side dish appear as an option on the cafeteria line. I have followed and participated in that process from its inception as part of my dissertation research, so I am acutely aware of how much work went in to it and why it's so special.

It is important to note that [redacted] County School is not the first to attempt this; a very small number of schools in NC have served student-grown food in their cafeterias before. To the best of my knowledge, however, this year the [redacted] HS cafeteria is the only one in NC to serve food that students grew in the soil.

While it's fantastic that this project makes us unique among our peers, I believe the real importance of that lunch was what it told us about ourselves. That lunch told us that it is possible to serve [redacted] County grown food in our schools and that [redacted] HS students are capable and potent actors in the process of feeding themselves.

I'm reminded of a conversation I recently had with [redacted] Randolph of [redacted]. Mr. Randolph was talking about his memories of working on his grandfather's farm as a child and "walking the pole" to pack down hay being gathered in the field. He reminded me that, back when farmers and communities farmed to sustain themselves, there were specific jobs to be done by children of all ages. In fact, the farm needed each person – and each child - to play their role to get the work done.

Mr. Randolph said that, in his lifetime, he has seen the transition to commercial farming and away from that old system of farming.

I would point out that that transition has brought with it some unintended, negative consequences: that our youth have lost an opportunity to play vital roles in their community, to grow up being counted on (not just doted on), to grow into ever-increasing roles of responsibility, and to understand first-hand how important it is to work together to survive.

This farm-to-cafeteria project gave [redacted] HS student the to opportunity to feel what it means to play a vital role in their community. I spoke with some of them at the lunch and they said that, while the sweet potatoes tasted good, the real joy of the lunch was the pride they felt in watching other students eat the food they grew.

That lunch did so much more than make us unique; it reminded us – adults and youth alike - that we can can feed ourselves and that doing so is good for our children. It's good for them not just nutritiously, but good for their self-esteem, good for their growth as community members and good for their ability to carry on our mountain heritage.

Eric Klein

Figure 4. Letter to the editor. Describes my valuation of the outcomes of the research.

The local newspaper covered the lunch at which we served the sweet potatoes in the cafeteria. That was not the first article written about the project and also not the first time that a reporter errantly claimed that BCS was the first school district in the State to serve student-grown food in a school cafeteria. My original impetus for writing this article (Figure 4) was to

simply correct the error, but as I wrote, it changed. It became an opportunity for me to share with my community why I thought the project was important.

The article previews a number of themes I address in this section: pride in the work that went in to the sweet potatoes; the ways that food connects community; neoliberalism's pernicious culture of competition (as represented in the misrepresentation of being "first"); storytelling as a valid form of knowledge; youth agency and how it functions in connection to community; the transition from small-scale to industrial agriculture; and, above all, axiological issues around food. I include it here as an image of the article - rather than just the text - to re-ground the study in its specific cultural, political and historical context. The image also underscores that I did this research in dialogue with my community. My name is printed clearly at the bottom of the piece, without qualification or affiliation. The project itself was a conversation that I had with my hometown about our agricultural heritage and future. In that, the image enriches my disclosure of my positionality.

Chapter 21. System (mis)(re)alignment

> [T]he current political climate for agriculture, one that endorses biotechnology, free markets, global trade and the growth of multinational corporations, is likely to make a change toward civic agriculture difficult. (Lydon, 2004, p. 102-103)

While the picture of a child "walking the pole" to tamp down hay on a cloudless Appalachian day is a romantic vision, the fact is that the small-scale and community-level agricultural practices that Mr. Randolph described in the newspaper article have been largely subsumed by a global-scale corporate food system (Konefal, Mascarenhas, & Hatanaka, 2005). Consolidation, mechanization, biotechnology and global supply chains now characterize the agricultural process that makes the vast majority of food available across the country (Lydon, 2004). OXFAM estimates that the majority of food purchased in the U.S. is controlled by only ten companies (Hoffman, 2013).

Public school cafeterias are part and parcel of this corporatized food system. Institutional food suppliers such as SODEXO or Bailey County's supplier, US Foods, are called "broadsheet distributors" because their ordering forms enable Child Nutrition Directors to order absolutely everything they need to run their cafeteria (Conner et al., 2010; Izumi et al., 2010). Coupled with minimum ordering requirements, the level of convenience that broadsheet distributors offer dis-incentivizes district food service directors from ordering even part of what they need from smaller vendors such as local farmers. As such, the school lunch dynamic mirrors a dynamic in the overall food system: that institutions, individuals and communities are largely set up to purchase from and thus support the globalized corporate food system.

Indeed, there were a number of points in the student-grown food project at which it was clear that we were not set up to do what we were doing. The first was the novelty of the project

in general. A state-level extension agent who focused on farm to school programs told me that only one school in the state was having students grow food for their cafeteria; that school was growing hydroponic lettuce in a greenhouse.

The second example was typified by the fact that we let the weeds in the sweet potato patch get out of control. That neglect, as well as the wildly ineffective weeding process that followed, were emblematic of a lack of planning, communication and adequate engagement with the task. In his final interview, PLOW's garden manager, James, reflected on the groups process that created moments like that:

> I assumed there was more coordination behind the scenes happening than there actually was. So, um, I guess I should have taken more of, like, a lead coordinator role and in all of this, since I'm, like, the constant at the property there. So, um, when I noticed things not going well, like, sometimes I'd articulate it; sometimes I'd leave and go do something else and forget to articulate it and just assume that Natalie or someone else's also checking on it when that's not necessarily the case, even though it's your project. (James, interview, December 4, 2018)

There was no "lead coordinator" on the project, only interest and desire from four different parties at the school and two community agencies. There was no mutual understanding as to who was going to tend when. And while it is tempting to write off the lack of coordination as poor planning or lack of follow-through, those critiques assume a blueprint that did not exist. I postulate that these points of mal-coordination occurred because we were all newbies in a relocalized food system. The pieces of Bailey County's agricultural system were not aligned to have students grow food for their cafeteria; they are aligned to have the cafeterias be supplied by corporate food distributors.

Our experience was emblematic of a larger condition; communities in the U.S. are not aligned to feed themselves. Nationally 98.5% of the food we consume comes from somewhere other than our local community (Johnson, 2016). As I said above, neither the high school's agricultural education curricula nor the administration of the child nutrition program were structured to support student-grown food. Even though N.C. Extension's mission is to support N.C agriculture, they were not tooled to support this level of relocalization. Extension's model is to "transfer research-based knowledge to North Carolinians; translate knowledge into practical applications [and]; improve the economy" (NC State Extension, nd). As Meek et al. (2019) implies, this model replicated the coloniality of knowledge.

> All of these horizontal methods are based in a critique of traditional approaches to agricultural extension, where knowledge is produced by experts and then imparted to what are perceived of as "backwards" and knowledge deficient farmers. This conventional vision of agricultural extension has been closely linked to the Green Revolution and the advance of capitalism in rural areas (p. 618)

Our project had no precedent in the N.C. Extension's research knowledge base nor was it trying to improve the economy, so we were operating outside of the organization's normal function.

This project exposed that even the food hub, whose mission it is to support local farmers, was not designed to serve the local market. In my final interview with BCS Child Nutrition Director, Lacey Fox, I asked her how the sale price for the sweet potatoes had been determined. She said that Betty at PLOW asked her if she would be willing to pay the price she paid the sweet potatoes through the North Carolina farm-to-school program. Betty indicated that that was an acceptable price because it was commensurate with the South Carolina wholesale market

price. Lacey said they she had expected to pay more because "you have to have a high yield to be able to sell at a market price." The $10.31 pittance that the FFA program received for their sweet potatoes came about because the agencies involved in negotiating the price were steered by the workings of the global food system, embodied, in this instance, by the South Carolina commodities exchange.

The participating agencies are functions of a globalized food system. As a result, the resources of these agencies are structured in such a way as to integrate with and function through the global food system. When this project asked the agencies to function through a different system - a local system - they faltered. The missteps were not because of some malevolent intention, but because that's not how they're set up to function. In a practical way, this project was a group inquiry into how the agencies - within themselves and with each other - would need to work differently to function in support of a local food system. Mignolo and Walsh (2018) would call this the process of delinking. Delinking "means conceiving of and creating institutional organizations that are at the service of life and do not, as in the current state of affairs, put people at the service of institutions" (p. 126). In the student-grown food project, we reorganized the county and school's food growing resources to be in the service of the students themselves. This constituted a "counterplot" (Al-Kassimi, 2018) to students tithing the global food system with their lunch money.

Our performance of delinking paralleled other such projects. Political scientist Khaled Al-Kassimi (2018) used the lens of decolonial delinking to describe the Latin American and Caribbean trading bloc, Bolivarian Alliance for the Peoples of Our America. The Alliance's policies of trading with one another in their own currency rather than with richer countries in dollars constituted a "radical systematic alternative that encourages local communities and

traditions rooted in local identities to address their own problems and voice their ideas about development processes" (Al-Kassimi, 2018, p. 9). Though we didn't think of what we were doing as "radical," we were following the same structural pattern of delinking.

Our action research project opened new understandings and possibilities for the relationships between the participating community organizations. For the Child Nutrition Director, Lacey Fox, the importance of the project was its proof of concept: "It established the process so we can do it again in the future." For Cooperative Extension director, Travis, the project gave him a new perspective on his organization's role in a localized food system. He described these openings and gave a fantastic example of his own agency's learning:

> I think what we have done is we have built real, when I say real, working relationships to tackle problems, issues or opportunities. We understand. I think you understand our limitations. We have a better understanding - you know, as sad as we are to see the kids maybe move off Sternhill, it makes perfect sense. Adam and I sat in there and watched the bus. It just doesn't make sense. (Travis, interview, December 13, 2018)

Travis' understanding of Extension's role in the partnership had previously been structured around students growing food on Bowditch Farm. However, because he waited in the Sternhill field for 45 minutes for the bus to shuttle kids back and forth from the high school, he understood that Extension's participation in the partnership was going to have to be structured differently.

Finally, Adrien, the agricultural extension agent, also suggested that the project paved the way for potential future local food partnerships. How he said it, though, was very interesting. His diction is worth underlining so I quote him in full:

> [T]hat develops a model for us that we can tweak and modify for other crazy ideas. You know, what might be the next craziest idea? So I think for us it's a learning tool, a matrix for us… we can look at this product just like we're doing right now and say, what worked, what didn't work, why that was a good fit or why that wasn't a good fit, blah, blah, blah, blah, blah. So the next time we want to have prisoners grow their food on the prison farm and say, "Hey, you know, you might not want to do this. You might want to, you might want to do this. Here's what works, here's what they did" and that streamlines that project and makes it more successful. (Adrien, interview, December 16, 2018)

In addition to describing a newness that this research project opened up, it is important to pay attention to the fact that Adam inscribed the idea that schools should play a role in teaching their community's children how to feed themselves, as "crazy," i.e. outside rational thought. What is rational thought if not the epistemic pillar of Western thought itself? Perhaps inadvertently, but with only one word, Adrien banished the project - and any like it - from the realm of Western epistemology, and by extension, from the goals of the colonial/West in general. And, indeed, our project did not work for the project of the West. Instead of "sanely" participating in the conveyor belt of chemical, cafeteria food - with it sane efficiency and rational economies of scale - our floundering and messy project created a decolonial otherwise to corporate food's colonial administration of the school cafeteria.

Chapter 22. Elder knowledge versus school knowledge

This project investigated the intersection between the education system and the food systems in two major ways. First, it leveraged local food as a space in which to open new, localized social organization in Bailey County. It also looked at the tensions and interplays between state-sanctioned knowledge and knowledges of place. This chapter returns to the discussion of what is taught in 21st century public education by folding in the experiences of those students who spent time with elder seed savers as part of this project.

The seed saving kids had a lot to say about the knowledge that was shared with us by the elder seed savers; we came to call that knowledge “elder knowledge.” The youth spoke about how they trusted what they heard from their elders, describing it as "wise,” "real” and, ultimately, "sustainable.” For them, the knowledge that elders had to share was "deeper,” “more beneficial” and, perhaps more damningly in the age of neoliberalism: “more effective.” As Meghan put it, "a lot of old ways and old stories and things that older people know tends to work way better and they're just more effective and even if they are longer process, it's worth it.” All the kids expressed a decided preference for the process of learning from the community over learning at school. Meghan talked about the pleasure she took in practicing the old ways with her grandmother: "From like my mimi - I can things with her. I'll can tomatoes and she'll show me how. It's just awesome. I enjoy it very much." She went on to say, "it always seems to be better whenever you learn older knowledge. It's just, it's more fun and you get to try it and it works out and it's just all amazing.”

In the following excerpt, Tina touches on three themes common among the seed savers experience with elder knowledge: a preference for the elder knowledge, a description of the qualitative difference she perceives in the elder knowledge ("beneficial") and a preference for the

method of learning elder knowledge ("story"). She also speaks touchingly about how much she values the relational aspect of learning elder knowledge.

> ...maybe it is just, like, the environment or, like, the fact that you want to be there learning, but for me, it's more like somebody telling a story and, like, I feel like it's just so much more interesting. Whereas school it's just like, oh, we come to school and like we have to learn it. Whereas you have to go and talk to somebody and make an effort to hear what they're having to say. And I think that shows them that you want that knowledge, it probably makes them really happy and then you get the benefit of just hearing a story and you know, gain lots of information. So I think that it's really cool. (Tina, interview, December 17, 2018)

Both Meghan and Tina drew an explicit opposition between their experience of elder knowledge and digital learning. Tina expressed her misgivings about her generation's reliance on the internet as a source of knowledge:

> [K]ids now are, like, technology natives or something like that. It's just like we're so caught up in technology and having things provided for us that I feel, like, I fear for, like, the future. Like we're not going to know how to even function because of, like, the technology that we have now. (Tina, interview, December 17, 2018)

Meghan added: “a lot of kids they'll go around and they'll look it up on Google and stuff whenever it's not the actual real thing you can get from talking to people”

Finally, the kids regarded elder knowledge as important. In conversation with Mrs. Baker at a Seed Saving Club meeting, Chris affirmed the importance of the sustainability nature of elder knowledge:

> Mrs. Baker: What happens one day when the stores close? Could you be set for life? Could you be self-sufficient? That's my question to my kids. Could you actually feed your family? Would you know how to do through a growing season?
>
> Chris: ‘Cause that's very important.
>
> Mrs. Baker.: That's very important. We should not rely on a store; we should rely on ourself. (field note, September 13, 2018)

In talking about why he found elder knowledge so important, Gary also addressed how he perceived the different kinds of knowledges were valued in society.

> I think that, um, everybody deems school more important than stuff like this. Even the people that know that extra knowledge is more important, still think that you have to come to school cause it's, I mean it's just always been in their lives - our lives, everybody else's lives - that school was the most important. First thing you have to do. There's no exceptions. And while I have to do it that way, sometimes I wish it wasn't that way. Because while you have homework and stuff to do and stuff to do in class, other stuff is 50 times more important than that. (Gary, interview, December 18, 2018)

A big part of why Gary and the other youth found elder knowledge so important was because they saw it as a roadmap of sustainability. Tina put it succinctly: “we have all this technology now, but they were being sustainable back then.” In the exchange above between Mrs. Baker and Chris at a Seed Saving Club meeting, it was clear that both of them felt that knowing how to rely on your own ability to “actually feed your family” was very important.

Self-sufficiency and colonialism are mutually exclusive. One is the vampiric extraction of resources from other places and people; the other is the ability to live in a place with the

resources of that place. In the preceding passages, the kids are describing the classic consequences of a colonial education system. They describe a body of local knowledge that is of and from personal experience with surviving in a particular place. That knowledge has been passed down to the elders in their community from those elders' elders as a blueprint for how to live within the means of their immediate geographic surrounds. The students recognize that this local knowledge is absent from their official state-sanctioned curricula.

I recall Wane's (2008) description the colonial education system in her native Kenya: "[a]ll the learning was embedded in a social structure designed to erode traditional knowledges and values" (p. 185). The erosion, in this instance, is achieved through silence; the exclusion and silence both erodes Bailey County's knowledge of place and reifies the corporatized paradigm of neoliberal education. Bailey County elder knowledge is a subaltern knowledge. Subaltern knowledge "embodies a central condition of many LKs [local knowledges] vis-à-vis the scientific/Western knowledge establishment – that of being marginalized but resisting or with the potential to resist this process" (Kothari, 2002, p. 225).

I am using a set of philosophical tools that were crafted to critique the Western episteme to describe a body of knowledge associated with white Americans. I am doing so intentionally to highlight the deterritorialization of the colonial agent and to run a warning up the flagpole for U.S. public education. The narrative of Pax Americana wrote out of public consciousness the possibility of white Americans being colonized. Few K-12 public educators go to work each day believing themselves agents of a corporate colonial apparatus that is systematically, generation after generation, educating a society into a dependent and subjugated relationship with global capital.

In inscribing white, American school children as neocolonized subjectivities, I speak with Hedges and Sacco (2012) and their caricatures of the subalternized white Americans in the sacrifice zones of post-industrial Camden, New Jersey and the coalfields of Welch, West Virginia. But in Bailey County, the subalternization is subtler. There are no wrecking balls smashing the mills that once employed thousands; there is no blacklung claiming the lives of those who work in the mines. In Bailey County, the neo-colonization is silent. It is the silence - the silent absence of knowledges of place. It is an absence filled with pizza and marching band practice and a 27% obesity rate (Southeastern University Consortium for Food Security and Health, 2019) and checking your phone between classes and a 15% food insecurity rate (Feeding America, 2019) and McDonalds on the way to a ballgame and the average age of a North Carolina farmer is almost 59 years old (Gergen & Martin, 2017) and announcements on the intercom about improving your ACT score. Sacrifice zones are the dirty cages of industrial economies, the physical toxification of the resources that people once used to build their lives. In the cleaner cages of the knowledge economy, epistemologies are toxified beyond being able to use them to build a sustainable life.

Looking through the lens of subalternity, it is not at all surprising that the only adults in the study who advocated for the inclusion of elder knowledge in public education came from the lowest paid workers in the study - the cafeteria workers. I return to a previously quoted passage from Highland High School's eldest cafeteria worker, Ms. Angie, to tease out further analysis. The passage is an excerpt from a conversation in which Ms. Angie and her colleagues were discussing the self-sustaining ways of life that they had all grown up with and lamenting how they saw those ways fading with each passing generation. Ms. Angie told a story that really drove the point home:

> Several years ago I asked a girl that I went to church with, a lady, if she'd like to have some green beans and she said - she had two kids - "I wouldn't know what to do with them." …[crosstalk]... Shocked me to death! And she had two children. And I mean, you know, it's time that we teach children!

She continued:

> … my daughter's teaching at [a high school in a neighboring county] and they're doing more family planning and stuff, home ec., you know.... cooking and things and that's good to bringing back maybe sewing and cooking for the girls and they can survive when they, if they can't go on to college, if they've got something, you know, a skill. (Ms. Angie, interview, December 16, 2018)

Obviously this passage reveals the highly gendered workspaces with which Ms. Angie grew up; it also touches on two important themes. First, Ms. Angie's statement reifies that the skills of self-sufficiency - elder knowledge - are not being taught in the schools. Her statement speaks in concert with the measly 5% the entire agriculture education curriculum dedicated to growing your own food; they are both threads in a tapestry of a school system whose curriculum is a function of and in service to the global economy.

Secondly, it is important to note that Ms. Angie wanted to *give* the beans to the younger woman in her church. In her lament of the fading workways of Bailey County, she grounds the values surrounding those workways solidly in a non-economic frame. Her framing stands in stark contrast to the agricultural education curriculum of agribusiness management that *is* taught at her school. What Ms. Angie is describing is the coloniality of knowledge, "the normalization of the specific concepts and forms of theoretical knowledge which support relationships of

subordination" (Richardson 2012, p. 540). The normalized concept of agriculture education at Highland High School is agribusiness management. Agribusiness management is a piece of argot of the capitalist food system. It is embedded in the frame of the commodification of food; that frame creates the very possibility for the subjugation of Bailey County and, indeed, counties around the world through the weaponization of food (Newman, 2017) and the epistemicide of local knowledges of sustainability (de Sousa Santos, 2015).

However, Ms. Angie is also proposing something. She is not just lamenting loss or railing against the injustice of the current system; she is advocating *for* something. Specifically, she is advocating for the teaching of a knowledge that is outside of - and otherwise to - a curriculum that teaches kids to compete in a capitalist economy. She is proposing the teaching of how to cooperate in a local community. This is what Catherine Walsh (Mignolo & Walsh, 2018) calls the "decolonial *for*." Walsh explicated the decolonial *for* by citing the Zapatista insurgent spokesman, the now defunct SupMarcos, describing his community's transition "'from a posture of resistance and a historic and empathetic 'no' toward concrete proposals and courses of action. The 'no' that now rises up does not just resist but it also begins to propose, to determine'" (Mignolo & Walsh, 2018, p. 33).

That's what we did; these two local food system projects proposed alternatives, otherwises to the coloniality of school food and neoliberal public school curricula. It is extremely important that this study's projects can be read as the same story as Mexican revolutionaries. As Walsh (Mignolo & Walsh, 2018) reminds us, re-existence is "a politics that affirms, constructs, and advances a radically distinct meaning, understanding and project not just for Indigenous peoples but for all" (p. 23). By underscoring the decoloniality of both the Zapatista agenda and the local food projects in predominantly white Appalachia, this study erodes a territorial

understanding of the Global North and the Global South and supports a deterritorialized conception of the neocolonial agent. To paraphrase the *Hunger Games* (Collins, 2008), it reminds us who the real enemy is. In doing so, it creates the opportunity to recognize our mutual struggle and our solidarity in that struggle.

Chapter 23: Appreciation and values in the cafeteria

Two days before Thanksgiving break, 240 portions of student-grown sweet potatoes were served in the HHS cafeteria. Lacey Fox from the Board Office was there, as were a photographer and a writer from the local newspaper and a woman who had served on Bailey County's short-lived Food and Farming committee. All the members of the FFA officer team were there in their dark blue corduroy jackets; unfortunately they and Natalie were monopolized in an interview with the pushy reporter the entire time. The kitchen was loud that day. The variation in the size of the sweet potatoes made them cook at different rates and the effort to get them all out on the line at once was considerable and boisterous. Figure 5 shows the sweet potatoes on the line with the other foods served that day.

Figure 5. Student-grown sweet potatoes on the HHS cafeteria line

Among the student growers, the cafeteria workers, Natalie, and me, there was enormous pride in accomplishment. As one of the food growers, Shelly, responded when I asked her what

it was like to eat a student-grown sweet potato: “The sweet potatoes *I* grew? I’m pretty proud of it.” I got to speak briefly with Ms. Vera and Deene after the lunch that day; Deene said: “There is something about something you have done yourself.” and Mrs. Vera said: “It’s hard work. Those kids were really proud when they delivered the potatoes.” Tina summed it up when she said, “It really feels like an accomplishment because you’ve seen the struggle and work that has been put in to it so it feels much more rewarding to see the product.”

The struggle was indeed real; 120 students and approximately a dozen of their adult compatriots had worked for six months to bring this one side dish to their school’s cafeteria trays. They persisted through the loss and replanting of an entire white potato crop, weeds as thick as sod, and the flooding death of 4,000 cabbages. As insult to injury, the entire white potato crop had been prematurely bush hogged. But the trials of the process had transformed the sweet potatoes from a side dish on a tray to, in Tina’s words, a “reward.”

The students did not take the reward for granted; many students expressed a different, much greater appreciation for the food on their tray. An FFA officer, Derek, said: “I mean, I ate one. I don't like sweet potatoes but I ate one because I was like: ‘We need it!’ I ain't gonna waste it.” The student growers extended their feeling of greater appreciation to their fellow students as well. Another FFA officer, Bella, talked about what it was like for her to watch her classmates eat the sweet potatoes she helped grow: “They seemed to appreciate it more knowing that it was some of their friends and some of their peers that grew it.” FFA president, Hillary, echoed Bella’s sentiment: “It was exciting for me being able to see, you know, the hard work that I put into it and being able to look around and see the joy and the excitement that the students had while they were eating it.”

It is not typical for high schoolers to specifically "enjoy" seeing their classmates eating in the school cafeteria. Normally the time in the cafeteria is spent enjoying the time away from class, the conversation with their friends, almost anything else except the food. In fact, the food is more typically the butt of jokes, maybe even the object of denigration. In this instance, however, the fact that students grew the food not only made them appreciate it more, it caused them to appreciate *other students'* appreciation of it.

That day, the school lunch experience was transformed from the consumption of an anonymous commodity - a thing on a Styrofoam tray to which no one in the room had a personal connection - to a serving of home-grown food that connected students to each other. That connection was not just a change in the degree to which students valued the food; the connection introduced a different way of valuing a meal in the school cafeteria. Specifically, it introduced a non-capitalist valuation of student lunch.

There's a strand of literature on the local food movement that uses Karl Polanyi's (1957) concept of "embeddedness" to describe the role of non-capitalist values in the local food dynamic (Bloom & Hinrichs, 2011; Conner et al., 2012; Hinrichs, 2000; Izumi et al., 2010; Ostrom et al. 2017; Sage, 2003). For Polanyi "the human economy... is embedded and enmeshed in institutions, economic and non-economic. The inclusion of the noneconomic is vital" (p. 250, as cited in Hinrichs, 2000, p. 296). Embeddedness has been used to frame participation in farmers markets and consumer supported agriculture (Hinrichs, 2000), customer decisions around food delivery services (Ostrom et al. 2017) and, most applicably, to understand the motivation of farmers (Conner et al. 2012; Izumi et. al, 2010) and child nutrition directors (Bloom & Hinrichs, 2011) to participate in farm to school programs. For Izumi and her

colleagues (2010), getting local food into schools is a “deliberate attempt to reconnect consumers with producers and attend to non-economic values” (p. 338).

Any axiological diversity, because it nods to what Walter Mignolo (2002) calls a “pluriverse,” challenges the hegemony of coloniality of power (Quijano, 2000). Conway and Singh (2011) define pluriverse succinctly as “a multipolar world order in which hegemony is pluralised in a number of regional poles and centres of decision that create a kind of equilibrium of power in global politics” (p. 694). The student-grown food project embedded HHS’s school lunch in the non-economic valuations of pride, learning, resilience, generosity and community connection. The serving of those sweet potatoes facilitated a transcendence of the $10.31 that the FFA program was paid for the sweet potatoes and $3.58 per child reimbursement that the district’s child nutrition program received for a meal. These economic realities were layered with social meanings of farming heritage preservation, intergenerational learning and a cultural value of survivalism. This process of layering dethroned the profit motive and created a “center of decision” (Conway & Singh, 2011) away from the corporate food system.

Chapter 24. Embedded agency

One of the things I was really interested in learning through this study was how participating in a local food system project would impact the students' sense of agency. The study intentionally identified two different contexts in public secondary education in which students are typically placed in passive, consumer roles - school lunch and knowledge - and positioned them as active participants in those dynamics. The study positioned them as producers of their own lunch and as curators and disseminators of local knowledge. Building off the concept of embedded values in the cafeteria, I suggest that the form of agency that participating students exhibited in these projects could be understood as an "embedded agency."

By "embedded agency" I mean that, most often, the students expressed the empowerment they felt as part of these projects as in relationship to their community. The agency that they declared was never an articulation of their power as an individual or for their personal benefit; instead, they talked almost exclusively about how their learnings and efforts were worthwhile because they benefited those around them. Traditionally, agency is thought of as something that starts and stops with the student. Following Martin (2004), Karahan and Roehrig (2016) define agency as "the capability of individual human beings to make choices and act on these choices in a way that makes a difference in their lives" (p. 427). This understanding of agency is an idea of the autonomy of the individual.

The following excerpt from seed-saving project participant, Larry, exemplified this embedded agency as it underscores a blurry understanding of what benefits him personally and what benefits his community. When talking about donating his time to help a farmer pick beans, he said, "you understand the reason behind it. You understand, like, this is to benefit them, that benefits yourself, that benefits someone else, even if it's someone else, it benefits the community.

So it's very, it's very, it's very motivating." Erin, an FFA officer, also spoke to this embedded agency when he identified that the benefit to other students as the main reason for growing the sweet potatoes.

> I think once they realize kind of what, how much they're putting into it and it's not kind of always about what you're getting out of it. It is about what's your giving to others from doing it. Because we definitely didn't get anything out of this. I mean, yes, the experience, but we didn't get any monetary gain. It was more what can we do for others to make sure that their food that they are getting out of the cafeteria is healthy. (Erin, interview, December 10, 2018)

Ikard described what it was like for him: "[T]o watch, like, hundreds of other people eating what, like, you had worked on was very, like, I don't know, you felt very responsible." However, he was the only participant to describe an impact on his own personal sense of agency; the students were much more likely to describe how they thought the experience impacted their classmate's idea of what students can do. In describing how powerful the experience was for him, Steven illustrated this projection of agency: "It's just like humbling to see them think about it, to see what the student body can do." It's almost as if he conceived of the sweet potato as the physical embodiment of the gift of empowerment. Other student growers were even more specific; Bella said:

> It felt pretty good to see them and, like, people were, like: 'Students here actually helped grow these things that we're eating' and like, maybe, spark interest for them to want to do it, too. Yeah. Like, 'We can do this too'. (Bella, interview, December 19, 2018)

Derek expanded on Bella's thought: "Maybe I can go home and lay some seeds and maybe I can try to grow something for my family. Maybe I can grow supper for my family." Rather than talk about how they themselves felt more capable or able because of the process, they projected that empowerment on to their classmates.

I was a little baffled by this, so, five months after the lunch, I gathered a focus group of six of the students who had been involved in growing the sweet potatoes. We read a reflection that I had written about the lunch at which they were served and then I asked them why they thought the students who ate the sweet potatoes felt empowered. Tina said:

> … when we did all of that then they got to be a part of it too. So they got to, you know, experience it. Even if they didn't, if they weren't a part of it, the whole thing, they still had, they got, they got to experience it. (member check, May 28, 2019)

Hillary followed on:

> ... being able to grow this and give it to the students that, you know, it didn't empower us. It empowered them because it was more of us being able to give something instead of having to take something away from the experience. (member check, May 28, 2019)

What I read out of this is an agency in low relief, understood and activated only in relationship with the students' social surrounds.

"Embedded agency" is a term I came up with in the process of analyzing the data and sifting it through the local food procurement literature. It is, however, also a term used in the organizational theory literature around social entrepreneurship. The way that literature uses the term is significantly different than the understanding I am trying to develop, so I want to take a minute to disambiguate the meanings.

In the organizational theory literature, the concept is concerned with how actors' positionalities within organizations impact their disposition and ability to create change within the organization (Garud, Hardy & Maguire, 2007). The agency that actors exercise is embedded in a context of not only "a set of opportunities but also of a structure of constraints in the form of established practice, supplier–user relationships and consumption patterns" (Kemp et al., 1988 as cited in Garud, & Karnøe, 2003). Organizational theory's understanding of embedded agency differs from what I am trying to develop in two ways. First, the theory stems from and functions in an organizational, bureaucratic context. I warrant the writings of the late educational leadership philosopher, Thomas Sergiovanni, to draw the distinction between bureaucratic organizations and social communities such as schools. For Sergiovanni (1994) a community is not a type of organization, but a completely different root metaphor for a collection of individuals. While communities are "bonded together by natural will … to a set of shared ideas and ideals," connections between individuals in organizations are contractual, negotiated and "self-interest is assumed to be the prime motivator in these negotiations" (Sergiovanni, 1994, p. 218 - 219). Because the relationship between the individual and their environment is so different in the organizational and community contexts, the concept of "embedded agency" developed in the organizational context is inappropriately applied to the context of a community.

Secondly, my idea of "embedded agency" is concerned with a different set of behaviors. While the organizational concept focuses on the actors' choices, I am trying to articulate an understanding of the actors' perceptions of their responsibility to their community and the beneficiaries of their actions. The understanding of "embedded agency" that I am putting forward here is an agency that is expressed in terms of giving, helping, sharing and empowering

others; these students are describing their power not in individualist terms, but in their ability to benefit their community.

This attitude was expressed by the seed saving kids as well; they frequently talked about their investigation of our county's heirloom seeds as being for the community rather than for them individually. Tina once references this in her description of seed saving's role in "being able to support yourself" - a role so central to the Appalachian identity that it is almost a trope (Eller, 1982). Even in her reification of rugged individualism, she couched her valuation of heritage seeds and the knowledge of how to plant them in a context greater than herself:

> I feel like it's really important for people to be able to provide for themselves and I feel like talking to the older people and learning how to save seeds is gonna be very beneficial for, you know, the community and for people to learn and I would like to share that knowledge. (Tina, interview, December 17, 2018)

For Tina, participation in local food systems meant benefiting her community by passing on the knowledge that she gained. I recall my earlier discussion in Chapter 13 of the seed savers who felt responsible to pass on the knowledge that we gleaned from elder seed savers. Chris immediately wanted to teach the seed saving skills we learned to "other people so not only do we know, but other people can learn it, too." Gary wanted to make sure that Mrs. Randolph got some of the pink tipped beans we'd gotten from Mr. Vance. He reasoned that Mr. Vance, "has no idea that she doesn't have any. But now that we're a group and we know that, I think it's important to share them again." For these young adults, any power that their knowledge or skills brought was only activated in terms of how it could benefit their community. Their agency was embedded in their social reality.

This non-individualist idea of power and agency stands in diametric opposition to the individualized sense of self upon which the Western episteme in general and neoliberal education, specifically, is built. At the heart of embedded agency is a horizontal construction of power. The data was replete with instances with kids talking about what they could achieve by working with others for the common good of their community. This was an unexpected instance of the decolonial otherwise, a model of power that exists outside of the modern/colonial construction of domination and oppression.

Chapter 25. Food as a community connector

Tommy James is a rock god. The man wrote "Crimson and Clover," "My Baby Does the Hanky Panky," "Mony Mony" and "I Think We're Alone Now" among many, many others. His chops are too righteous for words. His stuff was so good, a 16 year-old named Debbie Gibson launched her entire career of touring shopping malls in the 80s covering "I Think We're Alone Now." She toured malls - only shopping malls - because that's where people were. People used to gather in civic places to be human together but by the 1980s, that main places of gathering were temples of commerce at which the main activity was shopping. People did other things in malls besides shopping; they talked with each other when they walked from shop to shop or sat by the recycled-water replica of the village well. The physical and motivational context of human gathering at the mall, however, is capitalist commerce.

That's a thirty, almost forty year-old example of human connections being funneled into places in which they can be commodified and capitalized. The internet and its many terminals are the latest. The smart phone has corralled socializing, shopping, sex, banking, entertainment, working, navigation, and all manner of other activities onto small screen of very expensive devices that we pay to have, keep with us at all time and then pay for services on the device. The whole time our smartphones are tracking and monitoring our movements and actions, primary (but not exclusive) to be able to better able to sell us things. As the digital mediates an ever-increasing percentage of our daily lives, so, too, are our lives ever more commodified.

So it is important that we identify, celebrate, and amplify those places of non-commodified interactions in our lives. In subtle and not so subtle ways, the two local food projects conducted as part of this research staked out food as a context that opened up non-commodified spaces. The sweet potatoes that the students grew transformed the school cafeteria

from a space that was completely dominated by commodity food to a space that was also a context for human connection and the sharing of labor and love. Student food grower, Brad, articulated the how he experienced the meal underscored the school as a community: “I just think it’s a very, it's a great thing for kids to enjoy what they have been doing, and for other people to enjoy what their school's been doing, not somebody you don't know.”

I reiterate here a few points I’ve already discussed. The responsibility that students felt for passing on what they were learning and for acting to benefit their community were behaviors that inherently fostered community connections. The adults in the study, particularly Travis and Adrien from Extension and Lacey Fox from Child Nutrition all talked about how the student-grown food project had forged tighter connections between Bailey County agencies.
Student seed savers also talked about how much they valued the act of learning elder knowledge as an exercise in building a relationship with people. As Tina said: "I really enjoy hearing the stories from older people. I just, I just enjoy learning from people who just have that wisdom and just being able to gain knowledge.” Chris described how the context of our seed saving visits gave him greater access to the elders in his community than even his own family reunions. "I was able to actually talk to the older people instead of being surrounded by older people and them talking to them and not being able to talk to them and just actually hearing it and being able to talk back."

Mary, a student who joined the seed saving club in the fall, went so far as to describe seed saving as a way to improve relations between generations:

> Say for example we went to an old person's house, an elderly person's house and we asked them a bunch of questions and asked them if we could plant the seeds and they say, "Oh that's so sweet." "Oh sure you can." And so she's gonna see us

> as like people that want to help out and respect their elders. (Mary, interview, December 11, 2018)

And, finally, there was a theme of helping that ran through the data and is a fantastic example of a way to be with one another that doesn't involve the exchange of money. Brad spoke about his motivation to help at the Sternhill Farm over the summer: "They need just more hands than I really enjoy going out and doing that and just helping people out." In describing her motivation to grow food as part of the project, Hillary said: "what motivated me was just being able to work towards something to be able to serve in the cafeteria, to make cafeteria food more healthy and better for the students that goes to Highland High." Finally, Ikard's ideal scenario for agriculture in Bailey County was based on cooperation:

> [I]f we all pitched in and worked a little bit on our own and our own, uh, our own crops and our own, uh, livestock than I think that we could work out a way where everybody has a role in growing for themselves and for others. (Ikard, interview, December 10, 2018)

Engaging in local food work tied both the students and adults closer to their community. This increased connection with those around them was neither ancillary nor inconsequential; the interpersonal joy and bonding was a result of cooperating. Cooperation in the local community presents a clear alternative to competition in a global economy; by extension, the local food projects of this study opened up a clear decolonial otherwise to the neoliberal manifestation of public education in U.S. in the early 21st century. Always stumblingly articulate, Larry summed it up nicely:

> [I]n the beginning I regret thinking of this is just a small town like thing like, uh, but then now it's like, this is something that connects, you know, everything that

we have, this connects us and everything starts from a seed. (Larry, interview, December 19, 2018)

Section VII: Going forward

Section seven offers a summary of the study's key findings before squaring off with the most catastrophic challenge facing humanity - climate collapse. I use some attributes of the current study to help me articulate a preliminary outline of a climate collapse pedagogy.

Chapter 26. Summary of key findings

In this chapter, I present the salient learning of this study clustered in four categories: loss, community connections, community versus commodity, and one methodological finding. I end by commenting on the tension between the goals of the study and the context in which the study was conducted.

Loss

Both the students and adults in this small, rural, southern Appalachia community perceive an acute loss of cultural knowledge of place and self-sufficiency. The students in the study attributed the loss to the apathy of their generation; the adults traced the process as far back as the 1960s. The official curricula taught in Bailey County Schools are silent around knowledges of place; this silence both contributes to the erosion of knowledges of place in the community and reifies the globalized, corporate paradigm of neoliberal education. It was the perception of this loss - and a lack of confidence in the global food system's ability to continue - that motivated students to participate in local food projects.

Community Connection

The students who participated in the seed saving project were not transformed by their interactions with elder seed savers; rather, those interactions were sites of continuity and connections with their own family traditions. For the youth in the study, their heritage is a heritage of action and acquiring knowledge meant a responsibility to use it for the benefit of their community. Both the food growers and the seed savers perceived the benefits of their participation in the local food endeavors not in terms of a benefit to them personally, but in terms of the benefits they brought to the community. I describe this as an "embedded agency" - an agency that is expressed in terms of giving, helping, sharing and empowering others. This non-

individualist idea of power stands in diametric opposition to the individualized sense of self upon which the Western episteme and neoliberal education, specifically, is built.

Commodity versus Community

Just as the HHS's curricula is a function of and in service to the global economy, the agencies and departments that participated in the student-grown food project were aligned to have the cafeterias be supplied by corporate food distributors, not student-grown food. This project highlighted the misalignment between agencies when they tried to function in support of a local food system. Serving student-grown sweet potatoes in the school cafeteria introduced a different way of valuing a meal in the school cafeteria. The presence of the sweet potatoes brought the non-economic valuations of pride, learning, resilience, generosity and community connection into the cafeteria. Those valuations dethroned the profit motive in the school cafeteria and by doing so, challenged the hegemony of capitalist values in public education.

Not only did these two local food projects staked out food as a context that opens non-commodified spaces, the projects forged tighter connections between HHS students, between students and elders in their community and between agencies in Bailey County.

In directing the resources and capacities of the school and community in the service of the local community and not the global economy, these two local food system projects created otherwises to the coloniality of power (Quijano, 2000) as manifested in 21st century public school food and neoliberal public school curricula.

Methodological

Non-participatory action research's ability to affect systems-level change - such as food system localization - is limited if the project doesn't address a need that the community itself has identified and agreed to collectively address.

Shifting contexts

While this study generated evidence of otherwises to the colonial/modern structures of power and knowledge, it took place in a colonial/modern context. We burned a lot of diesel busing children between the school and the farm and around the county to meet seed savers. We sprayed our crops with a microbiological insecticide produced by a chemical company owned by a Japanese investment group. We grew some of our crops on plastic and we harvested the food we grew in such a way that prevented us from getting all the plastic out of the ground. The produce we grew quickly became a "commodity" whose worth was measured by global market pricing.

This was not a decolonial Camelot or a Shangri-La of sustainability. This was a step in a process. It was a step away from colonial systems of thinking and eating - with their choke points of exclusion and scarcity - and toward epistemologies and food systems that privilege community over corporations. But, like all first steps, it was mired in and a product of the very context it was trying to change.

The conception of education that we moved toward or that this study suggested is importantly different than the neoliberal educational context within which it happened. In a culture whose worship of the digital sings the hymn of "There's an app for that," the study participants' favorite source of knowledge was people who grew up before electrification. In a town with 1,800 people and nine fast food restaurants, teenagers found enormous value in spending six months growing one side dish. And in the context of an education system that values competition and individual achievement, the students in the study described their idea of power as being something they enacted in cooperation with others.

While the study happened amidst late capitalism's cult of convenience, we opened a space for different ways of being in the world and we opened space for public education to manifest itself according to different models. As I detail in the next chapter, I think we are in the early stages of a seismic shift in the context of public education. I would like to think that, to again use Thomas Sergiovanni's (1994) terminology, this study was part of a process of shifting away from schools as bureaucratic organizations and towards an idea of public schools as communities engaged in the teaching and learning what it means to live with each other here, in our very specific geographic surrounds.

Chapter 27. Climate collapse pedagogy

"In an emergency, you change your behaviour."

- Greta Thunberg, 12/11/2019, COP25, Madrid, Spain

On Dec. 18th, 2018, in a speech to UN Secretary General António Guterres at the 24th Conference of the Parties ("COP") to the UN Framework Convention on Climate Change in Katowice, Poland, then 15 year old climate activist Greta Thunberg asked: "... why should I be studying for a future that soon may be no more, when no one is doing anything to save that future? And what is the point of learning facts when the most important facts clearly mean nothing to our society?" (FridaysForFuture, 2018).

The facts that Ms. Thunberg was referring to is the consensus among the scientific community (Ripple et al. 2019) that modern, industrial human activity is changing the global climate (IPCC, 2018, 2019) to such a degree that it can no longer support the life of many species (Ceballos et al., 2015) and may not be able to support life for humans in the near future (Burke et al, 2018). This is what she meant by "no future."

Thunberg's statement that the "facts clearly mean nothing" refer to the reality that since the climate change alarm was first sounded in the 1970s, the warnings have become increasingly substantiated and dire (Weart, 2008) yet global policy response has failed to sufficiently, or even meaningfully address the threat. Two major international agreements on addressing climate change - the Kyoto Protocol of 1997 and the Paris Agreement of 2015 - both recognized the urgency to act to reduce the anthropogenic behaviors that are causing climate change, but neither agreement has led to that required change (Lewandowsky, Ballard, & Pancost, 2015).

In 2018, the Swedish teenager came to the conclusion that her education was not preparing her for the future that climate science predicts so she started skipping school on

Fridays. Instead of going to school, she sat on the steps of the Swedish parliament and protested her government's inaction on the climate crisis. Her protest went viral and has since become a global movement. On Friday, September 20, 2019, 4 million people worldwide skipped school and work to protest governmental inaction on climate change (Laville & Watts, 2019).

Greta Thunberg is, of course, not the first youth to protest climate change. There is a long pedigree of youth activists across the world, particularly among Indigenous communities, calling the world's attention to the front lines of the climate crisis, activists like Wikwemikong First Nation water warrior Autumn Peltie and Ecuadorian Amazon Indigenous rights activists Nina and Helena Gualinga (Grauer, 2019; Naware, 2018). I wonder to what degree Thunberg's whiteness facilitated her capturing the global media's attention. I cite Thurnberg's comments here because of their particular relevance for public education. Her comments essentially sidelined public education by inscribing school attendance as impotent at best and counterproductive at worst. As educational leaders, if we take climate science seriously, we have to take her accusation seriously as well.

Climate Change Science

How seriously do we have to take the threat of climate change? Mainstream projections are scary. The global average temperature has already risen 1°C over pre-industrial levels (WMO, 2019); 2019 was the hottest year on record for our planet's oceans (Cheng et al., 2020). Consequences of a warming planet include increased hunger and food insecurity caused by climate variability and extremes; heat waves and corresponding negative impacts on human health; loss of biodiversity and habitats; and the political instability caused by population displacement (WMO, 2019).

The Intergovernmental Panel on Climate Change's (IPCC) outlined how the effects of climate change would be mitigated if global temperature were kept under 1.5°C above pre-industrial levels and urged governments to target the lower temperature (IPCC, 2018). However, current and projected extraction and processing rates put countries on track to produce over twice the amount of fossil fuels consistent with a 1.5°C warming (SEI et al., 2019). If we humans continue to emit greenhouse gases as we have been, we can expect a "nonlinearly growing sea level rise, reaching several meters over a timescale of 50–150 years" (Hansen et al., 2016, p. 3762) leaving 340 million people at or below projected annual flood level by 2050; 630 million by 2100 (Kulp & Strauss, 2019). Climate change is expected to disrupt the global food systems ability to produce food (Campbell et al., 2016; Wheeler & Von Braun, 2013) and the transportation system's ability to move goods and commodities around the nation (Beheshtian, Geddes, & Donaghy, 2018; Markolf, Hoehne, Fraser, Chester, & Underwood, 2019).

I remind the reader that, during this study, the student food growers of Bailey County Schools lost 4,000 cabbages and an entire potato crop to rain during the wettest summer on record in WNC (DeGrave, 2018).

Projections outside the political mainstream are terrifying. As products of a political discourse that balance climate science with policy feasibility, the UN Paris Climate Accord and the IPCC reports have been accused of being "remarkably conservative" (Herrando-Pérez et al., 2019, p. 209). Last year, a group of over 11,000 scientists from over 150 countries published an open letter (Ripple et al., 2019) to the world that put a fine point on the climate crisis.

> The climate crisis has arrived and is accelerating faster than most scientists expected (figure 2, IPCC 2018). It is more severe than anticipated, threatening natural ecosystems and the fate of humanity (IPCC 2019). Especially worrisome

> are potential irreversible climate tipping points and nature's reinforcing feedbacks (atmospheric, marine, and terrestrial) that could lead to a catastrophic "hothouse Earth," well beyond the control of humans (Steffen et al. 2018). These climate chain reactions could cause significant disruptions to ecosystems, society, and economies, potentially making large areas of Earth uninhabitable. (Ripple et al., 2019, p. 9- 10)

We need to look at different geological epochs for an analog for a "hothouse Earth" climate. According to a study published in the Proceedings of the National Academy of Sciences (Burke et al., 2018), by 2030, Earth's environment will most resemble that of the Pliocene, the period roughly 3 – 5 million years ago. By 2150, "[u]nmitigated scenarios of greenhouse gas emissions produce climates like those of the Eocene, which suggests that we are effectively rewinding the climate clock by approximately 50 My, reversing a multimillion year cooling trend in less than two centuries" (Burke, et al. 2018, p.13288).

In short, human industrial activity is expected to bring about global environmental conditions not yet experienced by the human species. Further, those changes are expected to happen in an unprecedentedly fast timeframe that may not allow species sufficient time to adapt. And yet our addiction to fossil fuels - and the industry's deep pockets - stops public education from preparing for this (Eaton & Day; 2019).

Towards a Climate Collapse Pedagogy

So how will public education respond? How can public education remain relevant in the age of impending global climate collapse? What would a pedagogy look like that did not assume "fairy tales of eternal economic growth" (Thurnberg, 2019) but rather assumed an end to the environmental context of the species as we know it?

Because we are already experiencing the early effects of climate change (Ripple et al., 2019), it is fair to say that all public education is an example of education in the age of global climate catastrophe. But what would it look like to structure the public education experience with climate collapse survival in mind? I had climate collapse survival in mind when I designed this study's two local food projects so I now warrant the record of this study to inform an initial sketch of a climate collapse pedagogy (CCP).

Fundamentally, a CCP is a localized curriculum. Instead of gearing curricula to lead to jobs in the global economy, a CCP assumes the global economy will be unreliably unstructured by climate change. A CCP identifies the skills and knowledge students will need to live in a cooperative balance with their community and their immediate geographic surrounds without an abundance of materials from outside the community. In doing so, a CCP necessarily privileges the commons over the privatized and cooperation over competition. A CCP is a non-market pedagogy. Because there is no reason to assume the continued availability of electricity or fossil fuels, the skills and knowledge taught by a CCP would be carbon-neutral.

The relocalization of educational goals would render inappropriate the siloed knowledges of the traditional academe in favor of a post-disciplinary approach enacted through place-based learning (Gruenewald, 2003). A climate collapse pedagogy would center Indigenous knowledges and old-timey knowledges of place. These knowledges are rooted in a Holocene environmental context and therefore may offer limited solutions for Pliocene- and/or Eocene-like conditions. However, those knowledges were formulated in and demand attention to a balance with the natural surrounds that is not present in the digital epistemology.

Aspects of the local food projects presented in this study exemplify a climate collapse pedagogy. The projects' goals were local. Absent was a neoliberal desire for public education to

perform tasks for the global economy. Our learning outcomes were expressed in the community-sustaining we were practicing. Our activities were in line with a relocalized curriculum as well. We drew from localized knowledge to practice an activity required for life in Bailey County - growing our own food.

Obviously, as I discussed in the previous chapter, our activities were neither carbon-neutral nor free of industrial agriculture practices. The activities were, however, steps in a process of moving away from those practices. As a result of the student-grown food project, the administration of HHS recognized the impracticality of busing kids to a farm on the other side of the county and agreed to allow part of the campus to be plowed up for a farm. The picture below (Figure 6) was taken in the spring of 2019; that's the first student farm on HHS's campus since the tobacco buyout of the 1990s.

Figure 6. HHS student farm. Picture show the newly created farm that was installed on campus as a result of the student-grown food project.

The students involved in the study also expressed attitudes that were commensurate with CCP. Their "embedded agency" suggests a predisposition to community cooperation and the non-market approach of a CCP. Also, there was a haunting awareness among participants that our time with advantages of fossil fuels and electricity should be leveraged to prepare for the absence of those luxuries. I requote Ikard, a Senior who participated in both the seed saving and food growing projects:

> We're very fortunate to have the security that we have in our food, but I don't think it's always going to be like that. So I think it's good to know on a physical level how to actually go out and do that stuff. (Ikard, interview, December 10, 2018)

Finally, coloniality is an appropriate theoretical framework for a CCP. Industrial production is the primary engine of global warming and has its roots in colonial, extractive capitalism. Neoliberal trade policies and environmental regulations create the political and economic context for toxic levels of greenhouse gas emissions. Global warming is a function of coloniality/modernity. Further, the world's colonial seaports are, by definition, at sea level. As sea levels rise, the Earth's hydrosphere itself will become a decolonial agent that interrupts the coloniality of power's (Quijano, 2000) original technology - transatlantic trade.

A pedagogy of relocalization works in concert with a disruption of material availability. By preparing communities to live within their immediate geographic surrounds, a relocalizing CCP fosters delinking and independence from colonialist global systems. As we did in this study's two local food projects, a CCP centers the enactment of otherwises to global, colonialist systems, such as, but not limited to, the coloniality of school food and neoliberal public school curricula. In this respect, a climate collapse pedagogy is a pedagogy of decoloniality as well.

Chapter 28. Closing thoughts

There was a telling moment in the HHS cafeteria during the lunch at which the sweet potatoes were served. The FFA officer team had planned to hand out several bags of white potatoes at the lunch, but, unfortunately, were sequestered by the newspaper reporter as soon as they got in the room. Gary eventually became so worried that the potatoes were not being given out that the 14 year-old stood up, left the group, crossed the room and started handing out the bags of potatoes to grateful students.

I go back again to a quote from Mignolo and Walsh (2018) who have steered me through this entire process: “Decoloniality is the exercise of power within the colonial matrix to undermine the mechanism that keeps it in place requiring obeisance. Such a mechanism is epistemic and so decolonial liberation implies epistemic disobedience” (p. 114). This study worked with epistemic disobedience; we held as precious truth the knowledge and ways of our community’s seed savers. This study also underlined the importance of axiological disobedience. The moment he left that interview, Gary valued doing something else besides what he was “supposed” to be doing; he was exercising an axiological disobedience. If we educators, administrators and researchers in public education are to break free of neoliberal centrifugal hold on public education, we have to reject the hegemonic monetary valuation of the process of teaching and learning. We, too, must exercise axiological disobedience.

This study holds up the non-economic valuation of community as a template for disobeying neoliberal edicts. In our final interviews, I asked the adults in the study, “If there is no economic benefit to students growing their own food, why should we do it?” The most popular response was to re-teach the worth of self-reliance. Natalie put it like this:

> It is worth they're giving up other things to raise a garden, to preserve their foods, to save their seeds, to do things, to give up some time. It's going to take away from, it's going to take some time, but it's worth it for health, for just, environment. It's worth it to learn to feed ourselves. (Natalie, interview, December 21, 2018)

We're lucky to live in rural Western North Carolina; the knowledge of how to feed ourselves off the land yet circulates in our communities and we have sufficient arable land to do so. In 2010, a group of agri-economists from Clemson University asked how much land would be required to supply Bailey County *and* the two adjacent counties' school systems with all their fruits and vegetables. Their answer: five acres (Carpio, Zapata & Boonsaeng, 2010). A cornerstone of the colonial narrative is the impossibility of self-reliance; I howl: it is completely possible to feed Bailey County Schools from Bailey County farms. And as mountainous as Bailey County is, it stands to reason that the majority, if not all, other rural counties have the same potential.

One more antidote: On the day we weeded the sweet potatoes and replanted the white potatoes at Sternhill Farm, I was standing around talking with the Extension agents Adrian and Steve; Brad, his father and a couple of kids were there as well. Adrian made the dour observation that "New York City only has a 72-hour supply of food on hand." I didn't think much of the statement until Steve brought it up in his final interview; he said the same is true for Bailey County. Is this fallow land of plenty a metaphor for our education system? What surpluses could we teach our children to generate for themselves if we weren't so focused on teaching them to fill Caesar's coffers?

But is the public system up to the task of relocalized education? Is the State itself so beholden to moneyed interests that public education operates only to their advantage? Are we

resigned to agree with the famous Black lesbian feminist, Audrey Lorde (1983), that the master's tools will never dismantle the master's house? Certainly Mignolo and Walsh (2018) thought so: “Decoloniality is not, cannot be, state-led projects. They are projects by the people organizing themselves in their local histories and needs to delink from the colonial matrix” (p. 115). In their review of six food sovereignty education programs across Central and North America, David Meek and his colleagues (2019) described varied and complicated relationships between the programs of self-sufficiency and the State.

Can public education teach a relocalized curriculum before climate collapse completely reshuffles the deck? This study evidenced that rural youth have the desire to learn heritage workways from their community elders and that those elders are glad to teach them. What, then, is wrong with the generations in the middle, the generations to which I belong, the generations that Greta Thurberg accuses of not acting to mitigate climate change while not being around to suffer the brunt of the consequences? Is it because we came of age during Reaganomics and Thatcherism and were indoctrinated with the neoliberal belief in the markets as children? Certainly there's evidence in this study that points to my unchecked indoctrination.

What role will the middle-age generations - my generations - of educators and educationists play in the age of climate collapse? Obviously it is counterproductive for us to carry on with business as usual; at the high-stakes table of public education, the deck is stacked and the dealer’s wearing a gap-toothed, maniacal grin. Sometimes I think I should just go back to the farm and start learning the skills I didn’t learn from my mother, but that’s not my highest good. That would leave unleveraged the skills and knowledge I’ve spent half a lifetime developing. My choice not to follow that path was evident in this study. Although the loss of heritage knowledges was a primary theme of the study, this dissertation did not center the words

of the elders themselves. I was focused on the kids' experience of that process. That research decision was a function of how I see my role as a middle-aged educationist in the age of global climate collapse. I think my highest good is to leverage my social capital and administrative clout to create educational platforms that bring together that portion of our community in whom the knowledges of self-sufficiency still reside - the elderly - with that portion of our community who are hungry and ready to learn - the youth.

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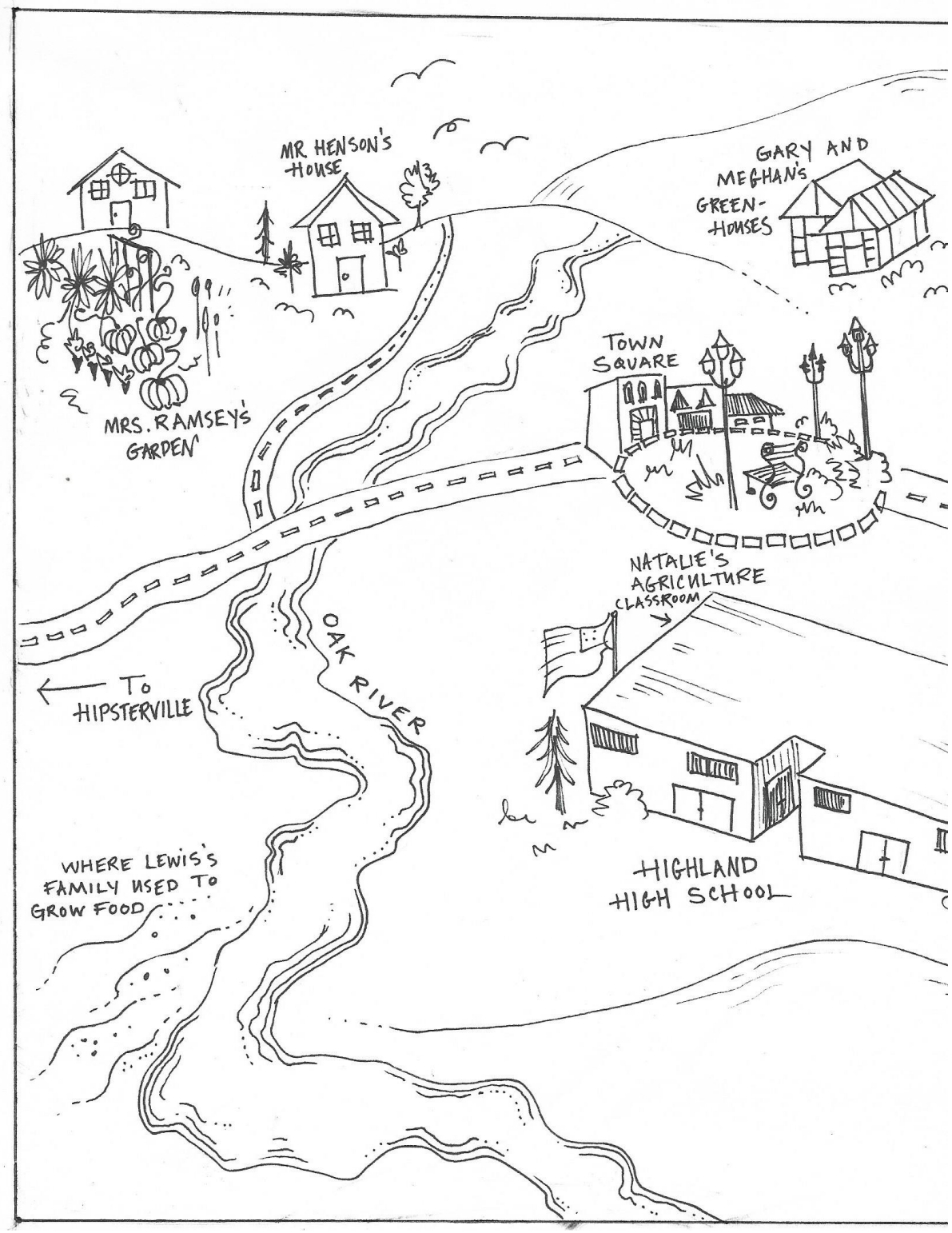
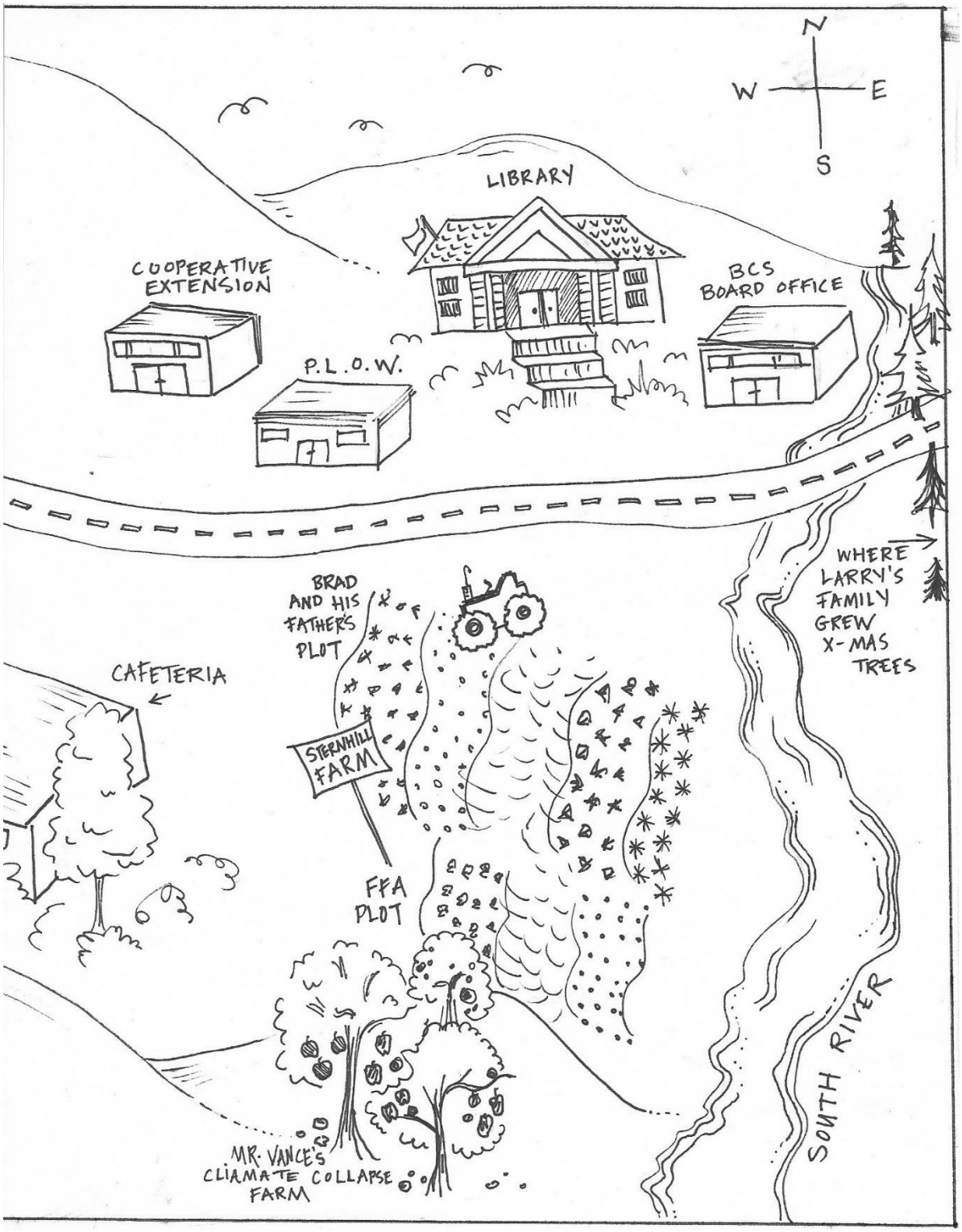
Appendix A

Stylized illustration of Bailey County with locations of major research activities




N
W
E
S
LIBRARY
COOPERATIVE EXTENSION
P.L.O.W.
BCS BOARD OFFICE
WHERE LARRY'S FAMILY GREW X-MAS TREES
BRAD AND HIS FATHER'S PLOT
CAFETERIA
STERNHILL FARM
FFA PLOT
MR. VANCE'S CLIAMATE COLLAPSE FARM
SOUTH RIVER

Appendix B

Timeline of activities

December 2017	Suggested student-grown food project to HHS agriculture teacher; cooperating organizations signed on
Spring 2018	Planning meetings for food growing project
April	IRB approved
May	Recruited students to seed saving project; planted white and sweet potatoes on student farm
June	White potatoes drowned; unsuccessful recruitment of community seed savers
July	Replanted white potatoes; planted cabbage; recruited community seed savers; visits with them began; Seed Saving Club idea hatched
August	Visits with seed savers continued; met with Seed Lending librarian at public library; seed swap idea hatched; all cabbage drowned
September	Seed Saving Club recruited new members; Club met with seed savers during lunch; Club advertised upcoming seed swap at Old Timey Day
October	All potatoes harvested; seed swap planning and advertisement continued; Club continued to meet with seed savers during lunch

November	Seed swap at the public library happened; sweet potatoes served on lunch line in HHS's cafeteria; white potatoes donated to students
December	Conducted final interviews with participants; white potatoes sold to teachers

Appendix C

Alphabetical List of Project Participants

Name	Age	Role	Attribute
Adrien	early-40s	Agriculture Extension Agent, Coop. Ext.	Leader in the field during student-grown food project
Andrew	17	Student food grower	Celebrated youth farmer
Bella	17	Student food grower	FFA officer, always with Derek
Brad	16	Student food grower & joined HHS Seed Saving Club	Farmed with father and girlfriend around Bailey Ct.
Chris	14	Original seed saving group	Learned about gardening from his grandpa
Daphne	16	Student food grower & joined HHS Seed Saving Club	Go-getting; rising star in FFA
Derek	17	Student food grower	FFA officer; always with Bella
Eric	14	Joined HHS Seed Saving Club	Ikard's younger brother
Erin	17	Student food grower	FFA officer
Gary	14	Original seed saving group	Grows lettuce in his bedroom
Hillary	17	Student food grower	FFA president

Ikard	17	Original seed saving group & student food grower	Volunteer farms for his neighbors
Jimmy Page	early-30s	Farm Manager, PLOW Food Hub	Suspected of poisoning the cabbages
Lacey Fox	early-50s	BCS Child Nutrition Director	Careful and cautious
Larry	16	Original seed saving group	Musician; grandparents grew Christmas trees
Lewis	14	Joined HHS Seed Saving Club	Family used to seed save but lost access farm land
Meghan	14	Original seed saving group	Cans with memaw
Mr. Henson	mid-60s	Community seed saving elders with whom we visited	Retiree from whom we got cornfield beans
Mr. Vance	mid-40s	Community seed saving elders with whom we visited	Anthropology faculty with agroecological farm
Mrs. Baker	mid-50s	Community seed saving elders with whom we visited	Self-sufficient farmer
Mrs. Randolph	80s	Community seed saving elders with whom we visited	Source of stories of pre-electricity Bailey County
Ms. Angie	early-70s	HHS Cafeteria Staff	Elder of HHS cafeteria
Ms. Deene	early-50s	HHS Cafeteria Staff	Spitfire of HHS cafeteria

Ms. Sally	late-50s	Librarian, Bailey Ct. Public Library	Coordinated seed swap with HHS Seed Saving Club
Ms. Vera	early-50s	HHS Cafeteria Manager	No nonsense
Natalie Brown	mid-40s	HHS Agriculture teacher & FFA Advisor	Lynchpin in student-grown food project
Niles	14	Original seed saving group	Dropped out half way through study
Steve	late-50s	Agriculture Extension Agent, Coop. Ext.	Elder Extension agent; super knowledgeable
Steven	17	Student food grower	FFA officer, knife maker
Tina	17	Original seed saving group & student food grower	Rode horse to camp
Travis	early-50s	Director, Bailey Ct. Cooperative Extension	Administrator willing to get out there and weed eat

Appendix D

This appendix details how I came to the conclusions I presented in the main text. As I stated in the introduction, my research agenda was best served by a qualitative ethnographic approach to knowledge generation. Further, an action research methodology allowed me to pursue my decolonial agenda and enact projects that fostered "innovations and ruptures that outline new strategies of action and of social, political, economic, epistemic, cultural, and re-existence-based struggle that confronts the legacies and contemporary manifestations of the modern/colonial matrix of power" (Mignolo & Walsh, 2018, p. 27). What follows is a discussion of the methods I used to generate data and a description of my data analysis process.

Research methods

Participant observation is a hallmark of ethnographic research and, as such, a crucial method for my study. Dewalt and Dewalt (1998) confine participant observation to "a way to collect data by ethnographers who observe and/or take part in the common and uncommon activities of the people being studied" (p. 2). The data generated by participant observation formed approximately half of my dataset. Participant observation occurs on a continuum of participation and observation (Spradley, 1980) and, while my position on that continuum fluctuated throughout the data generation process, I was almost always more on the participant side than the observer

As a method of data generation, participant observation was appropriate for the kinds of knowledge claims I was interested in making through this research project. I was interested in things like students' experiences of knowledge systems and how traditional heritage foodways could impact food system realignment. These kinds of learning required extended time in the field engaging with tacit knowledge. For Dewalt and Dewalt (2011), "[i]t is a tacit understanding that informs the form of research, the specific techniques of data collection, recording of

information, and the subsequent interpretation of materials collected" (p. 10). The field notes that I made through the participant observation process were places in which I could make that tacit knowledge explicit and incorporate it into my analysis.

The rare instances in which I stood back and watched the action included the trip to the food hub where the students washed and graded the sweet potatoes and the day the sweet potatoes were served in the cafeteria. There were also a few meetings in which I was mostly quiet and took notes. Other than that, I was a full participant in the action. I was in the field planting, weeding and harvesting with the kids. I was prepping the seed saving kids for our visit to a local seed saver and then making sure they asked the questions that they wanted to ask. Although the kids formed the club and identified the seed swap as their first project, I wrote the agendas and chaired the meetings of the nascent seed saving club.

I made "jotted" notes (Lofland & Lofland, 1995) during planned events such as days on the farm and seed saver visits. I went through two notebooks during the data generation period. From those jotted notes, I wrote a field note on each event. Most often I wrote the field note that night; a few times it was a day or two before I was able to write it down. I used a template to record the date and time, participants, settings, and happenings as well as my reflections on the actions and any questions/follow up. Because field notes are "at least one more step removed from objective observation than the non-objective observation in the first place" (Dewalt & Dewalt, 2011, p. 159), the field note could also be considered an early step in my data analysis process.

Because of my positionality as a school employee, as well as the designer and steward of the local food system projects, some days writing field notes felt like journaling. Below is an excerpt of a field note I made on my own actions. I offer it as an example of how consumed I

became by the activities of the research during my work day, my positionality as someone who could move between multiple contexts in public education fluidly, and the active, essential role that I played in the execution of the projects.

Context/Environment:

Convo with Natalie earlier in the day, she still had not heard back from anyone about BCS purchasing or serving the sweet potatoes. She had apparently suggested via email they be served as part of the Thanksgiving meal at the HS but had not heard back from Lacey. I told her that that was not atypical; that Lacey sometimes just doesn't respond to emails and that I needed to go to the Board office that afternoon and would stop in on Lacey and see what's up

Summary of Events

I have never experienced Lacey's door closed and it was open when I stopped by after lunch. I asked her when she thought it would be good to serve the sweet potatoes and if she had heard anything from PLOW about buying them. She said: " I got an email from *Betty*, I guess, I don't know her so I didn't know how to respond."

She said that Natalie had expressed interest in serving the potatoes on Thanksgiving and that she (Lacey) had spoken with Ms. Vera (head of the lunch room at the HS) and there are too few warm bath spots "on the line" for the sweet potatoes that day with as many side as are served with the Thanksgiving meal. But the Friday before would work. "Fridays are Pizza Hut days and there is generally good participation. So if you think that would be good…."

[I was shocked and somewhat uncomfortable that she was asking me to authorize the day, but I said, “Well, if it’s a day when a lot of kids are going through the line, I guess that would be good.” She said she had emailed Kate (Anglin, in finance) and Kate had said that “they (BCS) need a W9 for PLOW.” I said, “I have a W9…” and then I changed course mid-sentence and asked her, “Did Kate send one to Betty?” She said she had not but, “If you (me) think that Friday’s alright, I can send her a W9.” And I said, yes, I think that’s alright and that sounds like the next step. We agreed that that would be good and I took my leave.

Reflection (Use this space to add your own personal comments/questions about what you observed. Make some connections to other observations, and just wonder/think out loud!):

This -like everything else I guess - is a good piece of positionality. I stop by the board office frequently and so I have pretty much daily access to Lacey. Others do not. I also know what a W9 is and why BCS would need one from PLOW and why that would hold the problem up; did my offering to send one move the process along when it otherwise would have stayed stalled? Why was I feeling awkward about being given that kind of leadership? I guess I just interpret so much Lacey does as come from this incredible frame of fear. Just kind of makes me upset. Or am I upset that she doesn’t seem to share my values? (field note, 10.31.18)

Reflexively, sometimes it was hard to tell what was a research event and what was just me going to work. My job at the high school allowed enough flexibility that I could stop in on

Natalie just to say hello and end up having a conversation that I would make a field note on later that day. Technically, I was in the field for eight months, though my suggestion had kicked off the student-grown food project a full year before I stopped generating data. As the months went on, I seemed to be investing more and more of my time at work participating in the various strands of my dissertation research.

What counts as data in a qualitative study is complicated (Glesene, 2011). Qualitative data generation and analysis is often cyclical and my own lived experience often found its way into my data folder; the field note excerpt above is a good example. That having been said, interview transcripts formed a major chunk of my study's dataset. Interviewing was particularly useful because I was, as Seidman (2006) says, "interested in understanding the lived experiences of other people and the meaning they make of that experience" (p. 9). After the final events of both local food projects, I conducted twenty-five semi-structured interviews (Glesne, 2011). The flexibility of the semi-structured interviews allowed me to create groupings of responses across subsets of participants yet still remain open to hearing and recording what was significant for the interviewees.

I interviewed all of the adults who participated in the student-grown food project, all of the youth from the original seed saving project, seven students who had grown food and three students who had joined the Seed Saving Club. A table of study participants, their demographics and their roles in the project is in Appendix C. I audio recorded the interviews and then uploaded the audio files to an online transcription service to generate a rough draft of a transcription. I then read through each rough transcription while listening to the audio recording and paused the recording to correct the rough draft before saving the final transcript to my data file.

Member checks

Following Doyle (2007), Birt, Scott, Cavers, Campbell, and Walter (2016) define member checking simply as "returning an interview or analyzed data to a participant" (p. 1802). Along with other measures such as exhibiting reflexivity and providing thick descriptions, member checking is a way for a qualitative researcher to exhibit the trustworthiness of their data and analysis (Carlson, 2010). Classically, member checking is performed by having study participants read a section of interview or analysis, and react to it (Carson, 2010).

Although a cornerstone of rigor in qualitative research (Lincoln & Guba, 1985), the impact of member checks on the quality of research findings has been questioned (Thomas, 2017). Koelsch (2013) argues that, for research projects with transformational goals, change in the research subjectivities and circumstances may be a more appropriate marker of validity than representation. Koelsch (2013) warrants Cho and Trent's (2006) idea of transformative validity: "'a progressive, emancipatory process leading toward social change that is to be achieved by the research endeavor itself'" (as cited in Koelsch, 2013, p. 12). In transformational research projects, "[v]alid research will change rather than mirror truth" (Koelsch, 2013). My action research study had the emancipatory goal of bolstering the capacity of my community's local food system; therefore, I incorporated both traditional member checking activities and descriptions of the transformation that occurred because of the study as a way of describing the validity of the research.

As I was writing my findings memos, I conducted one group member check at which five student participants read and reflected on a passage I had written about their interactions; those reflections are detailed in Chapter 25. As an additional reflection on my analysis, I also presented with three student seed savers and one student food grower at a national conference six months

after the end of the data generation. Our presentation was structured as a panel discussion; I asked them several of the questions that I asked my stagnate dataset in my analysis process (discussed below). The agriculture teacher, Natalie, came with us to the conference and video recorded their answers with her phone; I watched the students' responses and held them up against my findings.

Finally, this project happened in a small town and things happened in our small town because of what we did. Our local community paper published seven articles about different aspects of these two local food projects during the data generation period; I wrote two of them. These publications moved the projects out of the school and of the farm and into a space of civic dialogue. Also, as the research period drew to a close, several participants in the research study were honored with Bailey County Farm-City Week Awards. Farm-City Week is a national celebration that honors the "contributions our Nation's farmers and ranchers make toward furthering the health and well-being of our country" (The White House, Office of the Press Secretary, 2010). The FFA Club was awarded Farmer of the Year; Natalie was awarded Teacher of the Year and I received the Sustainable Agriculture award. I site these newspaper articles and civic awards as examples of the transformational validity (Cho & Trent, 2006) of the study. They are evidence that the projects moved the student-grown food option into the collective consciousness.

Data organization

I used an architecture of Google Drive folders to store and organize the study's data. As I generated data, I put them in one of four folders: "Field Notes," "Informal Conversations," "Interviews" or "Ephemera." Ephemera included handouts from meetings, the FFA creed, a picture of the check the FFA received for the sweet potatoes, etc. The title of each datum began

with the type of file it was - “PO” for field note, “RM” for reflexive memo, etc. - immediately followed by the data of the event and then a short, descriptive title. Because I put data of the same type in the same folders, when I opened the folders, the data artifacts were displayed chronologically. I kept a “Newspaper Articles” folder in my Dissertation Data folder as well. Finally, I also had a “Working Files” folder in which kept documents that were not data but helped me get the work done; examples include the spreadsheet of community seed savers and their contact information, and the running list of aliases for my study participants.

Data analysis

This project taught me the meaning of “emergent process” (Lofland & Lofland, 1995). My process of data analysis emerged from the time I began gathering data and continued to unfold through the writing process.

In general, qualitative data analysis as “an *emergent* product of a process of gradual induction. Guided by the data being gathered … and the topics, questions, and evaluative criteria that provide focus” (Lofland & Lofland, 1995, p. 181, italic in original). I also understand data analysis as an iterative and recursive process (Chenail, 2012) therefore my data analysis started as soon as I start gathering data. As I worked in the field, I read through the artifacts I had collected to that point and made reflexive and analytic memos to myself. Those were kept in separate folders in my Dissertation Data folder.

Those notes helped guide my thinking both in terms of process of the study and analysis of the data. For example, some musings in one reflexive memo helped me couch the actions of the research in terms that were to become a central frame of the dissertation.

> For me this moment is special because of the intent that created it - that I, as an agent of the schools, have the beans for the purpose of reconnecting public

> education and intergenerational knowledge of individual self-sufficiency community resilience. In my possession today - today as a point in the process of my dissertation - the beans are the virus of rebellion against a food system designed to keep a population malnourished and an education system complicit in silencing knowledges of how to feed yourself. (RM, 9.1.18)

Not only did some of that exact language appear in the dissertation, but the memo represented the first time I felt the emotionality around the weaponization of food.

Because my data analysis began before the end of the data generation period, it is contrived to draw boundaries between the two periods. That being said, I did designate my last interview with a project participant as the formal end of the data generation period. My next step was to assemble and catalogued all the data with which I was going to work. I read through all of the data once in its entirety. During that read through, I made both analytic and reflexive memos; those memos were kept in a newly created "Analysis Files" folder. Based on that first read through, I identified six questions I would ask my data set. The questions gave me a way of targetedly and methodically engaging with the mountain of data that I had generated. Those questions were:

1) Why did students think it's important to save seeds?
2) Why did students think it's important to grow your own food?
3) What feelings did students have about the food they grew being eaten in the cafeteria?
4) What was the students' experience of engaging with the knowledge of their community elders?
5) How did students perceive the difference between elder and school knowledge?
6) What did the adult participants find important about the student-grown food project?

I asked these specific questions because I looked at the two local food projects as actions that opened decolonial otherwises (Mignolo & Walsh, 2018) to neoliberal, privatized food and knowledge systems. The otherwise systems that this study contrived were novel to me and, as an occurrence in a school setting, novel to the other participants as well. I hoped to develop a thick description (Geertz, 1973) of the otherwises that we cooperatively opened up by paying attention to how the participants felt about what they did, what their experiences were while engaging with these newnesses and what they thought was important about it.

I asked these questions one at a time. For each question, I identified those data artifacts that would help me answer the question, i.e. the relevant field notes, specific interview questions, and/or pieces of ephemera. I used Quirkos to help me in my analysis. Quirkos is a qualitative analysis software that allows users to code text by dragging and dropping excerpts in to an unlimited number of "quirks" or tags. A visual analytic tool, the quirks grow proportionally to the amount of text that has been placed in them.

For each question, I created a new Quirkos project and uploaded to that project the data artifacts I had identified as relevant to the question. I read through the artifacts in their entirety; if the artifact was a final interview, I paid special attention to the answers to the interview questions I had identified as particularly relevant. For example, when I was reading through the interviews to get a sense of the students' experience with elder knowledge, I paid particular attention to their answer to the question: "Do you feel like the people that we talked to this summer and into the fall, informed your understanding of why it's important to save seeds? If so, how?"

I created a new quirk for each theme or category of response I saw as I read through the subset of data for each particular question. I highlighted the text that I wanted to tag and then

drug and dropped it on to the relevant quirk. Sections of text could be associated with more than one quirk. For example, I associated the following quote from Meghan with both the “Familiar” quirk and the “Enjoy” quirk: “From like my mimi, I can things with her. I'll can tomatoes and she'll show me how. It's just Awesome. I enjoyed it very much.”

As I began to see relationships between quirks, I associated the related quirks with each other by dragging one on top of the other. The software automatically creates parent/child relationships between associated topics. Sometimes I thought of those associations as hierarchical; sometimes I thought of them as horizontally clustered.

As I read through the data, I frequently came across quotes or passages that were relevant to a different question than I was coding for at the moment. In order to note those passages, I created a Quirkos project that I called “Theme Scan.” The Theme Scan was a sort of master project that included all my data sources along with quirks that represented the general themes I was seeing in my data. When I encountered a piece of text that I wanted to associate with a theme that had to do with a different question than I was working at the time, I toggled to the Theme Scan project, found the passage in the data, and associated it with the appropriate quirk. This allowed me to work in a focused way on one question at a time while not sacrificing the learnings I was having about other questions or themes. The method also allowed me to take advantage of the multiple readings of the data I was doing.

After I had read through the subset of data that I had identified to answer a question, I wrote a findings memo as an answer to that question. I used the field of quirks to help me structure that memo. Because the size of a quirk reflected the amount of data associated with it, I used the largest quirks and cluster of quirks as the main themes for the findings memo. Text excerpts associated with smaller quirks or quirk clusters found little resonance with the other

data; those tagged quotes were generally not included in the findings memo. I summarized the major themes in a paragraph at the top of the memo and then used quotes from each main quirk/quirk cluster to expand on and flesh out the themes.

Below is an example of how I moved from the data grouping that I did in Quirkos project to writing Findings Memos. Figure 7 is a screen shot of the quirk field for the question "What was the students' experience of engaging with the knowledge of their community elders?"

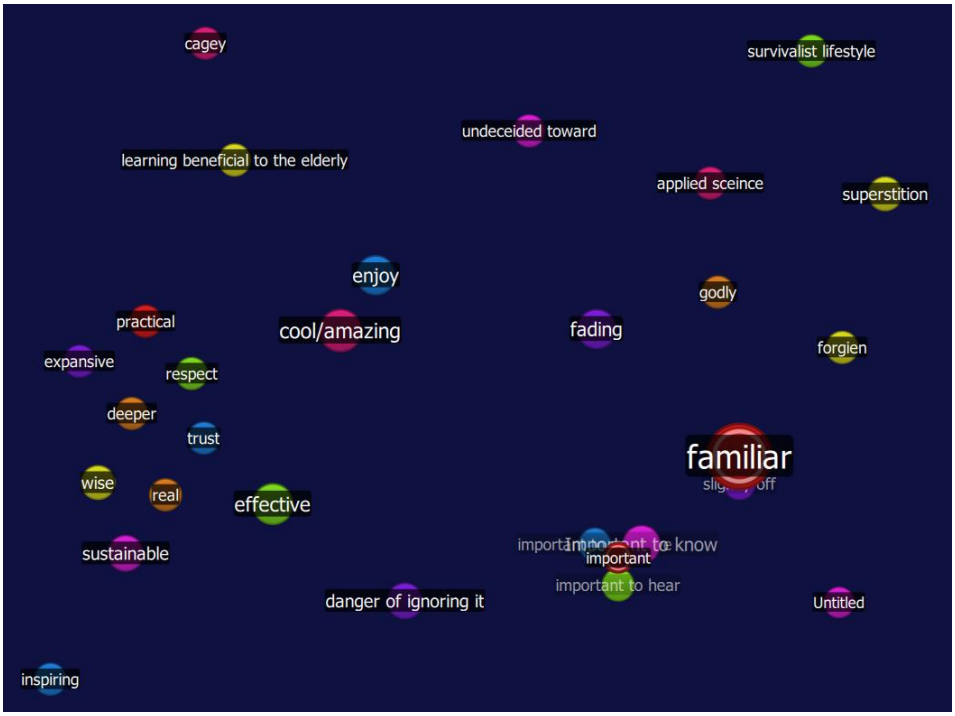


Figure 7. Quirkos field screenshot

Below is an excerpt from the Findings Memo that I wrote on the question.

> Students had a host of accolades they used to describe their reaction to the knowledge that we learned from elders in the community during field research. They described a respect that they felt for an expansive body of knowledge that they found both practical and inspiring. They spoke about how they trusted what they heard from their elders, describing it as "wise," "real" and, ultimately,

> "sustainable." For them, the knowledge that the elders had to share was "deeper" and, perhaps more importantly for the context of education in the age of neoliberalism: more effective. As Meghan put it, it "a lot of old ways and old stories and things that older people know tends to work way better and they're just more effective and even if they are longer process, it's worth it."
>
> What struck me the most is how many instances I found in the data in which students were familiar with the traditional agricultural processes that their elders were describing. Because of the nature of the research, the elder knowledge that I am referencing is predominantly the knowledge of how to save seeds.
>
> Sometimes that student closeness to the elder knowledge took the form of knowing or being related to people in the informants' stories or the informants themselves. An excerpt from my field note from our visit with the Mountain Man: "He pulled a grocery bag out of the freezer and said those he had gotten from [seminal BC seeds saver] from Cold Mtn. He was related to [other seed savers] at which point Tina reacted saying she must be kin to him as well because she was kin to them. There was some discussion of who else she was kin to to be able to dial in on the connection between the two."

The quote at the end of the excerpt as well as the quote from Meghan in the first paragraph are examples of how the process allowed me to author memos that were very close the raw data. For example, to get the quote from Meghan about the effectiveness of local knowledge, I double clicked on the quirk and the software displayed all the quotes about effectiveness along with who said the quote and where the quote was in the text.

Inevitably, working with the data like that spawned analytic thoughts and musings; those frequently were recorded as part of the findings memo. When the memo was done, I cut the editorial material from the document and pasted the passage into its own document that I then saved in the Analytic Memos file.

Moving from the findings memos to an analytical structure was difficult. The decolonial aspirations of the project lead me to reject the standard format of the dissertation; I wasn't interested in replicating the knowledge production ritual that privileges esoteric theory. As an action research project that was meant to generate a glimmer of an otherwise, the narrative of what we *did* was paramount for me. Therefore, I created the structure of the dissertation by drawing - with pen and paper - a spiral that represented the narrative of the research story as it tightened in toward the concluding events of the seed swap and sweet potato lunch (Figure 8). Then I drew five lines through the spiral that all pointed to the middle. Each one of those straight lines was literally and metaphorically a through-line, a theme that framed my research project every step of the way. Those through-lines were "community," "local food and farming," "21st century education," cafeteria food," "local knowledge and traditions" and "student agency." Each time a through-line crossed the narrative, I named a mini-chapter; the mini-chapters were the opportunity to discuss that theme at that point in the narrative.

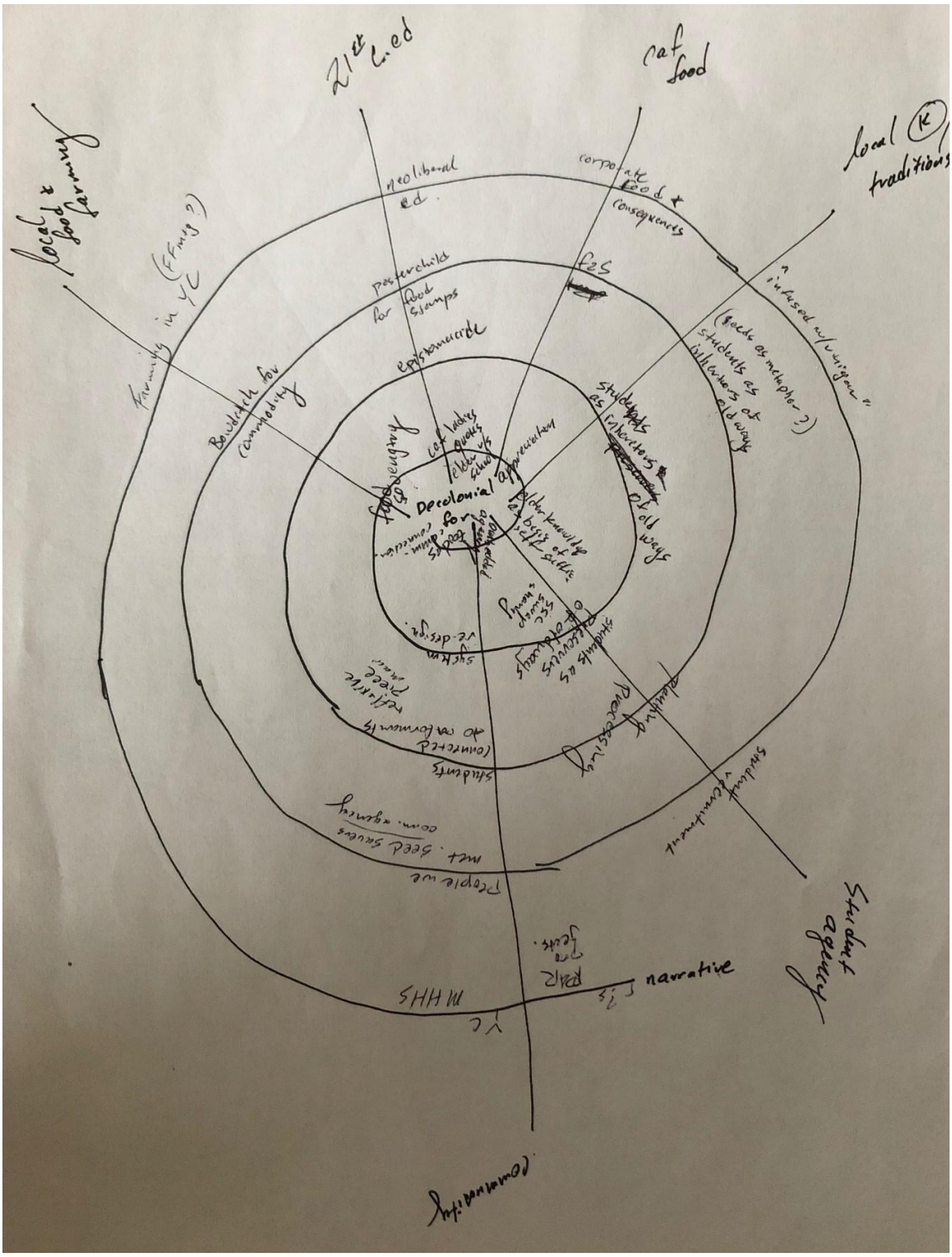


Figure 8. Hand-drawn outline of dissertation structure

The vestiges of this analytical structure are barely visible in the final dissertation. The mini-chapters were reordered during the writing and editing process to facilitate narrative flow. The spiral structure is worth discussing, though, as it greatly informed my analytical process.

The curvature of the narrative is important. Linear thought is the basis for Western epistemology. I am certainly not claiming that, as a white, American, male, my spiral represents a non-Western approach. However, the curvature of the narrative does push back against a linear way of thinking. On a practical level, it opened the opportunity to address and readdress each of the major themes that structured the study at different points in the narrative in a way that each readdress was informed by the intervening discussion of the other themes. For example: after initially framing 21st century education as neoliberal in Chapter 5, I returned in Chapter 15 to add the layer of epistemicide to my understanding of the education system. That understanding had more gravitas because, in the intervening period, I had cycled through discussions of the loss of heritage workways in my study site (Chapter 12) and the real-life consequences of focusing our children's education on global and not local priorities (Chapter 14).

Vita

The son of a Jesuit priest and a Glenmary nun, Eric Klein was born in the coal fields of Kentucky and grew up in rural, Appalachian North Carolina. At seventeen he won a scholarship to be a Congressional youth ambassador to (then) West Germany and spent his senior year of high school at a comprehensive school in Wilhelmshaven. His late teens and early twenties were spent penduluming between the University of North Carolina at Chapel Hill and the University of Goettingen in Germany. His travel and studies eventually lead to a B.A. in German from Chapel Hill (’95) and some fantastic bartending skills.

In the fall of 1997, Mr. Klein began work on a master’s in Intercultural Relations at Lesley University in Cambridge, MA. Since graduating in 2000, his professional career has focused on increasing the enrollment and success of underrepresented populations in higher education. In 2012, Mr. Klein retreated to his childhood home in N.C. to begin work on a doctorate in Educational Leadership at Appalachian State University in Boone, N.C. He and his wife still live there and they are visited frequently by his college-aged daughter.