

London School of Economics and Political Science (LSE)

**Divergent Economies of AgriCulture in Hawai'i:
Intersecting Inequalities and the Social Relations of
Agrifood Work**

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A thesis submitted to the Department of Gender Studies of the London School
of Economics and Political Science for the degree of Doctor of Philosophy.
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Abstract

This thesis analyses agrifood work in Hawai'i from an intersectional, gendered perspective. It examines the intersecting social relations of production, investigating how different agrifood practices address, if at all, intersecting social inequalities. It asks, how do agroecological 'alternatives' address intersecting inequalities, if at all, in their work? Do forms of 'alternative agriculture' offer more 'gender-inclusive' forms of work when intersecting inequalities are considered? The research sought to address these questions by analysing three case studies which can be said to represent 'outliers' compared to the majority of Hawai'i's agrifood production. It examines particular cases of small and collective agroecological growing practices, as well as examples of transnational seed production. The thesis utilised methods of participant observation, interviews and document analysis in order to understand how different how agrifood work is organised and how different participants in these practices make meaning of their work. It drew on analytical frameworks from agrifood studies of labour and justice and intersectional feminist and anti-imperialist political economic and ecological theorising.

The research found that within the cases, agrifood practices are characterised by their diversity, and sought to draw out what I argue are nevertheless important tendencies within them. This entailed analysing the tensions, contradictions and possibilities these cases presented for addressing intersecting inequalities in their work. I showed that, in some ways, agroindustrial seed production offers more formal 'gender-inclusive' benefits but that agroecological practices create spaces to challenge gendered-norms on an individual and collective basis. At the same time, I suggested that projects for the recognition and inclusion of women and women's work are highly limited when they fail to account for the ways gendered inequalities intersect with other differences of class and race, for example. At the same time, I argued that efforts to address intersecting gendered inequalities within agrifood work must attend to these contradictions, failures and possibilities and that doing so is not only revealing of some of the wider logics shaping agrarian ideals and agrifood practices, but potentially of how gendered colonialities operate.

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Dedication

For those who work, un(der)paid and uncounted, in Hawai'i's agrifood systems.

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Any omissions and errors are my own.

Prologue

The grafted tree bears fruit

I left London for fieldwork on December 3rd, 2014, arriving in Honolulu some 24 hours later. These first few moments off the plane are, for many raised in Hawai'i, the multisensorial stuff of much nostalgia. Humid air saturates our lungs, swells the threads of too many clothes, bringing a warm rush of wintertime smells: milky-orange *puakenikeni* blossoms, six-petal gardenia, bunches of ripened, drooping lychee, fermenting in the mountains. This colder, rainy season was the only period in which I had visited this archipelago in nearly a decade. But this time, my stay will last through summer, the hotter months when the trade winds lull and the ocean is transformed by heat and calm. But in those first days of December, I did not know the names of the seasons, fresh off another calendar and sense of time. Like so many things in Hawai'i, these scenes of encounter are where different worlds burst, collide and evade one's grasp. This research is the story of some of these negotiations and the embodied labours of their translation.

It is indeed strange to think back to this same month in 2010, when I experienced not a rainy winter but the full heat of summer in the southern hemisphere. I was living in Buenos Aires and interning at a human rights organisation, where I had managed to secure an unpaid position. One of the main campaigns of the organisation and its lead researcher concerned repression against several Pilagà communities in the northern province of Formosa. Several activists had been killed by the provincial police, their houses set ablaze and their lands flooded. It was determined that the repression against the Pilagà collective was the result of collusion between provincial authorities and corporate interests. These Pilagà lands lay in an alluvial plane alongside the Paraná river; by deliberately flooding lands,

burning residences, directly and indirectly repressing community members, the area waterways were slowly being enlarged. The waterways carry shipments of soy from Paraguay for export, much of which was genetically modified.

In April 2012, I was in Istanbul at the Association for Women's Rights in Development (AWID) international forum: 2,000 activists gathered to debate gender and economic justice. Maria Poblet of Occupy Oakland spoke about alliances between Latinx and African Americans; Francisca Rodrigues shared the story of the peasant organisation Via Campesina and their pursuit of food sovereignty and gender justice. Enthused, concerned, engaged, feminists shared their theory and practices of economic and gender justice, including feminist contributions on concepts of *Buen Vivir* and food sovereignty in Brazil, Mexico and other parts of Latin America. I wondered what possibilities existed for addressing economic inequalities and gender justice in relation to agriculture in the context of Pacific island geographies.

By the winter of 2012, the energy from the forum had dissipated, and I undertook my yearly trek home to Hawai'i in wintertime. A few days into a short trip to the island of Moloka'i, a sign stopped me in my tracks:



It read ‘Monsanto Moloka’i’ in arresting ordinariness, politely extolling the multinational corporation’s concern with keeping this most development-resistant island’s highways litter-free.

My surprise was twofold: at the time, it was not widely known that the world’s major agrichemical companies had acquired seed companies on several islands, let alone that Monsanto had quietly become the largest employer on Moloka’i. Secondly, Moloka’i represents a particular place in the political geography of the pae ‘āina: resistant, subsistence-oriented, Moloka’i residents had successfully blocked most hotel projects on the island and opposed a range of other kinds of development projects over the years. On an island with around 7,000 residents, practices of subsistence provisioning are key to many folks’ livelihoods in a place where formal, waged employment is among the lowest in the islands (Akutagawa 2008). Happening upon Monsanto’s road sign was a harbinger for many subsequent moments that led to my research: like the inequalities I would later come to analyse, I was stunned by what could be hidden in plain sight.

A few weeks later, a chance meeting with a friend led to an offer to help organise a visit by a well-known activist and academic whose work I read in my postgraduate degree: Vandana Shiva. Shiva’s visit was aimed at raising public awareness and bolstering a growing movement against the agrichemical companies’ work, GMOs and the lack of public consultation with regard to their open-air research. My experience with organising this visit was heartening as well as unsettling. Compared to my work in feminist organising, food politics seemed refreshingly goal-oriented, aimed in this case at resisting concrete elements in the food supply. Nor had I ever felt so physically well then after a three-day retreat, supplied each day with freshly prepared, local vegan catering; I wanted to stay in this

nourishing embrace, talking politics over plant-based communion, strategising in the light trade winds of the beachfront worksite.

It was partly feeling so good in this relaxing, intellectual feast that awoke my curiosity, stewarded by a feminist kind of guilt, familiar with killing joy (Ahmed n.d.). Though this organising was not always so well-funded, in that moment it contrasted starkly with my daily bread and butter: my work at the time involved researching the extent to which women's rights and feminist organisations were struggling to resource their work globally. Our research found that total annual budgets of the 2,000 organisations surveyed amounted to less than one-third of the budget for Greenpeace that year (Arutyunova et al. 2014). Seeing the evidence of the relative financial abundance of these environmental-political struggles was therefore both exciting and distressing. What excited me were the possibilities for cross-movement organising and collective resource mobilisation that could take place between feminist and environmental organising. Like many before me, I wondered how to build stronger links.

Indeed, my newfound (dis)comfort at what well-resourced organising felt and looked like was part of this desire for greater cross-movement work, but not the only reason for my questions. My initial observations in 2012–2013 were that the bulk of the 'on the ground' organising was done by a core cadre of women, middle-aged and mostly white. I have written about this elsewhere (2016) and Kimura has also made similar observations (2016).¹ My initial research interests therefore concerned the role of gendered, racialised and

¹ Not only was this resistance increasingly networked across islands; it may have been some of the first forms of activism to do so successfully, given the cost challenges of organising across multiple islands without affordable transport. Tensions and openings of the GMO debates had enabled novel alliances (Shaw 2016), multi-island organising led to the greater politicisation of food and agricultural practices, and, it seemed to me, potentially worked through practices of othering that warranted further research.

classed divisions of labour within these food and anti-GMO organisations and movements. I began to wonder in what ways environmental and food movements might already be 'women's movements'. And if they were, which women were involved and how might their labour be valued (or not) as these political struggles grew?

Some of these dynamics and intersections were apparent in divisions of labour and gendered campaign messaging while other social equity issues remained implicit. Specifically, I was interested in the implied, but often undefined, 'alternatives' to corporate food and farming that were invoked in resistance to seed-agrichemical companies, GMOs and the wider agroindustrial food model. This 'alternative' concept appeared elastic, incorporating broader concepts such as local organic food, regenerative agriculture, agroecology, food self-sufficiency, sovereignty and ahupua'a restoration and more. And yet, as feminists and others had long asked of a range of purportedly 'liberatory' projects, what gendered ideologies were deployed in these discourses and material practices? Were these 'alternatives' any better than the status quo when assessed with relation to gender equality and social well-being? What might those latter two mean in the specific context of Hawai'i, positioned ambiguously in relation to the global North via U.S. colonisation but, like many non-autonomous states in the Pacific (Baldocchino 2010) facing markedly different challenges?

Some of these initial questions remain beyond the scope of what became this thesis, but the initial questions about the role of gender, class and race in food and anti-GMO organisations and movements led to me to ask similar questions about the agrifood alternatives to which these movements often refer. And because both agricultural production and the politics of food need people, analysing the social positioning, politics, practices and influence of those whose work was seen to resist the agroindustrial food

model appeared to me to warrant further analysis. Indeed, part of what piqued my interest were the explicitly socially conservative views of some politicians who strongly opposed GMOs and had also vocally campaigned against LGBT and women's reproductive rights. I began to wonder about the social and gendered views of others involved with this movement and those working in 'alternatives'. How did self-identified feminists within food movements reconcile and negotiate these conflicts?

Similar to others, my ambivalence concerned not only these gendered dimensions of alternative food movements and practices but also the classed and racialised elements of the agrifood prescriptivism implied by these efforts. While I shared some of the ethical objections to the processes by which GMO ingredients enter the food chain, I also understood how out of reach and prejudicial a market-based approach to eating GMO-free could be, given the high costs. How was this new prescriptivism different from previous nutritional discourses, and whose food 'choices', cultures and practices might be targeted for reform or even fetishised or 'gentrified' within these frames? It seemed that agrifood practices and discourses identifying with the 'local' and 'sustainable' entailed at least as many contradictions as what these efforts were posed against. In response to these mounting questions, this PhD project was born.

In the years since this research began, the context has altered substantially. From the vantage point of 2017, the optimism, enthusiasm and sense of other possible worlds that I felt around the time of the 2008 global crisis now feels like a pinprick of colour against the current lack of possibilities for systemic economic and social justice. In the long wake of this optimism, years of austerity and new visibilities of old tensions understandably turn many toward gratitude for the minimum and a focus on holding ground on what has been achieved, dampening if not extinguishing imaginaries for whole economies 'otherwise'. It is

hoped that what follows contributes to efforts to keeping such possibilities afloat, weighted as they are with contradictions and yet, buoyed by those who steward them, perhaps must simply await the right wind, the right tide.

Chapter 1: Introduction

...if you ask any farmers, people usually think that the main restrictions for farmers in Hawai'i island, because it's so expensive, [is land] or water. But at the end of the day ... they'll tell you that the worst thing is labour. Because once you have planted all these beautiful fields of tomatoes, no matter if they're conventional or organic, and they're ready to pick and there's nobody to pick them because kids have better opportunities going to work in Walmart or McDonald's. Not that they are great jobs, but they probably pay more. And you're not in the sun. [This situation is not great] for the farmers (CA21, labour recruiter, 21-22).

This research analyses the social relations of Hawai'i's agrifood systems, focusing on how different kinds of farming organise their work. Specifically, the research analyses the extent to which different forms of agroindustrial and 'alternative' agriculture address gendered inequalities. The thesis utilises a diverse economies methodology to analyse the intersecting social relations of different agrifood practices, their specific socio-ecological effects, divisions of labour, the social qualities associated with particular kinds of work and how those social qualities are associated with wider discourses concerning gender, race, and citizenship in particular. The research develops an analytical framework that draws together food, feminist and settler colonial studies in order to answer the question 'how alternative are agrifood alternatives in the context of Hawai'i?' In this context, I refer to alternative agriculture as a range of resource-conserving, low-input, diversified agroecological practices that are usually undertaken on small farms² (Gürçan 2010: 489; Altieri 2002)³ but may be undertaken at 'multiple spatial and/or temporal scales' (Kremen et al. 2012). Industrial agriculture, in contrast, refers to any form of 'capital-intensive, large-scale, highly

² This research utilises the USDA definition of farms as those that grow one thousand U.S. dollars' worth of produce per year, even if not sold, to exclude those who farm on a very small scale in gardens (USDA ERS).

³ These may be known through the names associated with particular techniques, such as organic agriculture, sustainable agriculture (Beus and Dunlap 1992) and in Hawai'i methods associated with Korean Natural Farming (Kohala Center 2014) and historic Native Hawaiian techniques.

mechanized agriculture with monocultures of crops and extensive use of artificial fertilizers, herbicides and pesticides, with intensive animal husbandry' (Knorr and Watkins 1984: x). Taken together then, 'agrifood practices' refers to a specific collection or combination of activities of producing, provisioning, preparing and consuming food, which may or may not be marketised.

The research found that alternative agrifood practices addressed gendered inequalities in varying ways but that these efforts remain largely aspirational and are impeded by broader challenges to the social sustainability of the sector. At the same time, seed production offers a number of gender-inclusive material benefits largely unavailable to the more informalised alternative agricultural sector, even while it was found that these benefits do not apply to all employees equally.

In this chapter, I provide an outline of the background to the research, the research questions and an overview of the thesis. I conclude by discussing the definitions and terminology the research utilises before deepening discussions about the research's theoretical framing in Chapter 2.

Background to the Study

An unprecedented amount of knowledge and cultural production dedicated to agrifood trends, practices and pathways is currently flourishing in academia and popular culture, ranging from treatises on the need for agrifood system reform (Pollan 2006, 2008; Patel 2009) to fascination with good food and health (Goodman 2008) and local food (Goodman and DePuis 2006). These analyses highlight the detrimental environmental and human

health impacts of the dominant neoliberal⁴ agrifood system (McMichael 2009) and also acknowledge the socioeconomic and race-based inequalities that underwrite agrifood system work (ROC 2012). However, scholars have noted that these intersecting inequalities within agrifood system work have been undertheorised (Harper 2010) and that questions of labour require greater consideration with relation to alternative agriculture (Selwyn 2013; Rainnie et al. 2011; Guthman and Brown 2016; Brown and Getz 2008a, 2008b; Getz et al 2006; Holmes 2007, 2013).

The interest in ‘alternative’ agrifood systems and practices has raised a number of questions about what alternative agriculture entails and what its supposed ‘sustainability’ actually sustains at a social level (Deutsch 2011). At the same time, indigenous, anti-racist, feminist, environmental and labour movements (Sachs 2013) have called for agrifood system change as a key to challenging wider intersecting social inequalities (Sachs 2013; Allen and Sachs 2014; Porter and Redmond 2014) and as ways of contesting forces of imperialism⁵ and capitalism.⁶ Indigenous and indigenous feminist organising has been at the forefront of globalised movements for food sovereignty and food justice, with some specifically focused on transforming gender relations through changing the agrifood system (Jacobs 2015).

⁴ I understand neoliberalism as related to but not coterminous with capitalism or ‘the economy’. I draw on Ong’s framing of neoliberalism as a ‘technology of governing ‘free subjects’ that co-exists with other political rationalities’; as she puts it, ‘the problem of neoliberalism—i.e. how to administer people for self-mastery— is to respond strategically to population and space for optimal gains in profit’ (2007: 4). In this sense, neoliberalism is not a totalising force but rather a set of conditions characterised by movements, dynamism and adaptation that promote individualisation and market logics (ibid).

⁵ Imperialism or ‘imperial formations’ (Stoler et al. 2007) are understood to describe a range of ways in which different empires stake their claims (Stoler 2016).

⁶ I draw on conceptions of capitalism proposed by Gibson-Graham and Cameron, which limit this framing to ‘the class relations in which non-producers appropriate surplus labour in value form from free wage labourers and distribute it to a variety of social destinations, including themselves’ (2010: 21).

Within this confluence of social movement, popular and academic interest in agrifood system change, a hodgepodge of different policies promote goals of health, proximity and transparency in the food supply. These policies engage with and promote concepts such as food self-sustainability, food self-sufficiency and local food economies. Yet the gulf between globalised, neoliberal agrifood systems and these visions of more equitable agrifood systems and economies is particularly wide in the United States, a hub of globalised food industries and ideologies. The U.S. is often cited as the emblematic case illustrating the impact that neoliberal agrifood systems have on poor people and people of colour. This impact includes both health inequalities linked to lack of access to nutritive food as well as to the poor conditions that often characterise work in food chains. Much unpaid food and farmwork continue to be undertaken by women, people of colour and migrants, raising questions about the potential for agrifood systems to enact social change (Passidomo 2016; Guthman 2011), especially when the perspectives of agrifood systems workers are often missing from research. For these reasons, analysing low and unpaid work is a critical zone from which to assess the potential for agrifood system reform to generate wider socio-economic benefits, greater social and gendered equity, inclusive work and well-being.

While I have posed these questions about the broader agrifood system primarily in relation to the U.S., positioning Hawai'i only in this way is problematic. While Hawai'i is very much integrated within U.S. agrifood systems, the islands also experience agrifood issues that parallel challenges in the Pacific. This is because, unlike the continental U.S., Hawai'i's position can also be compared to other Pacific island non-independent territories (Trask 1999; Baldocchino 2010) that experience import dependency, including on foodstuffs. It can be argued, therefore, that Hawai'i's situation must also be thought in relation to

patterns and histories of extraction, plantations, tourism, militarisation and trade that have interrupted historic forms of social provisioning and led to contemporary forms of food insecurity that accompany health problems linked to imported, processed food.

These imperial entanglements shape how agrifood systems function at the same time that they are contested. Along with land division and occupation, the purposeful cultivation of plants is a key technology in colonial attempts to educate natives about good food (Guthman 2011) and permanently alter the landscape through botanic substitution of supposedly weak indigenous species (Smith 2011). Colonisation disrupts historic resource and food provisioning systems in the creation of plantation and extractive economies, devaluing indigenous knowledge and resource management systems. These colonising imperatives and settler entanglements were, and are, gendered (Merry 2000), as they shift gendered social relations, divisions of labour and the social qualities associated with particular forms of work.

This research examines Hawai'i's diverse agrifood economies within an overall economy based on the military, tourism and real estate development in a multicultural, (neo)liberal settler state. In this definition, Hawai'i's diverse agrifood economy refers to a spatialised region of production whose products are cultivated and consumed in Hawai'i. Island spaces are important for European and American eco-social imaginaries as these spaces often represent concepts of paradise (Whittaker 1986) and material and discursive spaces for social experiments (Smith 2011; Wood 1999). In this way, analysing the extent to which alternative agrifood practices truly alter existing social inequalities is particularly fruitful in the settler colonial context of Hawai'i, laden as it is with Edenic associations with demonstrated racialised, gendered and sexual dimensions (Kame'eleihiwa 2001, 1992; Trask 1999). Indeed, as I shall show in *Chapter 2*, the links between settler colonialism,

agriculture, and intersecting social relations represent an under-theorised area of contemporary agrifood research, an area to which my thesis aims to contribute.

In the present context, agrifood inequalities raise a number of issues for consumers and producers in the islands. Firstly, Hawai'i has the highest food prices and cost of living in the U.S. (Civil Beat 2014), as well as high land costs, high levels of food insecurity and significant income inequalities (Hawaii Appleseed Center 2016). Comparing the same industries, Hawai'i employees make 18% less than their average U.S. counterparts (DBEST 2018: 5). Moreover, Hawai'i's agrifood system workers in particular face difficulties not only in maintaining livelihoods but in doing so safely, as documented by several cases of agrifood system worker abuse (EEOC 2016; Zimmerman 2014, 2011). Research interviews determined that there is an acknowledged policy gap between workplace protection and agricultural policies (TO; RS)⁷ and that there is a lack of information about the agricultural and food processing workforce in particular. Such gaps are troubling in the context of recent state initiatives promoting the doubling of local food production by 2020 (Ige 2015). With little known about the conditions and experiences of agrifood workers, policy goals of increasing local food production do not adequately address the conditions of agrifood workers or poorer consumers. This combination of lack of academic and policy-level attention means that an analysis of the intersecting relations of power and social inequalities in Hawai'i's agrifood systems is both timely and urgent.

⁷ These abbreviations refer to the initials of the names of those I interviewed. More on interviews is explained in Chapter 4.

Research Questions

This research utilises an intersectional lens⁸ to analyse whether and how different agrifood practices address gendered inequalities. In particular, I analyse agrifood practices and policies as they shape possibilities and limitations for gender-inclusive work, social equity and well-being. The research asks: how alternative is alternative agriculture when the social relations of production are analysed? Specifically, how do alternative practices shift some of the intersecting, gendered inequalities that have been documented within industrial agriculture? In order to undertake this analysis, I analyse what are considered opposite ends of the agrifood spectrum: seed production and different forms of agroecology, all of which I define later in this chapter. Part I analyses two different forms of what might be considered alternative agriculture: both small and community-based agroecological farms. To what extent do these forms of farming offer more gender-inclusive work, greater social well-being and/or explicitly address intersecting inequalities? Part II of the thesis analyses the extent to which corporate seed production is characterised by the kinds of inequalities found in other global production networks (Barrientos 2015). In order to address the research questions, I ask several related sub-questions:

1. How do different agrifood practices understand the inequalities which exist in relation to their work and how do they propose to address these issues, if at all?
2. How is work organised and undertaken and how are different tasks, roles and occupations valued, given meaning and associated with particular social qualities?
3. How do different agrifood practices manage the tensions, points of contradiction and possibilities for addressing intersecting inequalities?

I refer to both seed production and the forms of alternative agriculture as outliers in relation to Hawai'i's broader agrifood system, which is characterised by food imports and conventional agricultural production undertaken primarily by (im)migrant groups. In order

⁸ As outlined in the methodology chapter, I conceptualise intersectionality as a means of analysing multi-axial differences, in ways that may focus on understanding how categories of social difference are constructed and how differences between and within groups are defined (McCall 2005).

to understand some of the relations of power and difference within these spaces, I analyse the demographics of those who participate and how they understand their work and others', attending to meanings given to divisions of labour, the social qualities associated with particular roles and tasks as well as other features of embodied agrifood work as they connect with wider social discourses of gender. While I outline what I mean by 'gender-inclusive work' in the final section of this chapter, my overall analysis has focused on the different gendered possibilities, tensions and contradictions that arise in how practices do, or do not, address intersecting inequalities. In this sense, I unpack how such benefits and drawbacks affect different social subjects and groups, while also drawing attention to how 'social groups' are themselves defined.

Methods

As I will outline in chapter 4, I have developed a methodology that combines multi-sited analysis (observation and participation), formal and informal interviews and document analysis. I undertook 35 formal interviews and utilised a thematic coding process to generate research themes. Utilising a site selection methodology that considers agricultural methods as well as the number of people working within those sites, the research focuses on the island of O'ahu, which hosts the majority of the state's diverse agriculture (Melrose et al. 2016). Initial fieldwork and literature analysis revealed that research is missing on those who work at the both the 'top' and the 'bottom' of food chains. Since the thesis aim is to understand how power relations and social differences intersect in different forms of farming, I interviewed actors who hold different levels of decision-making power within the places they work. However, as I discuss in Chapter 4, my own social positioning facilitated research on those at the 'top' of the agrifood system, and thus I sought to interrogate how these actors described their own work and the work of those they supervised. This approach

offered insights into how powerful actors (re)produce inequalities, and thus offers important perspectives into how different forms of farming actually enact gender and socially inclusive practices.

Thesis Outline

Chapter 2 develops the research analytical framework, drawing together literature concerning both agroindustrial and alternative agrifood practices that combine both politics and material production (Wainwright 2014). I analyse how different scholars have approached the relationship between capitalism and inequalities of gender, race, class, citizenship and other differences. I outline how alternative food movements have often struggled to define their aims, highlighting the scholarship that shows how they often reinforce the very inequalities they seek to change. In particular, while some have seen women's presence in alternative food and farming spaces as positive advances, others have shown that important tensions, contradictions and paradoxes remain. As I demonstrate, the raced and classed contradictions of alternative spaces might lead one to question, as both Passidomo (2016) and Guthman (2008) have, the usefulness of focusing on 'alternative supply' issues at all. However, this research shows that attending to the differential trade-offs, opportunities and limitations of different agrifood practices is integral to assessing how these projects may contribute to more socially equitable and just economies. This chapter suggests, however, that such a project must more fully engage with research on settler colonialism in order to adequately attend to these intersections and extend the insights of Guthman (2008, 2011) and Glenn (2002) concerning how settler colonialism informs the social relations of agriculture.

Chapter 3 provides a contextual overview of some of the key historical processes shaping different forms of agrifood practices in Hawai'i. In the first half of this chapter, I

analyse some of the ways in which the structure of settler colonialism led to changes in agriculture and gendered relations. I suggest that this affected Native Hawaiians, white settlers and different (im)migrating groups from Asia and the Pacific in markedly different ways. I focus in particular on the ways in which plantation agriculture relied specifically on racialised differences while also targeting gendered and sexual relations. As scholars have shown, these changes continue to shape the contemporary multi-ethnic composition of Hawai'i society and the socioeconomic positionings of different groups. (Okamura 2008; Fujikane et al 2007)

Drawing together these histories of gender, agriculture and settler colonialism in Hawai'i, I propose that these histories continue to shape contemporary agrifood practices in Hawai'i. At the same time, I show that there have been significant efforts to diversify agricultural production and lessen food import dependence. However, as current data about the economic viability and social conditions of agriculture raise important questions about the extent to which such programmes can benefit poorer consumers and producers, including farmworkers, who appear to continue to face major racialised and gendered wage gaps in Hawai'i. The final portion of this chapter outlines some brief histories and definitions of the three case studies: small forms of organic farming, Native Hawaiian-led community-based agriculture and corporate seed production. The research focuses on these 'outliers' and excludes the majority of food production taking place in the islands, which, especially on O'ahu, is undertaken by different (im)migrant farmers and farmworkers (Kimura and Suryanata 2016). These agricultural outliers can be said to represent different ends of the spectrum of agrifood work, as they take place on large to small-scale farms, draw on small and large numbers of workers/participants and utilise different approaches to agriculture, as I outline in Chapter 4. Each area of agrifood work raises questions about the extent to

which they provide more gender-inclusive, socially equitable work or greater well-being for those who participate.

Chapter 4 outlines the methodology and rationale for these three cases being uniquely suited to the comparative task of analysing the extent to which alternative agriculture offers more gender- or socially equitable conditions. It outlines the parameters of the research, its scope and ethics, and the research dynamics and outcomes most relevant to the findings. I discuss the research methods and design, outlining the study's focus on agricultural outliers, and detailed site selection consideration. I undertook 35 formal interviews, 20 informal interviews and more than 200 hours of participation in and observation of agrifood work.⁹ The research design is modelled upon a diverse economies framework, which I supplemented by drawing on feminist and intersectional analyses. The research design facilitates understanding the possibilities and limitations of both agroindustrial and alternative agriculture in shifting social inequalities. *Chapter 4* also makes the case for an interpretive framework based on grounded theory and for thematic coding of interview narratives. I also discussed the quandaries of multi-sited research, commenting on questions of access, the research sample and the focus on 'researching up' on powerful actors. I proposed the framing of researching at Eye/I/'Ai level as a method for bringing together consideration of researcher perspectives (eye), personal positioning (I), and Hawai'i agrifood systems ('ai).

Chapter 5 begins the second part of the thesis analysis, analysing small, organic and agroecological farms as one form of alternative agriculture. Drawing on the words of one

⁹ Agrifood 'work' can be defined as both individual activities and combinations of activities utilised to produce, provision, process and prepare food.

research participant, I utilise the framing of 'pilgrim farmers'¹⁰ to describe a subset of those involved with production who emphasise the spiritual rewards of their work (DE; SH and IA). I submit that privileges of wealth and whiteness often enable these forms of alternative agriculture, and that there are historical connections between such forms of spiritual 'pilgrimage' to Hawai'i and the accumulation of material wealth. The analysis highlights some of the historical continuities between these expressions of eco-spiritualism and longer histories of missionary work, as well as settler ideals of yeoman farming. At the same time, the research findings also trouble simple distinctions between those who farm as a lifestyle and those for whom farming is a livelihood, demonstrating that pilgrim farmers draw on a range of multifunctional agricultural strategies to carry out their work. Such findings enable analysis of intersecting privileges and also of the gendered constraints faced by some pilgrim women farmers.

The research also found that gendered divisions of labour and combinations of paid, unpaid and volunteer work vary widely on pilgrim farms, but the women farmers interviewed highlighted similar issues in their work, including problems accessing land and receiving recognition for their work. In this sense, the research documents and corroborates multiple structural issues for those who are distanced from the masculinised, able-bodied ideals of the farmer who heads the idyllic heteronuclear family farm.

Nevertheless, some of those interviewed expressed hope about the potential for agroecological practices to offer new forms of family, intimate and gendered equality, even while their own and others' experiences underline that these goals remain largely aspirational. Such findings raise important questions about contemporary agrarian

¹⁰ I utilise a definition of 'farmers' to refer to those who operate farms and undertake decisions, similar to the USDA definition of farm operators (USDA ERS).

romanticism that glosses intra- and inter-household power relations that shape ‘family farming’ and the labour-intensity of both agroecological practices and a year-round growing season.

While some research has examined work-trade exchanges on similar types of farms (Mostafanezhad et al. 2015, 2016; Lans 2016), I propose that more must be done to analyse the gendered issues of power that emerged in my research: where power differences between hosts and participants resulting from age, gender and other issues were reported as sexual harassment. Moreover, I suggest that the framing of ‘family farming’ as an ideal solution to the ‘labour problem’ represents yet another form of subsidisation based on unpaid family labour and a form of settler nostalgia for an idealised, U.S., masculinised, heteronormative view of the farm family. Such nostalgia expunges both the colonial past and the present: the majority of the islands’ local food producers, many of whom are (im)migrants from Asia and the Pacific, already practise family farming.

Taken together, these concerns about farm, intra- and inter-household power relations highlight reasons to question the extent to which pilgrim farming (as one form of alternative agriculture) offers greater social equity, well-being or gender inclusivity. Instead, I suggest greater attention must be paid to gendered power relations but also to how pilgrim farming may disproportionately benefit white and middle-class farm visitors and hosts, thereby contributing to the rural gentrification and settler colonialism that entrench land inequalities and (re)make landscapes.

Chapter 6 extends consideration of alternative agriculture to another sphere: agrifood practices that Native Hawaiian-led, community-based and rooted in efforts to revitalise and restore Native Hawaiian culture, life and self-determination. Termed ‘āina work by one interviewee (NC), these activities include broad efforts to restore agrifood

infrastructure, build new spaces and shape people's taste for historically and culturally important foods.¹¹ As 'āina work is specifically embedded within wider decolonising efforts, the research found these agrifood practices may specifically create space for reconsidering intersecting social relations, including gendered identities; the organisation of this work can at times rely on gendered essentialisms, similar to other kinds of agrifood practices.

In the first part of the chapter, I seek to show how other dimensions of social difference are key to understanding the differentiated socio-ecological effects of 'āina work, including the politics of indigeneity, diaspora and authenticity as well as hierarchies of paid/unpaid staff, experience and genealogical ties, offering participants differentiated possibilities for belonging. In analysing some 'āina work tasks, I suggest, along with others, that these labour-intensive tasks may convoke collective work that at times relies on essentialised understandings of gender and age to organise work, even work is self-selected (Goodyear-Ka'ōpua 2013; Tengan 2008; Baker 2016). At the same time, I hypothesised that this self-selection may offer greater possibilities to exercise gendered autonomy compared to other agrifood practices, but that it does not, on its own, dismantle gendered socialisation. In the second part of the chapter, I outline how thatching work challenges 'nimble fingers' discourses of feminised fine motor work, highlighting the need for analytics of power that can encompass both Native Hawaiian and settler histories of gender and work. The third section, in contrast, sketches some of the ways in which masculine conceptions of 'authentic' farming also shape the views of some 'āina work participants, specifically those who farm the staple tuber crop taro (*kalo*). However, farming practices

¹¹ 'Āina work' refers to any combination of activities aimed at restoring or creating Native Hawaiian historic foodshed practices and systems, including taro farming, fishpond restoration, growing and processing medicinal plants and other activities associated with the political and cultural spheres. In this sense, 'āina work refers to things one does to restore or take care of land and oceans.

rarely conform to such ideals, especially in the case of taro farming, which blends subsistence and commercial work. While politicising taste represents an important aspect of challenging inequalities, more needs to be understood about how labour-intensive practices of food preparation or growing may be managed within households.

Chapter 6 suggests that 'āina work practices offer their own set of possibilities, tensions and contradictions for gender and socially-inclusive work, greater equity and well-being, as explicitly political processes that create room for reflexive and relational work that can at times challenge settler gendered logics. As selective (Kauanui 2017) processes of Native resurgence, 'āina work can create opportunities to exercise gendered agency. At the same time, these opportunities may be limited by selective and narrow conceptions of gendered identities and by other subtle and intersecting relations of power that shape this work.

Chapter 7 investigates agroindustrial agriculture through the example of transnational seed production. The chapter focuses on the Hawai'i activities of transnational seed production networks mainly concerned with developing transgenic and hybrid seeds, especially seed corn. This industry has come to play a significant role in Hawai'i's agricultural economy (Schrager and Suryanata 2017; Gupta 2015, 2016) and represents the high-value, 'high-tech'¹² end of the forms of 'outlier agriculture' analysed in the thesis. The chapter considers some of the social relations of this 'high tech' seed production and asks to what extent these production practices are characterised by some of the poor conditions

¹² However, Schrager and Suryanata's work offer reasons to question the framing of this sector as 'high tech', given that the solutions offered by these technologies do not necessarily adequately address Hawai'i's agricultural challenges and the firms rely on a combination of new technologies in order 'to capitalize on Hawai'i's geographical location and agrarian politics to shorten the cycles of crop improvement' (2017: 12).

and inequalities found within other parts of the U.S. corporate agrifood system (Porter and Redmond 2014) and global agribusiness (Barrientos 2015). It found that many large transnational seed producers utilise corporate policies aimed at supporting women's participation in paid work, as well as some efforts to understand issues of gender identity and sexuality at work.

While such policies were important to several women employees interviewed and indeed represent relatively inclusive policies compared with other forms of agriculture. In this sense, transnational high-tech seed producer policies resemble less the policies available in other forms of smaller-scale agriculture but are more consonant with those enacted by other corporations. At the same time, such policies are limited in both application and coverage, raising broader questions about how occupational segregation based on gender, race and citizenship visibilise the limitations of corporate diversity policies in addressing intersecting inequalities. By offering relatively good conditions and using different indirect strategies, companies reduce the costs of labour recruitment, training, surveillance, management and turnover by drawing on existing employee networks. They seek to attract workers within a relatively small labour pool and extend their influence beyond the sphere of production into areas of consumption and labour reproduction (Jonas 1996: 327).

The heightened scrutiny within which seed companies operate may play a role in shaping gender-inclusive policies and the social relations of production, incentivising efforts to create good relationships with workers and the broader community in order to shift their public image, pre-empt internal employee discontent and forestall collective bargaining processes which may open companies to further scrutiny. The chapter thus suggests that policies to support women's entry into the seed production workforce and aim for 'holistic'

approaches to employee well-being (LR) can be linked to a number of converging rationales and strategies for influencing the reproduction of seed companies' workforce as part of broader accumulation strategies (Schrager and Suryanata 2017). The chapter concludes by suggesting that more research is needed to understand how different employees experience, understand and negotiate these strategies and rationales, as well as their broader working conditions.

Chapter 8 concludes the thesis discussion by bringing together the arguments proposed in both parts of the analysis and highlighting several themes that threaded across the different cases. The research finds that, compared to seed production, there are indeed substantial differences within the social relations of production of these practices, related to differing organisational structures, methods, philosophies and the composition of the workforce. Overall, the research found while agroindustrial seed production may appear to offer more formal 'gender-inclusive' benefits, different forms of agroecological practices also create spaces to challenge gendered-norms on an individual and collective basis. This means that seed company policies can offer more formal gender-inclusiveness than other sectors of agriculture and in relation to weak U.S. regulatory regimes that offer very little protection to workers, especially farmworkers. However, these policies do not apply to all workers and form part of limited projects to recognise and include women and women's work which do not necessarily contemplate all workers, and thus fail to account for the ways gendered inequalities intersect with other differences of class and race, for example.

The analysis suggested that different agrifood practices thus contain their own contradictions, possibilities and points of tension in framing and addressing (if at all) intersecting inequalities. Attending to these contradictions, failures and possibilities, I posited, can help to reveal how wider logics shaping agrarian ideals and agrifood practices

function. I proposed that the research helped to extend existing analytical frameworks from scholarship on diverse economies, gender, agriculture and settler colonialism, reframing several analytical concepts of ‘divergent economies’, ‘agrifood formations’ and processes of ‘becoming agricultural’.

Research Scope and Limitations

While I have suggested that the tendencies outlined within the stylised case studies are helpful, these are based on a small sample size and are indicative of tendencies, rather than representative of, the wider agrifood system in Hawai‘i or of individual agroecological ‘alternatives’ as a whole. The small sample size was particularly useful for thinking through tendencies within what I have framed as cases, even while these cases do not represent the full range and diversity found within different types of agroecological production, seed production or the wider agrifood system in Hawai‘i. At the same time, one of the most important thesis findings is the diversity of experiences within agrifood practices. Nevertheless, I hope that the research has contributed to explicating some of the structural issues and contradictions within these forms of ‘outlier agriculture,’ even while the presentation of findings is preliminary. Data triangulation methods (Chapter 4) were helpful for validating and embedding these initial findings against other work on Hawai‘i’s agrifood system and the selected cases, as gendered inequalities in the agrifood system remains an understudied area.

A significant trade-off resulting from the ‘outlier’ approach taken in the research has meant less focus on the ‘mainstream’ of food production in Hawai‘i. Many local food producers, small farmers and farmworkers working on larger farms, have (im)migrated from different parts of East Asia, including the Philippines, Thailand, Laos, Vietnam and China as well as from other Pacific Islands, including Samoa, Tonga, Pohnpei and the Marshall Islands,

(Needs Assessment 2016: 4; Melrose et al. 2016: 6). Part of the reason for this exclusion was linked with interest in understanding forms of agriculture often framed at opposite ends of the agricultural spectrum; at the same time, practical concerns of language and access were also key to these decisions, as I discuss in Chapter 4.

More research is thus needed with these farmers, farmworkers and others in order to gain a fuller picture of agrifood inequalities across the cases and overall context. In particular, further research with farmworkers and other employees is needed within seed production, such as with cleaning and laboratory staff, and within other areas of the agrifood system (e.g. food processing employees). The focus on those to whom I had access (more powerful actors) has perhaps meant more attention paid to overt examples of discriminatory attitudes or narratives, whereas interviewing a fuller array of participants may better capture the negotiation, ambivalence and multi-dimensionality of power relations within agrifood working encounters. Future work can aim to interview some of those not reached by the present research in order to obtain a fuller picture of agrifood inequalities and how gendered divisions of labour, relations and subjectivities are (re)produced.

Relatedly, the specific research focus on agricultural *fieldwork* was important to analyse as a common area across all case studies and as a particularly precarious form of work. At the same time, this focus also meant that, at times, the division between reproductive/productive agrifood work was left somewhat unproblematised, with the result that strong insights were not generated about unpaid reproductive. Although I included questions about unpaid work and household divisions of labour, as mentioned in Chapter 4, interviewees who understood my purpose as linked with their *work* did not always appear comfortable discussing their private lives. Moreover, many of those I interviewed did not

have significant caring responsibilities, which also affected the amount of data generated about how participants negotiate these boundaries. A specific focus on reproductive work and consumption can be generative of further insights about agrifood inequalities, especially where questions also focus on how divisions of space function to reinforce gender, as in Sachs et al. (2014).

For its part, the thesis presents what I consider to be some of the most provocative, intersecting gendered dynamics shaping the different agrifood formations under study. At the same time, the research does not consider, in depth, the appropriateness of the term ‘feminisation’ to describe what is happening within the cases studied, in spite of the fact that such queries were a part of the early motivation for the research, as outlined in the prologue. Such questions require quantitative, larger scale analyses to understand women’s presence within the sector as well as possible changes to the conditions of this work and further quantitative research, for example on pay rates, will be needed to enhance this overall comparative picture. The concluding chapter reconsiders some of these research limitations by way of responding to the methodological and epistemological issues involved in undertaking intersectional analyses of socio-ecological phenomena such as agrifood work.

Notes on Definitions and Language

There are several terms whose definitions warrant some initial commentary. Firstly, I take gender-inclusivity, social equity and well-being at work to refer to context-specific practices, structures and experiences (Gibson-Graham 2011) that accommodate different gendered realities, identities, expressions and relations as they relate to the workplace. ‘Gender-inclusivity’ thus refers to practices that specifically take into account the needs and experiences of women, trans persons, different gender non-conforming persons and the

relations between people within the workplace. This may involve a range of efforts to shape working spaces in ways that consider caring responsibilities, organisational cultures and the ways in which work is valued (Perrons et al. 2016). Secondly, social equity is a broader concept that relates to how work is structured in relation to other social groupings, and the differential or equivalent value and conditions of this work. Thirdly, well-being can be understood as a subjective experience of the safety and quality of conditions, the climate and the environment in which people work (ILO n.d.).

In relation to the thesis language, I have chosen to utilise particular categories, such as (im)migrant, to denote that trajectories of residence are not necessarily established. Additionally, I prefer the gender-inclusive forms of Latinx and Filipinx to refer to people in the plural or abstract, though I use Filipina or Filipino in referring to specific individuals or when this term has been used by participants or researchers. Relatedly, I differentiate between ‘local’ and the capitalised ‘Local’, the latter taken to refer to a Hawai‘i-specific multi-ethnic identity or series of identity markers that emerged as a result of cultural exchange and intermarriage between different Native Hawaiian, Asian and other settler groups in the islands (Okamura 1992: 243; Fujikane et al. 2008). Finally, I refer to Hawai‘i as a contested liberal multicultural settler state (Isaki 2011: 89).

Lastly, I have chosen, contrary to common practise in Hawaiian studies, to italicise most Hawaiian words, except for several that recur throughout the thesis (‘ōiwi, ‘āina). This is not because I understand these words as ‘foreign’ to the Hawai‘i context, but rather seek to follow standard U.K. academic practise in writing for an audience not familiar with these debates as well as to maintain readability. In relation to naming practices, I use the terms

‘Native Hawaiian’¹³, kanaka ‘ōiwi (people of the bone) and shortened versions of this (‘ōiwi), similar to contemporary usage within Hawaiian studies (Goodyear-Ka‘ōpua 2013; Silva 2004; Tengan 2008), recognising however that not all Native Hawaiians relate to the term ‘Hawaiian’, as this refers to a unification process associated with King Kamehameha, who came from Hawai‘i island (Silva 2004: 12-13). Again, similar to other scholars and given the history of debates about these naming practices, where I have used the word ‘Hawaiian’ this is coterminous with ‘Native Hawaiian’, and people who live in Hawai‘i are described not as ‘Hawaiian’ but as ‘Hawai‘i residents’ or the like.

The definitions and orthographic practices I have suggested here are by no means exhaustive but are enumerated in order to provide greater clarity on some of the decisions that have shaped the research and writing. The next chapter extends some of the relevant discussions concerning agrifood practices, relationships to capitalism and definitions of alternative as I outline the research analytical framework.

¹³ I do not differentiate, as some federal documents do, between ‘native Hawaiian’ and ‘Native Hawaiian’ to differentiate percentages of blood quantum (Kauanui 2008).

Chapter 2: Analytical Framework

The Social Relations of Agrifood Work

This chapter outlines the analytical framework I developed to analyse agrifood practices and the extent to which alternative agriculture actually alters the social relations of production compared with agroindustrial practices. Given that no existing analytical framework has been developed to analyse agrifood practices with relation to histories of settler colonialism, this chapter draws upon feminist, food and settler colonial studies for relevant analytical tools and insights. I suggest that research on conventional agriculture is critical to understanding a range of projects that contest the capitalist and colonialist dimensions of agroindustrial production, and that feminist research on global production networks has also been critical to demonstrating how some of the processes reproduce intersecting social inequalities. At the same time, other critical scholarship has highlighted some of the paradoxes faced by alternative agrifood practices as they struggle to oppose neoliberal values. Finally, I make the case for how settler colonial agriculture deploys racialising logics that specifically target gendered and sexual relations. In Hawai'i, these histories are critical for understanding the socio-ecological effects of different agrifood practices in relation to their prospects, paradoxes and promises for greater gendered and social equity, well-being and inclusive-work. By utilising a diverse economies framework, I question both the assumptions of the agroindustrial/alternative divide within agriculture and the assertion that different forms of alternative agriculture are necessarily more egalitarian, gender-inclusive or 'women-friendly'. The thesis provides empirical evidence for questioning these claims as well as the limited goal of promoting gender-inclusive work in agriculture more broadly.

Feminist Debates on Capitalism, Development and Agrifood Alternatives

As mentioned in the prologue and introduction, my interest in this research originated in feminist debates about the relationship between capitalism, development and gendered social relations including: definitions of capitalism, noncapitalism, more-than-capitalism and pericapitalist social relations (Tsing 2015) in the present; possibilities for economic transformation; and the meanings of the economy itself (Gibson-Graham 1996, 2006; Cameron and Gibson-Graham 2010; Tsing 2013, 2015; Butler 2011). The range of these debates can be mapped against (though not necessarily neatly *onto*) the epistemic and political orientations of different theorists, but what can be seen as shared is an orientation toward decentring orthodox economic thinking that entrenches gendered binaries and the social norms that shape the possibilities of economies and social worlds.

Drawing on Gibson-Graham's work, the research analyses these possibilities in the present by focusing on alternative agriculture as a collection of practices that 'combine protest and political mobilisations with practical, productive alternatives' (Wainwright 2014: 88). Moreover, the research understands these alternatives to take shape within fields of contestation concerning human-environment relationships, as feminist political ecologists have theorised (Mollett 2016; Rochelau et al. 2013; Perkins 2009; Sultana 2011). The blending of politics and productive alternatives has been pursued at the level of agrifood systems and systems of social provisioning globally (Trauger 2014, 2015; Wainwright 2014) with some feminists also making the case that some of these practices can also shift gendered inequalities (Allsopp 2012; Acero 2012). At the same time, other scholars are wary of the potential for agrifood system alternatives to effect structural change or to truly alter

neoliberal values, subjectivities and logics (Goodman 2006; Passidomo 2016; Guthman 2008b).

Moreover, social researchers have questioned the extent to which alternatives enact their socially transformative values, including visions for gender, race, class, and other forms of social justice (Harper 2010). These scholars have argued that alternative agrifood practices can actually promote and re-entrench white middle-class subjectivities and their over-representation within spaces such as farms, co-ops, community gardens and more (Alkon and Mares 2011). Some research has also found that eating practices associated with alternative agrifood and food movements can actually increase women's labour, either through food preparation or in farming work (Castellano 2013). Nevertheless, some scholars are encouraged by the greater presence of women, for example within forms of alternative agriculture, especially as farmers (Delind 1999) and by rising trends of farm ownership by women, minority and disabled farmers, in particular in the U.S. (Hoppe and Korb 2013).

The research questions began with interest in what appears to be the greater representation of women within alternative agriculture—in particular forms of small-scale, agroecological growing—and aims to contribute to understanding the social relations of agrifood labour through different case studies. The research asks, '*how alternative are alternatives?*' not by establishing abstract criteria for gender-inclusive work, social equity or well-being, but by analysing some of the key tensions, contradictions and possibilities that emerge from grounded theorising of the social relations of production of these different practices. It does so through a combination of analysing and observing how different agrifood actors understand and articulate their work and how these practices address, if at all, intersecting social inequalities that bear on the meaning and value associated with different work and workers. One of the key ways in which gendered relations of work

intersect with other social differences is through the production of racialised social and spatial difference (Mohanty 2003). In the next section, I articulate how gendered colonialities of power (Lugones 2010) can be understood to shape the intersecting social relations of agrifood practices in Hawai'i.

Accumulation, Place and Colonialities of Power

Histories of colonialism shape regimes of accumulation and production in given geographies in ways that can be applied to analyses of agrifood practices. Drawing on the work of Hart (2002), Nagar et al (2002) and others, Werner argues that geographies of production must engage with the ways that new production practices intersect with those of the colonial past and with 'the racial and gendered ideologies and practices that are reproduced in relation to colonial formations' (Werner 2011: 1576). Quijano theorises this process in the Americas as 'the colonality of power' -- processes of establishing hierarchies of social differences, in part, through forms of labour control (both wage and non-wage) (2000). Writing about the Caribbean context, Werner suggests that 'historic patterns of exploitation' are reworked to the 'contingent necessities and attendant conflicts' of contemporary capitalist processes of accumulation (Werner 2011: 1576).

These insights may be usefully applied to the overall political economy of contemporary agrifood production in Hawai'i, albeit in ways that differ based on the islands' specific histories of settler colonialism. In attending to the relationships between place, capitalist accumulation and colonialities, Stoler's work offers important insight into the 'peculiar temporalities' to which colonialities are subject (2016). She writes that recognising colonial genealogies is as much linked with expectations of 'what the connectivities between past and present are expected to look like... how tangible or intangible those effects are expected to be' (Stoler, 2016: Location 160-163). Tracing connectivities and

effects thus requires a temporal shift to understand ‘colonial durabilities’ (Stoelr 2016)— an orientation to time similar to what scholars of settler colonialism have also pursued. This orientation is encapsulated by Wolfe’s well-known framing of settler colonialism as an ongoing process not a past history: ‘settler colonizers come to stay: invasion is a structure, not an event’ (Wolfe 1996).

Colonialities may thus shape the production of Hawai‘i as a place as well as its location within wider geographies of globalised agrifood production in the present. Drawing on the spatial analyses of Massey (1994) and others, Werner describes how places come into being through their positions in uneven geographies of development. He writes:

If coloniality is fundamentally a relational process linking hierarchies of raced and gendered workforces—made “national” through additional practices of the state—to capitalist accumulation, it is also, fundamentally, a spatial endeavour. It is not only the articulation of race, gender, class, and nation that shape the contours of wage labour and those rendered as superfluous to its relation, but also the relational production of place. Places are processes formed through specific histories of accumulation, disinvestment, violence, dispossession, and resistance in relation to other places. The structural position of places within hierarchies of capital accumulation is reproduced (or not) through processes shot through by the coloniality of power (see Massey 1994; Sheppard 2002) (Werner 2011: 1576).

Understood in this way, intersectional inequalities within outlier agrifood work must attend to the wider histories and politics of place that shape possibilities for gender-inclusive work in contemporary Hawai‘i. Part of analysing the question, ‘*how alternative are alternatives?*’ is thus untangling some of the key tensions, contradictions and possibilities that emerge from these histories. In the next section, I aim to first unpack how agrifood systems have been understood, before detailing some of the histories shaping U.S. and Hawai‘i agrifood economies.

Defining Agrifood Systems: Inequalities and the Alternative/Agroindustrial Binary

Gendered Inequalities in Agrifood Labour

In order to understand how inequalities materialise and are (re)produced with relation to agrifood systems, it is important to define both food and agrifood systems and my understanding of how these concepts relate to gendered, classed and racialised inequalities. Firstly, theorists have insisted that the framing of 'food' as an object hides the labour that goes into producing it (McMichael 2009: 163; Araghi 2003) and that food as an ambiguous 'object' actually troubles the boundary between those who eat and what they consume (Bell and Valentine 1997; Goodman 2010: 213; Probyn 2000: 32). Scholars concerned with visibilising the social and ecological processes that produce food have therefore included the language of both social relations and agriculture to highlight these processes through concepts of socio-natures (Alkon 2013), foodways (Forson and Counihan 2013), food milieu (Purdue et al. 1997), foodscapes (Goodman et al. 2010) and agrifood systems¹⁴ or networks (Jarosz 2000). I utilise the framing of 'agrifood systems' in order to highlight the role of agriculture as a technology and knowledge system and 'system' instead of 'networks' in order to foreground the issues of power analysed within the research.¹⁵

Part of the project of re-visioning definitions of food and how it is produced involves critiques of what has been called the conventional, dominant, corporate and/or neoliberal food system. This system relies on globalised agroindustrial production that entails 'capital-intensive, large-scale, highly mechanised agriculture with monocultures of crops and extensive use of artificial fertilisers, herbicides and pesticides, with intensive animal husbandry' (Knorr and Watkins 1984: x). This model, originating in the U.S. but promoted

¹⁴ There are number of different spellings used by different authors, such as agrofood or agro-food; I use agrifood, in line with many discussions on alternative agriculture.

¹⁵ See Whatmore and Thorne (1997) for a more thorough discussion of the uses of ANT within agrifood systems research (212–215).

globally, is associated with a number of negative effects on human health, the environment and, in particular, smallholder livelihoods (Pollan 2006; Patel 2009).

McMichael has described this contemporary 'food regime' as characterised by 'food from nowhere' – anonymised, globalised production of monocrops that are turned into increasingly processed, cheap foodstuffs (2009).¹⁶ However, Friedman (2005) and Campbell (2009) have argued that trends within the contemporary food regime are better described as 'food from somewhere', wherein demands by environmental and ethical consumption movements are selectively incorporated by corporate actors who then profit from ethical consumption trends (Campbell 2009: 309). This system has been described as 'undergirded by corporate agricultural biotechnologies' (Pechlaner 2012: 75) and characterised by the consolidation of large supply chains for privileged consumers, the displacement of smallholders and an emerging food/fuel agricultural complex in tension with forms of food-based localism (McMichael 2009: 142). The rise of voluntary regulatory schemes across different forms of agriculture has also been critiqued as part of 'roll-out' neoliberalisation (Peck and Tickell 2002; also cited in Brown and Getz 2008: 14), 'depoliticising and de-democratising' trends which replace regulation and collective bargaining with voluntary standards (Brown and Getz 2008: 14).

How agrifood systems have been analysed thus correlates to how researchers¹⁷ understand the relationship between capitalism and what they see as a multi-dimensional environmental and social crisis of the globalised agrifood system (Sonnino and Marsden 2006: 182). The reasons for this crisis are linked to historical trends of capital accumulation,

¹⁶ This system, according to Campbell, 'operates on invisibility: obscuring the social, geographical, economic and technical bases of its production regime' (2004: 311).

¹⁷ In other words, the crisis is not only in the global political economy of food production and consumption but also linked to the financial, climate, water, and energy crises (Gürçan 2011: 487).

colonisation, mechanisation and commodification (McMichael 2009) and to neoliberal modes of financialisation, deregulation and corporatisation (C. Shaw 2011: 95–96; Women’s Major Group 2013: 20).¹⁸ Overall, food regime analysis has sought to account for these relationships at a transnational level, defining a ‘food regime’ as a form of food governance which entails rules, norms and forces that inform how food and agriculture are produced in a given historical period, charting the historical relationships between capital development and agriculture (Araghi 2003; Friendman 2009; McMichael 2009). While food regime theories highlight important dynamics of capital accumulation and agrarian change, these approaches overlook some of the contextual aspects of different agrifood systems (see Friedman 2016). Moreover, food regime analysis, with its roots in Marxian concepts, largely neglects the politics of how gender informs the globalised agrifood system or how reproductive work shifts alongside+ changes to productive systems.

In contrast, feminist research on Global Value Chain (GVC) and Global Production Network (GPN) has incorporated gendered perspectives into analyses of agrifood systems and their relationships with transnational capital. This research has argued that agrifood systems are undergoing forms of feminisation in both ends of production chains, with women concentrated in flexibilised roles in supermarkets, food-processing and agrifood exports (Barrientos and Evers 2013; Perrons and Barrientos 1999; Dolan 2004; Barrientos 2001; Sifaki 2015; Patel-Campillo 2012). Feminisation is thus linked with deterioration of employment terms and flexibilisation (Perrons and Barrientos 1999; Dolan and Sorby 2003; Bain 2010) as well as with the low social value often associated with sectors of the economy in which women work (Jarman et al. 2012: 1004; Acker 1990). More broadly, feminist

¹⁸ The periodic crises associated with neoliberalism were especially notable in the 2007–2008 food crises, which were sparked off by speculation in commodity futures after the collapse of the financial derivatives markets (Tandon 2012: 505).

research on globalised production networks demonstrates how these networks ‘transform the boundaries between national and global markets and create new boundaries between the commercial and the social’ (Barrientos and Evers 2013: 47). At the same time, research has demonstrated how paid employment can positively affect women’s status and shift gendered relations within homes (Kabeer et al. 2011; Barrientos and Perrons 1999; Dolan and Sorby 2003) but also shows that agro-exports intensify women’s labour (Barrientos 2014) and even strengthen gendered divisions of labour on small farms (Barrientos 2014; Dolan 2001, 2002). In sum, scholars have demonstrated that agriculture represents a particularly ‘sticky’ (Rao 2014) sector for gender (in)equalities even while women’s role in globalised agriculture appears to be growing (FAO 2011).

Of particular interest to this thesis are the ways in which this research has shown that global agrifood production specifically relies on inequalities to earn a profit. This works through the segregation of work along the lines of gender, citizenship, ethnicity, race and civil status enable downward pressure on wages and conditions, meaning that women’s and migrants’ low-paid, flexibilised work offers a kind of ‘comparative advantage’ for globalised corporate agribusiness (Barrientos 2001; Perrons and Barrientos 1999; Sachs and Alston 2010: 280; Elson and Pearson 1981, 1999). These scholars have argued that such practices often frame women as having supposedly natural qualities suitable for tedious, dextrous work such as that found in some areas of agriculture, in what has been called the ‘nimble fingers’ debate (Elson and Pearson 1981; Reddy 2007; Venkateshwarlu and da Corta 2001). These discourses have been particularly associated with agricultural tasks such as weeding and cross-pollination work (Venkateshwarlu and da Corta 2001: 9), even as theorists have shown that who does this work is context-specific and depends on wider gendered changes within agrifood systems and economies (Ramamurthy 2010). My research draws on these

perspectives in order to analyse the extent to which such discourses and gendered divisions of labour take place within Hawai'i agrifood practices, including transnational seed production.

A second insight of relevance is the suggestion that processes of social segregation have contributed to the bifurcation of the agricultural workforce into protected and unprotected roles (Sachs and Alston 2010: 280; C. Shaw 2011), wherein labour standards may be inapplicable, ineffectual or even contribute towards this split between standard and flexibilised, feminised labour (Bain 2010). This research has demonstrated that the processes through which employees are associated with, allocated or segregated into different roles and tasks on farms is key to analysing how inequalities are reproduced and that these dynamics warrant an intersection lens (McDonald 2016). How work is organised and how this organisation changes may thus play out along lines of gender, social class, race/ethnicity and citizenship status (Jarman et al. 2012: 1005, Reskin and Roos 1990; Milkman 1987; Schrover et al. 2007; Holmes 2007, 2014). This scholarship is helpful for the thesis project analysing the gendered social relations of production within Hawai'i's agrifood system, analysing change, not over time, but comparatively in the present through three different case studies.

While state regulation, labour unions and workers' organisations have often been the means through which workers aim to realise their rights, such organisations may also be characterised by paternalistic forms of organisation that fail to engage with different women workers' realities, including their unpaid work (Barrientos and Evers 2013: 48). Moreover, GPNs challenge a traditional labour-rights approach, as their multiple locations challenge the jurisdiction of national laws, may operate outside the jurisdiction where some labour laws apply (e.g. Export Processing Zones) (Barrientos and Evers 2013: 48) and the

mobility of capital presents challenges to traditional forms of labour organising (Kabeer 2015). Much feminist research has focused on buyer-driven agricultural chains, whereas seed production networks, as part of larger biotech corporations, are significantly more supplier-driven (Schurman and Munro 2010; Kloppenburg 2012; Schrager and Suryanata 2017). Even while this research has shown that these networks can be vulnerable to pressure exerted downstream, more research is needed to better understand how transnational seed production in Hawai'i, as one of the research case studies, is shaped by supply chain dynamics and how these, in turn, affect labour relations and the wider social relations of production.

In the next section, I turn toward understanding more about these gendered social relations of production within the broader context of U.S. conventional agriculture. I discuss the significance of some demographic trends amongst both farmer and farmworker populations, before analysing how the social relations of production have been considered within the literature on alternative agrifood practices.

Intersecting Inequalities in U.S. Conventional Agriculture

In the U.S., women are still under-represented as farm owners and in agricultural policymaking and their contributions to farms is un(der)recognised, despite some indications that women and ethnic minority¹⁹ farm ownership is rising (USDA FSA). Current data suggests that women operate²⁰ 14% of U.S. farms—a small percentage but double the number of operators in 1978 (Moskin 2005). Some appear hopeful about these changes, since changing quantitative patterns of ownership and operation are considered important

¹⁹ Such farmers are the subject of ongoing lawsuits concerning discrimination in USDA farm loans to Black farmers (Pigford I and II), women farmers (Love v. Vilsack), Native American farmers (Keepseagle v. Vilsack) and 'Hispanic' farmers (Garcia v. Vilsack) (Carpenter 2012).

²⁰ USDA does not differentiate between those who own farms and those who act as decision makers and day to day managers.

given the historical masculine bias in the U.S. definition of ‘farmer’ (McMahon 2005: 135; Little 2002) and the failure to consider women’s farmwork as productive work, as it was seen as belonging to the reproductive sphere in the classic farming homestead (Sachs 1996, 1983; Whatmore et al. 1994). Women make up a larger proportion of U.S. farmers—defined as those who own and/or operate farms—than has been historically recognised and there appear to be increasing numbers of federal, state and corporate efforts to promote ‘women in agriculture’ (Wernick 2016).

At the same time, lessons from GPN research offer a reason to interrogate both the focus on farm owners and a single axis view of women’s increasing presence, as demographic information on farm ownership or operation does not, on its own, speak to measures of farm quality, social value and economic viability. Just as research on women’s increasing presence in paid agrifood work shows they may experience poor conditions, research shows that farms owned and operated by women and people of colour tend to be smaller, located on poorer quality land and generate less income (Sachs and Alston 2010: 279; O’Donoghue et al. 2011: 8). More pointedly, while these changes are significant, they are of course skewed to those who own or lease property or hold operational decision-making power within farms—concepts which are not necessarily problematised or historicised for the ways that private property, histories of unfree and exploitative work and prospects for agricultural livelihoods have affected indigenous people, people of colour, (im)migrants and working-class women.

With these histories in mind, my aim is to analyse gendered relations, norms and negotiations within different agrifood practices by focusing on division of labour, combinations of paid, unpaid and hired farmwork (Brandth and Haugen 2010: 386; Whatmore 1994; Sachs 1983; Baylina and Berg 2010) and how work is (de/re)coded as

‘male’ or ‘female’ (Brandt and Haugen 2010: 386). Research has found that new divisions of labour can reinforce gendered essentialisms concerning women’s ‘natural’ aptitude for dextrous work, services, ‘aversion’ to using pesticides and discomfort with machines (Brandt and Haugen 2010: 386; Alston and Sachs 2010: 284; Jansen 2000; McMahon 2005; Brandth and Haugen 2010; Hall and Magordy 2007: 300). However, changes to agriculture²¹ have also shifted gendered power relations as women play increasing roles as farm managers and in sustaining farms through their off-farm income (Brandth and Haugen 2010).

At the same time, given the role of hired labour on many farms, consideration of paid farmwork is also important from a social perspective. Research on hired farm labour in the U.S. has shown the importance of regimes of race and citizenship in shaping the conditions of farmwork (Holmes 2007, 2014; Prebeisch 2007; Brown and Getz 2008, 2008b; Getz et al 2006). Holmes’ research on farmwork in North America has demonstrated how ‘ethnicity-citizenship-labour’ hierarchies materialise in production practices and in the (in)visibility of migrant farmworkers, perceived embodied differences and ‘imputed humanity based on body position [while doing farmwork]’ (2007: 61). In his research, those doing work closest to the ground – stoop labour – also corresponded to racialised hierarchies (Holmes 2007: 61). Guthman and Brown describe California farmworkers’ positions as both ‘indispensable and disposable’ based on how farmworkers’ pesticide exposure is only superficially considered by activists advocating for pesticide buffer zones (2016: 470). The conditions of farmwork are part of a larger political economy of agriculture in which questions of poor labour conditions are central and present unresolved dilemmas.

²¹ Namely the shift to what is called multifunctional or post-productivist agriculture.

For their part, agricultural unions have achieved important goals in the U.S. context but have, at times, been unable to support the most precarious workers (Brown and Getz 2008b: 1185) and inadequately taken into account the position of women (Ramchadani 2018; Murphy et al 2015). These insights into some of the ways that social difference shapes agrifood economies and work are important to the different case study analyses as they help to understand how farmwork, and agricultural fieldwork especially, is organised and how different forms of work are allocated, undertaken and coded in relation to gender, race and citizenship. In contrast, how have ‘alternative agriculture’ movements and practices been able to address some of these inequalities and how have scholars analysed the gendered relations of production within different forms of ‘alternative agriculture’? The next section unpacks some of these terms and different approaches taken to analysing the quality and meaning of alternative agrifood work.

Gender at the Intersections in ‘Alternative Agriculture’, Food Justice and Food Sovereignty

A sizeable debate concerns the relationship between alternative agriculture and capitalism and how alternative agriculture proposes to shift disembedded agrifood relationships and related inequalities. Some theorists and activists have proffered a deliberately broad understanding of alternative agriculture as a form of production and provision that can ‘exceed’ market logic (FAAN n.d.) or function ‘beyond a market episteme’ (McMichael 2009: 162). In this vein, a host of practices may be employed to de-fetishize food as a commodity or to make ‘legible the social and ecological relations of agro-food production’ (Getz and Brown 2008: 14). However, others have raised questions about the lack of specificity in what is considered ‘beyond the market’ (Guthman 2008; Holloway et al. 2007; Brown and Getz 2008: 13) and from a feminist perspective some have long argued that the very heart

of capitalist relations is also conditioned through nonmarket, reproductive and emotional work (Elson 1999; Hochschild 2012). Importantly, others insist that alternatives are often still embedded within market relations and the linked social inequalities they purport to exceed or shift (Trauger 2014: 1134; Buck et al. 1997; Hinrichs 2000).

Other scholars have questioned the analytical purchase of the conventional-alternative divide for the way it constructs 'good' versus 'bad' practices and binaries of local/global and pure/impure (Andrée et al 2010; Maye et al. 2007; Parkins and Craig 2009). Such binaries, they argue, detract from analysis by focusing judging alternatives in the abstract rather than understanding contextual constraints and possibilities that shape different agrifood practices (Pepper 2010). Moreover, some researchers contend that this framing is impossible to sustain because consumers and producers adopt 'hybrid' approaches to agrifood systems which are themselves porous (Watts et al. 2005; Kneafsey et al. 2008). While the conventional-alternative framing may successfully highlight some important differences, this perspective on its own is insufficient to analyse the complexities of agrifood systems and their relationship to capitalism and social inequalities (Holloway et al. 2007; Follet 2009; Treager 2011; Campbell 2004; Maye et al. 2007; Watts et al. 2005).

There have been several theoretical approaches to alternative agrifood systems' relationship to capitalism and social inequalities, including focusing on the details of specific sites, practices, methods or movements; others have further defined alternative criteria or used other language altogether in their analysis. I briefly present the possibilities and drawbacks of each of these approaches before considering the diverse economies literature on agrifood systems.

Cognisant of the problems of theorising alternative agriculture at what Goodman calls the meso-level of systems or networks (2003), a first group of theorists moved away

from a focus on the whole (e.g. networks or systems) to theorise the constituent parts of these systems, such as: places of exchange (e.g. farmer's markets), ways of linking producers and consumers (box schemes), community schemes (community food gardening), private enterprise (agritourism), institutional practices (school gardening), systemic policy advocacy (food policy councils), state efforts (self-sufficiency and security) or political movements (food sovereignty) and other experimental practices (freeganism) (McMichael 2009: 163; Alkon 2011; Slocum 2011; Guthman 2008, 2011; Sachs 2013; Allen 2010). The insights of these contextual, emplaced studies have been particularly important for theorising how power operates socio-spatially, even while their somewhat atomised focus may miss important connections between and across practices.

A second group of researchers have focused on defining the methods of alternative agrifood systems as key to their eco-social effects. Many of these scholars utilise the framing of agroecology to refer to applying ecological concepts and principles in systems of cultivation (Aliteri 2010: 255). Common to these practices are a focus on soil health, the importance of observation as a key 'technology' and working with existing ecological flows in cultivating food. These are most recognisable in terms like 'organic agriculture, sustainable agriculture, regenerative agriculture, ecoagriculture, permaculture, bio-dynamics, agroecology, natural farming, and low-input agriculture' (Beus and Dunlap 1990: 594) but many other site-specific, cultural growing practices emphasise similar ideas, including the Hawaiian *ahupua'a* system explored in greater detail in the next chapter. Analysing agricultural methods has some of the advantages of specificity but risks abstraction from relations of power, wherein agricultural methods can become co-opted, 'conventionalised' (Guthman 2008) or made 'safe for capitalism' (Guthman 1998: 150). Agricultural methods alone do not necessarily incorporate practices of consumption, which

a broader agrifood system analysis must consider (Lockie and Kitto 2000; DuPuis and Goodman 2005).

Moreover, some scholars have been enthused about women's better representation in different forms of small-scale, alternative and diversified agriculture²² across North America, New Zealand, Australia, and Western Europe (Sachs 1996: 58–59; Trauger 2001: 57; McMahon 2005)—22% of U.S. organic farmers are women compared to 14% of conventional farmers, for example (USDA: 2012). They argue that these forms of farming entail more egalitarian social relations than agroindustrial agriculture (e.g. Delind and Ferguson 1999; EWG; Karpf 2011); that women's traditional agricultural knowledge is more innovative in relation to 'labour-saving and land-intensive practices' (Trauger 2001, 2004); and that women tend to eschew uncertain technologies, such as pesticides (Seager 2003; Rocheleau et al. 2013), growing more diverse crops on smaller farms and frequently undertaking direct marketing (Allen 2007). Peter and colleagues have even suggested that organic agriculture is more 'feminine' in character as a form of 'dialogue' with the environment (Peter et al. 2000; Campbell et al 2006), that men involved in organic farming tend to exhibit less masculinist attitudes (Campbell et al. 2006), and that women organic farmers are more likely to claim their titles as farmers rather than as partners or helpers of farmers (Trauger 2004). Other scholars have remained sceptical of these claims, arguing that farms must be analysed in situ (Agarwal 2010) and that these forms of farming remain subject to the wider political economy of farming relations as outlined above that prioritises a masculine notion of the farmer and does not necessarily offer predictable social outcomes aligned with progressive visions (Allen and Sachs 2014).

²² There are multiple debates about how to categorise these different forms of farming; see Trager (2014: 1134–1136) for more.

In contrast to these methodological focuses on production, research that focuses on alternative agrifood movements²³ has been critiqued for its focus on spaces of consumption. Many have been critical of this research for reproducing wider problems associated with 'ethical' consumer movements, linked with neoliberal obsessions with food as markers of individual health and class (Guthman 2011) and researchers' own investment in working in pleasurable agrifood spaces (Passidomo 2013). Some have attempted to differentiate between consumer-focused, new social movements (Guthman 2011; Goodman and DePuis 2006; Beck 1994) and movements for food justice and food sovereignty (Trauger 2015), although others have suggested that these boundaries are indistinct and their genealogies are often intertwined.

Research on food justice movements have challenged the often-unreflective calls within the mainstream alternative agrifood movement to 'return to the farm'. Food justice organisations argue that in order to make that return possible, farms must provide living wages and good jobs, and these jobs must take into account the issues which most marginalise people from paid work and formal economic participation. These movements have a number of genealogies, including anti-hunger and community food movements, and they commonly critique socially unequal regimes of food production and consumption that produce hunger, poverty and poor health, particularly in poor people and people of colour (Slocum 2011; Porter and Redmond 2014; Heynan 2009; Sbicca 2012). And while food justice work calls out some of the conditions of neoliberalism, capitalism and marginalisation that create these conditions, debate continues about their precise relationships to neoliberalism and inequality (Guthman 2008; Alkon and Mares 2011). This is

²³ These are sometimes referred to as practices of 'ethical consumption', characterised by concern for the environment and others who are distant in geographical as well as political, resource and social terms (Goodman et al 2010), such as slow food, organic and fair trade.

because alternative agrifood practices often struggle to envision or enact transformative goals (Joshi and Gotlieb 2010). Moreover, relationships with state and private structures can also depoliticise their work (Marsden et al. 2000; Alkon and Mares 2011; TNI 2014: 88).

Intersectional feminist analyses of food justice practices have shown that these efforts may reinforce essentialised ideas of gender and may not shift divisions of labour at home and in community work (Castellano 2013; Harprer 2010; Counihan et al 2014; Williams-Forsen and Wilkerson 2011). Others have demonstrated that food justice initiatives still suffer from some of the same issues identified in consumer movements for ethical food, including a relatively uncritical valorisation of ethical eating, which can solidify race and gender stereotypes through colonial discourses of purity, hygiene and filth in relation to diet and social improvement (Guthman 2008; DuPuis and Goodman 2005). Moreover, food justice initiatives may also leave unaddressed the classed, raced and structural constraints in accessing healthy, high quality, 'ethical' and culturally acceptable food (Alkon and Mares 2011; DuPuis and Goodman 2005; Brower 2013: 3). Slocum and Guthman have both shown how farmers markets and organic agriculture can work to reinforce U.S. national ideas of 'national vigor, purity, home soil, and even social organicism' (Guthman 2008: 435), uncritical nutritional discourses (Guthman 2008) and reinforce whiteness by using food to seek out people of colour 'physically, affectively, in solidarity, in appreciation, in embrace, in networks or in the imagination' (Slocum 2007: 523). Understood intersectionally, food justice movements are still beleaguered by issues relating to neoliberal structures and values, as well by social discourses that reinforce middle-class whiteness and gender norms that do not necessarily shift divisions of labour.

In contrast, food sovereignty movements²⁴ arose to explicitly challenge neoliberal, transnational control of agrifood systems, emphasising the struggles of peasant/producer-led movements in the global South and Latin America (Altieri and Toledo 2011) and indigenous and other place-based knowledge systems (agroecology). Food sovereignty emphasises food production for local and domestic consumption, control over productive resources and fair prices for producers (Desmarais 2007; Bello 2008)—proposals to ‘decommodify food and decentralise authority over decision-making’ (Trauger 2014: 1140). For others, the movement challenges both capitalist and (neo)liberal state relations, forming part of wider struggles against colonisation and historical traumas as they materialise in relation to food, eating, bodies, and relationships to land and culture (Marshall 2012; Plahe et al 2013). These movements may focus on recovering and connecting with ‘ancestral’ ways of eating (Deras 2016), decolonising diets (Bodirsky and Johnson 2008) as a means of resistance, and indigenous resurgence (Corntassel 2012).

The trajectories of food sovereignty in North America (Wittman 2010) and the Pacific (Lacey 2011) encounter different issues to those of other indigenous peoples and of rural peasants in Latin America, and some have been critical of the broader ways in which food sovereignty has been taken up within North America (Alkon 2012; Schiavoni 2009; Patel 2009). These scholars suggest that emphasising themes of local autonomy, independence, and self-sufficiency appeals to both leftist ideals of participation and conservative ideals of market non-interference (DuPuis and Goodman 2005: 368; Kimura 2011; Lockie 2009; Wekerle 2004). Critics worry that such alternative projects may be used to justify the

²⁴ Some prefer terms such as food self-sufficiency and food autonomy (Peña et al. 2017), but I use the discourse of sovereignty as it relates to the Hawaiian context, based on Lukens’ finding that this concept resonates with local issues.

withdrawal of state services and protection and that NGOs providing services will instead be funded through private foundations, wealthy individuals and corporations, which do little to promote structural change (Bierra et al 2007). Disagreements remain about the liberal concept of 'sovereignty' which underwrites this model (Trauger 2014: 1140; Agarwal 2014; Patel 2009).

At their best, counter-narratives of food sovereignty and decolonial agrifood movements challenge the forms of essentialism that characterise neoliberalism and colonisation (Smith and Kauanui 2008), and feminist analyses have found that often, such practices can offer women greater control over production and may create more gender-equitable community and family relations (McMahon 2011; Allsopp 2012; Acero 2012). However, the relationships between control over production methods, construction of supposedly more equitable relations and the ways in which women's labour and time are implicated deserve more careful attention—as labour can also increase with agroecological farming practices (Kerr et al. 2013: 15). In particular, it is important to analyse the complexities of collective decolonising practices and relations of power in relation to unpaid work, which may entail subtle, complex motivations and experiences in those who undertake it. While some are critical of volunteer labour for reinforcing the neoliberal ideal of active citizens (Rosol 2012: 249), voluntary work can also be considered key to maintaining autonomy, resisting professionalisation and powerfully (re)shaping subjectivities and intersubjective relations (Baker 2016, 2015).

Taken together, these analyses indicate the need to analyse processes in context. They also reveal the need to heed the broader critiques of gender, women, the environment and agriculture mentioned above, which caution against essentialising, romanticising or homogenising these relationships (Agarwal 2010; McMahon 2005: 135; Jewitt 2000: 962). At

the same time, while these analyses offer important insights relevant to Hawai'i's different agrifood practices, they do not, on their own, facilitate a comparative analysis of the extent to which work is gender-inclusive work or provides greater social equity or well-being. In order to undertake such an analysis, it is necessary to question the framing of agriculture into these largely binary terms, as some scholars have done (Kneafsy et al 2007; Burke and Shear 2014) while at the same time constructing a new basis for comparison. I propose that diverse economies theorising offers a generative framework for thinking about agrifood practices beyond the alternative/agroindustrial divide, and that a focus on work within these practices helps unpack gendered relations, norms and practices.

Diverse Agrifood Economies, Labour and the Social Relations of Production

Diverse economies researchers have attempted to analyse agrifood systems for their particular eco-social effects and imaginaries, including how they relate to capitalism and logics of gender, race, class and other differences (Wilson 2013; Burke and Shear 2014; Miller 2011). These scholars draw on Gibson-Graham's work to disrupt narratives that centre capitalism as the only economic system to which There Is No Alternative (TINA) in favour of analyses of what might be considered already existing economic practices that cannot be reduced to capital processes (Gibson-Graham 2006). Indeed, Tsing's work also analyses the relationships between capitalism and social relations that can be considered outside capital control, showing how capitalist commodities depend on relations outside of capital for their value – a process described as 'salvage accumulation' (2015). Tsing describes these entanglements as pericapitalist in order to denote sites that are both inside and outside capitalism (2015: 263, 96), demonstrating elsewhere how all capitalist commodities 'wander in and out of capitalist commodity status' (2013: 37). These

perspectives on the present have shaped my decision to focus not on agrifood futures but on what may be considered to exist in the current moment. At the same time, these scholars caution that ‘non-capitalist relations of production, exchange, circulation, and ownership are not necessarily more socially equitable, ethical or liberating than capitalism’ (Burke and Shear 2014: 132). Rather, Burke and Shear suggest analysing the ‘distinct socio-ecological consequences of different types of economic relations’ (2014: 132), such as those found in agrifood systems. In analysing such systems, I draw on Tsing’s suggested aim which is less to *describe* capitalism or capitalisms but rather to ‘show other ways of being’ that emerge in relation to these practices (2013: 38).

Moreover, theorists of GPNs/GVCs as well as agrifood studies scholars have made the case for more robustly theorising labour agency in relation to gendered social relations in which such production is embedded (Alford et al. 2017; Selwyn 2013; Rainnie et al. 2011; Coe et al 2004; Coe and Jordhus-Lier 2011; Levkoe; Allen 2004; Guthman 2004a, 2004b; Brown and Getz 2008). Rainnie et al. argue that agrifood production can be seen as ‘networks of *embodied labour*’ (2011: 161), wherein work is ‘the ultimate source of value’ (Rainnie et al: 160–161). Moreover, scholars studying alternative agrifood networks have highlighted several important considerations that help to understand labour dynamics within particular parts of the agrifood system. In the next section, I consider what is understood by labour and the social relations of production within agrifood practices, before discussing a number of issues that have been identified in research on agrifood labour within different forms of farming.

Theorising Labour in Agrifood Systems

Traditional models for theorising labour agency or claims-making may not be appropriate for agrifood work, which spans paid and unpaid spheres, and includes some of the most

precarious forms of paid work, such as agricultural fieldwork, which are un-organised or difficult to organise collectively (Alford et al. 2017; Kabeer 2015). For these reasons, a focus on the 'social relations of production' (Marx 1973; Tsing 2014, 2015) better facilitates analysis of the relations of power that shape agrifood work within different kinds of agrifood production, including agricultural fieldwork in Hawai'i, as a particularly neglected area of research and policy action. These social relations of production must consider the range of ways in which surplus labour is appropriated, not only within capitalist exploitation of waged labour but also through self-exploitation of individual farmers (Gabriel 1990: 94), and through the appropriation of unpaid family labour (Federici 2013; Tomich 2004). Such perspectives seek to locate capitalist agrifood production within a spectrum of forms of work that are not themselves inherently more just (Gabriel 1990: 94; Levkoe 2017). Indeed, agrifood scholars have identified a number of important problems with the work needed to produce food and fibre, outlining some of the factors that shape social relations of production within given agrifood political economies (Besky and Brown 2015; Getz and Brown 2008b). These scholars have identified possibilities for establishing social justice criteria in agriculture (Henderson et al 2003; Bacon 2012), including gendered criteria (Allen and Sachs 1991). The following section outlines how agrifood labour problems have been considered within agroindustrial as well as 'alternative' forms of production, with a focus on how globalised changes interact with localised histories of labour relations, race, gender, class and other differences.

Labour in Alternative Agriculture

A number of theorists have long taken issue with the claims of various forms of 'alternative' or 'sustainable' agriculture for their lack of attention to dynamics of paid and unpaid labour on farms, the conflation of the interests of farmers and farmworkers and the use of un-

waged labour and internships (Brown and Getz 2008, 2008b; Levkoe 2017; Getz et al 2006; Besky and Brown 2015). They have highlighted how alternative agriculture's focal points, such as certification schemes, can detract from a focus on farmworkers, collective bargaining and forms of regulation that centre farmworker perspectives (Brown and Getz 2008b; Guthman and Brown 2016). In a sense, alternative agrifood practices can even be considered as parallel trajectories to farmworkers' struggles in the U.S. and in California in particular (Brown and Getz 2008b: 1187). The distinct histories of different forms of so-called alternative agriculture and farmworkers' movements helps to explain some of the agrarian conservatism found within alternative agriculture movements and practices (Brown and Getz 2008b: 1187). Indeed, Brown and Getz' work has found that some California organic farmers viewed collective bargaining and regulatory processes as polarising and undesirable (Brown and Getz 2008b: 1194), which helped to explain the continued privileging of farmers' perspectives, localism and 'family farming' (Brown and Getz 2008: 12, 2015) – in short a kind of 'agricultural exceptionalism' that frames farming as something 'culturally different from the rest of society' (Getz et al 2006: 489). Getz et al highlight that while organic agriculture is considered to have better labour conditions than agroindustrial farming, this is largely based on the absence of pesticides used, whereas research indicates that organic agriculture actually features more stoop labour -- a more common occupational hazard (Getz et al 2006: 484).

Brown and Getz and others suggest that these limitations undermine efforts to address inequalities in the social relations of production by obscuring power differences between farmers and farmworkers (Brown and Getz 2008: 15; Allen et al 2003; Guthman; DePuis 2000). From farmers' perspectives then, exploitation in agricultural labour is considered a problem of a few unscrupulous producers, rather than as a logic inherent to

capitalist relations of production under neoliberal deregulation (Brown and Getz 2008b: 1192). Getz et al suggest that all growers, in fact, rely on the degraded bargaining position of farmworkers, the majority of whom are (im)migrants, in order to operate (2006: 485). Forms of agrarian populism that position 'alternative agriculture' as beyond questions of labour precisely highlight the need to look more closely at these issues (Getz et al 2006: 500), as is the thesis aim.

Bacon et al (2012) have suggested some criteria for evaluating the social dimensions of sustainability and social change in diversified farming systems (DFS), including analysing the following areas: human health, democracy, work, quality of life and human well-being, equity, justice and ethics, resiliency and vulnerability, biological and cultural diversity. Within their focus on work, Bacon et al outline the need to assess both paid and unpaid labour in the agrifood system (within and beyond households), issues of employment conditions, wages, routines, injuries, discrimination, collective bargaining and (im)migration (2012: 41). The area of 'equity, justice and ethics' also encompasses the 'procedural and distributional dimensions of environmental and food justice' and the 'ethics of eating, farming, food systems, and intergenerational ecosystem stewardship' (Bacon et al 2012 2012: 41). For Bacon et al, consideration must be given to inequalities and how social identities shape 'the distributions of environmental benefits and burdens in agri-food systems' (Bacon et al 2012 2012: 41). Taken together with the insights developed by different strands of intersectional feminist research on food, agriculture and environment, including research on GPNs/GVCs, these insights are important for the research analysis of different cases of 'outlier agriculture'. They help to think through the specific social dimensions of agrifood work, the extent to which they offer more gender- and socially-

inclusive forms of work and how the different cases are positioned within Hawai'i's agrifood system as a whole.

The research methodology is outlined in greater depth in the following chapter, and the next section discusses what has been written about agrifood dynamics in relation in Hawai'i and the relations of power and difference the research analyses. Chapter 3 presents more about this context and the background to the three agrifood areas of interest for my work: seed production, small agroecological agricultural activities, and 'āina work. However, the next section outlines some of the theoretical insights that have helped to shape how I analyse alternatives in relation to histories of capitalism and intersecting inequalities. I then outline some of the literature analysing alternatives within the Hawaiian context.

Gender, Settler Colonialism and the History of Agribusiness in Hawai'i

In this section, I outline some of the ways that contemporary theorists have analysed the links between settler colonialism, agriculture and intersecting, gendered inequalities. In the first section, I describe how these processes affect the wider landscape in which different forms of agriculture take place and specifically in relation to Hawai'i. I then discuss how these interrelationships, and resistance to these projects, has been conceptualised in the areas of some of the 'alternative' agrifood practices the research analyses (small agroecological growing and 'āina work).

Scholars have shown how settler colonialism and agriculture are linked by analysing the processes through which settlers (re)make the land, themselves and the places in which they settle (Lukens 2013: 73). In Hawai'i, these processes have been integral to the development of capitalism, settler governance, labour and citizenship regimes, and broader social life. As Lukens writes:

Agriculture is often the primary means through which settlers remake the land, making themselves, their foods, their crops, and their land practices a permanent part of the landscape they have settled upon. In Hawai'i, the introduction of sugar, pineapple, macadamia nuts, and today GMO seed corn marks the continuing process whereby the accumulation of wealth through settler-industrial agriculture has profoundly impacted the ecological and social conditions of the local agrifood system. These forms of agriculture create structural barriers to local food farmers, as they are forced to compete within a market where land and labour values are determined by the major market players: namely, corporate industrial agribusinesses rooted in the colonial tradition (2013: 72-73).

Other research has articulated how such processes are racialised and gendered (Awwad 2016; Rotz 2017; Glenn 2009, 2011; Kame'eleihiwa 2001; Stoler 2016) through histories of racialised discourses and practices that shape agrifood work, shifts in farming ideals, historical and regulatory processes, and how these played out in Hawai'i. I analyse each of these threads in turn as they relate to my research focus on the embodied labour of agrifood systems and its intersectional, gendered dimensions.

In the first case, as McClintock and others have shown, racialised discourses of sloth, indolence and Native disappearance have been applied by white settlers to different groups over time and have been central to colonial justifications for the appropriation of both land and labour (McClintock 1995: 252–53; Teaiwa 2001: 28; Tengan 2008: 891–899; Smith and Kauanui 2008). Contemporarily, scholars such as Rotz (2017) have analysed how such discourses of racialisation operate in relation to agriculture by analysing white settler narratives as part of processes of racialised subject formation and othering (159). Rotz shows how some of the narratives of white Canadian settler farmers position indigenous peoples and migrant farmers and farmworkers as spatially and temporally distant in different ways, reiterating a triangulated racialised hierarchy (2017; see also Smith and Kauanui 2008) that has also been suggested to apply to Hawai'i (Fujikane et al. 2008). Rotz' findings demonstrate some of the important ways in which white settler farmer masculinities function in the Canadian context through discourses of self and othering, even

while her theorisation of the gendered dimensions of these processes could be deepened.

What is important from this analysis for the Hawai'i case is how settlers draw on agricultural practices, in part, in their constructions of belonging in the present (Barker 2016).

A second area of research illustrated the relationships between U.S. farming ideals and changes in relationships between labour, technologies and citizenship (Jones 2009; Carlisle 2014). These scholars have shown how U.S. agrarian ideals position farming as 'mixing ones [sic] labour with the soil... a spiritually and materially superior form of work, the root of both personal wealth and personal salvation' (Carlisle 2014: 2). However, such a view is implicitly invested in property ownership and such U.S. agrarian-focused views tend to overlook wage-labour in their valuing of family labour, including in organic farming (Brown and Getz 2008: 18; Guthman 2014; Getz et al 2006). Not only do these ideas suggest that the concept of 'labour' once again plays an important role in eco-social imaginaries but that farming ideals are also central to the U.S. religio-political system and attendant concepts of citizenship.²⁵ Carlisle demonstrates how a central feature of this ideal, the concept of the yeoman small farmer, has formed the crux of American concepts of religious morality, citizenship and private property through the ages (Carlisle 2014: 2). While forms of farming changed from large-scale plantation farming to smaller 'family farms' and agribusiness (Jones 2009), such concepts have endured in ways that belie the histories of slavery, colonisation and capital accumulation that have been central to American agriculture. Such histories of slavery, for example, endure in concrete forms in relation to U.S. labour rights for agricultural workers— or rather their relative absence: as sectors where slaves were concentrated, agriculture and domestic work were and continue to be

²⁵ While this term has been used to refer to the Native Hawaiian system, it also seems a useful way to highlight the interrelationship between Puritanism and forms of government in the US.

excluded from many U.S. labour protections, including in Hawai'i (Takaki 1984). With agroindustrialisation, new farming ideals linked with the Green Revolution²⁶ (Lyons 2000: 3), the promises of technologies and mechanisation were increasingly promoted abroad (C. Shaw 2011: 94).²⁷

Glenn and others' work has shown how these U.S. processes of colonial settlement, agriculture and capitalism functioned in relation to Hawai'i, profoundly shaping the gendered and racialised patterns of labour migration, settlement, patterns of agricultural work, differential employment opportunities and broader socio-economic relations in Hawai'i (Glenn 2009; Beechert 1984; Takaki 1984; Andersen et al. 1984; Fujikane et al. 2008; Isaki 2011, 2013). Colonial views on Hawaiian agriculture shifted over the years, with once admiring accounts shifting toward disdain as the development of mercantilism, the deaths by introduced disease and migration of Hawaiians led to mass abandonment of subsistence agriculture. These issues are examined with greater depth in the next chapter, but for the present section, what is important to highlight is how colonial gazes feminised the islands (Kame'eleihiwa 1992), conceived of agriculture and the influence of American ideals of the yeoman farmer who could 'productively' transform the land as central to the project of the Hawai'i settler state.

Moreover, settler forms of agriculture transformed the social composition of the islands, promoting white European and American settlement and migration from East Asia and beyond, with varying degrees of success. Such projects were profoundly gendered and

²⁶ The Green Revolution promoted high-yield varieties (HYVs) and mechanisation (Feldman and Biggs 2012: 110) for small producers and was promoted through the geopolitical use of food aid (C. Shaw 2011: 94) and global farm subsidies to support U.S. producers (McMichael 2009: 144–145). Alongside the industrialisation, standardisation and intensification of the U.S. farming system, the chemical fertiliser and pesticide industries developed as a way of absorbing excess nitrogen-based munitions from World War II (Lukens 2013: 43).

²⁷ For example, in the later part of the 20th century, the U.S. government facilitated the growth of farm size and the industrial approach to agriculture through the Butts subsidy programme, which paid farmers more who grow more (McMichael 2009; also cited in Lukens 2013: 45).

targeted sexual relations: since white European settlement and reproduction were desired, recruited plantation managers were able to bring their families (Glenn 2009: 209) and earned far above that which they could have likely attained in their home countries.²⁸ In contrast, East Asian men were, initially, targeted solely as migrant plantation workers whose settlement was not desired (Glenn 2009: 196) and thus were initially prevented from bringing their families to Hawai'i (although this changed when plantation managers began to consider women and families as domesticating—and therefore more profitable—forces for plantation life (Glenn 2009: 32). From the beginning, then, colonial settlement, plantation agriculture and the settler state took form through not only through processes of racialisation but through gendered and sexual logics.

The elaborate racialised stratification systems employed by the plantations²⁹ also determined wage rates (Fleischman and Tyson 2000) and prevented 'noncitizen' workers from owning agricultural land or undertaking 'skilled jobs' (Glenn 2009: 203–204). This impacted contemporary employment prospects for different groups, as Okamura's work has shown (2008). Moreover, these plantation systems entailed forms of subcontracting and sharecropping (Glenn 2009: 32) that present some similarities with the contemporary bifurcation of the contemporary agricultural workforce into protected and unprotected workers, a finding I explore in relation to seed production in Chapter 6.

While much literature has focused on how different groups from East Asia and the Pacific were impacted by plantation agriculture in Hawai'i, less has been written about early

²⁹ For example, as Glenn notes, distinct linguistic and cultural lineages were merged into national groupings, for example Okinawans being considered 'Japanese', different ethnic groups from Canton labelled 'Chinese' and 'Filipino' including those from Ilocano, Visayan and Tagalog speaking areas (2002: 207). In contrast, the haole 'proprietary and managerial class' conjoined Russians, Spanish, Germans, Norwegians, and Poles (Glenn 2009: 45).

Native Hawaiian employment in sugar plantations and their resistance to these conditions, as I outline in the next chapter. For example, Native Hawaiian women were initially preferred for some forms of plantation work; narratives of Native Hawaiian men framed them as desirable for work necessitating strength; and while seen as good, honest workers, they were framed as lacking discipline and easily bored by monotonous work (Glenn 2009: 23).

Beyond this, what has been analysed are some of the ways that differentially gendered opportunities and constraints in relation to colonisation have shaped the economic possibilities for Hawaiian men in particular. Tengan has suggested that Native Hawaiian men preferred work that resonated with “‘ōiwi cultural logics’ emphasising strenuous but short, group-oriented work (*ukupau*, which translate as paid by the job not time) (Tengan 2008: 874–881). In combination with formal political accords, this is seen to have led to ‘ōiwi men’s concentration in blue-collar work, such as city and county work, as teamsters, in longshoring, ranching and cowboying (Tengan 2008: 874–881; McGregor 1989: 108–09).³⁰ More research is needed to understand the sectors in which ‘ōiwi women work and how Hawaiian gendered identifications, including that of *māhū*,³¹ shape occupational prospects today,³² by further analysing ‘ōiwi and immigrant women’s paid and unpaid work during the plantation era (Brown 2003: 255). In short, triangular settler logics of agriculture in Hawai‘i work in gendered ways, target both productive and reproductive relations and have strongly shaped contemporary occupational prospects and the social

³⁰ Tengan also shows how colonialism and militarisation have affected the occupation opportunities of native Hawaiian men, with many people accessing work through the military and seafaring work (see also McGregor 1989).

³¹ *Māhū* is not, as it was previously described, associated with particular sexual practices (Goodyear-Ka’ōpua 2013: 3087–3096) but it has been historically translated in different ways, including as having meanings associated with hermaphroditism and homosexuality as well as referring to a third gender or to a transgendered position (Goodyear-Ka’ōpua 2013: 3087–3096).

³² For some recent research on gender, see Kirtley (2015).

qualities associated with different subjects and groups (Okamura 2008). Moving on from how these linkages have been considered, the next section takes up how gender has been theorised in relation to alternative food movements and practices in contemporary Hawai'i using the insights provided to understand the extent to which they offer gender-inclusive work and/or greater social equity and well-being.

Gender in Alternative Agrifood Practices in Hawai'i

As outlined above, my research focuses on agrifood practices that combine political mobilisation and productive practices (Wainwright 2014: 88) or what Goodman calls 'material and symbolic expressions of alternative eco-social imaginaries' (Goodman 2003: 2). In this section, I consider how these alternatives have been considered in relation to their political mobilisations and productive dimensions in Hawai'i, and how, if at all, scholars have considered the relationship of these practices to settler colonialism, gender, race and class.

Lukens has offered a definition of alternative food movements which productively highlights their interconnections in the Hawai'i context. Basing her definition on Patricia Allen's work (2004), Lukens describes food movements as 'an assemblage of diverse political actors and imaginaries working to transform the industrial agrifood system and/or alternatives to it' (2013: 61). She further argues that these alternative movements in Hawai'i draw on concepts of both food justice and food sovereignty in ways that are not always distinguishable, even while the concept of food sovereignty resonates strongly with existing 'āina-based movements to resist settler colonialism and its characteristic forms of food and agriculture (2013). I suggest that these insights are important to extend through Brower's insights that such movements in Hawai'i may also include those who 'explicitly resist the idea of engaging in politics' (2013: 6)—an insight consonant with other observations about

the often-surprising alliances that materialise within food organising (DuPuis and Goodman 2005: 368). These ideas concerning agrifood alternatives and their politics are important to the research in order to consider the wider context in which the embodied labour of agrifood practices takes place (their social relations of production).

In the next section, I analyse some of what has been written about the gendered and intersecting dimensions of Hawai'i alternative agrifood practices, which, as I outlined earlier, I take to include forms of small agroecological farming, such as organic farming, as well as the 'āina-based movements Lukens discusses. In the first case, Kimura has analysed the barriers facing women organic farmers in Hawai'i who, she asserts, demonstrate 'less capitalist and more political orientation[s]' toward 'environmental sustainability and health' (2016: Location 3264–3266). She also shows that these politicised positionings actually place these women farmers in paradoxical and conflicting situations, as they must face gendered stereotypes of their work as 'not real farming' and their political work in anti-GMO movements as 'irrational' and emotional (2016: Location 2966-2969). Kimura suggests that Hawai'i's women farmers face a paradox: they must negotiate these negative stereotypes even while her interviewees described how organic agriculture offered an 'empowering space' which affirmed their identities as farmers in a 'less masculinised network of fellow farmers' (2016: Location 3273-3277). Some of her interviewees even described their farms as 'escape(s) from the patriarchal world', 'rare space(s) where they can be free from subjugating forces' (2016: Location 3061). My research interrogated some of these issues further, finding that other women organic and agroecological farmers described a number of gendered barriers within these spaces, including ways in which 'subjugating forces' encroach upon farm spaces in the form of visitors, suppliers, other farmers or institutional representatives (Chapter 5). Kimura's finding focuses a much-

needed lens on the gendered situation of some women organic farmers in Hawai'i, helping to unpack how critiques of lifestyle farming actually work through feminising this work as inauthentic farming. At the same time, one wishes to know more about how the politics of race and whiteness inflected the experiences of the farmers she interviewed, the majority of whom were white (9 of 13) and the relationships between organic agriculture and wider histories of settler colonialism.

Lukens' work offers a starting point to interrogate Kimura's and others' assertions that alternative agriculture is less male-dominated than agroindustrial agriculture and to account for some of the intersectional politics, trade-offs and contradictions of different agrifood practices. In her thesis, Lukens (2013) argues that 'haole³³ food' is positioned similarly to Guthman's idea of 'yuppie chow' that implies a 'right' (white) way to eat (Guthman 2003)—discourses of 'good food' that are highly prevalent in organic agriculture (Guthman 2008) and alternative agrifood practices. These discourses have often been used to justify interventions to educate 'ignorant Natives by "benevolent colonisers", who are often white women who know what's best' (Lukens 2013: 68). While good food discourses are not the primary focus of this thesis, these are indeed questions which surrounded my initial research interest and are relevant here for how they focus deliberation about the gendered nature of different forms of settler agriculture.

While the historical relationships between white settler women can be linked to colonial 'good food' projects, uncritical nutritional discourse, the racialised, classed and gendered politics of contemporary alternative agrifood practices in Hawai'i also include visions that explicitly reject these colonial discourses through frames of decolonial eating,

³³ Translated as white person. For more on the concept of *haole* in the islands see *haole* see Rohrer (2010, 2016).

food sovereignty and 'āina work (Goodyear-Ka'ōpua 2013: 204; Baker 2015; Gupta 2013). While Gupta argues that food sovereignty movements in Hawai'i must engage with the state (2013: 4, 18), Goodyear-Ka'ōpua suggests that the point is to *decentre* the state in efforts that 'enable indigenous economic independence (or at least less dependence), spiritual regeneration and social health through a continuous renewal of relational obligations' (Goodyear-Ka'ōpua 2011: 48). Goodyear-Ka'ōpua has been one of the few to openly analyse how 'āina-work agrifood practices struggle not only with relationships to the settler state but also entail complex negotiations of gendered differences.

Drawing on Tengan's work (2008), Goodyear-Ka'ōpua (2013) highlights some of the quandaries she observed within her work in a Native Hawaiian immersion school as they rebuilt historic taro terraces (*lo'i*) as part of their curriculum. She recounts how gender was sometimes used as a means for allocating work to boys and girls in ways she found problematic, where young women were assigned physically lighter tasks. At the same time, she observed that the school supported those whose gendered performances did not fit this binary, as in the case of *māhū* (third-gender or transgendered) students (Goodyear-Ka'ōpua 2013: 3122–3131), suggesting that 'āina work can potentially represent an opening for revisiting gendered relations, the meanings of masculinities and femininities, concepts of family ('ohana) and lāhui (nation) (Goodyear-Ka'ōpua 2013: 97). Both Goodyear-Ka'ōpua and Tengan have suggested that western gender binaries have been mapped too easily onto Hawaiian concepts, the latter of which actually multiply ways for rethinking concepts of masculine and feminine through pairings of deities and their energies (Goodyear-Ka'ōpua 2013: 3122–3131). Some research within Hawaiian studies has begun to engage with these themes in Hawaiian language histories (*mo'olelo*) (ho'omanawanui 2012; J.H. Osorio n.d.) but for the purpose of this thesis, what is important to outline are the ways in which 'āina

work can also entail its own paradoxes, possibilities and tensions with relation to gender-inclusive work, equity and social well-being.

While small, this important body of literature concerning the intersecting, gendered social relations of both agribusiness development and alternative agrifood production offer insights that this thesis seeks to further interrogate. To what extent do alternative practices differ from agroindustrial ones in relation to how they address these specifically emplaced inequalities linked to settler colonialism, race, gender and other differences?

Conclusion

This chapter has provided an overview of some of the literature concerning both agroindustrial and alternative agrifood practices, suggesting that research analyse both political and productive elements of agriculture, with a focus on embodied work as a means of comparison between different practices. Offering an overview of research on how capitalism has been associated with inequalities of gender, race, and class, in particular, I also showed the difficulties alternative food movement scholarship and practices experienced in defining aims, contesting market relations and addressing the inequalities participants themselves identify as central to agrifood system change. While some have been hopeful about the prospects for different agrifood practices to better represent women, shift gendered relations and help re-vision and (re)conceptualise gendered identities and other inequalities, this literature has shown that important tensions, contradictions and paradoxes remain. Principally, questions of farm labour remain unresolved across different kinds of agrifood practices (Getz and Brown 2008, 2008b; Getz et al 2006).

Such limitations might lead one to question, as Passidomo (2016) and Guthman have, the usefulness of focusing on 'alternative supply' issues at all. Guthman suggests this

focus is 'inadequate and possibly misguided' and calls instead for the more difficult work of enacting policies of 'eliminating redlining, investing in urban renewal, expanding entitlement programmes, obtaining living wages, along with eliminating toxins from and improving the quality of the mainstream food supply' (2008: 442–443). As Brown and Getz put it, domestic fair-trade regimes in the U.S. have struggled overtly with these tensions: 'not only must movement actors operate within circuits of capital, they make an explicit choice to do so, sometimes in lieu of pursuing public regulation or collective action at the point of production' (2008: 20). In this way, the pursuit of, for example, social certification labels, can undercut collective bargaining and justify further roll-back of state duties to regulate farm labour (2008b: 1185).

These critiques are important, at the same time that agrifood practices remain significant sources of social relations sites, spaces and imaginaries that appear to be gaining in importance in late modernity (Goodman 2003; Besky and Brown 2015: 25). I have suggested that one critical way of engaging with the differential trade-offs, opportunities and limitations that agrifood system practices offer is to bring together an intersectional focus on embodied work across different practices and to theorise these in relation to the important histories of colonial food and agriculture that Guthman, Glenn and others have elucidated. The next chapter seeks to provide historical background to that project before turning to address the extent to which seed production, pilgrim farming and 'āina work offer possibilities for and limitations on intersecting socially-inclusive work and wellbeing.

Chapter 3: The Social Relations of Agriculture in Hawai‘i

Introduction

While Chapter 2 demonstrated the importance of analysing the intersecting social relations of production in agriculture, this chapter demonstrates how key historical developments have shaped these relations of production in contemporary Hawai‘i. The chapter analyses how several key moments shaped present-day socioeconomic conditions and agrifood systems, highlighting shifting relations and conceptualisations of agriculture, land and work. I bring together theorising on the social relations of agriculture in order to show how these relations have produced contextual inequalities that shape embodied work within contemporary agrifood systems.

The second half of the chapter analyses what is known about the demographics of those who farm in Hawai‘i, suggesting that lack of information about farmworker demographics and experiences represents an important lacuna in the light of state promotion of ‘local’ food production. The chapter offers historical background on the agrifood practices analysed, foregrounding how divisions of labour, social qualities associated with work and other factors have shaped these distinct yet interconnected practices of seed production, small agroecological farming and ‘āina work.

Gender and Social Provisioning in ‘Ōiwi Wale

What is known about Native Hawaiian social provisioning practices and concepts of gender during ‘Native-Only Times’ (‘ōiwi wale)³⁴ (Goodyear-Ka‘ōpua 2009) indicates that social life was ordered through complex concepts of genealogical rank and a sophisticated system for managing resources. Taken together, scholars of Native Hawaiian history and epistemology

³⁴ Historical research suggests that Hawai‘i was first settled in 300–500 CE by voyagers from the Marquesas Islands, with later migrations from Bora Bora and Raiatea around the 11th century (Kirch 2011).

have suggested that Hawaiian gender and sexual practices were (and are) highly mediated by this concept of genealogical rank, with ancestral lineage a key arbiter of social positioning (Kameʻeleihiwa 2001; Linnekin 1990). These scholars have argued that Native Hawaiian women³⁵ and third-gendered people (*māhū*) exercised significant social, political and spiritual power (Kauanui 2008; Kameʻeleihiwa 2001, 1992; Linnekin 1990; Silva 2004; Merry 2000), as evidenced by their formal positions as political and spiritual leaders and healers (Goodyear-Kaʻōpua 2013: 3087–3096; Pukui et al. 1972) conveyed through histories (*moʻolelo*) that revered the bravery of female and *māhū* deities (Silva 2004).

With relation to food and social provisioning, *makaʻāinana* or commoners farmed the land under different *aliʻi* (chiefs), whose power (*mana*) was in turn determined by how well the chief provided for the people within their territory (Trask 1999: 5).³⁶ Indeed, the entire *ahupuaʻa* system depended on a kind of use-rights concept (Trask 1999: 5) wherein access was regulated through the *kapu* (taboo) system, which proscribed harvesting or fishing during particular periods and regulated locals' and restricting outsiders' access to these areas (McGregor et al. 2003: 117; Pukui et al. 1972). The process through which chiefs could ascend to the throne was also determined through this spiritual political system (Kameʻeleihiwa 2001). Within this system, and in contrast to what is often framed as 'women's work', food preparation for both families and deities (*akua*) was historically primarily a male *makaʻāinana* domain in Hawaiʻi (Tengan 2008: 715–724), although there were significant variations in these practices over time and by island. What is known is that, by the late ʻōiwi wale period, the system of *ahupuaʻa* had become particularly sophisticated,

³⁵ Women chiefs were especially powerful on Niʻihau and Kauaʻi (Kameʻeleihiwa 1992: 11)

³⁶ Trask and other Native Hawaiian scholars have resisted the comparison of this system to European feudalism, based on the fact that *makaʻāinana* were not bound by feudal service or to the land and the fact that individual chiefs could lose *mana* or spiritual and ruling power based on how well they provided for their people (Trask 1999: 5).

having been developed over a thousand years, and was able to feed an estimated one million people (Trask 1999: 4).

Gendered Changes in Uncertain Times: Mercantilism, Missionaries and *Mahele*

Encounters and interactions through the early maritime trade and the development of mercantile economies represented critical shifts in the functioning of the *ahupua'a* system and in relation to women's and men's roles within society. Over time, with increasing maritime commerce in fur, whaling and sandalwood, the interest of some *ali'i* shifted away from subsistence agriculture, and some individual *maka'āinana* were also able to obtain new sources of status in these mercantile economies (Kame'eleihiwa 1992: 140; Tengan 2008: 766–771). The extensive extraction of sandalwood furthered *ali'i* debt to white businessmen and also drew Hawaiians away from subsistence work (La Croix and Roumasset 1984: 162–3). While the first European accounts of Hawaiian agriculture were laudatory, describing it as highly productive and sophisticated (Banner 2005: 280), contact with Europeans was itself linked to the deterioration of the *ahupua'a* system, as trade brought opportunities to sell produce but ships also carried diseases that had a devastating effect on Hawaiians (Banner 2005: 280; Stannard 1989).

As *ali'i* struggled to balance changes, some *maka'āinana* women acted as intermediaries between foreign sailors, traders and other Hawaiians, and some have argued that this enhanced their positions (Daws 1968; Linnekin 1990). Concurrently, Hawaiian men were increasingly employed in whaling and other maritime endeavours (Tengan 2008: 766–771). It has been suggested that chiefly concerns about these gendered changes, the erosion of historic practices, and the influence of foreigners may have influenced King Kamehameha's actions in bringing the principal islands under his control (Kame'eleihiwa 1992: 11) and the declaration of a formal practice of gender-segregated eating (*'aikapu*).

‘Aikapu not only separated women and men during meals but concretised historic distinctions between chiefs, spiritual advisors and commoners, establishing formal modes through which religio-political power could be achieved (Tengan 2008: 710–715; Kame‘eleihiwa 1992).³⁷

By the 1820s, the combined effects of new diseases and neglect of subsistence activities had eroded traditional forms of authority, which Linnekin argues were increasingly challenged by new forms of class relations (1990: 170; see also J.K. Osorio 2002). Around this time, European discourses on the ‘backwardness’ of Hawaiian agriculture and social organisation began to proliferate (Banner 2005: 281) and the chiefly adoption of Christianity as a new model for maintaining and re-establishing balance—key to Hawaiian political concepts—can be understood in the context of an increasingly desperate situation (Tengan 2008: 741–749 Kame‘eleihiwa; 1992). In less than 50 years after the arrival of foreigners, nearly 80 percent of the Hawaiian population had been killed by disease (Kame‘eleihiwa 1992: 81–82).

The arrival of Christianity in the islands via Calvinist missionaries was spurred by the desire to ‘educate natives’ as well as to stop the ‘depravity of the docks’ that missionaries and reformers saw as corrupting young New England men in the supposedly sexually permissive south seas (Grimshaw 1989: 101). Not only were sexual practices and gender relations targeted by reformist missionaries but missionary journeys themselves were highly circumscribed by gender and sexual constraints: for example, single male missionaries were prohibited from travelling alone to the ‘seductive’ Sandwich Isles and thus most missionaries married hastily before setting sail (Grimshaw 1989: 6). Over time, missionary

³⁷ See Kame‘eleihiwa for a complete discussion of the ‘*aikapu* and changes during this time (2001: 2-13).

women's diaries reveal they experienced changes in their work, which shifted from 'educating natives' under increased pressure to concentrate on the home and their primary role in policing the social³⁸ and racial boundaries between their families and Hawaiian children, culture and language (Grimshaw 1989).

Legal changes reinforced these social changes, promoting laws regulating marriage and prohibiting sexual relations outside marital unions (Schmitt and Rose 1966; Merry 2000; Brown 2003) and encoding male ownership over the family sphere, women and children (Tengan 2008: 779-78). The gendered effects of these 'civilising' processes were somewhat contradictory for Hawaiian women in particular, who saw their status reduced through marriage laws of coverture and Calvinist interpretations of women's roles, even as Hawaiian conceptions of genealogical rank continued to carry important weight (Kauanui 2008: 284) and their work as mediators may have represented a source of power (Linnekin 1990).

Alongside the gendered and sexual effects of missionary legal and social programmes, the development of the mercantile economy exerted increasing pressure on *ali'i* to institute private property rights. Private property was explicitly linked in European and Anglo-American philosophies and racialising discourses of the time, framing land—and sea—as feminised, empty and unproductive, ripe for the civilising influence of a capitalist yeomanry that could save Natives from the 'twin vices of idleness and indifference' (Hasager and Kelly 2001; 195). No changes were more overtly dispossessive than the introduction of 'land divisions' (*mahele*) of the 1840s–50s which created Anglo-American inalienable fee simple property title in the islands (Banner 2005: 274).

³⁸ Missionaries prohibited activities associated with the pleasures of the body, which they saw as sinful, including surfing and hula (Brown 2003: 78)

The *mahele*³⁹ were a critical turning-point in the material relationships between the Hawaiian elite, *makaʻāinana* and foreigners in the Hawaiian Kingdom, and most property initially went to the government, the king and chiefs (Banner 2005).⁴⁰ It is thought that only around one in six *makaʻāinana* filed a claim for land title during this time (Linnekin 1987: 27) and, similar to processes in North America and New Zealand (Banner 2005: 292), many did not have their claims to title considered, could not afford to submit them, or were unaware or misled about the process (Tamayose and Takahashi 2013: 329). Others refused or renounced land titling as a form of resistance to these changes (Banner 2005: 292; Chinen 2002: 75–96). The *mahele* effectively prevented 75% of the Native Hawaiian population from owning land (Witeck 2001: 39),⁴¹ awarding commoners just a fraction⁴² of total land (Banner 2005: 293), often of marginal quality compared with land obtained by foreigners or chiefly elites.⁴³ As had been predicted by those who resisted these changes, many *makaʻāinana* became tenants on their own land as the *mahele* introduced new forms of inequality and land became increasingly concentrated in the hands of foreigners.

Many ʻōiwi had foreseen these changes during the 19th and even the latter part of the 18th century, well before the most overt imperial advances by the U.S. had taken place.⁴⁴ By the dawn of the 20th century, American and other foreign elites controlled most of the land, commerce, banking and shipping trade in the islands (McGregor 2007: 39),

³⁹ This included the establishment of the Land Commission in 1845, the ‘Great’ Mahele (division) in 1848 and later Kuleana Lands Act (1850).

⁴⁰ Initially, most land was controlled by chiefs (1.6 million acres), the king (1 million acres) and the government (1.5 million acres) (Banner 2005: 293).

⁴¹ See Linnekin (1987: 30) for a discussion of data sources about acreage.

⁴² *Makaʻāinana* were awarded just 29,000 acres of land in total.

⁴³ According to Linnekin’s research, *makaʻāinana* parcels averaged 2.7 acres, compared to foreigner parcels that averaged 141 acres (Linnekin 1987: 30). Lesser chiefs (*konohiki*) and chiefs (*aliʻi*) averaged grants of 74 and 1,523 acres respectively (Linnekin 1987:30).

⁴⁴ Historian Samuel Kamakau noted in 1867 the connection between *haole* arrival, devastating illness and the growing pursuit of profits: ‘the *haole* are people who kill other peoples; and the desire for glory and riches, those are the companions of the devastating diseases’ (quoted in Silva 2004: 26; translation Tengan, 757–765).

often leasing some of the best land for nominal fees, and beginning the process of land investment and speculation (Banner 2005: 330–331). These elite families became known as the Big Five investors: Alexander and Baldwin; American Factors; Castle & Cooke; Theo H. Davies; and C. Brewer and Company. These families played a critical role in the development of the islands’ particular path of capital development (Witeck 2001: 40; Brown 2003: 109; Cooper and Daws 1985; Melrose et al. 2016: 8), in ways that continue to structure contemporary land ownership patterns. As the thesis will argue, these histories represent critical junctures and injustices that ‘āina work practices seek to address, attempting to rebuild not only parts of the *ahupua‘a* system but to heal wider traumas associated with colonisation (Marshall 2012). As I have sought to demonstrate, these events impacted the gendered and sexual relations of Natives and settlers. In the next section I will discuss the impact of the increasing number of newly arrived plantation workers, as well as how different groups interacted and intermarried.

Exports, Sugar, Imperialism and Militourism

By the 1830s Hawai‘i had become an agro-exporter of sugar, molasses, bananas and other commodities⁴⁵ (Kimura and Suryanata 20116: 101) and a significant producer of rice (Philipp 1953). Though sugarcane had been present in the islands since early Polynesian settlement, the first sugar mills inaugurated the era of large-scale production aimed at supplying new markets in California during the gold rush of the 1840s—a new opportunity for profit that former missionaries and their descendants eagerly pursued (MacLennan 2014: 100). Many Hawaiians protested the Hawaiian government’s promotion of sugar industries (MacLennan 2014: 100) and the burden of tax and vagrancy laws that targeted them (Witeck 2001: 39; Kelly 1999). They also rejected the conditions of plantation labour, even as sugar planters

⁴⁵ Such as coffee, cattle hides and yams.

sought out Hawaiian women for their prowess in this work (Glenn 2009: 196; Andersen et al. 1984).

The growth of plantations diverted water from other forms of farming and planters increasingly pursued foreign labour to provide productive, 'docile' wage-labour in the context where Hawaiians had died,⁴⁶ resisted plantation work or otherwise employed. The Hawai'i Board of Immigration was established in 1866 for the purpose of recruiting foreign plantation workers (MacLennan 1997: 101) who were quickly segregated by race once they arrived in the islands (Takaki 1984; Beechert 1985). From the 1870s onward, plantation owners brought thousands of men (and some women) from China and Japan to work as field labourers; Japanese and Chinese men were considered ideal workers while Europeans⁴⁷ were sought as managers and overseers (Glenn 2009: 198). By 1892, the plantation workforce had grown from a few thousand in 1872 to more than twenty thousand (La Croix 2002: 9). This recruitment initially concentrated on Asian men as labourers and on encouraging the settlement of European families. Over time, however, sugar planters came to see women and families as 'stabilising' forces for plantation labourers, regularising production and thus profits (Glenn 2009: 196). As mentioned in Chapter 2, these forces evolved into complex patterns of plantation recruitment, racialised segregation and production practices that, I shall argue in Chapter 6, appear to continue to shape how different groups are positioned as possible citizens through their association with the quality of being hardworking.

⁴⁶ Some efforts to import 'South Sea islanders', were attempted in the hopes that their 'intermixing' with Native Hawaiians could help to improve the 'diminishing Native stock' (MacLennan 1997: 101).

⁴⁷ For more on the concept of *haole* see Rohrer (2010, 2016).

However, in the context of the early sugar plantation days, missionary descendants' business interests and U.S. imperial aspirations converged on the Hawaiian Kingdom, and on January 17th, 1893 a group of local white businessmen, backed by a U.S. militia, overthrew the Queen and the Hawaiian monarchy (Tengan 2008: 826–834; Trask 1999: 15).⁴⁸ Hawaiian language newspapers at the time were perseverant in expressing resistance (Silva 2004) and in spite of a U.S. inquiry into the injustice of the overthrow (the Blount Report), the Queen was not reinstated.⁴⁹ A provisional government, the Republic of Hawai'i,⁵⁰ pushed to transform the U.S. occupation into annexation,⁵¹ which took place in 1898 (Tengan 2008: 838). Hawaiians resisted these colonial encroachments through at least two armed rebellions and extensive written petitions,⁵² and the newspapers documented it all (McGregor 1989: 34–45; McGregor 2007, 42; Silva 2004: 127–28, 138–39; Tengan 2008: 838). Both women and men participated in the resistance (Silva 2004; Tengan 2008: 826–834).

By the end of the 19th century, sugar represented 92% of Hawai'i exports (Witeck 2001: 39) and the overthrow and annexation had profoundly reshaped life in the islands, doubling Hawai'i's population over the ensuing 20 years⁵³ (La Croix 2001: 9). These changes affected Native Hawaiians, *haole* and 'resident noncitizens' in very different ways. Within plantations, conditions of physical violence, harsh rules and efforts to stem turnover (Glenn 2009: 200–201) were enforced by the possibility of recruiting workers from new areas such

⁴⁸ Trask credits the Queen with preventing bloodshed by ceding her authority (Trask 1999: 12).

⁴⁹ For more, see Trask (1999: 15).

⁵⁰ Whose constitution was modelled on that of Mississippi's, which prohibited African-Americans from voting (Witeck 2001: 40).

⁵¹ While this annexation was illegal under the U.S. Constitution, which required not a resolution but a treaty, the occupation continued in spite of letters of protest and resistance (Kent 1993: 63–68; Trask 1999, 20–21, also cited in Tengan 2008: 842–850).

⁵² Hui Aloha 'Āina (Hawaiian Patriotic League), for example, produced over twenty-one thousand signatures against annexation (out of forty thousand Hawaiians) (Silva 2004).

⁵³ From an estimated 109,020 people in 1896 to 232,856 in 1915 (La Croix 2001: 9).

as Korea, the Philippines, Puerto Rico, England, Germany and Russia, after Hawai‘i became a territory (La Croix 2001: 9). Plantation workers struggled to improve their conditions through strikes but did not obtain union recognition, and those who could, left (La Croix 2001: 10; Beechert 1985). However, success in organising across ethnic lines⁵⁴ led to some improvements at around the same time urban Native Hawaiian elites fought to gain a political foothold in the Territory, eventually forging political alliances with *haole* Republicans (Silva 2004b). These alliances led some Hawaiian men—but not necessarily women (Kauanui 2008: 286)—to obtain government and private sector jobs. As mentioned in Chapter 2, historical patterns of employment continue to influence where Native Hawaiian men work (McGregor 2007; Tengan 2008) and have shaped gendered patterns in sovereignty organising (Trask 1996; Hall 2009) – economic and political trajectories that may also bear on the gendered relations of ‘āina work.

At the same time that possibilities for paid employment within and beyond agriculture were being shaped by early territorial politics, white anxieties about Hawai‘i’s possible entrance into the Union flared on the continental U.S. (Hobart 2016; Saranillio 2010), even as territorial legislators sought ways to help ‘rehabilitate’ the ‘dying race’, in part by establishing a programme granting homesteads to Hawaiians with 50% or more ‘blood quantum’ through the Hawaiian Homes Act of 1921 (Tengan 2008: 883–891; Kauanui 2008). While the programme was aimed at improving Hawaiians’ land access, ability to farm and overall wellbeing, the use of blood quantum⁵⁵ to define who met racial criteria had the effect of differentiating between ‘the industrious, assimilated part-Hawaiians’ and ‘needy,

⁵⁴ Labour organising at the time lobbied for protections including higher wages and better prices for sharecroppers, an eight-hour day, overtime pay, retirement plans, and eight weeks’ paid maternity leave for women (Glenn 2009: 224) – protections that continue to look progressive in a modern context.

⁵⁵ See Kauanui (2005) for more on blood quantum.

full-blooded Hawaiians' who could not compete with other races (Tengan 2008: 899–902; Hasager and Kelly 2001; Kauanui 1999b; McGregor 1990), such as the supposedly (now) entrepreneurial, hardworking Japanese or Chinese (Tengan 2008: 902–90; Glenn 2009).

Racialised stereotypes, in their gendered forms,⁵⁶ were never more at their height than in the debates over statehood, as white U.S. nationals feared the incorporation of a mostly brown Hawai'i into the union while resident *haole* feared the strength of a possible Native Hawaiian-Asian alliance (Trask 1999: 18). At the same time, social life and relations continued to unfold between different groups of settlers, immigrants and 'ōiwi, leading toward particular gendered patterns of intermarriage as groups sought to negotiate different labour practices, kinship networks and attitudes toward intermarriage (Kauanui 2008: 285). By the 1940s, pineapple became the second most important agricultural export crop and two-thirds of the civilian workforce was employed in sugar and pineapple production, crops that together made up 90% of field crops in the islands (Hitch 1992; cited in Kimura and Suryanata 2016: 115).

The increasing success of labour strikes⁵⁷ in the latter 194's and 1950s played an important role in the formation of cross-ethnic alliances and contributed to what is known as 'Local' identity. Defined in multiple ways, 'Local' (capitalised) has come to refer to a multi-ethnic series of markers which denote familiarity with the customs of different Hawai'i ethnic groups and may be used to describe a pan-ethnic identity (Okamura 1992: 243; Fujikane et al. 2008). Simultaneously, and linked to the success of union organisers in obtaining higher wages for workers, sugar plantations began to decline, sending investors to

⁵⁶ The is exemplified in the infamous Massie case, where Thalia Massie, a white woman living in Hawai'i accused several Hawaiian and mixed-race men of sexual assault which led to the killing of Joseph Kahahawai and sparked debates which arguably delayed Hawai'i statehood (Stannard 2006; Rosa 2014, 2000).

⁵⁷ For example, the 'Great Sugar Strike' of 1946 brought together 33 plantations, a total of 28,000 ILWU workers (HDOA n.d.; see also La Croix 2002: 12)

pursue development and the military as central planks of the economy (Cooper and Daws 1985; Kent 1993; Brower 2016: 69). Popular portrayals of Hawai'i during this time depicted Hawai'i as a welcoming, exotic and feminised locale, which could appeal to tourists and military recruits alike (Trask 1999; Ferguson and Turnbull 1999; Halualani 2002; Imada 2004; Tengan 2008: 7).

Further changes came with Hawai'i's admission into the United States in 1959, yet another illegal manoeuvre (Kauanui 2005b: also cited in Tengan 2008: 994–996). Statehood was fiercely contested and offered trade-offs for different groups. For example, labour organising and access to U.S. labour rights and higher wages were important to plantation workers, but this contributed to capitalists' decisions to shift production to cheaper locations (India, the Philippines, Cuba and Puerto Rico, for example) (Takaki 1984). Plantation closures actually increased land enclosures, as a multitude of small owners reclaimed their leases and interrupted Native Hawaiian traditional gathering practices and shoreline access (Melrose et al. 2016: 16). This transition is, in some ways, still occurring, as the last sugar plantation only closed in 2016.

Nevertheless, the major transition from a plantation-dominated economy, highly implicated in the international division of labour (Witeck 2001: 38), toward one focused on the military, tourism and real estate took place under an ethos of liberal capitalism development which was also accompanied by comparatively progressive⁵⁸ Democrat-led labour rights and social programmes (Witeck 2001: 41). By the late 1960s, the first seed companies had also established themselves in the islands (Gupta 2013: 13) and advances in refrigeration and shipping meant that Hawai'i's reliance on imported crops increased. By

⁵⁸ These included mandatory medical insurance for employees working more than 20 hours per week, unemployment pay, workers' compensation and collective bargaining for the public sector (Witeck 2001: 41).

1952, the islands only produced one-third of fruits and vegetables consumed locally (Philipp 1953, also cited in Kimura and Suryanata 2016: 115). The changes that began in the 1960s set the stage not only for cross-ethnic labour organising, seed production and reliance on food imports but also the growing interest in preserving agricultural lands and open space as part of touristic landscape consumption. Moreover, as I shall discuss in the next section, these changes engendered massive resistance in the 1970s, often led by Native Hawaiians and farmers, including resistance to the feminised, exoticised image of Hawai'i being used to sell real estate and tourist packages by both *haole* and Asian settlers, the latter of whom had gained significant political power in the state (Trask 1999; Cooper and Daws 1985).

The 1970s arguably brought new wind to practices of resistance to the intensified forms of development that accompanied the plantation transition. During this time, a series of prominent land reclamations,⁵⁹ occupations and disputes between farmers and developers set important precedents for cross-ethnic alliances and for today's agrifood-based practices (Kelly 1999: 67; also cited in Goodyear-Ka'ōpua 2013: 1066). The success of some of these efforts and a newly energised set of sovereignty movements pushed for changes that led to amendments to the State Constitution in 1978, establishing, inter alia, rights of access and gathering (Goodyear-Ka'ōpua et al. 2014; McGregor-Alegado 1980) and the protection of agricultural lands.⁶⁰ Yet in spite of these changes, in the 1980s some of the best-quality agricultural land was designated for development rather than farming, in spite of the abundance of other lands for development (Suryanata 2001: 74–75). Plantations continued to close (Melrose et al. 2016: 18) as the state pursued attempts to 'diversify'

⁵⁹ Such as the reclamation of the island of Kaho'olawe.

⁶⁰ Specifically, this included provisions to protect and conserve agricultural lands, 'promote diversified agriculture, increase agricultural self-sufficiency and assure the availability of agriculturally suitable lands' (Suryanata 2001: 72).

agriculture (Brower 2016: 70)⁶¹, largely through neoliberal economic policies that further integrated Hawai'i into globalised capital markets that largely directed profits back outward to non-resident and foreign investors (Witeck 2001: 42). These neoliberal state programmes incentivised capital investment in 'high-tech', high-value export crops, seed research and biotechnologies (Brower 2016: 70; Melrose et al. 2016: 18) and pursued public sector cuts in spite of budget surpluses. The growth of the tourism sector and services boosted women's labour force participation rate but many jobs were of lower quality and heavily stratified by ethnicity (DEBT 2010: 11).

At the same time, the 1980s and 1990s were a time of flourishing Native Hawaiian political organising (Goodyear-Ka'ōpua 2011)⁶²; several successful land occupations and other events set important precedents for the development of *aloha 'āina* movements (Goodyear-Ka'ōpua 2011; Hasager and Friedman 1994; Blaisdell 2005; Sai 2004; J.K. Osorio 2002). Since the early 2000s, these struggles have set the backdrop for the contemporary politics of agrifood systems and land-based social movements. Given the high levels of inequality in land tenure and the pressures of tourism, development and militarisation on the islands, growing on and restoring land in Hawai'i entails political and legal struggles and conflicts between different actors, communities and the state (Goodyear-Ka'ōpua et al. 2014). I discuss how some of these movements have evolved in the 2000s in ways that shape contemporary 'āina work practices as well as the broader political economy of agriculture in Hawai'i and also, as I shall suggest, shape the social relations of production within different agrifood practices.

⁶¹ One form of this support involved securing U.S. federal funding for 90 different agricultural projects over 18,000 acres, in hopes of spurring development of new forms of farming through the Rural Economic Transition Assistance—Hawai'i fund (Melrose et al. 2016: 18).

⁶² See Kauanui (2005b) for more on sovereignty initiatives in the 1980s.

'Diversified Agriculture' in the Contemporary Multicultural Settler State

The first part of this chapter illustrated how the history of agriculture in Hawai'i offers important insights into colonial projects, as well as resistance to them, and their influence on gendered social relations: changes to divisions of labour in social provisioning, to the power and value of different women, and shifting associations between differently racialised subjects and forms of work are amongst the most notable. Massive demographic changes, linked with the death and dispossession of Native Hawaiians, labour-related immigration and land accumulation by white settlers, continue to shape contemporary land ownership patterns and complex, multi-ethnic social relations. This second part of the chapter takes up some of the recent histories of food and land-based politics, contemporary patterns of agriculture, and the social contours of Hawai'i's multi-ethnic society. In the first section, I explore the wider political economy of agriculture in the islands before detailing what is known about agricultural employment and inequality in Hawai'i. I then pick up some of the historical threads that have shaped seed production, pilgrim farming and 'āina work.

The Political Economy of Diversified Agriculture in Hawai'i

This section outlines four key dimensions of Hawai'i's agrifood political economy, discussing how these factors help explain the extent to which different agrifood practices can offer gender- and socially inclusive work. These dimensions include: the role of agriculture in the overall economy; globalised changes in agrifood markets; the role of state promotion of diversified agriculture and; ongoing constraints to local production. I then discuss some patterns in crop types, farm characteristics and the differing motivations and profit positions of farms, before turning to analyse agrifood labour in greater depth.

In the first place, agriculture makes up a relatively small sector of Hawai'i's economy, but for different groups, both plantation and subsistence agriculture retain

symbolic and cultural importance. Currently, the natural resources, mining, and construction sector is the fastest growing area of the economy (DOLETA 2016: 9), even as the share of jobs within Agriculture, Forestry, Fishing and Hunting remains small, similar to the U.S. average (1.3% for the U.S. compared to 1.4% in Hawai'i) (DBEDT 2018: 9). At the same time that agriculture represents a smaller portion of the economy and workforce, other larger industries such as the military, tourism and development exert pressure on agricultural land and rural spaces. While open agricultural landscapes form a part of Hawai'i's contemporary touristic appeal, the land on which agriculture takes place has reduced by half since 1980 (Melrose et al. 2016: 4).

Secondly, the globalisation of food and agricultural markets has also impacted Hawai'i in several important ways that bear on the thesis analysis of outlier agriculture. Suryanata has argued that globalisation has accentuated differences in agricultural paradigms between those focused on increased production, international trade and intellectual property rights and those invested in 'multifunctional' agriculture, the environment and food safety (2002: 495). The accelerated internationalisation of trade in agricultural commodities and foodstuffs has also been accompanied by consolidation within agrifood industries, which, while bringing lower prices to consumers, has affected prices and competition for Hawai'i producers (Suryanata 2002: 494-5). This affects imports and local consumption of Hawai'i-produced foodstuffs as well as exports: U.S.-based suppliers are often able to offer lower prices and steady supply compared to Hawai'i producers, including in organic markets (Suryanata 2002: 495) while vertically-integrated global suppliers dominate export markets (Southichack 2007). These trends are relevant to the different case studies which produce food for local as well as export markets and to the overall social relations of production, as producers may seek to cut costs by relying on low and unpaid

labour on their farms (Getz and Brown 2008b: 1186; ROC 2012; Jayaraman 2013; Carolan 2018). All of these factors may create pressure on farmers and wages, and Hawai'i's archipelagic geography may also shape the power of collective bargaining for the agricultural labour forces, as people may be less mobile than in contexts where land borders offer access to other labour markets.

Thirdly, state support has resulted in multiple efforts since the 1980s to increase local food production, and while production did rise in the late 2000s, Hawai'i's local production continues to face a number of constraints. While a small group of local producers have been present in the islands since the 1990s, supplying the high-end restaurants and hotels that developed the concept of 'Hawai'i Regional Cuisine' (Costa and Besio 2001; Suryanata 2002), state-level efforts have more recently begun to focus on local consumption, compared to past work on mostly on high valued, 'exotic', Hawai'i-branded⁶³ crops for export (Suryanata 2001).⁶⁴ Current state efforts have been focused on making Hawai'i more 'food self-sufficient' (OoP DBEDT 2012), doubling local food production by 2030 (Lincoln 2016) promoting school gardens, supporting urban farming initiatives and procuring large former plantation land tracts for subleasing (Melrose et al. 2016). While the demand for locally produced food appears to be growing,⁶⁵ not everyone is convinced that such programmes will have equitable outcomes, especially for poorer consumers (Kent

⁶³ These include the 'Seal of Quality' and the 'Made in Hawai'i with Aloha' branding programmes (HDOA n.d.).

⁶⁴ However, the branding of products grown in Hawai'i can be said to apply to products grown for both local consumption and export, although in different ways.

⁶⁵ The demand for locally produced food has continued to grow, with one study finding that 81% of O'ahu consumers surveyed believed too little food was grown locally and many would be willing to pay more for certain locally grown products (Ulu pono Initiative 2011).

2016: 5; see also Cai et al. 2007), or indeed, even address reliance on food imports⁶⁶ (Suryanata 2002).

In this way, Hawai'i's local production continues to face a number of constraints, including high production costs linked with the high costs of land, inputs⁶⁷ and relatively high agricultural wages (Suryanata 2001: 72). High land costs have been a key problem, and state policies have not stopped gentrification of agricultural land (Suryanata and Lowry 2016: 183) at the same time that the inability to live on leased land represents a significant economic issue for farmers and farmworkers (WDC 2013: 29). Research has shown that many new agricultural land buyers are wealthy individuals, corporations and trusts (e.g. the Edmund Olsen Trust) (Melrose et al. 2016: 18–19). Because fee simple land remains expensive, some wealthy individuals purchase agricultural land but undertake only nominally agricultural or ranching activities on these so-called 'gentlemen's farms', enabling residential development on agricultural land (Suryanata and Lowry 2016). Some new wealthy owners support bona fide agricultural ventures, while others rely on tax incentives to plant exotic high-value crops or sublease to smaller growers (Melrose et al. 2016: 19). Thus, while there is currently a surplus of agricultural land (Melrose et al. 2016: 4) its quality varies. This is partly because concerns about containing urban development strongly shaped land use policy, and thus, prime agricultural land, perceived as abundant was not necessarily targeted for preservation (Suryanata 2001). Currently, land tenure is characterised by leasehold terms and long-term leases are increasingly becoming available for larger areas.

⁶⁶ Suryanata has argued that food importation is a longstanding problem that cannot be simply remedied by increased production goals, especially because local producers cannot compete with larger suppliers and cannot sell easily to off-island markets.

⁶⁷ Research interviews found that Input markets, like other markets in the islands, are constrained, with just a few companies supplying most of the islands' seeds, fertilisers, pesticides and other inputs. Machinery likewise is expensive, leading to sharing arrangements amongst some producers (HS and IA).

For smaller farmers, informal arrangements and short-term agreements are common and tenure has, in the past, often been less secure (Suryanata 2001: 73).⁶⁸ The recent breakup of some large landholdings and long-term leases has changed this picture somewhat, with more opportunities available to access to former plantation lands and a greater willingness amongst landowners to work with new farmers.

While these constraints and issues represent limits to farming and shape the broader social relations of production, they have not represented total roadblocks to Hawai'i producers nor created uniformly exploitative social relations of work on farms. In some sense, the constraints faced by Hawai'i farms are reflected by farm characteristics, which show that many farms are very small in size compared to farms in the continental U.S.: most farms in Hawai'i are under 100 acres (Kent 2013: 8), with a median farm size of five acres (USDA 2012: 246).⁶⁹ There are also a small number of very large farms with over 1,000 acres (127 farms or 2% of Hawai'i farms) (USDA 2012: 17).⁷⁰ The type of farming taking place on Hawai'i farms is also important, as the majority of Hawai'i farmland is in pasture—83% of all agricultural land use, most of which is on Hawai'i island—while field crops are grown on the remaining 151,830 acres (Melrose et al. 2016). The crop utilising the most land in 2015 was sugar on Maui (since fallowed in 2017), followed by seed production, commercial forestry and macadamia nuts. Export-oriented agriculture accounts for 79% of commercial agriculture (Melrose et al. 2016: 4–5)⁷¹ and mainly takes place on Hawai'i Island, Maui, Moloka'i and Kaua'i, though some local food fruit, root and vegetable production does

⁶⁸ A little over half of farms were fully owned by their operators while 24% of farms operated through tenancy agreements (USDA 2012: 246).

⁶⁹ This compares to the U.S. average of 434 acres and a median size of 80 acres (USDA 2012: 245).

⁷⁰ Food plan costs are calculated separately for Alaska and Hawai'i, but gender data and different food plans are not calculated.

⁷¹ In 2016, Maui Cane and Sugar announced the closure of operations, leaving an important area of land to be transitioned (Melrose et al. 2016: 20).

reach markets across the islands (e.g. bananas and speciality crops) (Melrose et al. 2016: 4–5). Some crops have both local and export markets,⁷² with the latter largely subsidising local production of coffee, pineapple, nursery products, forestry, papaya, cattle and tropical fruit (Melrose et al. 2016: 4–5).

Crops too have different implications for social and labour relations, and many Hawai'i farms specialise in labour-intensive 'diversified crops'⁷³ which include a broad range of vegetable crops: root, melon, leaf crops and others which are consumed locally and grown principally in the central plains of O'ahu on some of the best agricultural land (A and B class)⁷⁴ (Melrose et al. 2016: 28).⁷⁵ The majority of the state's 7,000 farms grow some combination of these diversified crops (USDA 2012) and the island of O'ahu has more diversified agricultural production than the next three islands combined (Melrose et al. 2016: 5).⁷⁶ In terms of market access, many producers, especially on neighbour islands, obtain a significant portion of their income from direct sales to consumers, hotels and restaurants and/or creating valued-added products (Melrose et al. 2016). They must compete with the imported agrifood system, which is supplied through highly vertically integrated retailers who rely on multiple U.S. or international producers, arguing that local production remains unreliable (Suryanata 2001: 81). However, the growth in farmers' markets over the last several years appears to be opening new opportunities for local producers (Castro et al 2014).

⁷² Diversified crops are largely oriented toward local markets, except for basil, other spices (such as Thai ginger, betel leaf and moringa) and Okinawan sweet potato that are generally exported to the U.S. and Canada. (Melrose et al. 2016: 28–29).

⁷³ These are usually referred to 'diversified crops' in Hawai'i, a term that originally included all agricultural industries that are not pineapple and sugar (Suryanata 2001), although there is some indication that these meanings have shifted over time. In other contexts, scholars have contested the terms by which some products are framed as traditional and nontraditional (Werner 2011: 1593).

⁷⁴ On 16,900 acres in the islands.

⁷⁵ See Melrose et al. (2016: 28) for the locations of different diversified crop systems across the islands.

⁷⁶ 9,860 acres compared to a combined 7,000 acres.

Finally, Hawai'i farms possess different motivations and orientations to profit-making that must also be understood for how they shape the social relations of production. Analysing Hawai'i agro-food initiatives (AFIs) such as farm tours, festivals, workshops, fairs and other events, Mostafanezhad and Suryanata (2018) have highlighted differing motivations amongst farmers and participants in relation to the role of profit versus other values within their work. Drawing on Anna Tsing's work (2009, 2013, 2015) they analyse how different agro-food initiatives generate value 'through the circulation in and between commodity and social systems of exchange' (2018: 228), differentiating between those 'farming for values' and those who highlight the 'value in farming' (2018: 230-31). For the former, 'farming for values' includes the desire for building of community ties and new forms of citizenship while larger, more commercially-oriented farms and organisations use AFIs to educate the public about commercial agriculture (2018: 231). Mostafanezhad and Suryanata suggest that those focused on the 'farming for values' draw on a number of ways of cutting costs and obtaining revenue such as farm tourism, grants and donations as well as non-farm income, as they cannot earn enough to live through the sale of their commodities alone (2018: 231).

Such insights are important for the present research which also included agrifood practices that crossed different orientations to economic and social value, discussed further in Chapter 4. In particular, what I have framed as 'pilgrim farms' relate to this concept of those who 'farm for values' and who represent a heterogeneous collection of usually small-scale farms 'combining a portfolio of activities at the intersection between simple reproduction and accumulation' (Baglioni 2017: 5-6) (see Chapter 6). These considerations are important for understanding agrifood inequalities within the cases, as profit-orientation and the overall political economy of agriculture in a given locale shape how intensively land

is farmed and how farming is organised, and therefore labour and social relations (Guthman 2004b).

From an intersectional, gendered perspective then, there are important concerns about how differently positioned producers and consumers might benefit from rising demand for local food production. Farm economic viability remains a concern, as do the economic livelihoods not only of farm owners but farmworkers and other agrifood system workers. My research focuses on some of the gendered, intersecting issues associated with agricultural fieldwork in particular. As I shall discuss in the following chapter, the information that is available on these sectors suggest that they, as elsewhere, are sustained by unequal social relations. For example, at the same time that producers are asked to increase production, both women farmers and farmworkers had difficulty reporting their earnings (Women Farmer's Survey 2016; Farmworker's Assessment 2016). It also appears that in the last several years, Hawai'i farms have actually consolidated in size and the number of operators has declined and that specifically, the number of women operators declined at almost twice the rate of male operators during this time (USDA 2012: 562).⁷⁷ These data raise questions about who is able to benefit from rising demand for local production and able to obtain work within different agrifood practices in the islands.

The Political Economy of Agrifood Work in Hawai'i

While the broader political economy of agricultural land and state policies raise questions about who is benefitting from agricultural work, data on the economy as a whole and on agrifood employment in particular also raises concerns about the quality of agrifood work and prospects for social equity and well-being. In this section, I first discuss overall

⁷⁷ From 1,806 operators to 1,574—a nearly 13% decline, compared to a roughly 5% decline for male operators (from 5,715 to 5,426).

workforce dynamics as well as broader socio-economic inequalities, before discussing different types of farm employment in particular.

Overall Workforce Dynamics and Demographics in Hawai'i

Hawai'i's workforce is small and somewhat older than the rest of the U.S., meaning that labour force participation rates are likely to decline in the coming years (DOLETA 2016: 3-5). The state foresees future employment growth in jobs requiring a high school degree or less and that does not require work experience⁷⁸ (DOLETA 2016: 17 – 19) – in other words, in areas of employment that are likely to be low-wage. Over the past decade, unemployment has tended to be lower than the U.S. average although unevenly distributed between more rural locations (DOLETA 2016: 5), such those on Molokai and Kaua'i.

With regard to the demographics of the workforce, Okamura has shown that racialised hierarchies continue to shape employment prospects for Hawai'i's different ethnic groups (2008, 2011). Based on 2016 U.S. census estimates,⁷⁹ 37.7% of people reported their ethnicity as 'Asian alone',⁸⁰ 25.8% as white alone,⁸¹ 23.7% reported being 'two or more races', 10.2% Native Hawaiian or other Pacific Islander alone, 10.4% Hispanic or Latino, 2.2% African American and 0.4% American Indian or Alaska Natives (U.S. Census Bureau 2016). Asians appear to make up the 'largest race group' employed across all Hawai'i industry

⁷⁸ Sixty-nine percent of the state's projected job openings through 2024 and most (84%) will not require any related work experience (DOLETA 2016: 17 – 19).

⁷⁹ These categories are often problematic, for example conjoining a number of very different groups under the Category 'Asian' and Native Hawaiian and Pacific Islanders. However, these categories are used to point toward some broad issues of intra-group inequalities.

⁸⁰ This definition is defined as a 'person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. It includes people who indicate their race as 'Asian Indian,' 'Chinese,' 'Filipino,' 'Korean,' 'Japanese,' 'Vietnamese' and 'Other Asian' or provide other detailed Asian responses (US Census Bureau 'Definition').

⁸¹ According to the U.S. Census definitions, 'White. A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as "White" or report entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian'. 'The concept of race is separate from the concept of Hispanic origin. Percentages for the various race categories add to 100 percent, and should not be combined with the percent Hispanic. Hawai'i has 22.1% non-Hispanic whites' (US Census Bureau "Definition").

clusters (DBEDT 2018: 12) and research has shown that white, Japanese and Chinese-Americans occupy a disproportionately higher percentage of socioeconomic and political positions than Native Hawaiians, Filipino-Americans, Samoans and other ethnic minorities in Hawai'i (Okamura 2008: 6). Recent State data has shown that whites in Hawai'i earn more than any other ethnic group, with the exception of the Art, Entertainment and Recreation industries (DBEDT 2018: 5). Filipina-American and Chinese-American women in Hawai'i also have particularly high rates of labour force participation (Okamura 2008: 6)⁸² and a significant percentage of workers in Hawai'i were born outside the U.S. – 22%, the highest of all U.S. states (DBEDT 2018: 17).⁸³ Thus, Hawai'i's workforce dynamics and demographics differ substantially from those found in U.S. continental contexts and shape the political economy of agrifood work in correspondingly specific ways.

Factors Affecting Farming Occupations

Some recent data on the employment dynamics and demographics of agricultural work is helpful for understanding the role of agrifood work in Hawai'i's economy. However, this data separate agriculture from food service but includes it with forestry, fishing and hunting professions. Such categorisations make precise dynamics less discernable but offer a reasonable overview of broader changes in employment, expected directions and the kind of jobs available in these areas.

The 2013 State Agricultural Workforce Skills Panel Report identified several major issues for farmers and farm employers in the islands. These included high costs of fuel, scarce water resources, low land availability, poor infrastructure, cumbersome government

⁸² The rate of women's labour force participation Hawai'i was 59.4%, (Hess et al. 2015: 3). This was down slightly from 2004 (60.8%) (Hess et al. 2015: 3) but up from 48% in 2008 (DEBT 2010: 5). This is lower than the current U.S. average of 57%.

⁸³ For more on these trends in the U.S., see <https://www.census.gov/prod/2012pubs/acs-19.pdf>

procedures, misaligned government, industry, and educational institutions⁸⁴ and lack of extension agents because of government cutbacks (WDC 2013: 10). In relation to the regulatory environment, participants in this Panel identified that mistrust between farmers and the state hampered collaboration in employment and safety practices (WDC 2013: 20) and that dim prospects for farming had previously hampered investments in the agricultural workforce and experts to support industry development (WDC 2013: 27). Generally, agriculture and food industries were some of the worst paid sectors in the state, with agriculture as the 5th worst paid sector followed by social services, personal services, food service and domestic work (DBEDT 2010:19).

The closing of the last sugar plantation (2015-2016) reduced the number of available agricultural jobs available in the islands (6,028 in 2016) (QCEW 2016) and the state estimates that most job growth will result from the need to replace farmers who retire or leave farming (WDC 2013: 84-85). Indeed, farming employs the oldest workers out of all industries in the islands: 38% of the workforce are Baby Boomers (52 to 70 years old) and also the largest percentage of workers over 71 years (4.2%) (DBEDT 2018: 11). Because of this, concern has been expressed that the demographic transition in farming could lead to the loss of land in agriculture (WDC 2013) and to loss of farming knowledge. Occupational growth rates are likely to remain mostly unchanged but that some speciality, small-scale farmers are expected to find new opportunities in organic farming and aquaculture, for example, (WDC 2013: 84-85). Based on State estimates through 2018,⁸⁵ this job growth is

⁸⁴These issues of misalignment included the procurement procedures which prevent government agencies from purchasing more locally-sourced products; University Agriculture programs focused more on research than production and; a fragmented agricultural career pathway within the Department of Education (WDC 2013: 15).

⁸⁵ Little change in employment is expected for agricultural equipment operators during this same period. However, employment of farm and ranch animal farmworkers is expected to decline through 2018.

also mixed by occupation: agricultural inspectors and scientist occupations are expected to remain the same, whereas ‘faster than average’ growth are expected for crop, nursery, and greenhouse farmworkers and slower than average employment for farmers and ranchers (WDC 2013: 83). Mechanization is also expected to affect the number of workers employed in agriculture in future (WDC 2013: 83).

At the same time that a number of challenges have been noted for these industries, occupational growth may be spurred by growing interest in food self-sufficiency and demand for products grown in Hawai‘i (WDC 2013: 72). In order to support this, the State is promoting an ‘agricultural renaissance’ (WDC 2013: 10), even while some have highlighted that these goals are often incompatible with other State actions and priorities (WDC 2013: 15). In the present, some participants in the skills panel felt that there was an overall labour shortage within specialised occupations and for those trained in Hawai‘i’s specific agricultural issues (WDC 2013: 27), especially acute on the island of Kaua‘i (WDC 2013: 41)⁸⁶. Some included a shortage of local “Willing Workers on Organic Farms” (WWOOFers) within this, lamenting that WWOOFers mainly came from the continental U.S. or abroad to work for trade (WDC 2013: 34). Some agricultural employers have addressed the lack of labour through efforts to grow local labour on farms (WDC 2013: 37) and also ‘turned to groups of willing and available labourers including Marshallese citizens in the U.S. on COFA, ex-offenders, and immigrants’ in order to fill the need for low and mid-level workers in agriculture (WDC 2013: 43). Indeed, the agriculture, Forestry, Fishing and Hunting cluster reports the largest percentage of born workers born outside the U.S. (38.8%) compared to other Hawai‘i industry clusters (DBEDT 2018: 17-18), suggesting that

⁸⁶ Such issues differ by island, as Molokai tends to focus on subsistence and non-monetary transactions within agriculture (WDC 2013: 48).

this is an important area of employment in the islands. Participants in the State skills panel report highlighted the specific issues this raises within farming on O‘ahu in particular, as some of these farmers may not be familiar with farming laws and regulation and experience language barriers to obtaining more information (WDC 2013: 17).

From the perspectives of farmers involved in the Skills Panel, there was a need to develop workers’ ‘basic work readiness skills’, including ‘attendance, motivation, health and sobriety, and flexibility with time and abilities’ (WDC 2013: 43) – issues frequently mentioned in my own research and in the Women Farmers’ Survey consulted (see Chapter 4). Some of the potential solutions offered by the Skills Panel participants to the difficulties faced by those employed in farming included a social service package with subsidies for health, childcare, housing, transportation, and other costs(WDC 2013: 18-19). This demonstrates that many Hawai‘i farmers and farm employers have the social sustainability of farm labour on their agendas, if largely from the perspective of employers rather than workers. And yet, the form of training farmworkers need also links back to the wider debates about what constitutes sustainable agriculture in the islands, as some participants in the Skills Panel felt that those trained in the agricultural sciences to date had been trained to work specifically in seed companies, since these companies paid more (WDC 2013: 33) and questioned whether this focus in training was adequate to the needs of the entire sector.

In addition to the challenges, constraints and prospects for undertaking agrifood work, ongoing questions of the quality of this work are raised by other data on the Hawai‘i case. Agriculture, forestry, fishing and hunting industry report the highest percentage of Hawai‘i’s workers who are self-employed (31.7%,) (DBEDT 2018: 5) and jobs in the agriculture industry cluster employ the largest share of workers with only a high school

diploma or less (54.9%) out of all industries (DBEDT 2018: 14). About 20% of jobs in this industry cluster were part-time – a middle range percentage compared with other industry clusters (DEBDT 2018: 15). As of 2016, the course of Hawai‘i’s agriculture economy is not likely to significantly deviate from its current composition over the next four years (WDC 2016: 154). This contrasts with food service occupations linked with the tourism industry that are expected to grow substantially in Hawai‘i in coming years (DOLETA 2016: 19). Taken together, these trends and overall picture of the agricultural sector shows that, in spite of much recent interest, agriculture as a profession is still characterised by low growth, high costs and a high concentration of self-employed, older and (im)migrant workers. In the next section, I discuss further some of the demographic information available about ‘farm operators’ -- a category which joins together the occupations of farmer and farm owner, in order to hone in on questions of gender and race specifically, before examining hired farm labour (farmworking) occupations separately.

Farm Operators: who operates Hawai‘i farms?

In 2012, there were more than 10,000 principal farm operators in Hawai‘i, most of whom employed fewer than five people (USDA 2012: 256).⁸⁷ The USDA utilises the category of farm operator and principal farm operator to differentiate between farmers and farm owners.⁸⁸ However, the overall category of farm operator unhelpfully lumps together farm owners with farm managers and possibly even farmworkers, depending on who is considered to be ‘operating’ a farm. Nevertheless, these data are often the only ones

⁸⁷ There were only 40 farming operations in Hawai‘i which reported five or more farm operators.

⁸⁸ USDA subsumes these categories together under the term ‘farm operators’ as those ‘either doing the work or making day-to-day decisions’ (USDA 2012: Appendix B: B–16). Principal farm operators are those with primary decision-making capacity while the survey also asks about up to three other individuals who undertake day-to-day work and make decisions on farms—farm operators, which may include farm managers, farmers or farmworkers.

available for understanding the demographics and characteristic of Hawai'i's farming sector, even as they present challenges for understanding more precise dynamics in farming (e.g. class differences between workers and owners).

Data concerning ethnicity in farming occupations show a higher proportion of Asian and white operators compared to farm operators of other ethnicities (USDA 2012: 2; DBEDT 2018: 12).⁸⁹ White operators represented slightly more (39%) of operators compared to their percentage in the population (26%) though Hawai'i has the highest number of minority-operated farms in the U.S. According to data from 2012⁹⁰ concerning all farm operators, 4,348 farmers were white, 4,077 identified as Asian, 1,152 as 'more than one race', 999 as Native Hawaiian or Other Pacific Islander farmers and 568 as of Spanish, Hispanic, or Latino origin and 57 as American Indian or Alaska Native (NASS 2017).

With regard to gender, women farmers were less likely to be counted as 'principal farm operators', making up only 22% in the state (USDA 2012: 2) but 36% of farm operators generally, close to the overall U.S. average (USDA 2012: 564). 2008 data suggests that women made up around 35% of the total agricultural workforce⁹¹ (DBEDT 2010: 31) and more recent information on agriculture, fishing, forestry and hunting highlights that men make up 69.6% of the workforce in these industries, making this cluster the 4th most male-intensive industry in the islands (after construction, utilities, transportation and warehousing) (DBEDT 2018: 10). These figures demonstrate the degree to which women are under-represented as farmers and within the total agricultural workforce.

Women-operated farms also tend to be particularly small, with only six women-run farms in Hawai'i employing more than five operators while 85% reported working alone

⁸⁹ It appears that these data include double counting for respondents who reported 'more than one race'.

⁹⁰ However, this census collects data from only three operators per farm (see NASS 2017).

⁹¹ This includes forestry and other occupations.

(USDA 2012: 258). Women farmers tend to earn below the Hawai'i median farm income, which is \$28,000 (USDA 2012: 291) and data also suggest that women are more likely to be part-owners and tenants (Women Farmers Survey 2016). Some research has shown that women farmers had difficulty reporting their earnings (Women Farmers Survey 2016) even while recent state reports claim that within the overall Agriculture, Forestry, Fishing and Hunting cluster, women's average wages were higher than men's – the only industry cluster in the state for which this was true.⁹² However, more disaggregated information is needed to understand agricultural occupations more precisely.

Not only do some state data lump together several somewhat distinct sectors within the Agriculture, Forestry, Fishing and Hunting cluster, but USDA data on farm operators do not reflect important distinctions within categories of ethnicity. For example, 'Asian' farmers may include those whose families have been resident in Hawai'i since plantation days as well as more recently arrived groups. These issues are important because, according to other data and my own research, (im)migrant farmers face different constraints to Local Asian farmers, and the former currently produce the majority of food produced for local consumption in Hawai'i.⁹³ A majority of farmers and farmworkers on O'ahu -- where most locally consumed production takes place -- have (im)migrated from different parts of East Asia and the Pacific (Needs Assessment 2016: 4; Melrose et al. 2016: 6). Precise demographics depend on the island, type of production and location, and the gendered breakdown of farm operators in these communities is not currently known.

⁹² \$42,762 for women and \$33,872 for men.

⁹³ There were only 40 farming operations in Hawai'i which reported five or more farm operators.

Earnings, Issues and Conditions for Agricultural Workers

Unfortunately, little systematic information is available on farmworkers compared with this broader concept of farm operators; the only information available suggests that Hawai'i had 12,492 paid farmworkers in 2012, working on 1977 farms (USDA 2012: 302). However, based on research elsewhere, it is likely that these numbers are greater than reported and some have suggested that up to one-third of Hawai'i farmworkers are undocumented (im)migrants (K. Jabola-Ing, personal communication, 6 September 2016). Some recent non-profit research on farmworkers found that many have (im)migrated to Hawai'i from the Philippines, Thailand, Laos, C.O.F.A. states (such as the Marshall Islands, Federated States of Micronesia and Pohnpei)⁹⁴ and parts of Latin America such as Mexico and Ecuador via California (Farmworker Needs Assessment 2016). Only 10% of those surveyed were women and it is doubtful that these numbers are representative even of the particular (im)migrant groups with which the survey was conducted (Farmworker Needs Assessment 2016). Older data reported that there were 8,613 unpaid workers on 3,518 farms and yet no information is given about their demographics, whether these numbers largely reflect unpaid family labour or whether this tends to reflect the unpaid work of sole proprietors themselves.⁹⁵ In short, in spite of the fact that (im)migrant small farmers and farmworkers make up the majority of the local agricultural workforce within diversified farming, little to no data is collected or published by the state about these different communities, gendered divisions of labour within their work or the barriers they face in relation to language and immigration status.

⁹⁴ After the dissolution of the Pacific 'Trust Territory' the Federated States of Micronesia and the Republics of Palau and the Marshall Islands signed treaties known as the Compacts of Free Association (C.O.F.A.) which exchanged extensive military and other concessions with the right to live and work in the U.S.

⁹⁵ According to the report, unpaid worker is 'a new item for 2012. It includes agricultural workers not on the payroll who performed activities or work on a farm or ranch' (USDA 2012: Appendix B: B-24).

While Hawai'i is framed as having a year-round growing season, different crops do draw on (im)migrant workers during busy harvesting periods: in spite of low rates of issuance of temporary agricultural worker (H2-A) visas,⁹⁶ seasonal trends do apply to several crops such as macadamia nuts, coffee and other speciality crops and some have documented seasonal migration largely by Latinx who appear travel on to the continental U.S. after the end of the harvest (Melrose et al. 2016: 19). Generally, turnover tends to be high within seasonal work as workers move into higher paying work and because of the substantial amount of physical labour involved (WDC 2013: 83). The non-profit research on farmworkers reveals that seasonal work harvesting coffee, for example, can involve highly intensive piece-rate work, which raises health and safety concerns (Farmworker Needs Assessment 2016). My research confirms a seasonal demand for labour within seed production, although it did not appear that workers were migrating specifically to undertake this work but more research is needed to understand the dynamics seasonal labour in seed production and within (im)migrant small farming and farmworking communities.

Based on information available, questions of hired farm labour pay rates, working conditions and pay gaps for different workers raise specific concerns about the quality of work within different agrifood practices. Information about agrifood pay in Hawai'i mirrors trends evidenced elsewhere in the U.S. which show that agricultural workers, food service and food processing workers struggle to obtain wages above both state and federal poverty lines (DBEDT 2010: 6). More than 20% of those working in agriculture failed to earn wages above federal poverty level, compared with more than 30% of food service workers (DBEDT

⁹⁶ In 2013, 123 temporary agricultural worker (H2-A visa) – positions were requested and 98 issued. There were 97 H2-A agricultural workers in Hawai'i, working in the banana, tomato, sheep and bee industries, as well as 'Agricultural Equipment Operators' with an average hourly wage of \$11.85 (Appendix A-14). These visas are granted for 10 months or less to follow the growing season.

2010: 21). At the same time, workers in the Agriculture, Forestry, Fishing and Hunting (AFFH) cluster earn more, on average, than their U.S. continental counterparts⁹⁷ (DBEDT 2018: 6, 19)⁹⁸—however, it may be that some very high-paying jobs within seed industries, for example, are influencing this average. Moreover, information on the agricultural workforce overall does not account for differences between farm owners, managers, workers or forestry operators, for example.

While a 2018 DBEDT report found that women earned more on average than men in the overall Agriculture, Forestry, Fishing and Hunting cluster (2018: 20),⁹⁹ other data show that there may be earnings gaps in agricultural professions in particular. These figures suggest that the difference between what women and men earn in agriculture overall is 38%¹⁰⁰ (DBEDT 2010: 22) and that women are under-represented in the higher earning positions within agriculture¹⁰¹ and over-represented in agricultural positions that earned below federal and state poverty lines.¹⁰² For example, the earnings of 74% of women working in agriculture fell below self-sufficiency or poverty lines, compared with 46% of men¹⁰³ (DBEDT 2010: 31). These figures suggest that, much like elsewhere, agricultural

⁹⁷ \$37,384 in Hawaii on average across a broad range of jobs compared to £36,575 (DBEDT 2018: 19).

⁹⁸ The data source for the DBEDT report come from the U.S. Census Bureau's American Community Survey (ACS) 2012- 2016 5-Year estimates PUMS data for which approximately 9.2% of Hawaii's population were surveyed during the five-year period by the U.S. Census Bureau (DBEDT 2018: 8).

⁹⁹ Average salaries within Agriculture, Forestry, Fishing and Hunting for women at \$42,762 compared to men at \$33,872. This differs from previous DBEDT reporting that showed men's average pay in agriculture was \$35,452 compared to women's \$21,634 (DBEDT 2010: 22).

¹⁰⁰ DBEDT reporting that showed men's average pay in agriculture was \$35,452 compared to women's \$21,634 (DBEDT 2010: 22).

¹⁰¹ Only 6% of women made above \$50,000 (in 2006 dollars) compared with 13% of men.

¹⁰² At the low end of the pay scale, 29% of women working in agriculture earned below the federal poverty line, compared with 20% of men. Many more women earned below state self-sufficiency and federal poverty line wages in total compared to men.

¹⁰³ Only 26% were able to make wages above self-sufficiency, compared with 53% of men working in agriculture.

occupations entail significant gendered pay gaps that appear to be larger than the gendered pay gaps in other 'male-dominated' sectors in the state, such as construction.¹⁰⁴

Other recent research shows that average labour earnings within the Agriculture, Forestry, Fishing & Hunting cluster show stark pay gaps by ethnicity, with whites earning more than Asians, other mixed-race groups and Native Hawaiians:

Figure 1: Average labour earnings by major race group within Agriculture, Forestry, Fishing & Hunting(\$/year)

White Alone	Asian Alone	Native Hawaiian Alone	Other incl. Mixed
52,038	32,687	25,483	27,722

For example, an average Native Hawaiian worker in Agriculture, Forestry, Fishing and Hunting earns 51% less than an average white worker in the same industry cluster. Even though white workers make up 30% of the agricultural labour force (compared to 'Asians' who make up 48% of this workforce), white workers appear to be overrepresented in higher paying occupations (DBEDT 2010: 31). Additionally, white agricultural workers were less likely to earn below self-sufficiency rates (49%) compared to Asian workers, 61% of whom earn below self-sufficiency rates.

Interesting, the report showed small differences between the earnings of those born in the U.S. and those born outside,¹⁰⁵ although again disaggregated figures are not available for agriculture (DBEDT 2018: 27). Agriculture also has significant earnings gaps with relation to educational attainment, as professions requiring college degrees pay significantly more than those that only require some college or high school¹⁰⁶ (DBEDT 2018: 24).

¹⁰⁴ When compared with pay gaps in construction, even though women are much less represented, their earnings are comparable with men's at different pay scales (e.g. 26% of women earn below self-sufficiency, compared with 27% of men).

¹⁰⁵ \$37,194 for U.S. born versus \$35,598 workers (DBEDT 2018: 27)

¹⁰⁶ \$63,713 compared to \$33,057 and high school \$28,686 (DBEDT 2018: 24).

Hired Farm Labour

Based on those surveyed in the Farmworkers' Needs Assessment, many farmworkers reported not only low earnings but also difficulty in understanding their unit of pay, regardless of whether they were paid in hourly, daily, weekly, or other increments (Farmworkers' Needs Assessment 2016: 13). Official pay for farmworkers¹⁰⁷ in late 2016 included an average wage of \$14.88 for newly hired workers, but research from 2016 with farmworkers themselves found that their pay averaged far below this at \$1,500 to \$2,000 per month, with some reporting earning hourly rates below the minimum wage or being paid on a piece-rate basis that varied throughout the year (Farmworkers' Needs Assessment 2016: 13). My own research found that farmworker wages ranged from about nine dollars per hour—the minimum wage—up to 15 dollars per hour on larger farms (MN1) with varying degrees of medical and dental benefits. However, minimum wage laws do not apply to farms with fewer than 20 employees—which includes most Hawai'i farms—or to the coffee industry at all (Farmworkers' Needs Assessment 2016: 13).

Moreover, several recent cases of farmworker exploitation in diversified agricultural production include the largest case in U.S. history of human trafficking, where more than 1000 mainly Thai men endured forced labour and exploitation in Hawai'i and beyond (Zimmerman 2011, 2014; Farmworker Needs Assessment 2016). In April 2014, another case was brought concerning working conditions and illegal pesticide use on a basil farm and a

¹⁰⁷This category is defined by the U.S. Bureau of Labor as including farmworkers and labourers, crop, nursery, and greenhouse workers who 'Manually plant, cultivate, and harvest vegetables, fruits, nuts, horticultural specialities, and field crops. Use hand tools, such as shovels, trowels, hoes, tampers, pruning hooks, shears, and knives. Duties may include tilling soil and applying fertilisers; transplanting, weeding, thinning, or pruning crops; applying pesticides; or cleaning, grading, sorting, packing, and loading harvested products. May construct trellises, repair fences and farm buildings, or participate in irrigation activities.' Excludes 'Graders and Sorters, Agricultural Products' (45–2041) and 'Forest, Conservation, and Logging Workers' (BLS 2016).

number of other ‘scandals’ have highlighted the abysmal conditions endured by Hawai‘i’s (im)migrant agrifood workforce on both land and sea (Shaw and Jabola-Ing 2017) even while convictions have been few (Zimmerman 2011, 2014).¹⁰⁸

Examples of exploitation, combined with a lacuna in how the majority of conventional diversified agricultural production takes place in the islands, highlights the pressing need for further research. Moreover, there appears to be no data available on the demographics and wage rates of the overall agrifood workforce in Hawai‘i, including information on those involved in food processing, packaging, retail and service industries. Some have pointed out the need to undertake such research (Kimura and Suryanata 2016), as research in the U.S. has suggested that this work is largely undertaken by people of colour and women, as outlined in the introductory chapter.

The present analysis remains focused on different examples of outlier agriculture but offers the foregoing context to show how these forms of agrifood work take place within the broader political economy of agrifood work. The information presented on the conditions of agricultural work and agricultural workforce demographics highlights some of the contextual issues and information gaps when considering the intersecting, gendered social relations of agrifood work. In the next section, I present some information about seed production companies as well as the areas of alternative agriculture this thesis examines. It is worth noting that agriculture in Hawai‘i is changing rapidly, with new lands becoming available and new laws shaping the issues outlined above. With relation to this changing landscape, there are three forms of production which represent contrasting forms of

¹⁰⁸ For example, in the case of Aloun Farms, for example, one of the farms implicated in the trafficking cases, convictions were never obtained and the farm has recently begun advertising ‘agricultural condos’ for sale, for between \$750,000 and \$1.98 million on 10–18 acres in central O‘ahu (Gomes 2017).

agrifood work that can be considered as outliers from the majority of farms, whose characteristics are broadly described by the information presented so far. Similarly to Bacon et al (2012), I also draw on three stylized cases of production to represent a continuum of different agricultural methods and, in my case, to characterise also the number of people working on these farms (see Chapter 4). Transnational seed production, small agroecological growing and āina work offer different lenses on questions of the social relations of agrifood work and their potential to offer more gender-inclusive forms of work. These case studies can thus, in a sense, be seen to represent newer forms of agriculture compared to the majority of diversified production taking place in Hawai'i, and are, of course, markedly different from plantation agriculture which dominated the late 19th- and 20th-century landscape. At the same time, as I aim to show, these new forms of agriculture rework different historical patterns of social relations, and present specific tensions, possibilities and contradictions for socially-inclusive agrifood work. Such cases are not representative of the entire agrifood landscape but it is my hope that the issues and tensions they present help to think through wider dilemmas of the role of work within agrifood practices, especially those that purport to address social inequalities. The next section discusses how these different cases relate to the overall landscape while Chapter 4 presents the research methods, questions of representation and personal positioning that emerged as relevant to the research. Below, I discuss two forms of what could be 'alternative agriculture' before providing background on what is considered as a form of high-tech, agroindustrial production.

Alternative Agriculture: Small, Agroecological Growing

Terms such as 'alternative agriculture' and 'agroecology' have been used to describe a range of agricultural practices that are defined as 'resource-conserving and diversified

agroecosystems that do not rely on high chemical and energy inputs, but rather promote small farming' (Gürcan 2010: 489; Altieri 2002). Alternative agriculture can be said to include organic agriculture and a number of other low-input forms of agriculture (Beus and Dunlap 1992), such as Korean Natural Farming (Kohala Center 2014) and historic Native Hawaiian techniques. However, the meanings of 'alternative agriculture' and different kinds of agroecological growing within them continue to be contested and debated (see for example Guthman 2014).

Agroecological and organic agrifood practices in the islands have multiple strands and represent a heterogeneous collection of different kinds of farming, scales and ways of organising production, with different motivations for growing, interest in profit-making and integration into markets and gift exchanges (Tsing 2013,2015). In Hawai'i, this collection of growers may be similar to what Lyson et al (2008) describe in California as farms that are very small farms,¹⁰⁹ including 'micro, hobby, residential, and retirement farms' (Bacon et al 2012). As Guthman (2004a, 2004b) has shown, farming practices differ by ideological orientation, which she describes as the difference between more profit-oriented firms who utilise 'shallow' as opposed to 'deep' organic practices, the latter of which are undertaken by a small, more 'ecologically conscientious' farms (2004b" 311).

Often, differences in profit-orientation are caricatured as the difference between bona fide producers and 'lifestyle farmers', the latter of whom are linked to back-to-the-land movements and 'landscape consumption for people seeking an alternative lifestyle' (Kimura and Suryanata 2016: 190; see also Guthman 2004a). Organic and other agroecological techniques have both differences and overlaps, but not all growers chose to

¹⁰⁹ Hawai'i and Alaska also have the highest percentage of farms in U.S. jurisdiction selling within 100 miles of their production (USDA 2015: 3), likely due to geographic isolation from other markets.

pursue organic certification because of its high cost (Kohala Center 2014). Moreover, while some organic growers are motivated by the price premiums that can be obtained from these products, perusal of state data questions the extent to which farms appear to be accessing markets or benefitting from price premiums: out of the around 262 USDA¹¹⁰ organic farms in the state, 103 organic farms reported earning less than \$500 per year (USDA 2012: 556). Moreover, since vegetable farming is highly labour intensive, more than grain and dairy, farms which produce these crops are of particular interest to studies of the social relations of labour (Brown and Getz 2008: 18).

With relation to the purpose of the thesis, one of the key assertions of some literature has been that organic and agroecological small production tends to better represent women and offer more egalitarian conditions, defined in different ways (Kimura 2016; DeLind 1999). I discussed some of the research on these issues in the Hawai'i context in Chapter 2, including Kimura's argument that women organic farmers face particular paradoxes in their work but that this sector appears to offer an important, gender-equitable environment overall. However, more recent data from the 2012 Census of Agriculture suggest that the percentage of women within the certified organic sector is comparable to or less than in agriculture as a whole: 32% of producers are women (USDA 2012),¹¹¹ raising questions about the extent to which women are indeed better represented within this sector.

¹¹⁰ This includes USDA National Organic Program certified organic production, production exempt from certification and farms transitioning into USDA National Organic Program organic production (USDA 2012: 36). The overall number of farms growing using organic methods in the state is not know (Radovich et al 2009).

¹¹¹ This was, however, a very small sample, and did not include uncertified producers, which may, in fact, have greater representation of women: 152 principal certified organic farm operators were men, compared with 74 women.

While consumer demand for organic products appears to be growing in Hawai'i and the number of certified producers is rising¹¹² (Radovich et al. 2009),¹¹³ higher prices represent a barrier for many consumers (Kohala Center 2014: 30). Rising demand for local, organic products may affect the wider social relations of production if more labour is needed to meet this rise in demand. Moreover, my own research and other work (Mostafanezhad et al. 2015, 2016; Levkoe 2017) raise important questions about the labour practices on agroecological and organic farms, especially the work-trade practices known as WWOOFing, which refers to the organisation known as Worldwide Opportunities on Organic Farming (WWOOF). WWOOF organises educational, work-trade exchanges between farmers and people interested in gaining organic farming experience.

Some of these issues are analysed in Chapter 5, including Mostafanezhad et al.'s finding that 80% of WWOOFing farm hosts were white, from the continental U.S. and Europe and more likely to be beginning farmers with less than five years of experience (2016). Chapter 5 suggests that these changing demographics are usefully understood not only in relation to counter-cultural 'alternative lifestyle' movements but in relation to longer histories of missionary work, agriculture as a technology of settler colonialism and the gendered aspects of 'good food' projects (Guthman 2008). In short, the research joins with other scholars in questioning the extent to which agroecological growing can address gendered inequalities within this political economy of labour (Mostafanezhad et al. 2015, 2016; Levkoe 2017; Guthman 2008). Further details about the agroecological growing sector and the particular examples of farming that my research analyses are presented in Chapter

¹¹² From 2005 to 2007, demand for organic products in Hawai'i rose by 60% and the acres of organic crops planted increased by 30%, with approximately 200 organic growers certified (Ulupono Initiative 2011).

¹¹³ The arrival of major retailer Whole Foods is also seen to have provided new avenues for organic, locally grown products (Radovich et al. 2009).

5. For the moment, what is important to highlight is the need to further explore the contradictions, opportunities and dynamics within Hawai‘i’s agroecological farming sector that is seen as better representing women but that may rely on work-trade labour in order to function.

‘Āina Work

In some contrast to privately owned farms undertaking agroecological growing, Native Hawaiian land and agricultural revitalisation programmes have emerged strongly over the last decades, supported by broader educational, cultural, health and political revitalisation efforts (Goodyear-Ka‘ōpua 2017; Marshall 2012). Politically, significant struggles have occurred concerning natural resources, gathering and sustainable management rights (McGregor 2007; Akutagawa 2015; Akutagawa et al. 2016), against the genetic modification of plants (Ritte 2015) and for the protection of sacred sites and spaces (Goodyear-Ka‘ōpua 2017). Some have characterised these movements in relation to the larger and longer-standing ethos of *aloha ‘āina* or love for the land (Gupta 2014; Beamer 2014; Fujikane 2016; Akutagawa 2015; Marshall 2012), which entails actions of caring for the land, through which one, in turn, becomes more connected to it (Goodyear-Ka‘ōpua 2013: Location 2889-2896). ‘Āina work thus takes place in the context of a strong history of residents’ community, cultural and environmental organising (Schrager and Suryanata 2017: 10). Some criticise these ‘āina work efforts as forms of ‘neo-luddism and new age spiritualism...combined with certain aspects of Hawaiian culture’ (Kaahui 2015). Certainly, where land and resources are concerned, power relations and contested visions abound.

Historically foundational to the *ahupua‘a* system, taro has remained an important but relatively small volume and value sector of Hawai‘i’s agricultural economy. Taro

production has been at the heart of historic struggles for water since wetland production requires sufficient irrigation (Cho 2007: 3–4)¹¹⁴ and water has historically been syphoned and diverted by sugar plantations (Miike 2004). Efforts to increase taro production also involve the restoration *loʻi* or irrigated terraces across the islands as well new producers (Hobart et al. 2015; Kamehaʻikū Camvel 2015; Goodyear Kaʻōpua 2013). These ongoing efforts to revitalise taro production have been accompanied by growing support for the historic processing method of pounding by hand, which activists managed to preserve despite threats by the state to restrict this method on phytosanitary grounds (Hobart 2016: 28). In this case study, the rising demand for taro coincides with a rising interest in these historic foodways and practices.

Freshwater management and taro production have been central to many *ʻāina*-based efforts and involved significant political mobilisation, legal battles and community volunteer work. The protection of *ʻāina* also includes the ocean. Advocates have attempted to revitalise historic practices of fishery and fishpond management (Tamashiro 2010; Kawelo 2016) and to manage conflict over inshore and deep-water ocean resources. These practices are of cultural and material importance to many Native Hawaiians and others in Hawaiʻi; subsistence activities, fishing and gathering practices are often important sources of food security for rural residents (Akutagawa et al. 2016). At the same time, as with the other agrifood practices discussed above, there appears to have been no in-depth theoretical exploration of how such revitalisation practices are connected with relations of power and difference as well as with Native Hawaiian efforts to re-vision concepts of gender

¹¹⁴ Taro production currently takes place on 400 acres (1.6 square kilometres) compared to the estimated 20,000 acres (90 square kilometres) of *loʻi* (wetland taro terraces) over six Hawaiian islands during precolonial times (Cho, 2007: 3–4; also cited in Goodyear-Kaʻōpua 2011: 51).

and sexuality as integral to decolonising practices (MANA n.d.; Kauanui 2008, 2011; Hall 2009) and 'āina work in particular.

Chapter 6 contributes to this research by building on what has been analysed in relation to gendered divisions of labour within some areas of 'āina work (Goodyear-Ka'ōpua 2014; Tengan 2008). The research asserts that 'āina work practices raise important possibilities for revisioning and 'decolonising gender' (Lugones 2010). At the same time, they share with the other agrifood practices analysed in this work the contradictions related to other areas of social difference and power, all of which require further analysis. Further background on 'āina work is presented in Chapter 6 but for the moment it is important to highlight that the dynamics of community-based work also raise questions about the sustainability and gender-inclusiveness of collective farming.

Transnational Seed Production

As outlined in Chapter 1, seed corn now represents Hawai'i's highest-value agricultural crop and the presence of major biotechnology companies has been increasingly debated in the islands (Gupta 2015, 2016, 2017; Shaw 2016). In this sense, seed production represents a very different form of agrifood work, linked with 'high-tech' agroindustrial production that takes place on very large farms. This transnational seed production has been argued to represent the epitome of the industrialised agrifood system, subject to massive agglomeration, capital-, technology- and input-intensive methods of monocrop production (Beus and Dunlap 1992; Pechlaner and Otero 2008; Pechlaner 2012). Schurman and Munro have analysed how GM industries have been shaped not only through these processes but by and through opposition to GM technologies and crops themselves (2010). For Schurman and Munro, GM technologies' have proved neither as disastrous nor as miraculous as either

opponents nor proponents have tended to argued (2010). In this section, I outline how Hawai'i came to host some of the world's largest transnational seed-agricultural companies by way of background on last case study.

Schurman and Munro outline the development of U.S.-dominated 'integrated life science' industries in the 1980's and 90's against the backdrop of public distrust of chemical companies and falling profits (2010: 900-909). These industries are characterised by strong orientation to profit-making (Schurman and Munro 2010: 1138) and worldviews characterised by beliefs in scientific technologies and 'innovation' as inherently valuable in their own right (2010: 801). Failure to foresee lasting opposition to new technologies, combined with the length of time needed to develop technologies meant that many biotech firms pursued aggressive strategies for creating favourable business environments – strategies which later left them open to considerable critique (Schurman and Munro 2010: 789). High costs of production also made early biotech start-ups 'magnets' for corporate acquisition and investment (Schurman and Munro 2010: 875), shaping trends of consolidation and agglomeration which continue today, wherein a small handful of companies jostle for dominance rather than expect to eliminate their competition (Schurman and Munro 2010: 1266). Seed-agricultural producers search for products with wide application and market longevity (Schurman and Munro 2010: 1234) and recently questions of climate change have begun reanimating the interest in transgenic technologies' and genetically modified seeds.

Biotech firms also produce with the costs of regulation and possible opposition in mind (Schurman and Munro 2010: 3979). Schurman and Munro, writing more than a decade ago, highlighted the dogmatic nature of claims about transgenic seeds a being key to producing more food (Schurman and Munro 2010: 3991), showing how 'overblown claims' were

capitalised on by activists (Schurman and Munro 2010: 4415). Ongoing scepticism about the role of GM technologies has played a role in biotech companies' aversion to investing in expensive or risky research and development and has increased costs as a result of new regulations (Schurman and Munro 2010: 4064), presenting points of vulnerability to downstream actor's actions (e.g. government regulations, supermarket and processing industries) (Schurman and Munro 2010: 4096).

The seed industry in Hawai'i has its roots in small seed producers that began in the 1960s and were later acquired by the seed giants, and debates concerning transgenic crops and agrichemicals, in particular, have burgeoned since the mid 2000s at the same time that the giants agglomerated and increased their presence in the islands (Schrager and Suryanata 2017). Seed production, along with commercial forestry, has taken on some of the land fallowed after plantations (Melrose et al. 2016: 7) on Oahu, Kaua'i, Moloka'i and Maui (Melrose et al. 2016: 23) and now uses 5%–8% of total available agricultural land (Melrose et al. 2016: ;2; Pollack 2013: 1).¹¹⁵ Seed corn represents 95% of the seeds grown in the islands, mostly produced using hybrid seed breeding and genetic engineering methods (Melrose et al. 2016: 23). These crops are grown for breeding and research purposes, and thus can be considered within the framework of agricultural inputs rather than products for direct consumption (CTAHR). Most seeds are produced by the five international seed companies (BASF Plant Science, Dow AgroSciences, Monsanto, DuPont Pioneer and Syngenta Hawai'i LLC) while 1% are smaller producers growing sun hemp and locally adapted vegetable crops (Melrose et al. 2016; Schrager and Suryanata 2017).

¹¹⁵ The estimated total acreage of seed farms is between 15-23,000 acres out of 280,000 acres of agricultural land. Hawai'i's total land acreage is 4,112,388 acres: 47 percent is designated as agricultural (see <http://planning.Hawai'i.gov/lud/> for more). The 2015 closure of the Pioneer seed processing facility on Kaua'i has somewhat reduced this footprint.

Awareness of the seed companies' presence grew after controversies concerning university patenting and genetically modifying the taro plant. Taro is not only a staple plant but is considered by many Native Hawaiians to be the ancestor to humans, a sacred, genealogical relative (Bondera 2013; Ritte 2013). As a result, the existing anti-GMO movement and some groups of Native Hawaiian activists forged an alliance in opposing taro genetic modification and patenting (Gupta 2013, 2015, 2017). Since this time, anti-GMO activism has proliferated and Hawai'i has thus become a centre for GMO politics, setting a number of precedents for anti-GM activists and seed-agrichemical companies alike. The former includes the prevention of further biotechnology research without environmental assessment (Atchitoff and Kimbrell 2012), efforts to ensure mandatory disclosure of pesticide use and buffer zones (Cocke 2013), county ordinances banning new growing of GM crops (Spector 2013; Gupta 2017) as well attempts to label consumer goods containing GM ingredients (Black et al. 2013). These efforts are contested and ongoing at the time of writing.

For their part, seed-agrichemical companies have responded with multiple forms of public relations campaigns, community outreach and funding programmes (Monsanto website) and invested record-setting amounts of money in GM referendum campaigns (Democracy Now 2014). Brower has also suggested that such industries rely on state support as plantations did in the past, enjoying tax breaks and close relationships with regulators (Brower 2016). However, in spite of recently published research about seed production economics (Schrager 2014; Schrager and Suryanata 2017), little information is available about the social relations of production within the industry, including the demographics of who works within seed production on different sites. The only information

about this workforce comes from industry studies.¹¹⁶ One such study reported that seed production employed 1,397 people in 2013 and accounted for 20.2% of agricultural jobs state-wide (Loudat and Kusturi 2013: 4), although this has probably decreased after the subsequent downturn in the industry, which led to site closures and layoffs. However, data from 1999 showed that of 770 workers, more than three-quarters of jobs (590) were part-time (NASS 1999: 3). My research, detailed in Chapter 7, demonstrates that the organisation of this work varies by size of site and company. One site reported that 30% of their workforce were temporary workers, while another site reported hiring just one or two extra people for the busy harvesting season. Since seed producers are large agricultural employers, have a contested presence in the islands and often make claims about their contribution to 'local employment', analysing their social relations of production offers some important sites of comparison to other supposedly more ecologically and socially equitable forms of production.

Conclusion

This chapter has provided historical and contemporary overviews of some of the key contextual factors shaping 'outlier' agrifood practices in Hawai'i. In the first half of the chapter, I discussed some the ways in which the structure of settler colonialism entailed changes to agriculture and to gendered relations. I suggested that this affected Native Hawaiians, white settlers and (im)migrating groups from Asia and the Pacific in different ways. Notably, plantation agriculture was shown to have relied specifically on racialised differences and targeted gendered and sexual relations in ways that have shaped the

¹¹⁶ The Loudat and Kusturi study (2013) was commissioned by the Hawai'i Farm Bureau Federation with funding provided by the Hawai'i Crop Improvement Association (HCIA), the trade association for seed companies.

contemporary multi-ethnic composition of Hawai'i society and the socioeconomic position of different groups.

Analysing the effects of the transition from agro-exporter to net food importer and to militouristic (Teaiwa 1999) destination, I then discussed some of the more recent trends in the wider political economy of agriculture in the state, including efforts to promote 'local food' production. I suggested, however, that current data about the economic viability and social conditions of agriculture raise important questions about the extent to which such programmes can benefit poorer consumers and producers, including farmworkers who appear to continue to face major racialised and gendered wage gaps in Hawai'i. I provided a short overview of trends in relation to small-scale agroecological and organic growing as well as the history of land-based, aloha 'āina movements. I then offered some background on the current largest sector for agricultural employment in the state—seed production and how these different cases relate to the overall political economy of agriculture in the islands. For all three cases, I suggested different questions related to the provision of gender-inclusive, socially and equitable work. The next chapter deepens how I have approached addressing these questions amongst these vastly differently 'outlier' cases as part of the overall research concern with the extent to which alternative agriculture offers more gender- or socially equitable conditions.

Chapter 4: Research Methodology, Scope and Ethics

Introduction

In the introductory chapter, I laid the groundwork for the research questions this thesis addresses before suggesting in Chapters 2 and 3 how the intersections of gender, race and class are critical to understanding contemporary issues in food, farming and land use in Hawai'i. I also made the case for why it is useful to examine this research through the lens of work in order to foreground the embodied, collective and unequal dimensions of food production practices. This chapter explains the methodology I used to analyse the extent to which alternative agriculture can be understood as 'alternative' when viewed from the perspective of intersecting social relations.

In the first section, I discuss some of the methods used by research into the intersectional dimensions of agrifood systems, including methods from food studies, and the broader methodological issues at stake within intersectional agrifood research. The research builds on studies of the intersecting gendered dimensions of agrifood labour across different forms of production, especially on studies of 'alternative agriculture' (Buck et al 1997; Guthman 2004, 2014; Guthman and Brown 2015; Getz et al 2008, 2008b; Besky and Brown 2015; Holmes 2007, 2014) and how these link to theorising on settler colonialism. Next, I outline my original research design and the individual methods I utilised during the fourteen months of fieldwork. I also discuss some of the ways in which my personal positioning impacted the research I produced. I propose an extension of Dorinne Kondo's framework of the 'Eye/I', which describes both research perspective and personal positioning, and adapt this framing to the specific research context and methodology of food and agriculture in Hawai'i.

(Inter)Disciplinarity: Intersectional Perspectives on Agrifood Work

In order to answer the research question of how ‘alternative’ some agricultural practices are with regard to social relations, I suggested in Chapter 2 that it is necessary to develop an analytical and methodological approach in order to understand intersecting social relations in the context of a settler state. While there is an ‘embarrassment of choice’ regarding methods for studying agrifood systems, no studies could be identified that bring food, feminist and settler colonial studies together in analysing both agroindustrial and alternative agrifood practices in the same frame. The research therefore builds on a small but expanding subset of intersectional agrifood analyses (Porter and Redmond 2014; Harper 2013), feminist-inspired diverse economies literature concerning food and agriculture (Burke and Shear 2014; Brown et al. 2011; Miller 2011) and studies of agrifood work (Getz et al 2008, 2008b, Guthman and Brown 2016; Holmes 2014), integrating perspectives from settler colonial studies on agriculture (Rotz 2017) and colonialities of power (Baglioni 2017).

The lack of established and rigorous methodologies offers exciting possibilities for interdisciplinary creativity but is also accompanied by uncertainties and, in practical terms, may be time-consuming for researchers who must come to grips with debates and research in several fields. Working across disciplines requires significant investment and time spent outside feminist and gender studies. However, in spite of the drawbacks, I hope to demonstrate the value in bringing together these approaches in order to robustly analyse the intersectional, gendered relations of production across both agroindustrial and alternative agrifood practices. Below I have outlined a brief methodological map in order to show the fields of study from which the research draws. Recently, this research approach has been validated by a study on agro-food initiatives in Hawai’i that used a similar methodology (Mostafahnezed and Suryanata 2018: 329- 30)

Figure 2. Methodological Map

Intersectionality <i>How differences are mutually constructed through categories which themselves must be interrogated (McCall 2005)</i>	Feminist Political Ecology <i>Overall framing of human-environment relations (Rochelau et al 2013)</i>	Settler Colonial Studies and Colonialities of Power <i>The context in which differences have been configured through settler projects (Rotz 2017; Kamelehiwa 1999, 2001; Baglioni 2017)</i>
	Diverse Economies and Agrifood Work <i>Understanding of capitalism, more than capitalism and already existing ‘alternatives’ (Gibson-Graham 2006) as well as diverse economies of food (Burke and Shear 2014) and agrifood work (Getz et al 2008, 2008b; Guthman and Brown 2016).</i>	
	Social Relations of Production and Social Provisioning <i>The social relations of production as including work that goes beyond the so-called productive sphere (Power 2004)</i>	
	Intersectional Perspectives on Work <i>Understanding group and intra-group relations in changing work environments helps interrogate constructions of ‘groups’ themselves (McDonald 2016)</i>	
	Narratives and Material-Discursive Inequalities <i>The precise ways in which inequalities are (re)produced through a combination of material and discursive practices, with a focus on narratives (Presser 2005).</i>	

In particular, I draw on Burke and Shear’s analysis of the ‘distinct socio-ecological consequences of different types of economic relations’ of diverse food economies (2014: 132) in order to analyse alternative and agroindustrial practices together. As outlined in Chapter 2, I draw on this diverse economies framework to analyse how alternative agrifood practices exist alongside, and in entanglement with, capitalist and neoliberal logics and practices in the present (Burke and Shear 2014; Brown et al. 2011; Miller 2011). This concept of ‘distinct socio-ecological consequences’ aligns well with the focus on agrifood systems as embodied labour (Rainnie et al. 2011), which can be further elaborated with

reference to Marx's notion of the social relations of production. In the first instance, however, some clarifications are in order about how such labour can be defined.

I understand labour to be 'not a commodity but a set of capacities borne by people' (Peck 1996: 34) and while some have differentiated between concepts of 'work' and 'labour' (Bakker 2007: 54), I utilise these concepts interchangeably. I likewise take a broad view on the definition of work as a mediation between humans and nature (Bakker 2007; Alkon 2013: 667) involving degrees of direction, obligation or necessity, effort and persistence and 'which may be pleasurable but is not fully so' (Noon and Blyton 2007). In this way, I do not differentiate between production and consumption, but apply Power's (2004) vision of 'social provisioning' as encompassing all activities undertaken to reproduce life, as helpful to an inclusive view on agrifood labour. At the same time, analyses on the social relations of production are helpful to understanding the role of agricultural fieldwork in agrifood systems, which is the interest of this thesis.

Marx defined the social relations of production as the process of exchange that takes place between the performance of labour and the reward received for that labour (Marx 1973 [1867]: 83–90; Hiraldo 2017: 32; Edwards 1975). For Marxian theorists, these relations are shaped by wider societal conditions which affect people's access to the means to produce, to employ others and to access what is produced. These theorists suggest that because of these wider interconnected socioeconomic relationships, analysing the conditions of labour represents an important barometer of the broader inequalities within a given social context (Hiraldo 2017: 33).

It is therefore necessary to understand not only the processes of agricultural production but also the social relations within which this production takes place (Marx 1973; Hiraldo 2017; Tsing 2013, 2015). So, while my research focuses on agricultural

production fieldwork, for the reasons outlined in Chapter 3, I take these to include both paid and unpaid activities.¹¹⁷ This is because, as feminists have shown, these boundaries are contingent, and social provisioning or earning a living can encompass a range of activities that include markets and are paid or unpaid (Power 2004; Barca 2015). In this way, I am able to consider both the productive activities of transnational seed production as well as small ‘pilgrim’ farming and ‘āina work by comparing their social relations, divisions of labour, processes of task allocation and the social qualities and imaginaries different participants narrate in relation to their work.

I also draw on McDonald’s (2016) framing of intersectionality in relation to work, which he adapts from McCall’s work analysing how intersectionality has been deployed (2005). McDonald (2016) has urged scholars of work and specifically those who study work and inequalities to take up the challenge of McCall’s anti-categorical intersectional analysis in order to deconstruct the terms through which identities are established. At the same time, McDonald recognises that such research is difficult to sustain without some reference to existing social categories (2016: 20), and therefore some comparison between and within ‘groups’ may also be needed (what McCall refers to as inter- and intra-categorical forms of intersectionality) (McCall 2005: 1787).

My research engages critically with the categories used by interviewees and in the practices studied, using both inter- and intra-categorical analyses. This includes inter-categorical analyses of workforce composition and intra-categorical analyses in unpacking

¹¹⁷ Hiraldo summarises these as ‘a) the work activity itself; b) the rewards workers obtain in exchange for spending their labour in the production of use-values; c) workers’ ability to appropriate the product of their labour; d) the relationship of workers to the means of production (i.e. how they access the non-human nature and the instruments they need for their work); e) their relationship to the products of their labour (i.e. whether they are free to appropriate them, whether they belong to somebody else and therefore whether the social relations of production affect the type of economic activities that workers perform); f) workers’ ability to defend the conditions of their labour’ (Marx, 1959, 1967, cited in Hiraldo 2017: 33).

constructions of identity categories in manager narratives (Chapter 7). At the same time, the overall aim of the research is to work anti-categorically to demonstrate how the intersecting social relations of different kinds of production come into being and are narrated. In order to do so, I focus on how differently positioned actors, including those with decision-making power, narrate how they organise work, allocate tasks and understand the social qualities required of their work and others'. Given my focus on determining the extent to which different practices offer possibilities and limitations for gender-inclusive work, equity and well-being, I concentrate on how these narratives relate to wider social discourses that can sustain intersecting inequalities.

Agrifood Outliers: Multi-Sited, Mixed Methods

My research analyses the social relations of production through narratives of how participants articulate, justify, understand and question their work. I used formal and informal semi-structured interviews as well as observation, participation, document analysis and secondary source research. My research adapted these methods from multi-sited ethnography, which uses participation, observation and interviewing across multiple sites (Hannerz 2003; Mostafahnezed and Suryanata 2018). Fieldwork took place over several phases, including an initial period of immersion (December–February 2015) which began the processes of study design, site selection and spreading the word about the research. During the fourteen months of my fieldwork, I undertook formal 35 interviews on 10 farms, attended 30 food, farming and 'āina work events and volunteered regularly at two 'āina work and cooperative spaces. I completed field notes, transcribed my interviews, and collected audio, video and visual material.

Figure 3: Methods and Data Sources

Method	Number
Site visits	14
Formal in-person interviews	35
Formal Skype audio interviews	1
Formal telephone interviews	1
Informal in-person interviews	20
Informal telephone interviews	2
Volunteering (days)	16
Education (days)	26
Events	20
External surveys analysed for comparison	2
Document analysis (organisational materials, website materials and news coverage)	N/a

Snowball sampling was used to recruit participants from personal and family contacts, and people I had met during a 2014 permaculture design course, which took place on O‘ahu and introduced me to some of the islands’ agroecological and small farming community (See Appendix H). I also approached a number of farmers and seed production companies directly through email and telephone calls. I used snowballing, as it was an important method for contacting potential interviewees. I also attended more than 30 community, food and agriculture events as a way to broaden my network and observe some of the public dynamics of different agrifood practices and those associated with those communities. While snowballing and attending public events have their limits, as they may reproduce the researcher’s own positionings (Hannerz 2003), I found these techniques invaluable for creating relationships, meeting farmers and others open to the research and analysing how white, middle-class settlers such as myself are participating in both alternative and agroindustrial agrifood networks.

In addition to my 35 formal interviews, I also undertook tours/site visits to two seed production farms, one agricultural park and one food processing facility, where direct participation or prolonged observation was not possible. In contrast, my research on ‘āina

work consisted almost entirely of participation, observation and informal interviews, while research with small agroecological growers consisted of a mix of formal interviews and participation in food and farming work. In several cases, I undertook telephone interviews with community advocates and farmers in order to accommodate their caring responsibilities and health concerns (see Appendix A for more information on the research activities) and conducted one interview with an organisational leader via Skype. These interviews were largely conducted for background or to follow up on research findings from interviews already conducted, such as background about legal cases concerning farmworkers, work-trade and community programmes. I found that telephone interviews and the one Skype interview I conducted were somewhat more informal in tone than interviews recorded face-to-face.

While six of the full or half-day 'āina work events I participated in were one-off occurrences, I regularly volunteered with a food cooperative, a labour union and an 'āina workspace. This participation and observation were crucial in broadening my understanding of the wider political and social context of the research, enabling me to observe, participate and build relationships across different food and farming spaces. While I did not find power relations completely shifted by acts of volunteering, I did find that some research participants appeared to appreciate the help.¹¹⁸ However, I also found that, similar to what has been written about informal research methods, that their use can blur ethical boundaries and care must be taken not to assume that volunteering is innately appreciated or helpful (Smith 2011).

¹¹⁸ For more on the 'volunteer ethnographer' see Garthwaite (2016) and Flachs (2013).

In my case, while the aim of volunteering was to offer participants something in exchange for their participation, I noticed that perhaps I relied on this strategy in part to downplay class, gendered and racialised differences between myself and research participants. Even though I thought of myself as exchanging work for words, many of those I interviewed also gave me produce from their farms, raising further questions about how researchers undertaking volunteering as a form of research can account for the multiple exchanges, power relations and ethics such research may involve. On a practical note, working and interviewing was sometimes difficult to undertake given the physical nature of the work, which may present a barrier to researchers undertaking this method who may be less practised than agrifood workers in undertaking physical work while conversing.

Informal conversations and interviews also played an important role in shaping the research, cross-checking information and building relationships with research participants. In Hawaiian English Creole (HEC),¹¹⁹ ‘talking story’ is a phrase that describes having ‘informal conversation; tell[ing] stories’ (Sakoda and Siegel 2003: 16). Talking story is a well-known Local pastime and practices implicated in the development of HEC to enable communication between different cultural and linguistic groups and also intersects with the value placed in Native Hawaiian culture on sharing histories/stories (*mo’olelo*) (ho’omanawanui 2017: 85). Again, this method of research seeks to build relationships and share the researcher’s aims, experiences and interests with participants or potential participants, although again this raises questions about the boundaries of a research project. Upon reflection, I could also see that talking story was one way in which I could also perform my own relative ‘insider’ status by demonstrating familiarity with different Local—understood in the sense of the

¹¹⁹ HEC or HCE is a creole that emerged under plantation days blending English, Hawaiian and other languages. See Tengan’s (2008) introductory chapter for more information on this. For more on HEC or ‘Pidgin’, see Sakoda, K., & Siegel, J. (2003).

multi-ethnic identity that has developed in Hawai'i—protocols. While I found this method familiar, enjoyable and unobtrusive, it is not clear that the research participants felt the same way or that it was always completely clear that these conversations could or would contribute to my research and thinking. Taken together, both volunteer and informal talk story methods bring the lives, commitments and physical bodies of both researchers and the researched into the scene of analysis (Fonow and Cook 1991) in ways that raise important questions about the effects of informality on the boundaries of research, research ethics and relations of power.

Site Selection and Criteria

Having established the primary research question—how alternative are alternatives—and the methods of investigation, this section outlines the process of site selection. Site selection required the development of a unique typology of sites in which to interrogate different agricultural practices for their gendered and social inclusivity, equity and promotion of well-being. Agricultural research primarily devises site selection based on farm size, acreage cultivated, crops cultivated, farm sales or amount of production, number of farm operators (farmers) or farming methods, such as organic (Melrose 2012; USDA 2012). After evaluating these different agricultural site selection methods, I determined that each method in isolation entailed significant drawbacks, as for example, farms tend to very small within Hawai'i (often less than five acres) and farm size itself says little about the quality of social relations of production that my research aimed to unpack. Moreover, focusing on strict criteria for methods, size or products seemed unduly exclusionary and difficult to operationalise, let alone somewhat arbitrary in relation to how these different criteria might connect with the intersecting social relations of production. I therefore developed an

approach of selecting sites based on both the number of people employed (operators and other workers) and based on information about farm methods and crops. The research aimed to gather a selection cases studies through which to analyse the research questions; the aim was less to obtain a fully representative picture of agriculture in Hawai'i but rather to select cases that exemplified some 'outliers' within the overall agrifood system. At the same time, issues of language and culture meant that it was easier for me to engage with those with whom I could most easily communicate and whose social positionings were somewhat similar to my own.

Figure 117: Agricultural Outliers: Farms by Size of Workforce and Methods

Type	Size*	Methods	Crops	Economic Structure	Locations
Agroecological Small Farms	<10	Agroecological (may include organic, biodynamic, permaculture and other low-input methods).	Multiple, primarily vegetables and fruits, but may also save seed and produce other inputs (e.g. compost).	Often sole proprietorships, family businesses or small corporations. May also be informal with varying profits, if any.	All islands, but especially concentrated on Hawai'i Island.
'Āina Work Practice	<50	Blend of contemporary agroecological practices and historic, Native Hawaiian methods (may use some conventional methods, such as pesticides, in some sites).	Multiple, primarily vegetables and fruits, especially taro. May also include aquaculture (fish and seaweed).	Usually structured through a not-for-profit organisation or informal community group. Rarely for profit, but generating income from sales, events and grants.	All islands.
Seed Production	100–500	Hybrid and genetically modified seed production (more recently some intercropping, integrated pest management and other agroecological techniques).	Primarily seed corn and soya bean seeds, but also some quantities of barley, cotton and other crop seeds. Other 'products' include intellectual property linked with field research.	Large-scale transnational corporations with high profits.	Kaua'i, O'ahu, Moloka'i and Maui.

*Number of participants, both paid and unpaid, owners and employees.

These methods yielded an interesting picture of farms at both the very large and very small ends – what might be considered outliers within the overall agrifood system. This framework therefore excludes the majority of the mainstream imported agrifood system as well as large- to medium-scale agroindustrial production. My aim, rather, was to analyse different outliers within the overall context for what they reveal about efforts to address intersecting inequalities, gendered inclusiveness, equity and well-being. Understood in this way, the focus on these agricultural outliers enables connections to be made between them

as well as to analyse their different tensions, opportunities and contradictions. Similar to what Mostafanezhad and Suryanata (2018) found, different agrifood practices entail different orientations to economic and social value, which these authors characterise as those who farm for social value compared to those who seek to demonstrate the social value in their economic practices (2018: 230-31). But as Mostafanezhad and Suryanata also show, drawing on Tsing (2009, 2013, 2015), *all* agricultural commodities accrue value through both social, gift exchanges and economic relations (Mostafanezhad and Suryanata 2018). In this way, both capitalist and non-capitalist relations are immanent to the production of all agricultural products.

With regard to the research sites, the primary sites selected were on O‘ahu, which hosts the majority of diversified agricultural production in the islands, although this broadly refers to the mainstream of agricultural production (Melrose et al. 2016). I undertook research visits and interviews on Kaua‘i, Hawai‘i Island and Maui, including one-week research trips to Hawai‘i Island and Kaua‘i and a two-day trip to Maui (see Appendix B for more information). The benefits of concentrating on one island were also important in light of the extended period of time required to obtain, arrange and schedule formal access to agrichemical-seed company employees, and to find out about and build relationships with Native Hawaiian-centred community agricultural practices which are not always easily locatable. In order to protect confidentiality within the research sample, I do not disclose the specific research sites and locations on these islands nor do I offer in-depth demographic details about my participants, given that these may be easily recognisable to those familiar with the research context (Reid et al 2011). All initials used to identify participants are pseudonyms.

This concentration on O‘ahu risks contributing to a bias toward issues faced by this central, capitol-island, whereas research into the agricultural and social realities on other islands could have revealed different issues.¹²⁰ However, this focus was chosen because of the substantial diversity of agrifood systems on O‘ahu and its position as a centre of agricultural policymaking affecting the entire archipelago. Shorter site visits, interviews and research on Maui, Hawai‘i Island and Kaua‘i helped to narrow, compare and clarify the research findings.

As I have discussed, my research involves three case studies, including seed production. I focused on this sector because it is an often-demonised pinnacle of the industrial agrifood system (McMichael 2009; Campbell 2009; Lyons and Lawrence 1999) and seed companies now employ the largest numbers of agricultural employees in Hawai‘i. My second case study involves small and very small farms, mainly on O‘ahu, employing fewer than 10 paid and unpaid workers and identifying with a variety of agroecological techniques including organics, biodynamics, permaculture and other methods that focus on using few off-farm inputs, pay close attention to closing waste loops and work with ecological systems in growing (Altieri 1995, 2009; Kremen and Miles 2012; Goodman 2000). These techniques are what is often meant by the phrase ‘alternative agriculture.’ However, the third case study (‘āina work) could also be considered another form of alternative agriculture, as these practices involve agroecological methods. ‘Āina work spaces that function as farms and foodshed restoration projects are often run by a small number of paid staff (usually

¹²⁰ For example, Moloka‘i and Kaua‘i struggle with high unemployment and lack of infrastructure, whereas Maui and Hawai‘i Island report more Latinx agricultural workers than O‘ahu. These differences and how they shape some of the social relations of different kinds of agriculture and the alternatives posed to address inequalities through the agrifood system could be fruitfully explored in relation to, for example, the politics of subsistence food provisioning.

between one to five) but regularly bring together large numbers of volunteers for community workdays and other programmes (20 to 30 volunteers on regular workdays; hundreds of volunteers on large-scale restoration workdays). Based on how research participants described it, 'āina work can involve anything from the physical work of preparing land, weeding, planting, harvesting and processing foodstuffs to other Native Hawaiian cultural practices such as building houses (*hale*) and learning histories (*mo'olelo*) of particular places that form part of holistic land-based resurgence practices.

Interpretative Framework, Analysis and Triangulation

In order to analyse participant narratives, I drew on Alkon and Mares' (2011) interpretation of grounded theory (Glasser and Strauss 1967) to 'create an account that can aid our understanding of the roles of racial and economic identities and inequalities in the politics of food' (2011: 352). Drawing on this approach and extending it through an intersectional frame on identities and inequalities, enabled me to connect fine-grained data from participant narratives with observational data. In analysing how different actors explain and justify their decisions and understandings of their work, what emerged were narratives of how particular work became associated with certain social qualities and intersected with social discourses concerning race, gendered norms, citizenship and other issues analysed in the analytical chapters.

This grounded theory (Star 2011) analysis has enabled me to compare agrifood practices in order to generate analyses, hypotheses, and theoretical claims about the wider agrifood system and its relationship to intersecting inequalities. As 'middle range theories' (Charmaz 2006), grounded theory methods are particularly useful for analysing areas of social relations that have to yet to receive significant or specific attention (Kushner and

Morrow 2003: 33). This is particularly relevant to my focus on under-researched relations of power and difference in Hawai'i agrifood systems, especially the intersecting social relations and conditions affecting agricultural fieldwork. Indeed, the only similar study undertaken more recently on Hawai'i agro-food initiatives independently utilised a very similar methodology to my own, drawing on participant-observation, semi-structured interviews and grounded theory (Mostafahnezed and Suryanata 2018: 229).

I then used thematic analysis to identify patterns within the data, patterns which became the categories and themes for analysis (Fereday and Muir-Chochrane 2006), through a two-step, thematic coding process (Charmaz and Belgrave 2013: 356) (see Appendix P for coding framework).¹²¹ Initial coding identified key connective themes, while second level analysis focused on particularities and differences, which were then narrowed down or fleshed out through further interviews ('theoretical sampling'), testing out initial research categories and assumptions (Charmaz and Belgrave 2013: 359) in relation to relevant document analysis and secondary research. Utilising grounded theory allowed me to connect thematic issues back to my research aims and questions. By analysing some of the major repeated themes that emerged in relation to gender and social relations, I selected issues that were novel, or appeared not to have been significantly researched beforehand (Kushner and Morrow 2003: 33). I was able to interpret these themes in relation to my 14 months of observation and in relation to other secondary scholarship. Similar to Mostafahnezed and Suryanata, I triangulated my research through purposively aiming for a range of participants, events, sites and sources of information (participant observation,

¹²¹ Interviews were also loaded into NVivo coding software to extract multiple analyses for word frequencies and commonalities across interviews; however, manual coding was found to be a more generative and iterative process and thus these analyses have not been heavily drawn upon in the research.

interviews, document analysis) (2018: 229) and through comparing my research to the findings of two unpublished surveys undertaken by local non-profit organisations (Olsen 2004). At the same, interview narratives are often wonderfully illustrative of particular themes and I thus sought to highlight different participants' words as they organise, make sense of, and shape the events and connections being described (Wiles, Rosenberg and Kearns 2005: 90) as embedded, relational tellings (Presser 2005; Riessman 2005; Borland 1991).

A further means of triangulation involved access to two unpublished surveys of women farmers and Hawai'i farmworkers, respectively, conducted by non-profit actors in the farming sector, accompanied by informal interviews with the coordinators of the research. This operated as a useful means through which to triangulate research results (Cook and Fonow 1986: 16) by comparing my own findings with different dimensions of the agrifood system than that which my own research investigated. The first survey was administered by the Oahu Resource Conservation and Resource Council¹²² that surveyed 106 women farmers in Hawai'i, focusing on risk management topics about which farmers were interested in receiving training. The aim of this survey was to identify training needs for women farmers in Hawai'i and it included 43 questions concerning a range of farm operations: not all questions were answered by every farmer. Topics included: agri-tourism, new technologies and production systems, insurance products and / or product diversification; market fundamentals, marketing plans and strategies, identity preserved marketing, and/or direct marketing; managing assets, business/strategic plans, cost of production, financial records and analysis, and/or value-added enterprises; farm programs,

¹²² The O'ahu Resource Conservation & Development Council is a non-profit entity assisting rural enterprises and farmers, including conversation education and practices. See Appendix N for more information.

contracts and leases, environmental regulations, food safety liability, labour regulations, and/ or personal and business liability; recruiting, retaining and managing employees, interpersonal relationships, health and well-being, communications, and/or transition planning. Age and ethnicity information was unfortunately not collected for those who responded to the survey. While more information would be needed that was collected in order to assess the representativeness of this data, I did not find that the issues mentioned by farmers differed markedly from those I interviewed. I principally utilised this survey to triangulate the themes that arose within the research and to provide further examples of themes I had already documented.

The second survey was administered by the Hawaii Center for Immigrant Justice¹²³, and aimed to understand the workplace safety issues facing Hawai'i's immigrant farmworkers. This survey assessed the needs of farmworkers and included data from 51 farmworkers and farmworker advocates. The main subject areas included information about farmworker demographics, health and safety concerns as well as training needs. The hazards that survey participants reported experiencing included: repetitive motion (pulling, turning, squeezing, bending, stooping, etc.) (72.5%), animal/bug hazards (bites, kicks, dengue fever, etc.) (54.9%), and toxic substances (pesticides, cleaning solutions, excrement, etc.) (45.1%). Within the study, 31.4% of farmworkers reported they had become sick from doing farmwork and 62.5% presented their issues to their employer, who reportedly fixed problems (68.8%) (2016: 10). Though only 19.6% of these farmworkers reported working if they were sick or injured, the report authors suspect the number is higher as sick leave did

¹²³ This organisation is part of the Legal Aid Society of Hawaii (LASH) and utilised a Susan Harwood Training Grant through the Occupational Safety and Health Administration (OSHA) to undertake the farmworker needs assessment. See Appendix O for more.

not appear to be available to those interviewed (2016: 10). Moreover, 78% of those surveyed felt that they did not understand their legal rights as farmworkers (2016: 10). Most respondents were Thai, Ponapean and Marshallese men (only 18.8% of respondents were women), although these numbers are not necessarily representative of women farmworkers in these communities or more broadly. Overall, the survey implementers reported struggling to access other populations of farmworkers beyond these groups. Nevertheless, the survey results have helped to triangulate my own research findings by providing some context for other kinds of agricultural work taking place in Hawai'i.

Together, both surveys were used to consider some of the issues arising for farmers working across a variety of kinds of agriculture in order to give greater context to my own findings concerning outliers. As mentioned in the introduction to the chapter, this was needed in the absence of any recent qualitative surveys or data available on the agricultural workforce and their experiences. At the same time, both are limited in that the Women Farmer's Survey did not collect age or ethnicity information, while the Farmworker's Needs Assessment did not include a representative sample of women farmworkers and was limited to populations with whom farmworker advocates have most contact. Additionally, neither survey is publically available, so findings have not been subject to wider public discussion or inquiry. At the same time, given that little other information is available at the state level or from researchers, triangulating my own research results against this information provided distinct but interconnected perspectives on different populations of farmers and farmworkers. For example, while no information was collected on farm types, some of the women farmers surveyed appeared to be working within organic farming whereas farmworkers appeared to be employed by export-oriented crop and vegetable producers. In summation, in the absence of comprehensive state information or extensive existing

academic research, these surveys provided helpful methods of triangulation for my own contribution to the field.

Researching at Eye/I/’Ai Level: Claiming ‘Nalo, *haole* Kuleana and Gender in Translation

Having presented the key methods and issues associated with my research design, this

section addresses several ethical strands of the research, including the politics of personal positioning, questions of representation, and quandaries of language and translation.

Specifically, I extend Dorinne Kondo’s framing of the ‘Eye/I’ (1999: 3-32)—framing that refers to the perspectives she takes in her research (Eye) and her own positioning (I)—as a way of framing the methodological adaptations of the research design to the specific context of agrifood systems in Hawai’i. In her ethnography of a Japanese factory, Kondo describes the Eye/I as a way of seeing that is entangled with subjective positioning. I have added the homonym of ‘*ai*, a Hawaiian word for food or food plant that also means to eat, taste, bite, grasp or hold on to, amongst other meanings. I suggest that this addition is generative for thinking about the role of agrifood relations in Hawai’i, as it highlights not only how one sees but how concepts of ‘*ai* and ‘*āina* trouble individualistic concepts of the human as separate from that which one eats, grows and cares for. ‘*Ai* can also mean ‘rule, reign, or *enjoy the privileges and exercise the responsibilities of rule*’ (Kame‘eleihiwa 2001: 4 [my emphasis]; Kahikina 2015), again a perspective which can help to highlight not only the privileges and power of research but the concomitant responsibilities.

A dual conception of rights and responsibilities is also found in the Hawaiian concept of *kuleana*, which can refer to abstract duties, rights, privileges and claims but also to physical locations as well as relatives (Wehewehe; for more, see Glossary). Scholars such as Goodyear-Ka‘ōpua (2011) have emphasised *kuleana* as a set of guiding questions which may

undergird researcher ethics: 'given my and my family's relationship to history, to this specific 'āina, [and] to the other people who exist here, what is my kuleana?' (2013: Location 2985–2986). These questions resonate with feminist reflexive practices which ask researchers to continue questioning how positioning does not determine but bears on the knowledge produced in research (Alcoff 1995: 106). In the following sections, I engage with such a process of questioning, discussing how personal positioning may bear on the research produced.

Claiming 'Nalo

Eye/I/'Ai perspectives offer a useful emplaced method for analysing how my own personal positioning has shaped the research. In the first case, I discuss some of the insider/outsider dynamics involved in white settler research on 'home' and the opportunities and limitations this positioning has represented in research with different agrifood actors.

Researching 'home' is a particularly invested endeavour, perhaps even more so for white settlers whose claims to place are questionable (Rohrer 2015). More broadly, as Tengan has related, while some of the knowledge brought to researching a place one considers home can be helpful, the taken-for-grantedness (Tengan 2008: 27) of some of this knowledge can also be limiting. Insider-outsider dynamics are crosscut by other dimensions of personal positioning (Conroy 2015) and influence attempts to establish rapport with different actors (Grenz 2005; Wolf 1996; Kulick and Wilson 1995) and affect appearance and speech management (Grenz 2005).

Having been raised in Hawai'i, I was, to some extent, already embedded in the research context in ways that are specific to my positioning as *haole* settler and partial insider. I was raised in the beach lots of Waimānalo, the wealthy area along the beach where my psychiatrist mother and architect father settled with me in the early 1980s. My

family of three was part of an earlier wave of *haole* settlers from the continental U.S., especially California and the bay area. I attended private schools¹²⁴ and had few social connections with my neighbours across the dividing line of Kalanianaʻole Highway, the racialised spatial divide between beach lots and Native Hawaiian homestead lands.

My positioning as a locally raised *haole* proved significant in the research process for at least two reasons. In the first case, this personal positioning strongly facilitated access to other white settlers and networks of agricultural professionals, policymakers and food movement leaders through professional, family and social networks. This positioning also made establishing rapport in other relationships more difficult—often, I expect, because of my own anxieties—as in the case of relationships with some Native Hawaiian ‘āina work participants and small farmers whose languages I did not speak. In some of the more successful relationships I developed, it often seemed, both from casual comments made and my own impressions, that my status as white settler and partial insider was particularly valued by other local *haole* as well as newer white settlers, and, to some extent, also by some mixed-raced Asian settlers. This seemed especially true for older men in positions of power; some responded with evident enthusiasm when I shared information about my upbringing. This enthusiasm seemed to confer an additional layer of legitimacy for my presumed local cultural competencies, enhancing my status as both researcher and potentially valuable member of the labour market.¹²⁵

¹²⁴ Hawai‘i has a long tradition of private education linked to missionary families and plantation owners. It ranks first in the nation for private school attendance, with 16% of children attending private schools, although it is also less expensive than in other U.S. states (Wong 2014).

¹²⁵ For example, I was casually recruited by several of those I met during research and it was commented that my LSE credentials were an important combination with being raised locally.

The fact of where I was raised also seemed to affect how I seemed to be read at times by different Local and Native Hawaiian-identifying people who understood some of the politics, history and culture about the area where I was raised. Waimānalo known as a Native Hawaiian cultural and political centre, is one of the largest predominantly (65%) Native Hawaiian communities on O‘ahu and includes Homestead lands that require 50% native Hawaiian blood quantum.¹²⁶ However, the overall neighbourhood has different demographic pockets, and the beach lots where I was raised is increasingly¹²⁷ becoming a more affluent, settler-dense beachfront zone. I was a somewhat surprising subject for many who associate Waimānalo with a predominantly Native Hawaiian, working class culture and may not be aware of the elite area where I was raised.

I noticed that how and when I ‘claimed’ this upbringing powerfully indexed the shifting relations of insider-outsider status between myself and research participants. For example, I often recognised a strong desire to claim affiliation with this area when I felt most at pains to demonstrate my insider status, to differentiate myself from newer *haole* settlers (what we call ‘transplants’), perform myself as a ‘different kind of haole’ (Rohrer 2016) or downplay my relatively elite status in majority Native Hawaiian spaces and in agricultural circles (since the valley of this area is an important agricultural zone). I was also conscious of the effects of how I presented myself and became highly attuned to how I might be read, making a point to specifically mention that I was raised in this ‘beach lots’ area and that I was not Hawaiian, although it was not always possible to explain these important details.

¹²⁶ Hawaiian homelands, initiated by the 1921 Hawaiian Homes Commission Act, can be applied for by native Hawaiians of at least 50% blood quantum. See Kauanui (2008, 2005) for more on the politics of Homestead lands and blood quantum.

¹²⁷ Waimānalo Bay was featured in a prominent list of best beaches in the world in 2015 and there has been growing tourism in the area in the last several years (Civil Beat 2017).

Over the course of the research, I came to specifically avoid using the words of 'being from' or calling Waimānalo 'home', having begun to understand that for Native Hawaiians such words denote a much deeper genealogical connection than my own relationship to that area. Nevertheless, even partial claims to place, I would contend, form part of the processes through which we as different *haole* settlers seek to 'indigenise' ourselves (Rohrer 2016). These intersubjective processes are not only important for researcher-researched relations, but may affect writing and analysis, 'othering' *haole* and other settler research participants in trying to establish my own position as an 'uncomplicatedly just, good, progressive' academic critic (Hunter 2005 cited in Hunter et al. 2010: 412). These tensions strike at the heart of dilemmas of doing research on whiteness and other dimensions of social life in which one is always complicit (Probyn-Rapsey 2007).

These complexities of how I negotiated these claims to place, when and where I 'claimed 'Nalo' or had it claimed for me by others, may have facilitated some access during the research. In turn, how I was read within the research also affected access, relationships and research possibilities. While generally interpolated as *haole* or sometimes Latinx in Hawai'i, I found myself increasingly at pains to identify my heritage as Euromerican white after having witnessed some disturbing examples of 'race passing', and especially 'Hawaiian-passing' within the local food movement. And yet, of course, racialised readings are never fully within one's own control and in one case an incident of unintentional race passing took place as a result of misunderstanding, where I later learned that I had established a research relationship and consequent friendship, in part, because the person thought I was non-white.

One way in which ethnicity and class are marked in Hawai'i is also the use of Pidgin or Hawaiian English Creole, a practice which remains ambivalent for me. As a relative

insider, I have also been aware that this use of (some) pidgin by a *haole* woman from my class background was and is incredibly loaded, and brings up feelings of inauthenticity for me in ways that may have been different for a relatively more 'outside' researcher. Similarly, when responding to questions about personal location, my use of Pidgin could also map my desire to downplay raced and classed differences and mediate my own white middle-class femininity. At the same time, speaking Pidgin makes sense when this is the language used in context and can aid communication and building rapport, and there were indeed times when I used Pidgin in the research as in the case of the concept of talking story as a research method. Perhaps the phrases I have felt comfortable using can also help measure the extent to which these phrases have travelled into standard English and become acceptable for white middle-class people to use. In sum, insider-outsider dynamics and the politics of race and class in particular have shaped researcher-researched relations in unexpected, interesting and troubling ways, affecting research sampling and access in specific ways detailed in the next section.

Research Access and Sampling

While personal positioning is complex, it does have tangible effects on research access, sampling and representation. My research sample was affected by snowballing procedures that originated, in some cases, with my existing contacts. In particular, a family friend who is an agricultural consultant working with different kinds of farmers—and not involved in the GMO debates—allowed me to use his name when contacting potential participants at seed production companies. In turn, one seed production manager made an e-introduction to a senior agricultural policymaker, which in turn opened other doors. In relation to smaller-scale agroecological farming, many of my connections resulted from my participation in a

permaculture design certificate course in late 2014, as well as previous work with anti-GMO organising (discussed in the introductory chapter) through which I met a number of farmers, agrifood system activists and others. Given the narrow context, interviewees were often able to facilitate not only connections with colleagues but also with farmers across different sub-areas of agriculture (see Appendix A for more information on the research activities). Taking place across multiple sites, this research required significant time to build relationships with research participants, so drawing on contacts was an important way to facilitate other research connections.

I also undertook deliberate attempts to widen participation beyond those reachable through this initial social network, with differing degrees of success. For example, for one interview with a former farmworker, I enlisted an acquaintance to act as a translator, as the interviewee was suspicious of professional translators and concerned about confidentiality. However, not all of my efforts to reach beyond personal networks were successful, as I conducted internet research on different farms and contacted potential interviewees via phone and email. Some people agreed to speak with me, even though I called 'cold'; however, others never responded, or stopped responding to emails. This also happened in person, as in the case of one elderly Asian-American woman farmer who specifically said she was not interested in talking about being a farmer or in receiving help on her farm. A trans farmer of colour, who had been suggested to me as a possible research participant, declined to be interviewed as part of settler research. How access has affected the research sample raises important questions about the role of research for different people, its usefulness to their lives and how social positioning affects researcher-researched relations (Smith 2011).

One element of these researcher-researched relations is the significant role that GMO politics plays in politicising agriculture, as Kimura has also noted with regard to Hawai'i's organic farming (2016). For my research, this raised important ethical questions about how I represented my research to different audiences. For example, I did not automatically disclose my links and previous work with food movement and anti-GMO organising but responded to any questions by seed company actors who asked me about this work. My initial involvement in the food movement formed part of the original research curiosities and desire to know more about the operations of seed companies as well as other kinds of farming. When I did succeed in accessing several companies, I endeavoured to undertake my research as rigorously and dispassionately as possible even though these boundaries were not always clear. At the same time, I believe the research project analysing several different kinds of agriculture critically facilitated access to different actors, since gender represents a somewhat less divisive, if perhaps more ambiguous, frame than some traditional agricultural or ecological debates.

Within seed companies, several key informants were responsible for facilitating my access and acted as significant gatekeepers, affecting who I was able to interview. They did not provide any non-managerial field crew for interview and it is likely that those I interviewed in those spaces were seen by managers as good or compliant employees. While I considered seeking out employees through other channels, I determined that the ethical stakes for workers were prohibitive and that my own language and cultural competency would not have facilitated such research on its own. In spite of these obstacles and limitations, the access I obtained to seed production sites was critical to providing new insights about the social relations of production in some of these sites, even though a fuller picture cannot be obtained because of lack of further cooperation. Since undertaking my

research, multiple requests sent to seed production human resource personnel for information about workforce demographics have been ignored.

Overall, the research sample of formal interviews is largely made up of those working in seed production, policymaking and alternative agrifood systems and spaces, many of whom are also middle-class, often white settlers (see Appendices for interview protocol). At the same time, as mentioned above, I sought to triangulate my own findings with other research, and obtained access to surveys on women farmers and on farmworker issues in Hawai'i (see Appendices N and O for more).

While the research sample generated represented the outliers I was interested in analysing, it also meant that white middle-class settlers tended to be over-represented in the interview data sample, as they dominate seed production and some forms of agroecological farming. At the same time, this sample usefully lent itself to a focus on researching up on powerful actors (Archer 2002; Neal and McLaughlin 2009); to the call for more research on 'Big Ag' (Bobrow-Strain 2007); and to more deeply interrogating white settler practices, narratives and positionings within Hawai'i's agrifood systems. Feminist researchers have highlighted the issues of power and responsibility that arise in interpreting interview narratives, including how differences in interpretations or 'interpretive conflicts' (Kirsch 1999: 47) may impact research participants' emotional well-being (Borland 1991: 328; Kirsch 1999: 46; Reay 1996). At the same time, others have highlighted that analysing the narratives of relatively powerful actors presents somewhat different concerns, as researchers may focus less on aligning interpretations than on critically highlighting actors' power (Kirsch 1999: 47). Some of these issues of narratives, representation and interpretation are discussed in the final section, but first, I discuss some of the broader ethical challenges the research presented.

The Challenges of ‘Gender Research’

Whether or not participants identified with feminism or agreed on the importance of gender research varied amongst those interviewed. These differences are important as they may impact how I or my research participants interpret our interview encounters and participant narratives. Feminist researchers have noted that differences in interpretation may be particularly attenuated when researchers perceive their commitments to participants and to their wider research and activist communities to be at odds (Kirsch 1999: 52). A similar tension was also present to some extent within my own research, which took place across multiple agricultural sectors, with differently positioned but often relatively powerful actors.

In this vein, I encountered several challenges in undertaking the research, some of which were linked to understandings and interpretations of gender research as well as to how this research focus was directly and indirectly questioned and even dismissed. One common challenge encountered across research sites involved how participants or potential participants engaged with, or reacted to, the stated interest in gender that framed the research. On the one hand, this framing appeared to facilitate access, as this did not immediately fall into the divisive terms of current food and agriculture debates in Hawai‘i. On the other hand, many participants seemed to find it difficult, uncomfortable or irrelevant to discuss gendered issues, using dismissive frames of non-discrimination to assure me that there was in fact ‘a good gender mix’ in my area of inquiry. Some participants acknowledged gender as an issue making farming a ‘male-dominated’ industry, but this was either seen as a consequence of ‘natural’ gender differences or as a reason for focusing on and promoting the issue of women in agriculture. Some of these responses can be understood as forms of resistance, as has been found within gender mainstreaming research (Lombardo and

Mergaert 2013). At the same time, these dynamics are a common part of gender research and thus important learning experiences for researchers aiming to work in areas that can be politicised and sensitive for research participants.

While some of these contradictory articulations are taken up directly within the chapters, this general and constant positioning of gender as unimportant or not directly relevant to the work of food and farming piqued my curiosity about the operation of gender in these networks. At the same time, it was also personally taxing and heightened my insecurity about the research process and aims, which sometimes emerged as a desire to abandon the research focus. That I felt so discouraged about exploring this direction, despite my relatively strong social and institutional positioning, perhaps points to the difficulties in pursuing discomfiting areas of research, both for participants and researchers.

On the other hand, when gender *was* acknowledged by participants or potential participants as important or interesting, this was not always done in ways with which I felt comfortable, as my status as a gender researcher at times seemed to be read or interpreted as a form of sexual availability. More than once an interviewee appeared to perceive an interview meeting as a potential romantic occasion. Such actions point toward dynamics of power and the broader problems of undertaking feminist research (Grenz 2005) in male-dominated sectors.

A third challenge is related less to what I have interpreted as masculinist forms of obfuscation, resistance and misunderstanding but is related nonetheless to power within researcher-researched relations, questions of priorities, access and participation within different agrifood practices. For the agrifood practices analysed in this thesis, critical gender

research has not necessarily been identified as a research priority,¹²⁸ which raises concerns in relation to participatory politics within research on indigenous practices. In particular, research by settlers on indigenous communities is particularly charged and seen to necessitate participatory approaches that entail mutual benefits (Smith 2011). However, because gender has not been identified as a priority by many of the agrifood practices analysed in this study, enacting strong participatory criteria may have generated distinct foci and left the questions raised at the outset unaddressed. It is hoped that the work may nonetheless be useful or relevant to the movements and practices researched (Mott and Nilsen 2011) and that future work, building on some of the relationships that have since been developed, may more centrally address these quandaries of undertaking gender research in a settler colonial context.

A fourth challenge in relation to gender research concerned the boundaries between what is considered public and private, between production and consumption. Although my research sought to obtain data about reproductive and food consumption work, interviewees did not always appear comfortable discussing their lives outside work, even as I sought to ask interviewees about their lives more broadly. I was more successful in obtaining answers to these questions from pilgrim farmers, who I often met in their homes, but for those I encountered at work or in community spaces, it was more difficult to establish rapport in this area. In some sense, the fact that participants did not appear as comfortable discussing these issues appears to highlight the ways in which productive and reproductive work continue to be interpreted as separate spheres and are spatially managed, presenting researchers within male-dominated industries with particular research

¹²⁸ I was specifically told this by one food movement activist.

quandaries. For those farmers interviewed on their farm homesteads, many were relatively young or did not have significant caring responsibilities. The women farmers surveyed in the survey I used to triangulate findings, in contrast, highlighted caring responsibilities as a significant issue for the women farmers surveyed. This helped to give some context to the constraints of my own research, and to highlight the need for more research on these issues specifically. Research that seeks to explicitly focus on work-life tensions and negotiations would likely be more successful in illustrating these issues in greater depth than my own research has been able to do. Addressing this gap in meaningful data about how different agrifood practices shape reproductive work and divisions of labour is thus a key area of work going forward, though some of these issues are drawn out in Chapters 5.

One final challenge to the research results from limitations on the research's ability to engage with Native Hawaiian and other language sources. I do not speak or read fluent Hawaiian or Ilocano, Marshallese and other languages spoken by Hawai'i farming communities. In this way, the research is limited in how it engages with the experiences of those who speak these languages as well as academic research conducted in those languages. Moreover, while it occurred to me to think about Pidgin and the languages spoken by (im)migrant farmers such as Ilocano, Tagalog and Thai, it did not occur to me to consider difficulties with regard to Hawaiian. And yet, as I came to find out, 'āina work is often conducted in part or entirely in Hawaiian and many important conversations take place in spoken Hawaiian or are communicated through song and chant. Since I had initially not considered that I would be able to access or participate in Hawaiian-language spaces given my positioning, I had perhaps not fully considered these ethical and linguistic issues in advance. My sense is that my relative 'insider' status as a *haole* raised in 1980s and 1990s

O'ahu¹²⁹ also affected how I considered these issues, making the assumption that Hawaiian language speakers would also be interested in and able to converse in English or Pidgin.

This framing of Eye/I/Ai also helps to highlight these issues of language and translation for gender researchers in particular, as engagement with Hawaiian language material is likely to have transformative epistemic value in understanding gender relations in this context. This is because, in part, settler researchers have tended to overlook Hawaiian-language sources (Nogelmeier 2010: v), lacking fluency and relying on texts whose Calvinist authors may have censored gendered and sexual themes (J. K. Osorio n.d.).¹³⁰ In short, research challenges have raised ethical questions concerning participation, representation and translation and highlighted provocative areas for research.

The Politics of Interpretation in 'Researching Up'

How can researchers write with 'interpretive respect' (Borland 1991: 64) for participants' understandings of their words while upholding researcher responsibilities to critically interpret these narratives? Feminist researchers have identified that actual or potential interpretive conflict are more likely to be present when researchers and participants share different values, worldviews and interpretations of experience (Kirsch 1999: 48). These differences could be said to characterise some portions of my research as well, especially within seed production industries, where I often (though not always) felt I shared less in common with the managers I interviewed. In analysing interview narratives, a recurrent

¹²⁹ My age and educational experiences are relevant insofar as during my upbringing there were fewer Hawaiian language immersion schools; Hawaiian language fluency has since flourished as a result of these schools.

¹³⁰ According to her dissertation prospectus, Jamaica Osorio describes how different Native Hawaiian scholars have unpacked and re-interrogated prominent English language settler translations and omissions within Native Hawaiian texts (mo'olelo), including scholars such as Noenoe Silva, Cristina Bacchilega and others. (J.H. Osorio n.d.)

question revolved around balancing respect for authorial intentions without necessarily privileging these intentions (Borland 1991: 327).

In this way, access to and research with relatively powerful actors presents particular quandaries for intersectional feminist research. Researching social relations through the lives of more powerful actors does not on its own challenge social inequalities, even while researching up may redirect the research gaze toward actors less often perceived as researchable subjects (Kirsch 1999: 61). Moreover, the study of 'dominant others' has been found to be particularly useful in research on work (Kirsch 1999: 61). Kirsch and others caution that in the case of research on powerful/privileged actors, feminist principles of empathy and collaboration in research may become problematic, impossible and/or undesirable for research aimed at exposing hierarchies and relations of power (Kirsch 1999: 61; see also Acker et al 1983). In this way, researcher-researched dynamics may differ from that concerned with more marginalised actors, as privileged actors already have voice and power in shaping research encounters and later representations (Kirsch 1999: 62). Kirsch also highlights that it can, at times, be useful for powerful institutions to be critically analysed in order to uncover inequalities and insights into how dominant relations of power and hierarchy are maintained in quotidian ways (Kirsch 1999: 62).

Nevertheless, researching powerful actors does not on its own challenge the conditions of marginalised subjects, and can even re-centre privileged groups and their lives (Kirsch 1999: 63). In this sense, the research aimed to include a number of differently positioned subjects within the research sample, although questions of time, positioning and access also provided more access to privileged actors in agrifood systems. Additionally, how researchers negotiate their work with powerful research subjects must also take account of how this may impact future work in a given area. As Kirsch cautions:

if the likely result of our work is only to alienate powerful “others” and prevent future researchers from gaining access to the institutions and workplaces in which powerful people are located, then we have gained little. But if we are able to find participants who are willing to open up institutions and workplaces to researchers’ critical scrutiny and to learn from researchers’ analyses, then we will have taken the first step toward changing the material conditions and institutional structures that separate marginalised and privileged groups (Kirsch 1999: 63).

Indeed, while researching up was not the project’s only or initial intention, questions of positioning and access meant that this emerged as an important aspect of the thesis questions surrounding how powerful actors define agrarian ideals. Feminist theorists such as Kirsch and Alcoff note that research strategies always entail risks and ethical questions of interpretation and that the ‘dangers of speaking for others’ may be lessened, if not avoided, by speaking with the subjects of research (2008: 23).

Conclusion

In conclusion, this chapter has outlined the parameters of the research, its scope and ethics, and the research dynamics and outcomes most relevant to the research produced. I discussed research methods and design, outlining the study’s focus on agricultural outliers, and detailed site selection consideration. I drew upon studies of agrifood labour, diverse economies and intersectional analyses to develop a framework for analysing the extent to which alternative agriculture can be said to address and shift social inequalities. I did this by including different agricultural practices—outliers—within the research design to take into account the number of farm operators and workers as well as agricultural methods.

This chapter has also delineated some of the possibilities and limitations of different research methods, highlighting the opportunities and limitations of multi-sited work, formal and informal interviewing, participation and observation. The chapter also made the case for an interpretive framework based on grounded theory and for thematic research interview narratives. In the second half of the chapter, I commented on questions of access,

reflecting on the research sample and researching up. I proposed the framing of researching at Eye/I/‘Ai level as one way of weaving together ways of seeing, personal positioning and visibilising questions of food, land, responsibilities (*kuleana*) and translation in research on Hawai‘i agrifood systems. The next chapter puts these methods to work by considering intersecting gendered social relations within seed production practices.

Chapter 5: Pilgrim Farming

Introduction

I have a friend on North Shore who's an organic farmer who grows in the bushes and has eggplants and stuff but he lives in a shed on the farm and he goes surfing. He's got no kids, he's got no—that's all he wants to do and he's totally happy. So, is he a real farmer? Yeah. If all of our farmers look like that, would we be as productive as we need to do? Probably not (DE 48).

And even now with alternative ag, that social equity kind of thing, not just gender, it's fairly well-embedded in the spirit of it (DE 41).

Who is a 'real farmer', and are gender and social equity indeed 'fairly well-embedded' within so-called 'alternative ag'? Such questions recall the central issue addressed in this thesis: to what extent does alternative agriculture as embodied in small organic, agroecological farming offer alternatives to the social relations of production of other agrifood practices? Having looked at the social relations of large-scale corporate farming in Chapters 5 and 6, the aim of this chapter is to perform a similar analysis of small organic, agroecological farms as one form of small, low-input farming systems often promoted as an ideal 'alternative' to large-scale agriculture in Hawai'i (CFS 2016; the Kohala Center 2014) and beyond (Altieri 2009). At the same time, agrifood researchers elsewhere have been more critical of how some of these discourses take shape in relation to 'family-scale farming' (Getz and Brown 2008: 19). Indeed, they have highlighted how the 'the invocation of vibrant rural communities and family-scale farms as the political-economic unit of resistance to the global food corporation ignores the role that farm employers have played in the construction of the exploitative labor regime underpinning US agriculture' (Getz and Brown 2008: 19).

In this chapter, I outline some of the debates concerning agroecological small-scale farming, suggesting the need to complicate the lifestyle/livelihood dichotomy. I draw on the

framing suggested by one interviewee to connect these practices with histories of spiritual investment in farming in the context of Hawai'i. I suggest that these 'pilgrim farms' organise their work in a variety of ways, including combinations of paid, unpaid and work-trade labour that present particular gendered issues for farmers and farmworkers. I have framed pilgrim farmers similar to those who 'farm for values' and who represent a heterogeneous collection of usually small-scale farms 'combining a portfolio of activities at the intersection between simple reproduction and accumulation' (Baglioni 2017: 5-6) (see Chapter 6). Most of those interviewed farm on O'ahu, which may host a higher proportion of locally-raised farmers compared to other islands. I propose that such agroecological practices offer important opportunities for, limitations on, and variable implementation of gender-inclusive work, social equity and well-being.

The findings are based on interviews with ten farmers and work-trade volunteers, and a total of thirty people involved with policy and new farmer training programmes. The research was also based on observing and attending more than 20 food and farming events associated with these farms and farmers (see Appendix E for more information). In this sense, I interviewed farmers/farmworkers themselves who may also manage others' work (paid and work-trade). I also attended a two-week intensive permaculture design course which provided additional insights, connections and education (See Appendix H). This chapter also draws on a survey of 108 women farmers in the state, as outlined in Chapter 4 and Appendix O, which were used to compare with and further explore my own research findings.

Farm size varied amongst those interviewed, with farmers who had recently begun farming (beginning farmers) and home growers working on pieces of land as small as one - eighth of an acre, while some for-profit small farms held one to two acres in production.

These farmers would be similar to what Mostafanezhad and Suryanata (2018) have described as those ‘farming for values’ (2018: 230) or who tend to promote the social value of their work. These include many new farmers who seek to cut costs and earn income through multifunctional activities, including work/trade labour. In a previous study of farm hosts utilising work/trade labour, Mostafanezhad et al. (2016) found, white farmers with less than five years’ experience are over-represented¹³¹ in agroecological farms that utilise work/trade labour, and my research observed that many of those involved in small-scale agroecological farming as both farmers and work-trade participants are white. As outlined in the next section, the relationship of these small-scale agroecological farms to whiteness will be explored in greater depth, as well as their classed, gendered dimensions.

Pilgrim Farmers

It’s immigrant farmers...that have driven ag. A lot are small-scale aggies, but there are some decent size farms too.... And the other group is Caucasians that look like you and me, and that came from the mainland for the most part, and want to get into ag, mostly organic ag. And they’re passionate and it really is more about lifestyle. ... some of them will flourish, many will fall out... Because there are opportunities in this marketplace, we’ll see money come from the outside that will drive some of agriculture (TO 16–19).

These words, from a senior policymaker, contrasted ‘immigrant farmers’ and white farmers who are ‘more about lifestyle’—‘pilgrims that come over and want to get in the ag, but they’ve never done it and especially never done it in the subtropics’ (TO 16). Indeed, research elsewhere suggests that TO’s framing is insightful. U.S. traditions of organic agriculture and small farming entail histories of Calvinist spiritual investment (Carlisle 2014) as outlined in Chapter 2, and are characterised by what could be seen as forms of

¹³¹ ‘Data from the online survey reveals that more than 80 percent of the farm hosts are Caucasians, a striking figure considering that Caucasians comprise only 26 percent of the population in Hawai’i. Our interviews further indicate that the farmers most likely to host WWOOFers are first-time farmers from the continental U.S. with less than five years of experience. This new breed of farmers is more likely to participate in organic farming and, in most cases, choose to farm because of the associated lifestyle’ (2016: 3592-3595).

contemporary ‘good food’ (Guthman 2008) evangelism. Scholars have suggested this evangelism reinforces white hegemonic notions of purity and the moral worthiness of ‘putting one’s hands in the soil’ (Guthman 2014; DuPuis and Goodman 2005; Slocum 2011). As I outlined in Chapter 2, Lukens also suggested that in Hawai‘i, ‘haole food’ plays a similar role to the ‘good food’ Guthman discusses, suggesting a ‘right (white) way to eat’ (2008) while Mostafanezhad et al. found, in a survey of Hawai‘i farmers offering work-trade exchanges, that 80% of participants were white (2016: 3592–3595). In contrast, in relation to gender, Kimura’s work has shown that women organic farmers in Hawai‘i often describe their work as contesting sexism, even while barriers remain. Taken together, these combined insights raise important questions about the extent to which these forms of alternative agriculture can be seen as socially inclusive when gendered, racialised, classed social relations are taken into account in the broader social relations of production.

Pilgrim farmers were described by TO as mostly white ‘lifestyle farmers’—those who were able or attempting to supplement or subsidise their growing through access to existing wealth and land, pensions and other off-farm income as well as by utilising work-trade labour as a means of reducing costs (Mostafanezhad et al. 2016). Pilgrim farmers may grow for profit, informally or in some combination and appear more likely to have more secure land tenure through ownership or leasehold agreements compared to immigrant farmers (TO). The situations of pilgrim farms vary widely, depending on access to land, farming input and labour, length of time in farming and how farms utilise unpaid and paid labour, including work-trade and volunteer labour.

While the ages, class positioning and motivations of new farmers are diverse, it has been observed that many pilgrims are younger, in their 20s–40s; some are older or retired

from former careers,¹³² which has enabled them to buy land and undertake second careers in their 40s–60s (MC; TC). They are not all white settlers or ‘transplants’ from the continental U.S., but many are. Such demographics are also reflected in work-trade volunteers, many of whom are university-age visitors from the continental U.S. as well as Europe, Australia and Japan (ONN; MN; Mostafanezhad et al. 2016). Research has also suggested that women farmers are well represented within pilgrim farming (Kimura 2016’s research on organic farming) but my own work reveals that white settler men appear to be over-represented in leadership positions within organic and small farming member organisations¹³³ in spite of the fact that there many women members of the organisations they represent.¹³⁴ Moreover, my research has suggested that women continue to be under-represented as individual farmers or as co-farmers within beginning agricultural programmes.¹³⁵

While the framing of ‘lifestyle’ farmers may be useful to highlight some of the classed, racialised dynamics of who farms as a ‘lifestyle’ compared to who farms for a living, my research found that these distinctions did not fully describe how different farmers negotiate their investment in their work. Moreover, Kimura and others have suggested that this framing of who constitutes a ‘real’ farmer’ works through gender, by feminising women’s farming as inauthentic (2016) and, as others have shown, artificially separating productive from reproductive farmwork (Whatmore 1990; Little 2002). I therefore suggest that the framing of pilgrim farmers is useful not only for unpicking the classed, gendered

¹³² Including the military; at least two of those interviewed in the ‘retired’ category were former senior military (MC; TC.).

¹³³ For example, HOFA, WWOOF and HUFF are all led by white males from outside Hawai’i.

¹³⁴ For example, one local small farming organisation reported about 70% women members attending a recent meeting (MN8).

¹³⁵ For example, in ST’s new farmer programme consisting of nine individuals, all three women farmers in the program were farming with male partners (ST).

dimensions of these forms of alternative agriculture but how they relate to histories and processes of settler colonialism.

Pilgrim Practices

While agroecological growing as a practice of ‘pilgrimage’ does not necessarily fit the motivations and descriptions provided by all the small farmers interviewed, there were some important resonances with this framing. This included references to growing as a spiritual practice and deeply felt passion; a focus on ‘spreading the word’; and, at times, overt usage of moral and spiritual language. At least one organisation used the language of ‘pilgrimage’ to describe lobbying the legislature in relation to small farming, for example in a news post entitled ‘A Pilgrimage for On-Farm Mentoring’ and signed ‘in service to Agriculture’ (HUFF 2017). Some others referenced their ‘values’ (HS and IA), their ‘conscience’ (ST) and the spiritual rewards of growing (DE). For example, DE is an academic working in the organic farming sector – someone who grows for home production and for research purposes. A local *haole* raised in Hawai‘i, his words highlight the spiritual overtones of organic farming rhetoric:

To me, so one of the most spiritually rewarding things, and I think it’s for most people actually, is harvesting, is harvesting food. And then taking some data (DE 26).

In contrast, new farmer ST described organic farming as something good ‘that’s on my conscience’ which was about spending time and effort moving agriculture in the ‘right direction’ (ST39–40).¹³⁶

¹³⁶ As ST says: ‘I think it’s important not because I think I’m good at it, not because I think I’m going to make a lot of money off of it; it’s just I know when we talk about issues about food and agriculture and sustainability like I know what some stuff I spend my time and efforts on is something that is in the right direction. Like at least, that’s on my conscience’ (ST39–40).

Such framings highlight some reasons for considering these farmers through TO's framing of pilgrim farmers as those who believe in the moral economies and spiritual rewards of their work. These subcultural practices link pilgrim farmers not only to 'back to the land' movements but to older histories of spiritual investment in the islands (Zwiep 1989; Grimshaw 1997) as well to imaginaries of the islands as paradise (Wood 1999; Whittaker 1984; Rohrer 2016). The history of agroecological growing, especially what is known as organic farming, has been linked with notions of goodness, purity and healthfulness that have been found to cohere in white-dominated food spaces (Guthman 2008; Slocum 2007; Slocum and Alkon 2011) and that such practices may also redound on specifically religious histories (Sanneh and McClymond 2016).

In what follows, I first complicate the dichotomy of lifestyle versus livelihood farming before analysing the classed, racialised and gendered complexities of access to agricultural land and labour and how the latter is organised.

Livelihoods and Lifestyles

This section extends Kimura and others' insights concerning how gender functions to define 'authentic' farming by demonstrating how different pilgrim farmers negotiate relations of production. The farmers HS and IA, while not necessarily representative of most small pilgrim farmers, do illustrate how owning land significantly impacts the social relations of production on-farm. HS's family owned the land they farmed, meaning they felt their operation was 'pretty unique' since 'we have this luxury of not really having to be driven by the bottom line' which enabled them to place 'our values are at the centre of what we do' (IA). In this way, their farm strove to focus on 'innovation', 'communal living' and 'investing in long-term fertility for the farm' (HS) in ways that prioritised the well-being of everyone on the farm and the customers to whom they sold their produce (HS). The luxury of having land

also shaped their growing decisions, since they sometimes decided not to grow particular crops that were labour-intensive or that they personally did not enjoy eating (HS and IA). For HS and IA, therefore, farming was not entirely about 'the bottom line' but nor did their work ignore possibilities for profit: the research found that farmers like HS and IA must draw on a range of strategies to supplement what they earn from selling produce to consumers, farmers' markets and restaurants. This included activities that take place on the farm, such as farm tours, on-farm courses and retreats and community events (HS and IA); paid work teaching farming (AI 14) and paid work in not-for-profit farm policy (MN); and unrelated off-farm income and savings from previous work (MC; HS and IA; Y).

So, while HS and IA's descriptions of their work might be read as the embodiment of pilgrim farming focused more on 'lifestyle' than livelihood, other farmers expressed dissatisfaction with and lack of interest in farming as a lifestyle but may nonetheless feel a strong spiritual connection with their work. As one woman farmer from the Women Farmers' Survey I accessed described, 'I am disheartened with business practices and opportunities in Hawai'i. I cannot grow, pick, wash, weigh, package and bring to market/distributor and make a living wage. Gotta do it for the 'lifestyle', I am told' (Women Farmer Survey 2016: 16). In this sense, while some pilgrims are privileged enough not worry about surviving from farming alone, for others this remains their livelihood (SK; MN; J), precarious as this may be. In fact, several organic growers, especially beginning farmers, commented on being specifically interested in the higher margins obtained from organic products (OS; SK), raising the question about the extent to which all pilgrims are themselves 'true believers' in the organic mission. More to the point, rather than viewing HS and IA's work through the lens of lifestyle, it is perhaps more appropriate to describe their work as multifunctional or post-productivist agriculture, which includes utilising a variety of

strategies to obtain a livelihood, which a simple productive ‘lifestyle/livelihood’ distinction misses.

At the same time, might some pilgrim farmers be able to undertake their multifunctional agricultural work precisely because of their existing economic and social privileges? And how do these processes work in relation to gender? The next sections analyse issues of access to land and the subsidisation of pilgrim farmwork through unpaid, work-trade and volunteer labour.

Access to Land

Land is a major cost, especially in Hawai‘i, because leasehold agricultural land generally does not enable farmers or farmworkers to dwell on the property, substantially raising the cost of farming for those who must pay rent on farmland as well as on living space (AI 17). As mentioned, several farmers interviewed either had access to family land (HS; HK’s partner) or had been able to purchase or lease land because of existing wealth or pensions (YS; MC; TC) and some were able to access land (ST) by obtaining state leases and subleases. Given the prohibitive cost of farmland and the dwelling restrictions, agricultural land leases and agricultural parks play an important role in giving farmers access to land on better economic terms over long periods (60 years in some cases). The classed and income dynamics of pilgrim farming thus turn on how individuals are able to access the land. And yet, as research elsewhere has shown, historically disadvantaged farmers, (Carpenter 2012) such as Native Hawaiians, women, and disabled farmers, often have additional difficulties in accessing land because of lack of credit to buy, discrimination in leasing, or historical prohibitions on land inheritance.

At the same time, my research suggests that pilgrim farmers, the majority of whom are white and from the continental U.S., appear to be increasingly accessing or inquiring

about state agricultural leases. According to one state agricultural land lease property manager, the majority of agriculture land lease inquiries and applications come from new residents: 'they're coming here, they want to come here, they're here now and maybe they started something somewhere else and then they want a state lease now' (IN 9).¹³⁷

However, she also recounted that women remain a disproportionately small number of those accessing state agricultural leases as principal or sole operators, with one of the more inclusive agricultural parks reporting nine of 50 subleases held by women (IN 6). As the property manager noted, 'women coming into agriculture on their own is definitely something that's very, very new' (IN 5).¹³⁸

These difficulties with obtaining access to land were echoed by some women farmers from the external survey as well as some of those I interviewed. Some of the common issues that these women farmers remarked on were 'not being taken seriously', being 'less likely to find a place to farm for long periods' and 'being harassed and sabotaged' where they farmed (Needs Assessment 2016: 55). Such difficulties appear to suggest how women farmers are viewed as inauthentic, as Kimura noted (2016), as well experiencing serious issues of harassment and discrimination in different forms of land leases. These experiences contrasted with the views of one young woman farmer, who had been farming for two years:

There really is so much opportunity [to access land]. It's almost kind of scary, like you really could do this if you want to...they're like, 'Hey, here's some land over here...' it was just weird to think these people are going to take [us] seriously... it's like, how did I get here? (ST 35).

¹³⁷ While no comprehensive statistics are available, I was able to compile some information about Department of Agriculture leases on O'ahu and Hawai'i island, which range between five and 10 acres and span up to 30 years (IN 23).

¹³⁸ However, the majority of the existing 394 state parcels under her purview were leased in the 1960s and thus largely belonged to older, Local farmers. While these leases were often farmed by families, titles were often held by men or by married partners jointly: as far as this manager knew, no women had obtained these leases independently (IN 6) but some widows and female children did later begin to farm independently on these parcels (IN 6).

As a participant in a state-run beginning farmer programme, ST described access to agricultural land as almost ‘scarily’ easy, although she was still in the beginning phase of her farming venture. This sentiment appears to accurately describe the availability of agricultural land in Hawai‘i, as outlined in Chapter 3, and perhaps also demonstrates how women who farm in partnership with men may be differently subject to the barriers mentioned above. At the same time, ST also recognised that in spite of access to this land, the majority of those in the new farmer training programme also had full-time jobs outside this work (ST 5) and that no women in her programme cohort farmed independently. In this way, it is possible to see how gendered disadvantages in relation to accessing land may be mediated in different ways, through women farmers’ relationships with families, farming partners and the state, but the need to utilise multifunctional strategies including off-farm income applied to many. These gendered, classed and raced dynamics thus raise questions about the relationship between these privileges and the possibility of undertaking agroecological farming.

Labour and Unpaid Work-Trade

In addition to how land access appears to privilege those I have framed as pilgrim farmers, how such farmers organise their work is a second key factor affecting the extent to which their work is gender-inclusive. Amongst pilgrim farmers, there are variations over time and between different farms about the extent to which farmers wish, and can afford, to pay others for help as well as the extent to which their work utilises mechanised labour. Pilgrims engage in a range of strategies to accomplish their work, organising production in a variety of ways, involving different combinations of unpaid and paid work.

Calculating the costs of production were mentioned by some farmers as difficult tasks given their own lack of income and the prevalence of unpaid work: ‘we don't know what to value our [own] labour at’ (Women Farmers Survey 2016: 24).¹³⁹ Compared to larger agroindustrial farms, small pilgrim farms tend to have few paid farmworkers, although two farmers reported that when they did hire workers, they paid 15 dollars per hour (MN) or tried to pay what one person described as ‘fair wages’ (MH). However, lack of further information makes it difficult to assess any of these claims. More frequently, pilgrim farms rely on the occasional volunteer labour of family members and friends as well as full- or part-time workers who receive accommodation and sometimes meals in exchange for their work. These work-trade practices are relatively widespread in Hawai‘i (more than 200 active, registered farms) and significantly subsidise the costs of farm production (WWOOF Hawai‘i).

Five of the seven farmers interviewed had at some point engaged in work-trade exchanges including those from the international Worldwide Opportunities on Organic Farms (WOOF)¹⁴⁰ organisation. WWOOF exchange volunteers work up to six hours per day, five days per week for periods ranging from a few weeks to a year (WWOOF Hawai‘i). In return, WWOOFers, as volunteers are called, receive food, board and learn organic farming

¹³⁹ Both farmers and farmworkers appear to have difficulty accurately reporting their earnings. Based on those surveyed in Farmworkers’ Needs Assessment, many paid farmworkers reported not only low earnings but also difficulty in understanding their rate of pay: many did not know whether they were paid hourly, daily, weekly, or otherwise. While workers’ pay averaged \$1,500 to \$2,000 per month, some reported earning hourly rates below the minimum wage or being paid on a piece-rate basis. Most of the farmworkers probably worked on immigrant-owned and conventional farms; in contrast, the wages reported by agroecological and larger conventional farmers were higher, ranging from \$9 (OT 3) to \$15 per hour (MN1) with varying levels of medical and dental benefits. Variable hours and piece-rate work indicate that these earnings are also variable throughout the year (Farmworker Needs Survey 2016: 13).

¹⁴⁰ WWOOF was founded in the U.K. by a secretary working in the city of London, as Working Weekends on Organic Farms’, a means to enable people to support the organic movement even when they were not full-time farmers (WOOF ‘History’). The organisation changed names in part because ‘the use of the word “work” in the title caused problems in some regions as the organisation became inappropriately connected with migrant work and viewed as a clandestine migrant worker organisation’ (WOOF ‘History’). Instead, the U.K. WWOOF site describes its work as ‘a bona fide cultural exchange and learning experience’ (WOOF ‘History’).

(WOOF Hawai'i). However, this research and others (Mostafanezhad et al. 2016) suggest that the terms and conditions of these experiences vary widely for both WWOOFERS and their farm hosts and, as I suggest, involve relations of power that require further investigation.

HS and IA, the farming couple mentioned above, had relatively well-organised work-trade practices, although they were not formally registered with WWOOF. As a young couple, farming on HS's family-owned land, they relied on their own labour as well as that of several regular work-trade volunteers that lived on site, plus other volunteers who visited the farm at different times. HS and IA found these live-in work-trade participants through 'friends of friends' rather than through an online site such as WWOOF, because, in their words, this helped to 'vet' the 'social part': 'when you live and work in the same space, it really matters what those character traits are' (IA and HS 1). Those who stayed with them, much like the broader WWOOFing demographic, were university-aged white Americans, both women and men. In some sense, this recruitment via kinship networks forms the basis of recruitment patterns within some of these pilgrim farms, similarly to other kinship-based recruitment patterns used within other kinds of agriculture, including seed production (see Chapter 7).¹⁴¹

HS and IA described their volunteers as being able to participate because they were 'people who have money or work [elsewhere] seasonally for money' (IA and HS 1), suggesting that work-trade visitors have relative flexibility in going at least six months without earning an income. HS and IA offered a place to stay in exchange for 'full slash part-time [work because] we're pretty flexible'. This did not formally include food, but, as IA

¹⁴¹ Thanks to Krisna Suryanata for this insight.

described it, food was often shared from the farm: ‘the way we are, we’re very generous’ (IA and HS 3). These exchanges usually lasted around six months to a year, after which ‘people start working outside the farm or doing odd jobs to make money’ (IA and HS 3). At the same time, even IA noted her and HS’s relatively powerful positions, even in the most peer-like situations: ‘we’re their bosses, we’re their friends, we’re their landlords, all in one’ (IA and HS 3).

HS and IA’s work-trade practices appeared fairly positive, but expectations and relations of power vary widely from farm to farm (JS; MH). Moreover, as Mostafanezhad et al. have suggested, WWOOFing is perhaps less of a farm labour subsidy than a ‘coping strategy’ and new form of experiential tourism rather than a sustainable social practice within this sector (2016). Indeed, at least one farm host explicitly expressed a preference for already skilled work-trade participants, for ‘people who have farming experience and who are serious about farming’ (MN 9) which perhaps belies the ‘cultural’ and ‘educational’ nature of the exchange as well as the high investment farm hosts must make in training new volunteers (Mostafanezhad 2016).

My research suggests that the relations of power that imbue work-trade must be further analysed, as pilgrim farms are often located in remote rural locations and blur the boundaries between the social and professional, home and work. For example, one interviewee who worked as an administrator for work-trade programmes reported that his organisation had received at least three complaints that dealt with sexual harassment or some form or another of discomfort between female guests and male hosts in the past year alone (ON). ¹⁴² One incident of sexual harassment was also reported by an interviewee

¹⁴² One case concerned a WWOOFer who left a Maui farm where she was being harassed.

concerning a third party but could not be confirmed; however, my own observations and data concerning the gendered demographics of pilgrim farms, farming organisations and farm hosts suggest that age and gender differences require further attention.

Finally, while work-trade is a prevalent practice amongst pilgrims, some also reported utilising formal paid employment, although this does not necessarily shift these relations of power. Moreover, in a different way, some pilgrims interviewed reproduced discourses about the lack of work ethic of, variously, the youth and U.S.-born workers. For example, MN, who managed the farms of rich landowners and his own 4-acre plot, noted:

People between 20 and 40, they have no work ethic. They don't show up on time, they don't respect authority, they're kind of ... lazy... definitely not the case with my Thai lady, she's 51 and she outworks all the 20-year-old Americans I have, every single one. They're taking a break after 20 or 15 minutes, complain a lot, show up late or maybe not at all. And it's kind of a syndrome in Hawai'i ... it's like a vacation here, whether you're a local or not... the work ethic here isn't very strong, that's been my experience at least as a farmer (MN 2).

Organic farmers expressed similar racialised preferences to those expressed in the chapters on seed production: (im)migrants are seen as more hardworking than locals, and also a preference in some ways for the work ethic of older generations and possibly women. Concerns about work ethic, absenteeism and the transient nature of the farm workforce were voiced across interviews and within the survey of women farmers (Women Needs Assessment 2016: 38; OD, YSI, AL). Such discourses demonstrate the ways in which the boundaries between seed production and pilgrim farming overlap through their employment of (im)migrant farmers and through discourses about race, hard work and work ethic in Hawai'i. Approached from an intersectional view of the social relations of production, pilgrim farming thus raises not only 'sustainability' questions from a farmer or sectorial perspective, as Mostafanezhad et al. (2016) have suggested, but questions about the gender inclusiveness, social equity and well-being of both paid and unpaid work on

these farms. Seen this way, pilgrim farming, an important mode of agroecological farming, does not appear to transform intersecting inequalities.

The next section examines on-farm gendered divisions of labour as a further perspective on the social relations of production on pilgrim farms. I suggest that gendered divisions of labour and pilgrim discourses of family farming must be analysed in order to understand alternative agriculture.

Gendering Pilgrimage: Divisions of Labour

The foregoing sections have argued that pilgrim farming as one form of alternative agriculture raises important questions about how class, race and gender structure some of the social relations of production. Similarly to Brown and Getz (2008) and others, I suggested that pilgrim practices in themselves can hardly be considered to be socially equitable or 'alternative' from these perspectives, even though practices vary as farmers utilise a number of different strategies to undertake their work. In this section, I analyse how contemporary pilgrim farming may shape gendered relations of production as well as how discourses on gender, nation and family are reworked and (re)animated through interest in alternative agriculture as a form of agrarian romanticism.

Contrary to some research on gender and farming, specific tasks such as weeding, harvesting and processing did not appear as strongly gender-specific as some of the literature has indicated (McMahon 2011). Instead, pilgrim farmers demonstrated wide variation in how they organised their work, at times reinforcing existing gendered associations of tasks while at other times challenging these associations. Interviews with women farmers demonstrated the ongoing difficulties they faced in obtaining recognition for their identities, as when visitors asked to speak to 'the guys in charge' (IA and HS 7) or

when they got paid less for the same work (AI 3, 7). AI, who was a highly experienced farm manager, still felt that her decisions were questioned on the basis of her gender and that she 'need[ed] more credentials and [have]to sell myself more' (AI 3, 38) because she was a woman. External survey respondents echoed these issues and more, highlighting the ways in which the ongoing masculinisation of the farmer continues to function, as has been widely analysed (Allen and Sachs 2014; McMahon 2011).

At the same time, the research also found a number of instances in which divisions of labour were described in ways that highlight some of the complexities that pilgrim farmers face in relation to their understanding of how gender shapes their work. In relation to how IA saw gender shaping her work, she recounted her journey into agriculture:

You know when I first started working... I, um, definitely had that feeling... this is a job for a guy or this is too heavy for me to lift or This is too hard or whatever, I'm hot, I'm tired [laughs]. But the more you do it, you get, as we say, 'farm fit'... The more you're out there working every day, by the end I was baling hay and I was lifting heavy stuff that in the beginning I didn't think I was gonna do. And I think it just takes time to build up that confidence and that physical ability. I don't think it's exclusive to men [but] I think there is a shift to see ...[because] all the farmers I worked for were men and most of the farm crews were men. And so, there's no visual model for women leading or doing those things. And in the beginning, I definitely felt like 'ugh' and I remember having that feeling of ... looking around for a guy and being like 'wait a minute, I can do this'. And doing it and not hurting myself and feeling fine about it (IA 8).

In this way, IA can be understood to reject gender-essentialising narratives, though her experiences undertaking strenuous farmwork appear somewhat exceptional. Critically, she highlights the manual component of work, which requires practices and confidence, and because of this experience, she expressed assurance in her knowledge of farming and of farm machinery in particular, where she had been the one to determine which tractor to buy (although she sent HS to complete the purchase). While machine-work has been traditionally considered as distancing women producers, this was not true for all, as IA recounted. HS and IA's experiences demonstrate how gendered dynamics and relations of

power are more complex than they may at first appear, and that gendered divisions of labour require explanation in addition to observation.

HK, who also farmed with her partner on his family's land, described gendered divisions of labour as related to 'personality' rather than 'skills':

It could just be a personality thing. I like the soft things, I like being in the kitchen, I like doing the light harvesting and [partner] does all of the machines. And I don't know how much of that is a true expectation or just it's.... it's ourselves.... it's hard to separate...it's such an invisible hand (HK 1).

HK seems to refer to the gendered social expectations that emerge in on-farm labour compared with what she sees as intrinsic or personal characteristics, suggesting that these are hard to separate. For both IA and HK, their understanding of 'gender' appears to reject biological essentialisms and highlight the role of skill and experience in shaping how work is divided on the farm, if somewhat ambivalently. At the same time, it is possible that these farmers held these views because they themselves were in charge of undertaking their own work and thus were not subjected to being managed by others deciding which work they do.

IA also noted that farmwork is more than 'tractor work and the heavy duty lifting' but includes administration, accounting, marketing, sales, procurement, customer services and maintenance, 'everything start to finish of a single product', 'the whole life cycle of the plants,' which require attentiveness and observation and the ability to balance multiple tasks (HS and IA 6). In addition to these multiple tasks, the work of public relations, farm tours and education must be added. IA and HS describe their division of labour:

HS: it doesn't take people very long to see the dynamic between me and IA to realise that IA's the boss, though...

IA: Like HS is much more like the figurehead, cult leader...That's what my sister calls him [*laughing*] the cult leader—which is true because he is like an amazing educator, he really lights up this place and I think what's exciting about our farm tours and why everyone likes it

so much... He's a very unique character and he has all of this passion and all of this energy and it's contagious when people come... I don't have that! [*laughing*] and I'm fine with that. Like I would never try to do what HS does. I think that what comes easily to me is being like more managerial, like having an organisation of plans, of like what's happening today, this week, this month—

HS: Which I suck at.

IA: And I would also say that I'm much better at addressing confrontation if something's not going right.

While the humorous description of HS as a 'cult leader' could easily be dismissed, I suggest that in fact there may be a missionary history in their framing. As I outlined in Chapter 3, changes to missionary roles over time in Hawai'i shifted women away from public-facing roles as educators and increasingly toward managing the internal space of the homestead (Robert 1996). In this way, 'homelife [worked] as an agent of evangelisation' (Robert 1996: 69) wherein the contributions of missionary women were 'not merely to teach doctrine, but to model a particular lifestyle and piety' (1996: 68). As women's role shifted increasingly toward managing the home and children's' socialisation, it can be argued that their contributions were less public but no less integral to advancing and mediating colonial work (Zwiep 1991).¹⁴³

However, such divisions of labour are far less dichotomous for contemporary research participants and might be, in fact, quite far from HS and IA's experiences or HK and her partner's, such histories nevertheless warrant interrogation as new forms of agrarianism rise. This may be particularly true since part of the development of mission theory that focused on the Christian home has been linked to colonial Hawai'i (Robert 1996: 68) and thus appears important to further analyse as new forms of multifunctional agriculture entail

¹⁴³ For example, in the case of Hawai'i, women's presence in at least one instance prevented the ousting of American missionaries, because women's presence was seen to domesticate the mission, enabling their husbands to do mission work (Robert 1996: 69)

new and different tasks for pilgrim farmers. In the next section, I unpack ideals of family farming as they emerged within research on pilgrim farming.

Family Farming

Throughout the research, several of those interviewed specifically promoted the idea of ‘family farming’ in Hawai‘i, including at least one pilgrim farmer and organic farming advocate as well as a senior policymaker. In the latter’s words: ‘Because we don’t have a history of family farming, need to make new ‘aggies’’ (TO 11). Phrased in this way, it appears as though there was no kinship-based history of agriculture in the islands. However, what TO appears to be referring to is the Euro-American ideal of the yeoman farmer and farm family. This framing, however, obfuscates colonial histories of agriculture in both Hawai‘i and the continental U.S. For TO, ‘new aggies’ must be made because family farming is something that never existed; in contrast, another proponent of family farming overlaid this idealised American farm family history onto Hawai‘i’s past:

I’d like to see the family farm come back front and centre in Hawai‘i (DF1).

In this view, the farming past can be recovered and made central. While TO and DF linked the family farm with something Hawai‘i lacks—either historically or in the present—another interviewee specifically framed family farming not in relation to the needs of Hawai‘i’s agricultural economies but with the history of the U.S.: ‘so, the family farm I think was the cornerstone of America during its rise to power’ (MN7). This pilgrim contract farmer, who works on gentlemen’s estates and is active in pilgrim farming organisations, explicitly

connects family farming to the rising power of the ‘American’ nation, again silencing the history of colonisation that enabled changes that are themselves somewhat romanticised.¹⁴⁴

Across interviews, nowhere was the concept of family farming mentioned in relation to Native Hawaiian farming methods or kinship structures, which were not brought up without prompting. The implicit histories of colonisation, settlement and whiteness of the norms of this ‘farm family’ kinship thus remained naturalised. When MN was asked how he would define ‘family’, he offered these considerations:

Umm, well, that’s a good point. Well, in Hawai’i, there’s ‘ohana, there’s hānai, the concept of ‘ohana would be a little more apropos... well, from the national standpoint, they say it’s blood relations, when they say, ‘family farming’ they mean, your son, your wife, your children, but in Hawai’i, [our organisation has] ‘ohana memberships, which is basically the people who work together on the farm, we give a discount [....] (MN 6).

In this way, MN makes reference to the Hawaiian concept of extended family¹⁴⁵ or ‘ohana and to the practices of hānai or fostering, adopting and/or caregiving, usually for children (Schultz 2014). However, in MN’s comments these concepts appear rather superficially, as nominal recognition of differences which are then passed over in favour of the male-centred, nuclear family framing: ‘*your son, your wife, your children*’ (emphasis added).

Thus, it becomes possible to see how white settler romanticism of, and nostalgia for, family farming can reinforce a masculine farmer identity and conception of a heteronuclear family that erases Native histories of kinship, agriculture and colonisation in Hawai’i and North America.

Circling back to the central focus of the chapter—how work is organised—it becomes possible to see how conceptions of the family farm and the farming past are

¹⁴⁴ Such a view is also linked with histories of policies aimed at ‘preserving’ small, family farms rather than seeking to help initiate or establish such farms in themselves. Thank you to Krisna Suryanata for this insight.

¹⁴⁵ It is also much more than this: ‘common bloodline and place, but also includes the extended family that connects us spiritually to our ancestors, the present generation and the generations to come’ (Schultz 2014: 32).

centrally connected to concerns over labour. Indeed, in some ways, family farming is itself framed as the solution to the 'problem' of finding labour for large farms. Instead, small family farms can be more easily managed across the population:

Again, it goes back to the cost of labour in Hawai'i... That's always been one of the hugest problems in Hawai'i. It goes back to the 1800s, one of the problems of what's been tried... I don't know, that's why people used to do things with families... maybe use them (DF 1).

Here, the unreflective valorisation of family farming accompanies the naturalisation of the 'high cost' of labour and the 'labour problem' long decried in settler colonial discourses. This positioning of labour as a problem does not acknowledge the devastating effects of settler colonialism on Native Hawaiian health, resistance to plantation conditions or the later struggles of a multi-ethnic labour force to obtain better conditions. Family farming is promoted as a solution to the 'labour problem' not by disrupting logics of capitalism or colonialism but turning toward privatised relations of power within the household as the means to resolve the problem of paid labour's 'high costs' and resistance. The positioning of family farming does not address these racialised historical inequalities or offer certainty about how—presumably unpaid—family labour will be organised. Given the comments made by current women farmers and the findings of previous chapters, the unreflective promotion of 'family farming' could easily reinforce not only misplaced white settler nostalgia and romanticism but existing patterns of labour. Such patterns often make women responsible for unpaid work and continue to frame paid labour as problematically costly, which, has been linked in the past and in other contexts, with justifying reliance on (im)migrants and people of colour for the most dangerous and lowest-paid forms of work on farms.

At the same time, not all of those who mentioned concepts of family in relation to pilgrim farming reproduced these narratives. ST sought to challenge some of the

assumptions surrounding the heteronuclearity of family, even if she did not specifically address Hawai'i's particular context. ST specifically pursued organic farming in a co-op because she was interested in 'this idea of having this community that I don't have to be [related to] ...if I never get married, if I never have kids, these people will be my family' (ST 37). For her, farming in a cooperative was a way to form an alternative kind of family, a different form of investment in the possibilities of farming rooted in mutual cooperation and interest and not necessarily kinship. For ST, this was specifically linked with 'building a community [...] where I don't have to rely on trying to find a partner forever' (ST37) and which would enable her to 'still be a part of something meaningful, and have love, and the community' (ST38).

However, ST reported that other co-op members reacted differently to her conceptualising of farm family:

They thought it was funny... they didn't kind of see the connection or it just seemed kind of far-fetched... the idea of this co-op replacing my need for feeling like I have to get married or have kids or something. Like maybe they just didn't think about that because they're men (ST 37).

The framing of the co-op as a possible community of support represented, for ST, a potentially transformative endeavour, although this potential appeared limited by her peers, who did not understand these needs. ST also recounted her struggles in her current business venture with a male friend and business partner, struggles that specifically reinforced the norm of marriage in farming businesses: farming outside of a marriage contract, ST reported receiving tax penalties for not filing a joint tax return and recounted being advised against doing a farming 'partnership with someone you're not married to' (ST 35). This shows how efforts to pursue alternative conceptions of family and agriculture face attitudinal and structural obstacles that re-emphasise a heteronuclear model.

While ST appeared hopeful about the prospects for alternative forms of family and community, HK was decidedly disillusioned with her own farming experience within an extended family network. HK had hoped that joining a ‘family community’ would be ‘hopefully stronger than a community of strangers, but it’s not the case’ (HK 2). HK and her male romantic partner had encountered significant difficulty in managing the familial relationships on the land when ideas about how to manage the land came into conflict. She rightly called out the mismatch between the imaginary of farming lifestyles and the realities:

We’re living in our modern times, and there’s such a like agrarian romanticism that’s like pushed in the magazines and on TV. And it looks so simple and so beautiful, but it’s messy and hard... (HK 2).

Indeed, from this vantage point, it becomes clear that family farming offers its own configurations of conflict and relations of power. Taken together, the experiences of women pilgrim farmers in particular point toward some of the contradictions and possibilities of and limits to these visions of alternative agriculture. Parallels could be drawn with previous generations of missionary women who, in embarking on missions, hoped for greater autonomy but faced a variety of obstacles even as they played important roles in colonisation. In other words, it is possible to acknowledge the gendered challenges of pilgrim farming and homesteading life without presuming the innocence of pilgrimage or the histories it invokes.

Conclusion

They came to do good; they did very well.

—local Hawai’i saying concerning missionaries

While the idea of pilgrim farmers may have seemed out of step with what I have suggested are classed and raced privileges that often enable pilgrim farming, this local saying pinpoints

the historical connection between supposedly humble missionaries and their accumulation of material wealth. While the sample of interviewees does not represent all small agroecological farmers in the islands, the analysis sought to highlight some of the historical continuities between contemporary forms of farming, expressions of eco-spiritualism and longer histories of missionary work, as well as settler ideals of yeoman farming. At the same time, pilgrim narratives trouble simple distinctions between those who farm for a lifestyle and those for whom farming is a livelihood, demonstrating that pilgrim farmers draw on a range of multifunctional agricultural strategies to carry out their work. The research also found that gendered divisions of labour and combinations of paid, unpaid and work-trade work were highly variable across different farms and women farmers interviewed highlighted different opportunities in and limitations to their work.

Principally, the research documented and corroborated multiple structural issues for those who are distanced from the masculinised, able-bodied ideals of the male farmer who heads the idyllic heteronuclear family farm: the women farmers described ongoing barriers in relation to access to land and receiving recognition for their work, issues which have been documented across agriculture. Nevertheless, some of those interviewed expressed hope about the potential for agroecological practices to offer new forms of family, intimacy and gendered equality, even while their experiences in the present highlight that these goals remain largely aspirational. In contrast, others outlined their experiences of the 'messy and hard' work of farming with extended family and questioned contemporary agrarian romanticism. Such findings suggest that more research is needed not only on the outward-facing structural issues mentioned above but on the intra- and inter-household power relations that shape 'family farming'. In particular, the research highlighted questions of how farms manage the labour-intensity of both agroecological practices and a year-round

growing season and how these features of alternative agriculture affect gendered relations and unpaid work intensity. The chapter also highlighted some of the gendered issues of power that emerged in relation to work-trade exchanges. These tend to draw participants from relatively privileged positions, but differences between hosts and participants on the basis of age, gender and other issues were reported to have caused tension and problems of sexual harassment which require further investigation.

Moreover, I suggested that the pilgrim interest in family farming can re-entrench settler nostalgia as well as masculinised, heteronormative views of the farm family. I posited that the framing of 'family farming' as an ideal solution to the 'labour problem' represents yet another form of subsidy based on unpaid family labour, which does not adequately account for relations of power. Indeed, research into other forms of already existing 'family farming' in Hawai'i could offer further insights into these issues, especially with relation to the majority of the islands' local food producers, many of whom are (im)migrants from Asia and the Pacific. Many of these local food producers operate in ways that differ markedly from those I have studied and their perspectives on 'family farming' may raise different questions of gender and social equity.

Taken together, concerns about on farm, intra- and inter-household power relations highlight significant reasons to question the extent to which pilgrim farming as a form of alternative agriculture offers greater social equity, well-being or gender-inclusivity. Instead, I suggest that not only do gendered issues require greater consideration but that so too do the relationships between pilgrim farming, rural gentrification and settler colonialism. If work-trade farm stays largely benefit certain young, mostly white and middle-class farm visitors and hosts, what are the effects of these practices on land inequalities and on social life more broadly as settlers (re)make landscapes?

In the next section, I analyse another set of food and farming practices, collectively termed 'āina work, in relation to farming histories and ideals, political struggles and spiritual connections form part of this work of restoring foodsheds and socio-ecological relationships.

Chapter 6: 'Āina Work

Introduction

This chapter analyses the ways in which some 'āina work practices are organised with regard to gendered divisions of labour. It points to some of the ways in which intersecting, gendered differences shape the organisation of contemporary land-based practices, paying particular attention to the organisation of community workdays and efforts to promote taro production and consumption. The findings are based on participation and field notes from observation at six 'āina workday events, 224 hours of ongoing participation in community workdays at a fishpond and a community-farm/agroforestry project, two interviews and analysis of secondary source material such as newspaper coverage of 'āina work events (See Appendix K for more). The chapter suggests that certain 'āina work specifically creates space for reconsidering intersecting social relations, including gendered identities, at the same time that the organisation of 'āina work can rely on gendered essentialisms, similar to other kinds of agrifood practices.

'Āina work can be defined as a host of practices that aim to restore historic foodshed infrastructure, including taro terraces and ocean fishponds, grow historically important foods, and a number of other practices aimed at promoting connections between human and ecological health within the Hawaiian context. Such practices often draw on place-based knowledge and histories provided by elders and other sources of Hawaiian scientific knowledge, as well as the incorporation of contemporary ecological and scientific practices. 'Āina work connects with a number of broader educational, health, political and cultural efforts (Goodyear-Ka'ōpua 2013; Marshall 2012), including movements for *aloha 'āina* (love for the land), *mālama 'āina* (caring for the land) (Silva 2004; Hall 2009; Goodyear-Ka'ōpua

2013), *‘ai pono* (just eating/eating justly)¹⁴⁶ and health (Marshall 2012). Scholars have suggested that ‘āina work may function as forms of ‘land-based literacies’ (Goodyear-Ka’ōpua 2013) and ‘performative cartographies’ (Oliviera 2014), wherein these practices may performatively enact physical and spiritual healing alongside new forms of social relations (Marshall 2012; Oliveira 2014). ‘Āina work may also reflect a value for knowledge gained through doing (*ma ka hana ke ike*) (Goodyear-Ka’ōpua 2013) and the power (*mana*) that imbues one’s own hand-made objects. These are both values that may directly address critiques of the contemporary agrifood system, wherein people are distanced from production and the labour to create ‘food’ as an object is often invisibilised.

Questions of gender are somewhat under-studied in contemporary ‘āina work agrifood practices, although scholars have documented the gendered potentials and tensions of wider decolonising practices (Goodyear-Ka’ōpua 2013; Kauanui 2017, 2008). Goodyear-Ka’ōpua’s work in particular has highlighted how ‘āina work can create space for reflection on interconnected responsibilities and gendered identities and relations, even while she has documented tensions in how work is organised in relation to essentialised gender norms (2013). This chapter draws on Goodyear-Ka’ōpua and others’ work in analysing some of the ways in which gender shapes ‘āina work practices and the possibilities, tensions and contradictions these practices represent for broader gender and socially inclusive work, equity and social well-being.

I begin by describing some of the practices associated with ‘āina restoration work and how this work connects growing food with restoring social and ecological relationships.

¹⁴⁶ This has also been translated as healthy consumption by Kaholokula (2014).

Differentiated Connections: Multi-Dimensional 'Āina Work

This research focuses on 'āina work that takes place regularly as well some of the one-off events that can be considered within this frame. Often, 'āina work involves the physical occupation of disused lands and spaces by community groups, spaces that are formally or informally reclaimed, occupied and restored with different levels of acceptance or support from landowners, the state and surrounding communities. Sometimes sites are purchased or donated by property owners, or access may be granted by the state and the military, often after legal and community struggles. These 'āina work spaces are thus embedded within longer histories of resistance to development and militarisation and the reclamation of land and water that have taken place especially strongly since the 1970s (see Goodyear-Ka'ōpua 2014; Lasky 2011) and illustrate the contested visions that continue to shape Hawai'i's landscapes. It is not currently known how many such spaces are operating in the islands but observations over the research period appear to indicate that this work is becoming increasingly more visible as part of Hawai'i's agrifood system.

Sites and efforts may have a few paid employees but often organise a significant part of their work through recurring volunteer workdays, which may be weekly, monthly or event-specific. These workdays entail both productive goals and educational and community-building ones. Volunteers during workdays may help with a range of projects and tasks, including clearing land and building work; planting, weeding, harvesting and processing plants; and caring for animals. The restoration of walls for taro terraces and fishponds is often a significant task around which community workdays are organised. As one community workday coordinator told volunteers, community workdays were 'crucial to getting this work done; if it wasn't for all of you, there would be no way we could accomplish this' (D 1). D's words highlight the social and material dimensions of the central

role of workdays for 'āina work: often, machinery is unavailable or unsuitable for tasks that require many hands. At the same time, this collective work helps strengthen social, spiritual and ecological relationships.

Participants in 'āina work had a range of motivations: for many, an interest in (re)connecting with Hawaiian culture and practices was foremost, while others were motivated more broadly by participating in outdoor and community work. Research has demonstrated how participation in 'āina work has differentiated impacts for differently positioned participants. For example, as Aikau and Kameha'ikū Camvel have written, 'we do not presume to suggest that the young *haole* (white) man from Virginia experienced the work at the lo'i [taro field] in the same way as kanaka 'ōiwi [Native Hawaiians] whose work rebuilds their relationship with Haloa [the taro plant considered an ancestor to human beings]' (Aikau and Kameha'ikū Camvel 2016: 550). However, they continue, participation in 'āina work nevertheless calls upon one's 'physical, emotional, spiritual and intellectual' capacities (Aikau and Kameha'ikū Camvel 2016: 550). This multi-dimensional 'āina work indeed appears to create room for different meaning-making processes by a range of different participants, and as scholars have noted, to performatively (re)create relationships between different Native, settler and visitor participants (Aikau and Kameha'ikū Camvel 2016; Goodyear-Ka'ōpua 2013).

Similar to what has been found elsewhere (Lukens 2013; Aikau and Kameha'ikū Camvel 2016; Goodyear-Ka'ōpua 2014; Marshall 2012), my research found that those who regularly volunteered at community workdays spanned positionings across ethnicity, class, gender and ability. During weekday hours, volunteers are often those with flexible schedules, in school or retired; many are nearby local residents, schoolchildren participating in different programmes or have personal, genealogical ties to the place they are restoring

and to the surrounding communities. The research also suggested that paid staff, in particular, often identify as Native Hawaiian and/or have genealogical or community ties to the sites being restored.

Moreover, based on observations and two interviews, it appears that the role of 'āina work is often particularly significant for Native Hawaiians who grew up in the diaspora and are visiting or now residing in Hawai'i. ES, who grew up in the Hawaiian diaspora in the Pacific Northwest, describes the deeply meaningful impact 'āina work had for her:

Sometimes it just hits me when I'm with a bunch of other Hawaiians or hearing people speak Hawaiian or that are talking about different ways that their grandparents used to do things. Like it just hits me: none of this knowledge is supposed to be here, it was all supposed to be wiped out. And yet we're still here. And still sharing and talking ... Whenever I hear Hawaiian kids talking, it's like just 'your existence is' man (ES 2).

ES describes the impact of 'āina work not only in material terms but in linguistic, cultural and knowledge terms, connecting the work of practising culture to combating the violence of colonisation. 'Āina work may thus function as practices of relational healing and connection embedded within explicitly political projects. Trask has highlighted the centrality of land-based work to political and broader decolonisation work:

To know my history, I had to put away my books and return to the land. I had to plant taro in the earth before I could understand the inseparable bond between people and the "āina. I had to feel again the spirits of nature and take gifts of plants and fish to the ancient altars. I had to begin to speak my language with our elders and leave long silences for wisdom to grow. But before anything else, I had to learn the language like a lover so that I could rock within her and lay at night in her dreaming arms (Trask 1990: 117–118).

Like ES, Trask connects the Hawaiian language with the physical and spiritual nature of 'āina work, offering an intimate, queer metaphor for this work. Kame'eleihiwa (2001) points out that 'sexual power and political power are very close in the Hawaiian mind; the word *ai* means to make love and the word '*ai* means to rule the land' (1999: 4). Such multiple meanings, known as *kaona* in Hawaiian, point toward some of the ways in which gendered

and sexual meanings and the erotic can form integral, if as yet undertheorised, dimensions of 'āina work.

At the same time, there were some tensions in the ways that ES, for example, experienced her participation in 'āina work that highlight the politics of diaspora, 'authenticity', and organisational hierarchies. When asked where she felt 'most connected' to Hawaiian culture, she responded that connections worked differently for her in Hawai'i compared with her home in the diaspora:

I think when you're not in the homeland, there's more, like, a desperation... 'cause a lot of people miss this place so badly and they just ... and it's just not ever gonna happen for them to come back. I think there are just other ways of connecting... like a lot of [celebrations] luaus...a lot of hula [dance] and music and then sometimes canoe races... ... [we are] connected in different ways, 'cause back there, I never really questioned myself that much. And it was easier to learn things or there was less pressure because we were all learning. All still trying to gain all this lost information. But coming here I'm questioning myself so much more and feeling like the stakes are higher, but I'm in the place of my ancestors. Like a couple of weekends ago I went to the cemetery and saw some graves of some of my grandmother's [relatives] ... and there's family land that we have over in [Windward O'ahu] and so I went to [visit that] ... I never had that in [the Pacific Northwest]... So, I think I feel more connected to my ancestors here (ES 2).

ES felt more connected to her ancestors on Hawaiian soil even while she acknowledged that it was sometimes difficult because 'the stakes are higher' as she learns from those with greater knowledge. The chance to connect with her ancestors by visiting graves, family land and working at the fishpond were important opportunities not available in her home on the continental U.S. The difference in her connection to Hawaiian culture in different spaces was connected with higher stakes in the 'homeland' and the different possibilities for experiences and belonging in relation to different 'homes':

For me... in the [Pacific Northwest] Hawaiian community, I was just like accepted and everyone kind of understood, you know, we're all Hawaiian. A lot of us looked whiter 'cause we were all living on the mainland for a couple generations. And, like, coming here, I feel like the stakes are so much higher, and the standards are higher ... Just kind of like proving yourself. Like [paid staff member] still, he still is like, I haven't proven myself to him yet...I can tell because there will be times in the morning when everyone is just showing up. And we greet each other with like a honi and side kiss. And so, he'll greet every other person with a honi and side kiss and then he'll get to me and say like 'oh, good morning' ...it doesn't

seem like a big deal but it's like a subtle reminder ... and it's also hard, well, how much is my own insecurities and projections about other people? (ES 1–2).

The practices of *honi*, to kiss (also smell, touch), is a practice of touching foreheads and sharing breath with someone. Because the exchange of breath in Hawaiian culture is also an exchange of personal power or energy (*mana*), it is taken very seriously within 'ōiwi communities. Someone may refuse the *honi* as a sign that they do not wish to share energy with someone whose energy they perceive as negative, and new outsiders may not be invited to practices *honi* for a range of reasons. ES felt that the more established staff member's daily refusal to engage with her in the rituals of greeting spoke to her status as an outsider, marked by her light skin. At the same time, she recognised that perhaps there were other motives or meanings for these occurrences, and she was also worried about her own ability to fit in as a diasporic person with the more established group leading 'āina work. Whatever the reasons for her experience, ES's sense that her light skin affected how she was read by other Hawaiians conveys some of the ongoing ways that racialising schema and associated conceptions of indigenous 'authenticity' may continue to affect 'āina work practices. As Kauanui has described, these tensions within decolonising work are always suffused with contradictions, 'given that the quest to reclaim particular cultural traditions is always selective' (2017: Location 1492–1495). The intersecting gendered politics of these efforts are explored in greater depth through the example of stonework in the next section.

Eating Stones, Building Walls

'Āina work in an archipelagic space is critically linked with both freshwater management practices and sea provisioning practices: stonework has thus historically been critical to the management of both freshwater irrigation systems as well as saltwater fishponds. Restoring

the stone walls, embankments and terraces that sustain fishponds and irrigated taro fields (*lo'í*) are therefore important and labour-intensive tasks that are often organised through collective workdays, guided by skilled practitioners. While stones are of practical importance, they also hold spiritual and political importance in relation to Native Hawaiian resistance movements. Again, multiple meanings or *kaona* infuse how 'āina work practitioners articulate their work, as in the words of an organiser of fishpond restoration day:

The pōhaku [stones] is enough for us to live... We can make fishponds, we can make *kīpapa* [terraces], we can make *lo'í* [irrigated terraces], and through that we can feed ourselves. That's the best way for us to be independent, by us feeding ourselves and our people...(KW, 'Ōiwi TV).

KW references a famous resistance song from the 1890s, often referred to as the Stone

Eating Song, wherein stones are not simply rocks but 'stone food' – '*ai pōhaku*:

We do not value
The government's sums of money
We are satisfied with the stones,
Astonishing food of the land (Nordyke and Noyes 1993: 28).¹⁴⁷

Stone-eaters would rather eat rocks than participate in colonial, capitalist economies

(Nordyke and Noyes 1993: 29).¹⁴⁸ As Haunani-Kay Trask put it, 'we preferred our own ways to theirs' (Trask 1999: 117).

¹⁴⁷ In Hawaiian this verse is:

'A'ole makou a'e minamina
I ka pu'ukala a ke aupuni
Ua lawa makou i ka pohaku,
I ka 'ai kamaha'o o ka 'āina
(Nordyke and Noyes 1993: 28).

¹⁴⁸ John Charlot explains this passage: 'The Hawaiians have been dispossessed and are reduced to what, for the non-Hawaiian, appears to be worthless. But the poet transforms this pejorative expression into a positive description of Hawaiian culture. The rock is *lawa*: "enough, sufficient." The needs are basic. The rock is indeed '*ai*, "food." That food is *kamaha*—a religious term used by Lunalilo in his anthem for the name of the king. The Hawaiian eats the rock and is formed by it into a *pua* [flower/child] of Hawai'i. He brings the land inside of himself and thus becomes one with it. At the same time, the land becomes his. A chief is '*ai moku*, "eater or ruler of the island or land section." The land is the Hawaiian's in the Hawaiian sense of tenancy or usufruct,

Not only do rocks symbolise the self-sufficiency of Hawaiian practices and resistance to colonialities, but the collective mobilisation needed to accomplish stone-building tasks has also been historically linked with both spiritual and political power (*mana*). In mobilising large numbers of people to construct temples, kings demonstrated ‘not only the ritual authority of the chief but also his [sic] ability to organise labour and resources to construct them’ (Tengan 2008: Location 2274). Moreover, the contemporary organisation of stonework also demonstrates the immense level of organisation of ‘āina work, which requires both collective effort and guidance of great skill. Similar to other agrifood practices, this labour-intensity can represent both openings and closures for changes to gendered divisions of labour and associations with different forms of work.

Usually, different-sized stones are gathered and transported to sites before being dry stacked in the structures being (re)built. Stone stacking thus breaks down tasks into various activities, gathering small stones and moving larger ones, setting large foundation stones, ensuring small rocks fill the gaps and fitting flat stones for a smooth surface. The level of skill, experience and physical effort needed to accomplish each of these tasks varies immensely.

In her work, Goodyear-Ka’ōpua has analysed some of this stonework in relation to irrigated taro terraces (*lo’i*) in ways that raised questions for her about how work was allocated on the basis of gender, which ‘both muddled and, at times, re-solidified colonial logics and binaries’ of gender (2013: Location 2572–2587). She observed that work tended to be divided between young women and men in the school she researched, even while those who did not identify within this binary appeared to be able to choose the work they

rather than the Western sense of private property. That is, the Hawaiian rejects monetary prosperity in favor of sovereignty as defined by his own traditions’ (1985: 29; also cited in Nordyke and Noyes 1993: 33).

wished to undertake (Goodyear-Ka'ōpua 2013: Location 2572–2587). Goodyear-Ka'ōpua described her discomfort when young women were assigned to gather the smallest stones, bothered by the gendered assumption that they were less physically strong, writing 'I felt it hard to see this work as equally challenging and significant to the structural construction of the *lo'i* walls' compared to the work moving larger stones (2013: Location 2572-2587). My research also observed similar divisions of labour between light and heavier stonework, and across different agrifood practices more broadly, although with important exceptions.

My observations during some fishpond restoration workdays were similar; organisers sometimes mentioned gender, ability and age to suggest that women, especially older women, and young people undertake lighter small stone-gathering work. Just as often, however, I heard tasks described without reference to social positioning but rather framed for people to choose based on how they were feeling, their own abilities, experience and sense of responsibility (*kuleana*). At least once when an organiser suggested 'aunties' undertake lighter work, some younger women vocally challenged this such that the male organiser quickly amended his statement. More often than not, work is 'self-selected' to use Baker's (2016: 5) terminology from her work on anarchist practices within one 'āina work space, where tasks may be described by organisers without reference to social positioning, leaving people to decide for themselves what work they wish to do.

Participating in the stone-stacking work of these workdays, I did notice broad patterns of gendered and age-based organisation, but equally that these were punctuated by obvious boundary-crossing, revealing how such patterns shift and the different meanings this holds for different participants. For example, on one workday to restore a fishpond in East O'ahu, I noticed many of those moving big stones that day were small groups of men, usually with some experienced members guiding the work, often gathering larger stones

from underwater and further away from the point of active stacking. Those stacking stones were young and middle-aged women who appeared to have experience, while most children and their caregivers, often women, as well as older people, especially older women, sat together in the pond or walked around the beach and gathered small stones. These small stones were piled into buckets and carried to be stacked at the wall. Experience and skill obviously played a strong role in who worked where, and though many men undertook heavy stonework, this was not uniformly the case as physical abilities varied by experience, age and other factors. In this sense, undertaking this work worked in ways that were not only fluid but changed throughout the day as people switched tasks, took breaks, socialised and took care of children. One might conceptualise the organisational relations of these workdays as a kind of net, a set of organising principles that one may feel more or less trapped or supported by, which invariably allows different things to slip through and for power to work in slippery ways—difficult to grasp.

During the workday in East O‘ahu, I enjoyed participating in the work of identifying desirable larger stones, underwater or down the beach, for a mix of reasons: I felt capable of helping this way as a relatively able-bodied person; I liked the idea of being able to swim during the work; and I relished the challenge not only of locating suitable rocks but of physically manoeuvring them off the sea floor. Over time working with stones, one is taught to identify desirable stones for different purposes—flat ones to create the top layer, small boulders for the initial ‘teeth’ of the wall—and to differentiate between desirable lava and lighter, unsuitable pieces of coral and concrete, often disguised by algae. It is also true that participating in what is considered more strenuous work allowed me to test assumptions I am not alone in encountering across vastly different contexts that women are physically weaker or incapable of certain tasks. Engaging in this work, at times I encountered light

‘policing’ by men undertaking the same tasks, perhaps through making a show of assisting me without me requesting it; but mostly I felt that both women and men left one another alone to do the tasks we had set ourselves. What was important seemed to be that a person was competent and did not hinder any collective work that needed to be undertaken.

Feminist theorists and others have questioned the liberal framing of ‘choice’ inherent in this positioning of ‘self-selected’ work, highlighting the histories of gendered socialisation and education that shape the skills, knowledge and affective dimensions of the work people *feel* they can do, the work they ‘choose’ and actually do. The work people undertake is shaped not only by the spaces and organisational dynamics of workdays and others’ participation but also by individuals’ sense of their capacities, identities and willingness to engage in work that is more or less challenging for them in different ways. As described in Chapter 5, the work IA and HK undertook on pilgrim farms was related to the gendered composition of farms, the context and other factors. In this sense, while ‘self-selection’ may offer somewhat greater autonomy, these processes still take place within the wider collective organisation of work; they do not, on their own, dismantle gendered socialisation. However, the fact that the organisation of ‘āina work is more fluid, extemporaneous and event-based than the other forms of agrifood practices discussed is an important difference, even if this means that power relations are not absent but perhaps only muddier, to use Goodyear-Ka’ōpua’s description. In other words, such practices may indeed offer greater opportunities for gendered agency for different participants in ways that are structured by somewhat different logics than capitalist seed production or settler pilgrim farming.

Moreover, descriptions of stone-stacking work that valorise the most immediate¹⁴⁹ and labour-intensive dimensions of work may also inadvertently valorise masculine, able-bodied conceptions of what constitutes 'āina work. Indeed, the challenges of physically integrated work may represent processes of 'healing' for some participants, but, when undertaken as part of ongoing, regular work, may entail tensions and limitations. ES recounted her experiences to me after we had spent a morning gathering cut mangrove branches into piles before burning them:

Well, I've only done mangrove maybe 6 or 7 times... and [wall building] that's pretty exhausting. There was one day last week where we were lifting rocks that were like 500 or 600 pounds ...with this canvas thing... ..and we were like... I don't know how we're gonna get 'em out to the wall, I don't know how we're gonna get them under the water...And to their credit [the organisation] did tell me a list of responsibilities that each team did... and I guess it just didn't seem that hard. It said like 'harvesting *limu*' [seaweed] and like 'fixing the wall' [laughs] (ES 1–2).

When ES had applied, from her home on the continental U.S., to work here as an intern, she read what appeared to be descriptions of innocuous tasks such as gathering seaweed and 'fixing a wall'. Instead, she found herself undertaking more physical work than she ever had in her life, and as a core part of the team she had less leeway than community workday volunteers to choose lighter work. ES was thus often constrained to undertake physically demanding work as part of fulfilling her internship duties, highlighting the important differences between volunteers who may have more room for 'self-selection' and those for whom there are requirements to fulfil as they are subject to more institutionalised forms of power. As feminist scholars and others have analysed, the distinction between 'work' and 'leisure' is often a question of power and obligation (Hochschild 1989) and can be seen to

¹⁴⁹ Of course, such descriptions only describe the immediate patterns of work in the moment, and much other organisational work takes place before such workdays and during it, such as preparing food off-site to be served afterwards.

play out with relation to differences in participants' institutionalisation or professionalisation. Within this context of demanding physical work, which participants themselves may have 'chosen', attention to the valorisation of particular tasks and their gendered associations is particularly important. In the next section, I consider the organisation of another series of tasks that demonstrate different gendered associations and possibilities.

Ho'opilina 'Āina

In another 'āina workspace where I attended volunteer workdays, the work undertaken involved tasks such as planting, pulling weeds, building walls, binding roof thatching, crop processing and food preparation as well as learning songs, singing and playing music and eating together. In other words, this 'āina work included different tasks associated with what coordinators described as 'building community'—not just building and restoring land and foodsheds but creating connections with the land itself and with other participants.

Binding bundles of grass roof thatching was another task required for the houses or *hale* that many 'āina workspaces build on their sites. Hawaiian-style thatching work is labour intensive, as it utilises a variety of grass called *pili*, which must be harvested, sometimes off-island,¹⁵⁰ transported, dried and stripped of its outer leaves before bundling. *Pili* grass work is thus laborious and time-consuming, as one must strip the central stalk of its outer leaves with care so as not to bend or break it. On one of the workdays I participated in we undertook *pili* work:

We sort the *pili* stalks according to length, taking fist-sized bundles and binding them together firmly. After a few minutes, a young woman begins singing softly; some people 'talk story' while others work silently. Volunteers periodically check in with the staff and more experienced *pili* binders—is this the right thickness? Will the bundling hold? After an hour or so, hands begin to ache with the intricate work that will take many days to create the hundreds of bundles for thatching the roof (field notes 17).

¹⁵⁰ In this case the grass was donated by a military base.

Some have described the performative relational dimensions of such work as ‘*ho’opilina ‘āina*—to grow closer to the land (Ledward 2013: 46). *Pili* translates as ‘to cling, stick, adhere, touch, join, adjoin...associate with...close relationship, relative; thing belonging to’ and is often used to refer to belonging and bringing people and things together (Wehewehe). As one ‘āina work organiser described:

Pili grass is the best thatching for this house [*hale*] because of the longevity.... Each bundle is made up easily of a thousand blades of grass, cleaned and sorted to length; in doing that ... it really requires a community, a family, a bunch of people to work together for a common goal. It teaches us to work together. The word *pili* in Hawaiian means to stay together—‘so close, it’s like one.’ So that’s what our roof does; one of these blades of grass by itself is weak. It won’t do nothing. But thousands and thousands of blades of grass, tied together by a common bond, will shelter you from the rain and protect you from the cold, if they work together... a good metaphor, and if we work together and we take care of one another... (AR 1).

AR’s *pili* metaphor and Ledward’s description of the process of growing closer to the land are apt metaphors to describe the ways in which many participants are brought physically and psychologically into proximity with one another and to the land through ‘āina work. One need not read this as entailing a psychological closeness, and indeed, as ES commented above, some practices and rituals undertaken within ‘āina work can have the effect of ‘keeping apart’ as much as bringing together.

Nevertheless, *pili* work is remarkable, both as another task that is nearly impossible without collective work and for the metaphors it offers for flexible forms of social power. Moreover, this work could be associated with what are commonly seen as feminised fine motor skills: binding and thatching. Yet ‘āina work practices call into question such associations: this work was led by men organisers and, perhaps because it is associated with construction, it is associated with historically masculine domains in Hawai‘i. This is, of course, not to suggest that such work should be associated with any naturalised,

essentialised gendered qualities; rather, these comments are meant to highlight that individual tasks within ‘āina work, including fine-motor work, cannot be accounted for by discourses that presume gendered associations in broad, ahistorical ways (i.e. feminised associations with fine motor work). In the case of *pili* work, while gender may have played some role in shaping divisions of labour, differences in experience, age and genealogical ties to place appeared to take precedence in shaping how work was undertaken.

Of particular importance to how this work functions, I suggest, is how it links with the suppression of class differences; markers such as professional status and material markers (such as clothing) appeared to be downplayed and/or rendered irrelevant to the tasks at hand.¹⁵¹ These processes were, of course, never uniform but nonetheless notable for the effect that engaging in agrifood work may have on suspending, even if only temporarily, prevailing forms of social relations. At the same time, subtle relations of power materialised between new and more experienced volunteers, as in the case of *pili* grass, where experience and skill were clearly valued, with regular volunteers helping staff to train new volunteers and check the quality of work. In this way, genealogical and experiential ties to ‘āina work spaces play a strong role in how relations of power operate. This was noticeable when more experienced volunteers and staff tired of the emotional work required to enthuse and train new volunteers, at times understandably appearing weary, impatient and wary. Such differences in what might be seen as enthusiasm, energy or naiveté are interesting dynamics to more fully explore; they also affect the work-trade practices discussed in Chapter 5 and may point toward both the social skills required of ‘āina

¹⁵¹ Although, again, some of this was self-selecting as some workdays take place during the week and thus consisted mostly of students, people with flexible schedule and retirees.

work organisers as well as the broader effects on full-time staff and organisers of relying on unpaid, volunteer work.

In any case, both *pili* and stonework materialise the need to analyse both Native Hawaiian and settler gendered dynamics and histories, as well as intersecting relations of power related to genealogical ties to place. Goodyear-Ka'ōpua's conceptualisation of the concept of *kuleana* is helpful here, which she defines as responsibility, rights and privileges that are both personal and collective in ways that spotlight both individual positionality and collective relations of power (2013: location 2600). In this way, 'āina work can be considered with relation to reflexive questions participants may ask themselves, not only about what their genealogical ties are to the 'āina on which they are working and how this relates to others' links to place, but how they understand their individual responsibilities in relation to their sense of gendered identities: 'what is my kuleana as a *wahine* [woman], a *kāne* [man], or a *māhū* [third-gendered person] on this "'āina?' (Goodyear-Ka'ōpua 2013: 3125). This appears to be a helpful reflexive practice in relation to 'āina work and processes of self-selection. At the same time, these questions can be pushed beyond existing options for gendered positions (*kāne*, *wahine*, *māhū*), which, while they may revalue some aspects and interpretations of Native Hawaiian gendered relations, must also be understood as selective, as Kauanui (2017) has reminded. In this sense, 'āina work must grapple not only with how to revalue historical gendered positions and practices with attention to colonialities but also with the limitations of selective interpretations. However, that such work explicitly makes room for questioning one's relationships, histories and ties to place appears to offer fruitful opportunities to exercise individual gendered agency, to partially and momentarily downplay the importance of the usual classed relations and displace gendered skills as a legible, primary difference through which work is organised.

In the next section, I offer a final example of what 'āina work includes, based on a community food and health event bringing together both farmers and food preparers.

Taste Rises

As part of ongoing attempts to 'decolonise diets,' I attended a dinner in July 2015 organised by an 'āina work space that featured taro; the dinner was designed to showcase ways of using this Hawaiian staple food. The event gathered health practitioners, farmers and others who spoke about the role of taro and *poi*—a food made from pounded cooked taro—in their diets. The event took place in the cafeteria area of a health centre and included many of those directly employed in the non-profit organisations that manage 'āina spaces and who organise a range of youth, community and volunteer programmes. Dinner was served, made from ingredients brought by the farmers. Those invited to speak were described as: 'mother, teacher, taro purveyor'; 'poets and artists'; a 'family that made *ku*' [poi pounding] a regular part of their lifestyle' and; people 'homesteading on a small-scale family farm [...] to supply food and grow medicine for community' (organisational material). The framing of the event explicitly politicised the concept of eating taro as part of a Native Hawaiian public health movement called '*ai pono* (healthy or just eating) which emphasises (re)incorporating culturally important foods and responsible consumption more broadly than just healthy eating (Kaholokula 2014). Such efforts aim to reverse the health problems associated with colonisation, including lack of available nutritious food and destruction of traditional pathways of healing and wellness (Marshall 2012).

The event highlighted not only some of the ways that 'āina work and '*ai pono* movements connect producers and consumers through an agenda of decolonising diets but also highlighted some of the gendered and social dimensions of how different participants understand and organise their work. In the first place, the event spotlighted contemporary

taro producers and *poi* processors, and how they describe their identities and positions in relation to 'āina work. For example, BO describes his work as a taro farmer and small-scale *poi* processor as 'taking care' (BO 5). His partner IM, in contrast, eschews the title of farmer in describing her work:

I don't consider myself a taro farmer, I just *kako'o* [help, support] him... plenty... I also help make the *poi*, he's telling me, 'you're a *poi* maker,' I'm like, 'I feel you're the *poi* maker, I just help you make the *poi*' ... So, our focus is we're small scale ... we try to feed just the community around us (IM 5).

IM eschews the 'title' of farmer that others might give to her, even though she came from a family history of growing taro and her partner apparently considers her work as befitting the titles '*poi* maker' and 'taro farmer'. In some ways, IM's eschewal of the title of 'farmer' recalls research on gender and farming wherein women may view their roles as 'farmer helpers', as their work is often not confined to producing food crops (Whatmore 1991). However, in this case, MH also engages in paid work which is not exclusively about producing food; she works as a practitioner of Hawaiian healing arts. At the same time, some men might also resist the title of 'farmer', as was the case with another event speaker, NN, who grows taro:

I don't consider myself a farmer, I consider that a title for people who are in the trenches, day in and day out... growing food was a hobby and I started becoming successful at it, and it started dominating a lot of my life (NN 1).

In this sense, NN appears to define 'farmer' as those who fit the image of the rural full-time grower, even though few farmers obtain their entire income from production itself.¹⁵² This is particularly true for taro farmers, who are likely to grow for both commercial and subsistence activities (Kalo Task Force 2010: 22). Their reluctance to claim the status of

¹⁵² The role of off-farm income is summarised by YI who remarks, about taro farmers: 'farmers of before my generation and the generation before that they all had other jobs—commercial farmers too' (YI) Her opinion is supported by the findings of the 2010 taro task force report showing a mixture of occupations.

farmer may also be related to Local and Hawaiian cultural values,¹⁵³ who appear to be motivated by the values they associate with this work rather than for its potential to generate income. However, more research is needed to understand the gendered dimensions of taro farming, since data is not available, although reports suggest that farming continues to be largely organised within families (Kalo Task Force 2010: 22). Similar to what was identified in Chapter 5, neat differentiations between livelihood and lifestyle farmers cannot be made for many taro producers and processors.

Whether or not the title of farmer or *mahi'ai* is one claimed by those who grow, the processing and preparation of taro was also highlighted by event participants as a significant, embodied practice for themselves and their families. For example, S described the impact of this work for her and her family:

The first time I ever *pai'ai*-ed [pounded poi] was in [an 'āina work space] and through that experience it kind of ignited a fire in me and my family. And last year through [Hawaiian community organisation], [we got] to make our own *papa* [board] and *pōhaku* [pounding mortar]— it was definitely a labour of love. Once we had [those] we wanted to make the commitment to *pai'ai* as much as we can (WO 3).

WO goes on to say that the work of pounding is in itself an act of education: 'the action, the *hana* [work] of *ku'iai* is really teaching your family' (AR7). Not only do acts of '*ku'i* (pounding) involve reconnection with historically important food and practices values of learning through doing (*a ka hana ka 'ike*) (Meyer 1998), but participants at the event also highlighted that these practices were linked with a growing demand for taro that was explicitly political. In the words of one participant, the 'demand of the '*ai* [food], the '*ono* [taste] of our people is really rising up' (AR7). Not only is the metaphor of rising up one linked explicitly to resistance and even the Hawaiian word for sovereignty (*ea*) (MANA), but

¹⁵³ For example, in Hawaiian culture the value of *ha'aha'a* or humility is emphasised in sayings such as 'E ho'oha'aha'a 'ia ho'i ka mana'o ki'eki'e o ke kanaka' or 'the haughtiness of men shall be made low' (Wehewehe).

as Hobart (2016) has documented, taste is a key biopolitical dimension of settler colonialism. Racialised debates about Native Hawaiian primitivism and sovereignty can thus be glimpsed through the history of food regulation and the biopolitical management of the ‘embodied pleasures of the everyday’:

The foods they [Native Hawaiians] desired, enjoyed, or simply nurtured themselves with stood primed for regulation as taste became increasingly indicative of the strength of ones [sic] cultural foothold in the Islands (Hobart 2016: 2).

In other words, if agriculture remakes landscapes, taste is an inextricable part of what is grown and is in turn employed in projects to remake palates. Understood in this way, ‘growing taste’ and ‘decolonising diets’ can be understood as key, alongside other efforts, to Native resurgence and resistance efforts.

‘Āina work promotes both growing and eating taro and there are indications that this promotion is having an effect: many growers report that they cannot keep pace with demand. In the words of NM, who did not sell but gave away his taro, ‘you could grow a thousand pounds a day and you could get rid of it, people want it’. Not only does local demand far outstrip supply, according to a number of actors interviewed in the research (NY; MC; BO; IM); these actors also indicate that informal gifting and exchange practices are key to these agrifood practices in Hawai‘i.

Moreover, the politics of unmet taro demand reflect not only the political components of consumption but the political economy of unfavourable resource politics and economics: wetland taro production requires flowing water, strong walls, constant weeding and a long maturation period.¹⁵⁴ Given the high cost of land, historical water diversions still in place and the amount of collective work need to maintain terraces, it is no

¹⁵⁴ Nine to 12 months for maturation, compared to three months for sweet potato.

surprise that taro farmers are at the forefront of struggles for resource rights and many 'āina work efforts (Lasky 2011). That Hawaiian farmers continue to have less access to land suitable for growing taro mean that efforts to develop the taste for taro specifically touch upon these structural and historical issues. At the same time, more research is needed to unpack the effects of rising demand and the taste for taro. In particular, the subtleties of gendered power relations must navigate prevailing settler as well as Native interpretations, and labour-intensive practices must be carefully monitored for how work is organised and shared.

Conclusion

This chapter has sought to highlight some of the social relations of 'āina work as they are embedded within wider decolonising efforts. The research found these agrifood practices may specifically create space for reconsidering intersecting social relations, including gendered identities; at the same time, the organisation of this work sometimes relies on gendered essentialisms, similar to other kinds of agrifood practices.

In the first part of the chapter, I sought to show how other dimensions of social difference are key to understanding the differentiated socio-ecological effects of 'āina work, including the politics of indigeneity, diaspora and authenticity as well as hierarchies of paid/unpaid staff, experience and genealogical ties. Differences between paid and unpaid staff can highlight how 'āina work straddles distinctions between 'work' and 'leisure' (Hochschild 1989) for different participants and offers differentiated possibilities for belonging. In analysing stonework, I suggested, along with others, that these labour-intensive tasks may encourage collective work, although this work can be organised along gendered lines, in line with both settler and Native gendered norms, even when work is self-selected. I posited that 'self-selection' may indeed offer somewhat greater gendered

autonomy within 'āina work compared to other agrifood practices, but it does not, on its own, dismantle gendered socialisation.

In the second part of the chapter, I outlined how *pili* grass bundling work challenges existing analyses of 'nimble fingers' and feminisation and settler gendered logics, highlighting the need for analytics of power that can encompass both Native Hawaiian and settler histories of gender and work as well as the multiple social differences that shape 'āina work, as outlined above. The third section, in contrast, sketched some of the ways that masculine, full-time conceptions of farming appear to continue to frame how farming is understood, even while taro farming, and indeed most forms of farming, rarely conform to such ideals in practices. Taro farming in particular blends subsistence and commercial work, highlighting both informal, unpaid foodwork and exchanges as well as the structural barriers that impede production to meet demand. I argued that explicitly politicised consumption practices are consonant with efforts to contest settler biopolitical, racialised projects of regulating taste. It still remains to be seen, however, how labour-intensive practices may be managed within households and whether they may intensify Native Hawaiian women's work in particular, especially as older Native Hawaiian women in particular already undertake a disproportionate amount of caring work in the islands (Brown 2001).

The chapter has sought to show how some 'āina work practices offer their own set of possibilities, tensions and contradictions for gender and socially-inclusive work, greater equity and well-being, as explicitly political processes that create room for reflexive and relational work that can at times challenge settler gendered logics. I postulate that 'āina work multiplies the opportunities to exercise gendered agency precisely because of acknowledgement, discussion and conflicting visions concerning the 'always selective' (Kauanui 2017: Location 14) processes of Native resurgence and decolonising work. In other

words, it may be that the multiple meanings of *ai* and *'ai* (Kame'eleihiwa 2001: 4) indeed offer fruitful ground for reimagining the possibilities for gender and the erotic from within 'āina work spaces. At the same time, these opportunities may be limited by selective and narrow conceptions of gendered identities and by other subtle and intersecting relations of power that shape the socio-ecological effects of different forms of 'āina work.

Chapter 7: Gendered Social Relations in Seed Production

Introduction

This chapter analyses transgenic seed production in Hawai'i from an intersectional perspective, focusing on the social relations of production. The chapter focuses on the Hawai'i activities of transnational seed production networks mainly concerned with developing transgenic and hybrid seeds, especially seed corn. This industry has come to play a significant role in Hawai'i's agricultural economy (Schrager and Suryanata 2017; Gupta 2015, 2016) and represents the high-value, 'high-tech' end of the forms of 'outlier agriculture' analysed in the thesis. The chapter considers some of the social relations of this 'high tech' seed production and asks to what extent these production practices are characterised by some of the poor conditions and inequalities found within other parts of the U.S. corporate agrifood system (Porter and Redmond 2014) and global agribusiness (Barrientos 2015). The chapter is embedded within the wider thesis project aimed at understanding whether forms of alternative agriculture offer more gender-inclusive work than agroindustrial production.

Research on transgenic crops and technologies (Kinchy 2012; Schurman and Munro 2010) has highlighted that conflicts over agriculture often materialise deeper debates about the role of science. Some scholars have critiqued the social inequalities linked with GM technologies and crops, including seeds (Fukuda-Parr 2007; Fukuda-Parr et al. 2012; Pechlaner and Otero 2008; Lapegna 2014; Leguizamón 2016; Motta 2016; Schurman and Munro 2010), highlighting the labour dynamics of production (Venkateshwarlu and Da Corta 2001) and their links with wider processes of capital accumulation (Kloppenburger 2004 [1988]; Schrager and Suryanata 2017; Schurman and Munro 2010; Kinchy 2012). Kinchy

(2012) demonstrates how marginalised social actors are often excluded from debates about agricultural policies and transgenic crops, arguing against simplistic portrayals of local social values against corporate-technocratic institutions. Kinchy (2012) highlights the ‘scientisation of politics’ which has shifted debates about GM crops into the realm of scientists and experts – a process similar to what Seager has described with relation to environmental issues (Seager 2003). Taken together, these areas of research have demonstrated the contested, social processes immanent to seed production and the need to understand their social relations of production in particular contexts.

Relatively less has been written about the labour dynamics within seed-agrochemical production networks, even while research on other global production networks has yielded important insights into labour and the gendered social relations of production (Standing 1999; Elson and Pearson 1981; Barrientos 2014). This work has established that reducing costs associated with labour rights forms a central part of strategies of flexible accumulation (Standing 1999; Elson and Pearson 1981), as companies locate production within sites where these are not applied. Within agricultural production and electronics manufacturing, women and migrants are preferred employees and are overrepresented in forms of temporary, casualised work in export processing zones (Elson and Pearson 1981; Barrientos 2014; Bain 2010). This research was interested in the extent to which such patterns may also be said to characterise seed production in Hawai‘i, as part of larger seed-agrochemical production economies. What, if any, patterns of occupational segregation characterise seed production and how does gendered occupational segregation shape the overall quality and ‘gender-inclusivity’ of work?

The presence of the major seed-agrochemical corporations in one location (Schrager and Suryanata 2017) offers an excellent opportunity to assess these questions of gendered

social relations of production within seed production sites. The research is based on interviews and observations at two different companies and two different sites on O‘ahu,¹⁵⁵ one small¹⁵⁶ and the other employing more than 300 employees. While based on a limited sample, the chapter highlights issues of gender-inclusive workplace policies and occupational structuring that have relevance for other forms of corporate and ‘high-tech’ agroindustrial agriculture. The research found that many large transnational seed producers utilise corporate policies aimed at supporting women’s participation in paid work, as well as include some efforts to consider ‘diversity’ issues in their workplaces.

The research found that such policies were important to employees interviewed and indeed represent relatively inclusive policies compared with other forms of agriculture. In this sense, transnational high-tech seed producer policies resemble less the policies available in other forms of smaller-scale agriculture but are more consonant with those enacted by other kinds of ‘high-tech’ corporations. The research process also suggested that such policies are limited in both application and coverage and the chapter raises broader questions about how occupational segregation based on gender, race and citizenship visibilise the limitations of corporate diversity policies in addressing intersecting inequalities. However, the results of this research are preliminary and more information is needed on the implementation of these policies across companies. The chapter concludes by suggesting further research with seed production employees concerning how they experience, understand and negotiate their working conditions.

The findings are based on interviews with 18 male and female upper- and mid-level managers, supervisors and fieldworkers, one outside labour contractor and a research

¹⁵⁵ Companies usually have multiple sites on different islands.

¹⁵⁶ As discussed in chapter 4, further information is not provided because of confidentiality concerns.

director at an industry association, as well as on observational analysis of industry events, conferences and online materials. Most interviewees were involved with seed corn production, but three interviewees were principally involved in soy seed production and assisted with seed corn harvesting and other tasks. Three other interviewees were principally tasked with land preparation and pest management activities. I consider specific cases within these areas, rather than seed production as a whole.

Managers' roles were varied, from managing external relations to overseeing land preparation and directly supervising field crew, which could involve as few as six or several hundred employees. The primary seeds produced were seed corn and soy, with smaller amounts of research crops, about 70% of which are genetically modified. Labour dynamics differ substantially depending on the crop because of different kinds of mechanisation, the intensity of manual work and the kinds of risks associated with different tasks. While a comprehensive outline of the gendering of all production tasks and of organisational hierarchies was not attempted here,¹⁵⁷ Appendices L and M offer a detailed description of both corn and soy production, while Appendix D describes a sample organisational hierarchy.

Locating Hawai'i's Transnational Seed Production

Seeds occupy an important node at the top of agricultural supply chains and within processes of capital accumulation (Kloppenborg 1988). By controlling seed varieties (through breeding and patenting), seed companies are able to realise profits otherwise unavailable when farmers save their own seed (Howard 2009: 1267-8). Consolidation in the global seed industry has been dramatic, and companies across the industry have diverse

¹⁵⁷ This was partly due to confidentiality as well as access concerns, as the organisation of production is itself largely considered proprietary information by companies.

origins in chemical, agricultural input and pharmaceutical sectors (Howard 2009; Bonny 2017). The consolidation and agglomeration of the seed industry have depended not only on the acquisition of smaller firms, multiple mergers and licensing agreements with one another (Howard 2009) but also on companies' skilful navigation and shaping of intellectual property regimes and regulatory environments (Schrager and Suryanata 2017: 6; Kloppenburg 2010). Multinational seed companies influence the wider agricultural landscape as well as individual agricultural supply chains through the 'treadmill effect' in which a small number of farmers seek to remain at the forefront of technological processes to increase yields, while a majority of farmers must then increase yields in order to maintain the same revenue (Cochrane 1993; also cited in Howard 2009). Seed values differ significantly by crop, where seed corn and soybeans are relatively expensive per hectare and thus occupy a larger portion of global seed markets compared to their planted acreage (Bonny 2017: 9). The relative value of these crops thus explains the concentration of seed companies in high-value crops (Bonny 2017: 9)¹⁵⁸ and seed corn, especially, has historically been at the heart of U.S.-led industrialisation and globalisation strategies (Schrager and Suryanata 2017: 3).

Hawai'i hosts the largest concentration of tropical seed corn nurseries in the world, by investment in infrastructure and staff (Schrager and Suryanata 2017: 1). Schrager and Suryanata have demonstrated how Hawai'i seed companies draw upon the 'spatial fix' (Harvey 1989) in order to overcome crises of accumulation by expanding production into new areas with favourable social and ecological conditions (Schrager and Suryanata 2017: 6). They demonstrate how new production technologies such as marker-assisted selection

¹⁵⁸ The seed industry is also heterogeneous, with companies differing by subsector (see Bonny 2017: 9-10 for more information).

(MAS) facilitates flexibilised production across multiple locations, including sites that serve as winter nurseries such as Hawai'i (Schrager and Suryanata 2017: 6). Schrager and Suryanata's research demonstrated the inter-dependence of winter nurseries and MAS techniques as central to companies' crop improvement strategies and thus to their overall processes of accumulation (Schrager and Suryanata 2017: 6).

Hawai'i has served as a winter nursery for seed corn producers since the 1960's when crop breeders drew on the year-round growing season to speed up crop development.¹⁵⁹ Schrager and Suryanata suggest that new investments and technologies made relying on these winter nurseries central to current crop development strategies (Schrager and Suryanata 2017: 6). Hawai'i emerged as a prime location then, they suggest, because of a confluence of factors including state policies which preserved agricultural land, a favourable political climate, strong connections between university and industry research and a strong labour force (Schrager and Suryanata 2017: 8-9). According to Schrager and Suryanata, skilled and unskilled workers are able to carry out the range of seed production activities including cultivar selection and observation undertaken by more specialised workers and seed increase which involves tasks such as hand pollination of corn tassels (see Appendices for detailed descriptions of seed production) (Schrager and Suryanata 2017: 9). In this way, seed companies have been able to draw on an existing skilled workforce of former plantation workers and university graduates as well as unskilled workers, many of whom are recent Filipino (im)migrants (Schrager and Suryanata 2017: 9). My research further investigated some of these questions about the labour force, who works within seed production and what forces shape the social relations of production within the studied sites.

¹⁵⁹ For example, hybrid corn breeding requires six to seven generations of self-pollination to produce what are called parent lines, whereas this could be increased in Hawai'i which does not need time for a winter thaw (Schrager and Suryanata 2017: 6).

In the next section, I suggest some of the ways that the reproduction of particular labour forces can be theorised and how this might apply to the case of seed production in Hawai'i.

Theorising Labour Control in Seed Production

Transnational production networks face fundamental tensions in relation to the need to reproduce and control labour power. As Jonas has argued, capital has sought to achieve stable labour markets through forms of economic and social influence, by shaping not only state institutions but also spheres of consumption and labour reproduction (1996: 327). Influencing labour reproduction, in particular, means shaping the conditions under which labour power is reproduced and integrated into production (Jonas 1996: 325). Literature in this area has emphasised a shift from direct to more indirect strategies of influence and control accompanying different phases and sites of capital accumulation (Edward 1979; Gordon et al 1983; Buroway 1985).

Employer influence on labour reproduction has been found to be key to regulating worker time use and efficiency, and thus ultimately surplus value (Jonas 1996: 327). This is because as Melling argues, 'the costs of surveillance and coercion explain why firms seek to establish a basic level of reciprocity to sustain the legitimate authority of the management in production' (Melling 1992: 129 cited in Jonas 1996: 327). Jonas has suggested that within local labour markets, 'employers have a stake in fostering strong social bonds and reciprocities between sites of production and places of reproduction/ consumption' (1996: 327). Theorists have analysed the different methods through which capital has sought to cultivate worker loyalty by influencing workers' lives at home and through involvement in neighbourhoods, communities and other local institutions (Jonas 1996: 327). Community involvement and public relations strategies also appear to form part of strategies used by Hawai'i seed companies and industry associations (Monsanto website; HCIA).

Hanson and Pratt suggest that employers have an interest in creating ‘strong social bonds and reciprocities’ with particular places, sites of reproduction and consumption as a means of generating stability and predictability within local labour markets (Jonas 1996: 328). They show how employers also draw upon gendered relations within particular locations and tailor their labour recruitment accordingly; employees, for their part, also understand that job opportunities contain implicit social and geographical dimensions (1992; also cited in Jonas 1996: 328). In this way, they argue that gendered occupational segregation is constituted through particular emplaced practices of boundary making (1999).

This chapter looks at these social relations of production as framed with company policies, manager and employee narratives, attending specifically to the role of gender and race/ethnicity in the reproduction of the seed production labour force. Is seed production work stratified on the basis of skills that are often associated with particular social identities, race and gender? What policies shape the prospects for gender-inclusive work? As outlined below, addressing these questions entails consideration of the role of the regulatory environment, public scrutiny, corporate social responsibility and diversity measures in shaping whether work can offer more gender-inclusive benefits for workers.

The Regulatory Environment, Public Scrutiny and Corporate Social Responsibility

Brower has argued that close state-seed company relationships have indeed been integral to enabling a regulatory environment conducive to seed company interests in Hawai‘i (2015). Similar to other global production practices, seed producers may relocate with relative ease and employees are ultimately dependent upon companies to remain profitable (Pearson and Elson 1981: 103). The state’s role could thus arguably been seen as somewhat limited in the context of Hawai‘i as a satellite production site (Pearson and Elson 1981: 103),

wherein the Hawai'i context is already subject to wider neoliberal processes of reducing the bargaining power of labour as part of efforts to curb inflation, deregulate labour markets and reduce the powers of trade unions (Schmidt and Hersh 2003: 6). At the same time, seed companies, in particular, are subject to particularly stringent forms of public scrutiny (Schurman and Munro 2010; Bernauer 2003) which may impact how they operate, especially within the context of a U.S. jurisdiction.

Since the mid-2000's seed companies in Hawai'i have been operating with growing levels of public awareness and scrutiny, shaped in part by growing anti-GMO movements across the U.S. and in Hawai'i (Gupta 2013, 2015; Lucht 2015). Growing public awareness and scepticism can affect corporate performance by influencing public attitudes and regulatory environments, especially in relation to food and agricultural companies (Bonny 2017: 15). While the U.S. has largely provided a supportive regulatory environment for agribiotechnologies, intensified negative public opinion on genetic engineering has affected the deployment of new transgenic crops (Chapotin and Wolt 2007). Nevertheless, pro-biotech groups and industry lobby remain strong in the U.S. (Bernaur 2016: 69) and appear so also in Hawai'i, even while scepticism toward transgenic technologies has risen in Hawai'i and in the U.S. more broadly (Griesse 2007). Bernaur notes that 'regulatory polarisation' and social controversy surrounding transgenic technologies have thrown these technologies into crisis, but not lead to their disappearance (2016: 18). Germane to the social relations of production then, are questions about how different seed producers manage this 'crisis,' how this shapes working conditions as well as corporate commitments to 'diversity.'

In her research on the role of public debate in shaping seed production operations in Brazil, Griesse found that DuPont emphasised workplace safety, codes of conduct and Corporate Social Responsibility efforts (2007). Similar efforts have been observed in Hawai'i

as exemplified by the growing use of seed farm tours, volunteering efforts, the use of ‘pollinator sanctuaries’ and other efforts to positively shape local Hawai’i perceptions of seed producers (Mostafahnezed and Suryanata 2018; Monsanto website). To some degree, greater public scrutiny of corporations has been linked to better labour practices, although there is much variation and debate ongoing within the literature on codes of conduct and corporate social responsibility schemes (Barrientos and Evers 2013; Barrientos and Smith 2007). Specifically, analysts highlight that women are often overlooked in reporting practices as they are often concentrated in casualised forms of work exempt from codes of conduct (Barrientos and Evers 2013: 46). Indeed, Barrientos and Smith (2007) found that the impact of codes on gender discrimination has been minimal and that auditing practices rarely pick up on gender discrimination as a problem of non-compliance with codes (Barrientos and Evers 2013: 50). Thus, seed companies’ activities, such as investing heavily in safety measures and other efforts to influence public opinion, may positively shape some aspect of the social relations of production by ensuring high standards and safe working conditions. At the same time, these practices are not as clearly related to company policies aimed at increasing diversity and promoting gender-inclusive work. How does considering policies aimed at gender-inclusive work affect how seed company labour dynamics are understood? Below, I suggest that considering diversity reporting and observations and narratives about seed production workplace demographics are helpful in building a picture about the potential for gender-inclusive work within seed production.

Seed Company Corporate Social Responsibility Efforts and ‘Diversity’ Figures

Global ‘diversity’ figures, where available, suggest that seed-agrichemical companies continue to under-represent women but that these, and ethnicity figures, differ significantly by site; usually, such data are only reported for company headquarters in the global North.

For example, Monsanto reports that their global workforce is made up of 30% women, although this data does not specify the occupations or roles they undertake (Monsanto GRI Report 2012: 57). Monsanto only reports ethnicity figures for their U.S.-headquartered, full-time employees, where 23% of employees were considered to belong to ‘ethnic minority groups’ with governance bodies having a 16% ‘minority’ representation (GRI Report 2012: 57). Understanding these figures within different companies, individual seed productions sites and by individual occupation is thus made difficult because of the lack of disaggregated reporting, and the very recent introduction of corporate diversity programmes (most since only 2013, including DuPont Pioneer in 2015) and officially counted workers¹⁶⁰ usually includes only full-time workers or full-time equivalents.¹⁶¹ However, research requests for further data did not receive a response, and comprehensive information could not be obtained on sites’ employee demographic breakdowns. Given that little has been published about who works in these industries in Hawai‘i, the first aim of this research was to understand some of the demographics and occupational patterns of the workforce in order to analyse these broader issues of gender- and socially-inclusive work within these sites.

Preliminary Observations on Seed Production Workforce Patterns

Preliminary data provide several insights into what appear to be company-specific but industry-relevant issues of gender and racialised vertical and horizontal segregation within the workforce. At one research site, human resource personnel reported that the Hawai‘i subsidiary employed a percentage of women ‘in the high thirties’ and that 80% of

¹⁶⁰ For example, in a 2015 report, one company reported that they had around 22,000 ‘employees’ and zero ‘supervised workers’—although the meaning of this definition is not exactly clear.

¹⁶¹ For example, another company does not centrally track the numbers of their ‘contract’ workers, instead utilising measures of ‘full-time equivalents’ that aggregate hours worked by part-time and seasonal workers and then report these hours worked as though they were a number of full-time workers.

employees belonged to 'ethnic minorities' (2).¹⁶² In relation to gender, the research suggests that the gender breakdown of field crews differs by crop: while the field crew for corn appears largely mixed gender, soy production and pollination appears to be female-intensive, undertaken primarily by older Filipina women (IE; ED). Therefore, while fieldwork operations for corn were more gender-integrated, soy production was female-intensive, whereas land preparation and management appeared more male-intensive. Indeed, within the small research sample, units responsible for preparing land and managing pests were almost exclusively men from different mixed-race 'Local' and Filipinx backgrounds (OF; CA). These patterns are similar to what Holmes (2007, 2014) has observed about how particular forms of embodied farmwork are undertaken in relation to racialised, gendered hierarchies, with the lowest forms of work involving work close to the ground (Holmes 2007: 60).

Many of those interviewed in the research identified the majority of temporary fieldworkers as Filipinx Americans, Marshall Islanders and sometimes (im)migrants from Latin America (AA15), while many senior managers are white from the East Coast and Midwest 'corn belt' states. Local mid-level managers interviewed in the research often identified as 'Local', mixed-race Asian Americans and a few local *haole*. In a rare moment of acknowledgement of the role that these movements of people play in seed production, one local *haole* manager stated:

I [have no illusions] about the fact that very few people in here [in the company] are from here, and they [GM opponents] like to capitalise on that. And I get it, it's a little weird, but it's how it works (LE7).

Indeed, the research found that many O'ahu seed production sites' field crew were

¹⁶² Indeed, one human resource manager explained that they 'don't capture social or economic factors of the candidates' and that not recording such information is a way of being 'fair and equitable' (LR7).

(im)migrants from the Philippines and Micronesia at the larger site and Local mixed-ethnicity employees at the smaller site. Some of this variation can be understood in relation to the different histories of the companies that are now owned by transnational firms but which may have started out as niche local seed companies.¹⁶³ What further characteristics of local labour help to explain the patterns observed?

Interviewees did not agree on any specific gendered patterns within their organisations (e.g. CA, OF) and, in the absence of company data, it is not possible to understand patterns directly. However, they did comment on other issues affecting the workforce, and some women managers spoke about how they felt working in a male-dominated industry affected their work in relation to professional advancement, working relationships with others and strategies for managing their subordinates (AA; OA). AA's views are worth quoting at length:

As someone who wants to advance in her career, how do you stand out and be respected in a field that is traditionally male-dominated? Because you're in a room full of men and you do have to consciously be more assertive than you probably would be if you were in a room full of women. And sometimes it can be hard to get a word in.... there's not the attitude that... they're inferior because she's a woman... But it does seem to be a little harder to get noticed and I think it's just gender differences, maybe. So for me, I'm not typically really loud ...Like men are just generally better at selling themselves and women generally seem to don't like to talk about themselves.... they have lower self-confidence. So, when you're coaching a woman, you're trying to tell her she's doing really good, and then when you're coaching a man, it's usually a different story... It doesn't apply to everybody, but there's definitely some truths there (AA11).

This manager hints at some of the more challenging aspects of her work that influence her own professional aspirations and actively require strategic thought and negotiation. In her view, working in a male-dominated sector affected how women obtained recognition for their work or were able to advance. She describes gender differences through qualities

¹⁶³ For example, Monsanto acquired seed companies based on Moloka'i and Maui, Moloka'i Seed Service (later Hawaiian Research) and Trojan Seed Company (Monsanto "Who We Are").

associated with masculinity such as assertiveness, confidence and speaking up, making it harder for women to 'get noticed' and to talk about themselves. In this way, particular modes of communicating code certain Anglo-American, gendered qualities as professionally advantageous. Such examples demonstrate what has been found elsewhere, where 'some communication styles are perceived to be acceptable and normative, whereas others are unacceptable and deviant' (McDonald 2016: 20) in ways that have gendered, classed and racialised consequences. This could be linked to an overall 'glass slipper' effect: the implicit and largely invisible norms that tend to privilege white, masculine experiences of work (Charles and Grusky 2004).

While employees did not agree on the patterns of the workforce or the exact reasons for any differences they did notice, differences were usually explained through rational choice frameworks of employment (Charles and Grusky 2004), wherein women and men voluntarily choose different work or through understandings of differences as inherent, naturalised qualities. While some interviewees felt that it was important for more women to enter agriculture, others expressed uncertainty: in the words of OF, 'I mean, if they want to come, that's fine. I think in ag there's a need for people, period' (OF20). OF highlights the overall need for people to work in agriculture rather than a need for any particular set of people.

'Gender-Inclusive' Organisational Policies

Without being able to offer a more comprehensive overview of how work is organised on seed production sites because of company confidentiality and safety concerns preventing more substantive observation, I analysed interview narratives and organisational policies. What policies and practices exist to promote gender-inclusive work and what issues characterise the social relations of production?

Organisational policies¹⁶⁴ were highlighted by several interviewees as key aspects of their job satisfaction and as part of organisational efforts to promote gender-inclusive work. These policies mainly¹⁶⁵ concerned the provision of healthcare benefits, the promotion of flexible working and parental leave as well as organisational sensitisation regarding gender and sexual identity issues. What kinds of corporate policies exist, how do managers understand them and whom do they benefit? How do these policies compare with other forms of agriculture, to other industries and are they successfully applied? Again, access and confidentiality concerns limit the extent to which such information can be fully reported but some initial insights are helpful to thinking through the quality of work that seed production offers different employees.

Healthcare, Work-Family and 'Diversity' Policies

People sometimes characterise it as a male-dominated industry, which it still is, a majority... but it ... I think it's a reasonable amount... we are... all our policies and whatnot are very supportive ... they're very neutral to those types of things (LR4).

Such was the framing of one seed production human resource manager in describing company policies related to gender. She described their approach as 'very employee-friendly', describing her work in holistic terms: 'What does it take for employees to be happy in their work and life? ... [do these policy efforts] make me want to come and work here?' (LR). These sentiments could be considered as part strategies to reduce turnover and training costs as well as in relation to modern corporate efforts to compete on the basis of the 'lifestyle' they can offer (Tone 1997: 175). This could also be considered from the perspective of accumulation wherein employers attempt to smooth the transition from

¹⁶⁴ The majority of these examples are primarily drawn from one organisation, which is broadly seen to offer some of the most 'competitive' benefits packages within the industry, although online research into recruitment (e.g. on Glassdoor) shows that many of the transnational seed companies offer broadly comparable pay and benefits packages.

¹⁶⁵ In addition to these, one company reported starting women's networking and mentorship groups, although these efforts were relatively new in the Hawai'i context (LR8).

labour market to point of production (Jonas 1996: 329).

Healthcare and benefits policies were cited by interviewees as important reasons for working at seed companies, and women managers frequently mentioned the benefits packages as key to their decision to work for a particular corporation (although not for working in agriculture generally). In one case, these benefits were used by one manager to convince an employee to stay at the company and were key to her own continued employment there (OA16). Described as ‘super family-friendly’ (AA7), the organisation’s healthcare package options and family leave policies were favourably recounted by managers. Indeed, one human resource manager explained that expanding parental leave policies had been a key achievement for her organisation, although, as she acknowledged, ‘I wouldn’t say we’re out at the front edge’ (LR4).¹⁶⁶ While some seed-agrichemical corporations have expanded their healthcare policies at national level to include for example transgender healthcare benefits, this manager was not aware of her company’s policy.

In contrast, none of those interviewed, including female employees, mentioned taking advantage of existing flexible working policies (AP; OA; AA; RO) that were highlighted by one senior manager as part of the organisational commitment to gender-inclusivity (UE). The seed company employees or managers interviewed were also not always aware of what their benefits package contained: for example, some were unsure if their plans covered sick leave (AA8), nor was there any publicly available official information on sick leave policies. In

¹⁶⁶ This included a flexible savings account that would pay for certified childcare, although it was not clear if she herself had used this programme. This person also spoke about other branches of the same company offering on-site childcare, and she expressed interest in this as something she wished the Hawai’i branch would develop down the line (OA11).

the context of U.S. jurisdiction¹⁶⁷ and an agricultural sector without paid sick leave, the inclusion of sick leave benefits for some seed production employees is above standard. At the same time, these benefits did not appear to cover temporary contracted workers (LR7), part-time and hourly workers.

The same caveats also apply to family leave policies, which are not mandated by the state¹⁶⁸ and do not apply to the temporary workforce. At one site where I undertook research, the organisation offered a significantly better paid-leave policy for workers than the minimum U.S. regulatory requirements.¹⁶⁹ In the U.S. regulatory context, any paid parental leave policies are notable and compare favourably to those in competing industries.¹⁷⁰ At the same time, healthcare and family-leave policies represent distinct sets of issues in relation to gender inequalities at work and overall employee well-being. For this reason, the frequent reference in interviews to family-leave policies and ‘benefits’ as gender-inclusive is noteworthy. These policies are important and limited: they largely refer to policies that support women’s labour force participation rather than aim to support gendered change in the structure of work more broadly.

Additionally, the U.S. understanding of healthcare and family leave policies as ‘benefits’ rather than rights is limiting in that it may ‘underpin[] a restricted sense of

¹⁶⁷ Federal law does not require payment for time not worked under the Fair Labor Standards Act (FLSA), including vacation, sick leave or federal or other holidays. This is also true for Hawai’i state law (DLIR), although it is common practise in the U.S. for employees to have two weeks’ vacation per year.

¹⁶⁸ U.S. federal law does not require paid family or maternity leave under the Family and Medical Leave Act of 1993 (FMLA) but does mandate 12 weeks of ‘job-protected’ *unpaid* annual leave for qualified parents of newborns or adoptees (FMLA). In order to take leave under FMLA, employees have to have been working for the business for 12 months and worked at least 1,250 hours (around 52 days) in that time (FMLA). And they must work in a firm with more than 50 employees (‘at a location where the employer has 50 or more employees within 75 miles’) (FMLA).

¹⁶⁹ This company offers full pay for up to 20 business days to parents for birth or adoption, in addition to the U.S. standard 12 weeks’ unpaid medical leave. This is considered ‘disability leave’, as pregnancy is considered a form of ‘temporary disability’ and offered to mothers who are employees (company policy).

¹⁷⁰ For example, according to a recent White House report, both agriculture and food service have little access to paid leave, although there are more possibilities for flexible working than in, say, construction, which has both low access to paid leave and low flexibility (Council of Economic Advisors 2014: 13).

entitlement' to utilise these policies (Lewis 2002: 15). Research elsewhere suggests that in fact, the gap between those who have access to these benefits and those who do not, represents a larger pay gap than pay gaps by gender, national origin and ethnicity (Council 2014: 1). Most U.S. workers, especially low-wage earners, lack access to paid family leave¹⁷¹ (Milkman and Applebaum 2013: 7) and temporary, subcontracted and part-time workers are usually excluded from corporate health and leave policies.

Some women managers interviewed also discussed positive experiences of taking advantage not only of family-leave policies but also at-work adjustments during pregnancy. Indeed, three out of five women interviewed at one site had taken parental leave¹⁷² (AA7; OA9)¹⁷³ while employed with their seed company and worked while pregnant. One male field crew lead reported using his vacation time for parental leave (ED). However, the amount of paid parental leave appears to vary (AA7) as does reassignment to less physically intensive work during pregnancy (OA10; AA8). While the women managers interviewed reported that they felt safe working while pregnant (OA; AA9) one acknowledged that she had not always felt safe in other agricultural industries¹⁷⁴ and that chemical exposure for those 'who don't have a safety programme like this, I can definitely see that being an issue' (AA10). Questions about safety protocols around chemical exposure have been recently raised at some seed production sites in Hawai'i (Syngenta 2016) and while women managers reported pregnancy-related accommodations, it is not clear that this would be possible for all workers. Once again, organisational positioning—permanent or temporary, manager or fieldworker— impacts the effectiveness of gender-inclusive organisational

¹⁷¹ Hawai'i is one of the few states that has enabled some wage replacement through Temporary Disability Insurance (TDI) (Milkman and Appelbaum 2013).

¹⁷² Usually of eight weeks.

¹⁷³ One person's husband was currently the stay-at-home parent for their most recent child.

¹⁷⁴ In her words, 'I feel way safer here being pregnant than I did at the other place' (AA9)

policies.

As the foregoing discussion shows, gender-inclusive corporate policies largely focus on women and support for families within the context of broader but variable benefits packages and nominal support for men's parental leave and transgender health. However, one manager described also described efforts to create a workplace that is inclusive to LGBT identities, when asked what company policies included:

I think it's beyond—it's not just the male or female... X is a programme we have. It's a LGBT [programme] that we run.... it's a safe place if you want to talk, if you're having issues or if somebody is causing you issues, we try to be very open. So, it's not just the male and female, it's the broader gender community, if you will (UE13–14).

The existence of an LGBT network is significant in the agricultural sector, which, by this same manager's description, 'is seen as much more traditional' (UE14). However, the effect of such programmes on organisational norms is unknown, and UE's comments offer some conjoining of different issues. For example, the framing of LGBT networking as something that is 'not just male and female' but for the 'broader gender community' suggests that gender is something that particularly applies to LGBT persons. More importantly, it was found that this programme was not, in fact operational in the Hawai'i site (LR).

Again, these issues highlight the gaps between gender-inclusive policies, their application and use by employees, and levels of manager awareness. At the same time, it is interesting to note that certain corporate policies were not mentioned in relation to how they supported a gender-inclusive working environment, for example, sexual harassment, equal opportunity or cultural sensitivity policies, which also appear to be used by most global seed production corporations.

While there were significant corporate efforts at gender inclusiveness, these apply only to full-time workers and are possibly more likely to be utilised by managers than

workers. Moreover, such policies must be understood with relation to corporate efforts to attract potential employees through competitive benefits packages rather than as efforts to address occupational segregation or other workplace issues. Differences between full-time and temporary workers, in particular, echo other GPN research documentation of a two-tier employment system (Barrientos and Perrons 1999; Barrientos 2015; Sifaki 2013). The next section analyses what could be understood about the nature of temporary work within seed production on the basis of the limited research sample. While I was not able to interview temporary workers directly, the dynamics of temporary labour recruitment are of particular interest to further research on seed production.

Field Work Recruitment and Temporary Seasonal Work

Seed companies have selected Hawai'i in part for the characteristics of the local labour force, which include skilled agricultural workers left unemployed with the closure of pineapple plantations, many of whom have immigrated from the Philippines (Schrager and Suryanata 2016). For seed companies, the availability of a trained agricultural workforce appears to have made Hawai'i an attractive space for expansion and several employees interviewed in the research worked for the same manager on the same land under previous pineapple production, now producing seeds (D; LE; NM).

While Hawai'i is often described as having a year-round growing season, the busy seed-corn harvest period between November and April requires a significant number of temporary workers. The use of temporary work allows companies to more closely manage labour costs which fluctuate seasonally, and which require a large number of workers for time-sensitive tasks. Employees may choose temporary work for a number of reasons, and often those undertaking these forms of work have limited English language skills and may be recently (im)migrated (Farmwork Needs Assessment 2016). Temporary and seasonal

work in agricultural value chains has been found elsewhere to entail precarious and poor conditions, with women and migrants concentrated in these forms of work and excluded from many of the employment norms protecting full-time employees (Bain 2010; Perrons and Barrientos 1999; Sifaki 2013). Within North America, other research has highlighted the specifically gendered and racialised strategies used to recruit temporary agricultural workers (Tyner 2005: 67; Prebeisch 2007) and the existence of ongoing structural inequalities surrounding farmwork (Holmes 2007). However, little is known about these patterns within seed production in Hawai'i and further research is needed to investigate them in greater detail. For the moment, this research can comment on some of the strategies the small sample of interviewees mentioned as their means of recruiting temporary workers; I then offer some possible ways of understanding these dynamics in relation to the wider concerns about gendered social relations of production and the gender-inclusive quality of work.

The temporary workforce appears also to be recruited through word of mouth amongst permanent fieldworker networks in the sites studied, and the industry more broadly also uses job advertisements and staffing agencies. Some companies provided internal bonuses to permanent employees who gave successful referrals (AA4).¹⁷⁵ These activities can be understood as means of keeping the costs of temporary recruitment low by drawing on existing social relations and networks to fill production needs. One human resource manager described this process in the following way:

there is a strong first and second-generation immigrant kind of resource for us.. cultural and historical .. and we've got a lot of employees who tell their friends and family ...this is good role... as long as I've been in my role we haven't sourced migrant labour, we're able to source that all locally, which is great(LR4).

¹⁷⁵ Recruitment for temporary work also took place through print, radio and word-of-mouth advertising (AA21).

In this way, she describes implicitly Filipinx histories of immigration as representing a ‘cultural and historical’ resource that can be considered to reduce recruitment and training costs for companies, as signs are already in Tagalog¹⁷⁶ and workers speaking the same languages can more easily communicate.¹⁷⁷ Hawai‘i’s history as an important centre for migration from the Philippines is thus drawn upon strategically as part of seed companies’ overall recuperation of plantation infrastructures. At the same time, many temporary workers are regular rehires according to corporate materials analysed and interviews, making them ‘very experienced’ in their work (AA15) and raising questions about the conditions of this ‘temporary’ but apparently recurrent work.¹⁷⁸ Again, regular rehires reduce costs of training and recruitment and potentially provide seed companies with some measures of stability in ensuring a ready workforce for seasonal tasks.

Taken together with some of the insights provided by a local labour recruiter, how seed production companies engage with local Hawai‘i labour markets can be linked with the cost of direct and indirect strategies of obtaining labour (Jonas 1996: 331). In this sense, the framing of ‘local’ labour markets is somewhat misleading, as companies draw on histories of (im)migration indirectly by turning to ‘first and second-immigrant’ networks as a ‘cultural and historical’ resource. In some cases, companies directly recruit managers from national U.S. locations or internationally and thus directly import highly skilled senior staff (LR). As one manager, LE, who was somewhat unique in being a locally-raised haole, recounted earlier in the chapter, very few people working in his company are from Hawai‘i, which may

¹⁷⁶ Not all workers speak and read Tagalog or Ilocano, as many recent (im)migrants to Hawai‘i also speak Visayan and other languages.

¹⁷⁷ At the same time, the research also found that employees described significant issues with communication, even while none of these had been linked to serious incidents. Thus the politics of communication within seed production warrants further study.

¹⁷⁸ According to AA, this was different in the year before the study, when a large proportion of new workers were hired because of later advertising times, with different health and safety implications in terms of training.

seem strange but that's 'how it works' (LE7). These practices reduce the costs of recruiting and training workers, including temporary fieldworkers, and may smooth employment relations and (re)produce socialisation associated with particular kinds of work (Jonas 1996: 331). As Jonas remarks, 'without an ability to incorporate and adapt to local labour market conditions, capital faces limits to its ability to restructure through space' (Jonas 1996: 331). Recuperating former plantation infrastructure enables seed production to draw upon existing social relations, at the same time that workers, for their part, negotiate, resist and obtain their livelihoods in relation to – but not exclusively constrained by -- employer strategies.

At the same time, there appear to be iterative interactions between histories of the local labour force, state support for seed industries and the development of employer preferences over time. And thus while seed companies may draw on existing networks to recruit temporary fieldworkers, external labour recruiters may utilise distinct approaches to suit their needs. For example, one external labour recruiter favourably described renewing the U.S. government temporary agricultural worker programme in order to be able to recruit from other places with 'plenty of workers' (AL5), such as Ukraine, Thailand, the Philippines, and China. This is known as country-surfing, a well-documented labour recruitment strategy often used to employ those perceived as the hardest-working and most docile (Prebeisch 2007: 13) – a central strategy within past Hawai'i sugar plantation labour sourcing: 'hardly a locality in the world exists where there is a surplus of unskilled labour that has not been visited and investigated by Hawaiian labour agents', wrote a 1902 U.S. Labour Commission Report (U.S. Commission of Labor 1902: 22).

It seems that, while patterns may be subject to change, some forms of 'migrant niching' appear to take place within seed production fieldwork, wherein workers from the

Philippines make up a large percentage of workers, with workers from the western Pacific Compact of Free Association (C.O.F.A.) states also entering these roles. As Perrons and others have suggested (Prebeisch 2007; Kilkey et al. 2013; Stasiulis and Bakan 2005), iterative interactions shape the creation of migrant niches within employment, as 'social groups or identities are considered unsuitable for certain positions and then become unsuitable by virtue of not having had the necessary practise, experience or social networks' (Perrons 2014: 675). By relying on Filipinx (im)migrant networks and recruitment, employers may also come to prefer Filipinx workers, as this is both a cheaper and more socially manageable labour sourcing strategy. Indeed, Filipinx people were consistently described as 'the best workers of all' by one labour recruiter, 'really hard-working' (CA27), because of their work ethic, creativity (OF) and English language skills (AL5). The history of framing particular (im)migrant groups as hard-working is historically contextual and, in Hawai'i, there is a long history of this association with 'Ilocanos' – in the 19th century framed as the 'favoured laborer because *he* is hardworking and thrifty' (Sharma 1984: 349, my emphasis). The apparent preference for Filipinx workers in seed production may thus be understood with relation to processes of migrant-niching which are also gendered (Broughton 2008: 569).

Such niches are subject to change over time, and it may be true as one manager recounted that 'Micronesians will fill up a lot of the need of labour for a while, since a lot of the really hard-working Filipinos that have been doing the hard jobs are retiring' (CA27). Moreover, since COFA citizens¹⁷⁹ face significant difficulty in accessing Hawai'i labour

¹⁷⁹ C.O.F.A. (im)migrants, who may have highly variable experiences with waged labour and timekeeping, the English language and formal education (MUBI 2014). For example, in Chuuk, formal education is not mandatory (Hattori-Uchima 2013: 113)

markets,¹⁸⁰ possess limited citizenship rights and opportunities more broadly (Hawaii Appleseed Center 2011), jobs in agriculture and seed production may represent an important source of employment, as many seed production and agricultural jobs do not require previous education or training (NASS 2018).¹⁸¹ At the same time, their integration into the seed production workforce requires new negotiations and some managers described the ‘challenging’ nature of working with ‘Micronesians’ (CA 20–21). While seed managers interviewed largely expressed willingness and enjoyment in these challenges (CA; OF), the same external labour recruiter describes these difficulties as affecting COFA citizens’ work ethic: ‘as a rule of thumb, they’re not as good a workers [sic] as Hispanic guys’ (AL3). In this way, the labour recruiter associates Micronesian workers with being ‘laid back’ (AL3), without much understanding of the current situation for COFA (im)migrants in Hawai‘i who are heavily discriminated against (Hawaii Appleseed Center 2011). In relation to how gender shapes changing processes of migrant-niching, the gendering of agricultural workers as ‘guys’ corresponds to wider interviewee tendencies across the case studies to frame agricultural workers as men.

In short, while such instances are far from exhaustive, they point toward some of the ways that seed production companies draw upon historic and cultural social relations within ‘local’ Hawai‘i labour markets. Through what appear to be some processes of migrant-niching, gendering processes work through assumptions of masculine norms for agricultural fieldwork, even while individual employees must also negotiate gendered regimes in places of origin and in situ.

¹⁸⁰ It has also been documented that companies have expressly refused to hire Micronesians, and there are reports of Micronesians being underpaid and bypassed for promotion (Hawaii Appleseed Center 2011: 15–16).

¹⁸¹ C.O.F.A. citizens have come to live, work and study in the islands since the 1980s and have different levels of education; there are indications that more recently arrived C.O.F.A. migrants are mainly employed in temporary jobs and in janitorial services (Honolulu Magazine 2011).

Public Scrutiny, Union Avoidance and the Social Relations of Production

Public relations offer key windows into how companies navigate increased public scrutiny and the role that gender-inclusive policies may have therein. Such efforts can also be understood with relation to avoiding unionisation within seed production, which could potentially raise wages and therefore costs for employers, researchers have noted in other GPNs (Standing 1999). The avoidance of unionisation in agriculture raises particular issues, since the sector is already excluded from major U.S. labour rights law as a consequence of the history of slavery in the U.S. (Perea 2011).¹⁸² Avoiding unionisation of a sector noted for its hazards and precarity in the U.S. and globally thus might be said to limit other efforts to enact gender-inclusive work. Based on company public relations efforts in Hawai'i and individual manager narratives, there is some indication that union avoidance is also taking place in Hawai'i. Thompson suggests that in order to avoid unionisation of employees, companies must endeavour to become 'vital community citizens' (Thompson 2007: 2) – efforts which appear similar to the public relations work of companies such as Monsanto¹⁸³ and to a lesser extent Syngenta¹⁸⁴ as well as seed industry body associations and campaigns in the islands.¹⁸⁵

¹⁸² This works by excluding agricultural and domestic workers from the definition of employee: 'The term "employee" shall include any employee... but shall not include any individual employed as an agricultural laborer, or in the domestic service of any family or person at his home...' (29 U.S.C. § 152(3) cited in Perea 2011: 96–97)

¹⁸³ The global Monsanto website (Monsanto) as well as the local Hawai'i version (Monsanto Hawaii) show various community initiatives including their community programmes, which describe the company as having 'given grants and volunteered manpower for numerous educational, environmental, community and humanitarian endeavors' and 'The Hawaiian word *kokua* means "help" or "support", and it's one of Monsanto's core values to support the communities in which our employees live and work' (Monsanto "Community")

¹⁸⁴ This company had recently launched a local version of the 'Good Growth Plan' where they planned to host local events (Syngenta 2016); however, they have since sought to sell local operations, so it is not clear whether these plans will go forward.

¹⁸⁵ Such as the Hawai'i Agricultural Foundation, created in 2007, initially as The Hawai'i Farm Bureau Foundation for Agriculture and sponsored by a range of major food and agriculture organisations, including Monsanto (Hawaii Ag Foundation).

While it is not known how explicitly this avoidance is factored into seed production operations, two different managers mentioned a preference for ‘educating’ workers about unionisation – a hallmark framing noted within literature on union avoidance (Thompson 2007):

We try to push educating our field crew about what unions do. The pros and cons and all that kind of stuff and we just want to establish that, ‘Hey, we don’t want you to go and pay someone to talk for you.’ We’re kind of keeping our doors open and saying if you need to talk to us, either staff or the management, just come in and talk to us. I mean, that’s kind of the mentality of how we view unions. We’re not against it, we’re just like educating them. Saying, ‘Hey, you’re working for your money. We want you to keep it. If you have something to tell us, let us know instead of having someone else just coming in and talking for you.’ You don’t really need that (OA15).

Literature on the union avoidance industry¹⁸⁶ often emphasises these forms of ‘education’ programmes for workers as key to remaining ‘union-free’¹⁸⁷ (Thompson 2007: 2).¹⁸⁸ Another manager is more direct that high wages may also figure into ‘fighting off’ unionisation efforts:

They’ve come in and tried and they wanna try to unionise us but they [seed companies] keep fighting ‘em off. Basically, it’s just educating the workers. We have meetings all the time. You know they [unions] try different tactics, trying to get ‘em to sign up... so we just... our straight up field crew member starting pay is like \$13 hour, full benefits, everything. We have a 401k, retirement, pension plan...seems like we actually gave the best benefits (CM1).

More research is needed into such strategies and how public relations’ efforts more broadly affect working conditions within seed production. For the moment, it appears that increased public scrutiny is linked with both external controversies and also possibly broader corporate strategies to maintain favourable conditions for seed production. How companies negotiate actual and potential increased public scrutiny may thus contribute to

¹⁸⁶ These companies have been used by at least one member of the seed production industry globally: DuPont employed the Burke Group, according to Logan (2006: 655).

¹⁸⁷ Holmes also analysed farmworkers’ distrusting attitudes of labour organisers in the Pacific Northwest (2007: 58), so it is important to understand different attitudes about labour organising amongst different workers, which may differ by citizenship status (see also Tomas 1985).

¹⁸⁸ Specifically, that ‘employers who regularly express their reasons for remaining union free are far less likely to be organised and unions choose their targets accordingly’ (Thompson 2007: 2).

good working conditions as well as seek to delimit further transparency that might be achieved through workers' collective bargaining processes, for example. Higher pay, safety protocols and strong benefits packages must therefore be understood as part of how companies negotiate these tensions, promoting and maintaining stability in the labour force and favourable working conditions.

At the same time that seed production company practices of union avoidance may be operating at some sites, changes also appear to be shaping the future of seed production work in Hawai'i through some company preferences for task integration and contract farming as well as recent industry consolidation. Based on his history of work within and for seed companies, one external labour recruiter spoke about his efforts to promote a task integration approach in the farm labour services he provides to seed companies. Task integration sees employees take on further responsibilities in exchange for higher pay and AL saw this as affecting the temporary work dynamics of Hawai'i winter seed nursery sites:

They're not gonna be able to hire people for just like a month when they need 'em. You're gonna have to look at keeping a core that's gonna be able to do all these different things. And pay them a little more. I think that's what its gonna evolve into (AL3).

AL saw task integration as a solution to the persistent difficulty of finding enough temporary labour for intensive harvesting periods (AL3), suggesting that this will reduce management costs and overall costs of production for seed production companies (AL3).¹⁸⁹ Changes toward this model may represent better conditions for the workers able to access these better paid, more stable roles but layoffs would also likely accompany these changes, according to AL (AL6). The question remains: who will be considered ideal to make this transition and under what terms of employment? What changes might task integration have

¹⁸⁹ As AL says 'get[ting] by with less employees rather than having a mass number that's hard to manage' may be acceptable because 'these guys are reliable workers and do quality work and can do all these different kinds of jobs'.

in terms of work intensity, for example? Malanski et al (2017) have demonstrated that different pathways to task specialisation and versatility have differential impacts on the quality of work on farms.

Moreover, how does task integration differ from the use of Farm Labour Contracts (FLCs), which can have vastly different impacts, depending on the context (Otsuka et al 2016). AL, as a farm labour contractor, is keen on development in this area as well and predicts that:

employees will become like a farm service company where you go in and do certain things for people under a contract, perform certain services for them. And it won't be a labour deal per se (AL9).¹⁹⁰

In other words, instead of working through a labour recruitment company that supplies temporary workers or contracts more versatile workers over longer periods, seed companies may directly contract with outside firms for the work they need done. This has historically been known as 'contract farming', which can be undertaken to reduce costs at both low- and high-value-added production tasks and specialised functions (Bernhardt et al. 2015: 3). It appears that Syngenta has recently undertaken such an agreement (Hartung Brother 2017), although contract farming has a long history on Hawai'i plantations (Coman 1903; Andersen et al. 1984). Such changes could be understood with relation to what FitzSimmons has described as tendencies within the U.S. agricultural sector to become 'disintegrated' in 'complex web of capacity and specialty subcontracting' (2017). Further research will be needed to determine how such changes interact with existing social

¹⁹⁰ As AL says, 'maybe we'll see this from the seed companies. They may be looking for the third-party guy to do more of their labour, you know they just tell you what they want done and you come in and do it and not necessarily as a straight contract. In other words, they wouldn't be contracting you for your employees, you would be doing all the work ... with minimum supervision from them. It may evolve into that... and that would fit our bill pretty good because we actually know how to do all that kind of work. And that way they would cut their local staffs down'.

relations of production within seed-agrichemical production sites, what forms of contract farming are at work in other parts of Hawai'i's agrifood systems and how these changes may impact a range of job conditions and benefits.¹⁹¹ Since farmworking is one of the most dangerous occupations in the U.S.,¹⁹² such dynamics require close attention.

Further, industry downturn, site closures and layoffs in 2015-2017 have since shaped the seed production landscape, with Syngenta, for example, selling its Hawai'i operations to a seed supply contractor (Hartung Brothers 2017), Mycogen Seed closing on Molokai and the owner (Dow-Dupont) expanding on Kauai (Maui news 2018). The use of contract farming and the rise of digital technologies ('digital farming') are likely to pose important trends to watch in the seed industry and beyond.

Conclusion

In conclusion, this chapter sought to analyse the social relations of Hawai'i's seed production practices with special attention to intersecting dynamics of gender, race and citizenship as they relate to production practices and accumulation. I sought to understand how these agricultural 'outliers' compare with the other forms of agrifood work discussed in Chapters 5 and 6. The chapter analysed organisational policies aimed at gender-inclusivity and found that seed companies offer gender-inclusive healthcare and work-family policies that favourably compare both to competing industries and to the low threshold of the U.S.

¹⁹¹ For example, Bernhardt has associated changes as a result of domestic outsourcing to 'benefits, hours, workload, job stability, schedule stability, occupational safety and health, incidence of wage theft, and access to training and promotions' (2016: 6) There is ample research suggesting there are wage and benefit penalties to outsourcing low-wage jobs (Bernhardt et al. 2016: 19). Moreover, Weil (2014) has argued that outsourced operations are more likely to have lower wages and job quality, because contractors are more likely to violate labour laws and may have greater incentive to violate the law because they operate on thin margins (cited in Bernhardt et al. 2015: 20), although other research shows that close, long-term relationships with suppliers are linked with fewer violations (cited in Bernhardt et al. 2015: 22; Locke, Qin, and Brause 2007; Locke 2013). Macro-economically, research has linked the rise in outsourcing and resulting decline in wages to overall wage inequality in Germany (Goldschmidt and Schmieder 2015).

¹⁹² Agriculture has an injury rate seven times higher than workers in other industries and 40% higher than the rate for all workers (BLS 'Agricultural Operations').

regulatory environment. These policies were highlighted by interviewees as key aspects of job satisfaction and were emphasised by managers as organisational efforts to promote gender-inclusive work. It may be that such policies are indeed particularly successful in recruiting those with significant caring responsibilities—often women—who might otherwise not be able to take up paid work. In this way, the research found that the benefits of gender-inclusive policies are important but limited, as they do not apply to all workers¹⁹³ or aim to shift the broader political economy of seed production and capital accumulation.

The heightened scrutiny within which seed companies operate may play a role in shaping the social relations of production by further incentivising corporate efforts to create good relationships with workers and the broader community in order to shift their public image, pre-empt internal employee discontent and forestall collective bargaining processes which may open companies to further scrutiny. By offering relatively good conditions and using different indirect strategies, companies reduce the costs of labour recruitment, training, surveillance, management and turnover by drawing on existing employee networks and extending their influence beyond production into spheres of consumption and labour reproduction (Jonas 1996: 327). Marked oligopolistic competition amongst companies and competing industries (e.g. construction) may mean that seed companies must create attractive benefit packages in relation to a small labour pool. Policies that support women's entry into the seed production workforce and aim for 'holistic' approaches to employee well-being (LR) can thereby be linked to a number of converging rationales and strategies

¹⁹³ There is also reason to believe that investigating the gender balance of parental leave policies in some of these companies would be revealing, as some interviewees who had taken parental leave had partners employed in the same company. However, in one case it appeared that the primary parental leave would only cover one parent. One manager reported that her company had recently instituted a new policy that enabled her husband, who was employed by the same company, to take seven paid days of family/parental leave after she had given birth (OA16).

for influencing the reproduction of seed companies' workforce as part of broader accumulation strategies.

For their part, managers and workers exercise agency in different ways. Though they were not a large part of the present research, employees exercise agency and also shape these social relations of production, resisting, negotiating and getting a living in ways that can also limit strategies of accumulation and disrupt efforts at smooth, labour control (Werner 2011: 1576). At the same time, the research suggests that seed production strategies of accumulation must be understood with relation to 'the reworking of hierarchies of social difference and forms of labour in order to recuperate profits' (Werner 2011: 1576; Quijano 2000). By recuperating and reworking former plantation locales, infrastructures and social relations of labour, smoothing processes of labour reproduction must also be understood as aiding processes of capital accumulation, alongside the technologies of molecular breeding and production of seeds themselves (Schrager and Suryanata 2017).

Chapter 8: Conclusion

....we are defining places science can follow into but not lead or illuminate (Meyer 2006: 265).

In this concluding chapter, I revisit the thesis aims, research questions, methodology and analytical framework developed to undertake this work, focusing on the research findings, contributions to existing knowledge, limitations and areas for further research. In asking ‘how “alternative” is “alternative agriculture”?’ the thesis has suggested that different agrifood practices contain their own unique sets of contradictions, possibilities and points of tension in framing and addressing (if at all) intersecting inequalities. I drew on three case studies of agricultural practices at different scales (farm size and number of people), and that utilise particular agricultural methods. In analysing agricultural practices at the margins, I sought to broaden what is currently known about Hawai‘i’s overall agrifood system, even as much remains to be understood about the majority of Hawai‘i’s (im)migrant small farming and farmworking communities not reached in this research. The research proposes that these cases of ‘outlier’ agriculture nevertheless highlight important concerns for considering the extent to which ‘alternative agriculture’ addresses social and gendered inequalities.

The analysis addresses processes of gendered meaning making as they materialise in understandings of how work is organised. I aimed to show how expectations, practices and ideals surrounding gender shape agrifood social relations of production, outlining their possible consequences from an intersectional perspective. In this concluding chapter, I return to the research findings in order to elaborate on several key tendencies I term as ‘agrigrification,’ ‘alterNative agriCulture’ and ‘plantations remix’ taking place within pilgrim farming, ‘āina work and seed production practices, respectively. Bringing these

threads together, I argue, yields new ways of framing the gendered social relations of production within diverse agrifood economies. Specifically, I develop conceptions of ‘divergent economies’, ‘agrifood formations’ and processes of ‘becoming agricultural’ as ways of highlighting the relations of power, colonialities and processes of subjective becoming that emerge through agrifood practices. I then draw on the work of Joseph (2002) and others to highlight how each case study can be analysed in relation to some tendencies in how they organise conceptions of time and change – their ‘agrarian temporalities.’

The first part of the chapter revisits the aims, methods and analytical framing with which the thesis began, before summarising the research findings and how they address the research questions. I then outline how the findings help to build upon and rethink the analytical frameworks utilised in the research before commenting on the findings’ implications for the Hawai’i context and beyond.

Thesis Aims and Research Questions

The thesis set out to analyse the extent to which alternative agriculture can be said to offer more gender-inclusive work, greater social equity and well-being as part of wider efforts to transform food systems, economies and ‘development’. Specifically, the research emerged in relation to suggestions that some forms of alternative agriculture are explicitly aimed at revising gendered relations, norms and practices (Allsopp 2012; Acero 2012) and may offer more gender-inclusive work (Delind 1999; Kimura 2016). I sought to empirically test whether this might be true for different forms of ‘alternative agriculture’ in Hawai’i. I suggested that Hawai’i represented an important place in which to ask such questions given the recent politicisation of food import dependence, high food prices, and GMOs, to name a few of the debates that have intensified questions about the agrifood system there. Understanding such concerns as part of interconnected crises of capitalism, colonialism and climate, my research

therefore sought to interrogate how different forms of agriculture are positioned as 'remedies' to intersecting crises and to analyse the specific tensions, possibilities and contradictions that shape the extent to which these practices address intersecting inequalities. I did this by analysing forms of alternative agriculture as well as agroindustrial production which are outliers to the majority of production practices but form part of 'diverse economies' in the present, including together interconnected capitalist and more-than-capitalist practices or what Tsing calls the 'pericapitalist' (2015). This research focus excludes the majority of local food producers in Hawai'i, many of whom come from (im)migrant communities -- small farmers as well as many farmworkers who work on large farms. Part of the reason for this exclusion was linked with the research focus on agricultural outliers framed at opposite ends of the agricultural spectrum, but practical concerns of language and access were also key to these decisions, as I outlined in Chapter 4.

My research asked: how 'alternative' is 'alternative agriculture' when the social relations of production are analysed? How do 'alternative' practices shift some of the intersecting gendered inequalities that have been documented within agroindustrial agriculture? To what extent does alternative agriculture offer more gender-inclusive work, greater social equity and well-being? In order to answer these overarching research questions, I examined three sub-questions for the different practices analysed:

1. How do different agrifood practices understand inequalities that exist in relation to their work and how do they propose to address these issues, if at all?
2. How is work organised and undertaken and how are different tasks, roles and occupations valued, given meaning and associated with particular social qualities?
3. How do different agrifood practices manage the tensions, points of contradiction and possibilities for addressing intersecting inequalities?

Analytical Framework, Context and Methods

After outlining the research background, question, scope and aims in Chapter 1, Chapter 2 constructed an analytical framework through which to address these questions. I sought to build on existing analyses of agrifood labour (Getz and Brown 2008, 2008b; Guthman and Brown 2016; Besky and Brown 2015) and those concerning the role of gender and colonial logics with agrifood systems (Baglioni 2017; Rotz 2016; Guthman 2008b; Lukens 2014; Kame'eleihiwa 1999: 992; Glenn 2009; Stoler 2016). Chapter 2 assembled an analytical framework through which to analyse agrifood practices intersectionally and relationally. The framework identified four key lacunae in the literature related to my research questions, as well as areas of research I sought to extend to analyse the Hawai'i context.

Firstly, the research contributes to intersectional analyses within food justice literature, which tends to be split across consideration of gender relations on the one hand (Allen and Sachs 2014; Delind 1999; Little 2002) and race and class on the other (Joshi and Gotlieb 2011; Alkon and Mares 2011), with a smaller body of work considering intersectionality (Harper 2010; Porter and Redmond 2014). Secondly, the thesis extends Insights from diverse economies and other writing on agrifood system work, relationships to capitalism and the more-than-capitalist present (and Shear 2014; Selwyn 2013; Gibson-Graham 1996, 2006; Cameron and Gibson-Graham 2010; Tsing 2013,2015) and specifically aims to build on labour questions with agrifood research (Getz and Brown 2008, 2008b; Guthman and Brown 2016; Besky and Brown 2015; Levkoe 2017). Thirdly, the research also seeks to contribute to existing gender and feminist theorising about Hawai'i (Tengan 2008; Kame'eleihiwa 2001, 1992; Trask 1999) and specifically, writing on the relationships between intersecting, gendered social relations and agrifood systems (Goodyear-Ka'ōpua 2011, 2013; Kimura 2016) and contemporary agrifood systems in Hawai'i (Kimura and

Suryanata 2016; Schrager and Suryanata 2017). Finally, the thesis findings can also be understood to speak to subfields which emphasise (post)colonial, intersectional approaches to feminist political ecology, economy and geography by analysing processes of place-making and their attendant conflicts (Mollett 2016; Stein 2004). Specifically, it investigates how agriculture links with projects of settler colonialism and its gendered forms, and how such projects are legitimated, contested, secured and undone through particular production and consumption practices (Rotz 2016; Awwad 2016; Kameʻeleihiwa 2001; Werner 2011; Quijano 2000; Baglioni 2017).

In Chapter 3, I sought to apply this lattice of literature to analysing the wider agrifood landscape in Hawaiʻi. I suggested that a number of factors shape the current context, offering a historical view on the forces shaping the development of gender and social relations in the islands and the role that agriculture played therein. I submitted that globalisation, neoliberal policies and state promotion of ‘diversified agriculture’ shape the landscape in which agrifood livelihoods are negotiated in the contemporary context. I overviewed a patchwork of quantitative state-level data to try to account for how farmers and farmworkers in Hawaiʻi are positioned, and the role of gender and race in shaping working relations. I raised questions that, similar to others (Getz and Brown 2008, 2008b; Guthman and Brown 2016; Besky and Brown 2015; Allen 1991, 2004; Allen and Sachs 1991, 2014; Kent 2014), query the extent to which state efforts to increase local food production can benefit either poorer consumers or producers, especially women of colour, (im)migrants and others burdened by intersecting oppressions.

The final portion of Chapter 3 outlined some brief histories and definitions relevant to the three case studies: small agroecological and organic farms, community-based ʻāina work practices and seed production. As I wrote with regard to each of these case studies,

each area of agrifood work highlights particular quandaries about the extent to which they provide more gender-inclusive, socially equitable work or greater well-being for those who participate. While they share the same overall agrifood political-economic context, these agricultural outliers are shaped by their own, and in many cases, recent histories and are at the forefront of some fast-moving changes in Hawai'i's diverse agrifood economies.

Chapter 4 proposed a methodological framework for addressing the research questions which drew upon a concept of the social relations of production of agrifood work, developed via insights from intersectional perspectives on diverse economies and agrifood labour (Wilson 2013; Burke and Shear 2014; Morrow n.d.; Miller 2011; Tsing 2013, 2015; Getz and Brown 2008, 2008; Guthman 1997, 2004, 2014; Guthman and Brown 2016; Besky and Brown 2015). I deployed methods of multi-sited participant observation, and formal and informal interviewing, completing 35 formal interviews, 20 informal interviews and 224 hours of observation and participation in different agrifood practices (See Appendix J). Recently, other scholars have adapted similar methods of multi-sited ethnography, utilising grounded theory to analyse agro-food initiatives in Hawai'i (Mostafahnezed and Suryanata 2018). I offered a version of what researcher reflexivity might encompass when it considers not only intersecting and shifting relations of power between researcher and researched but responds to indigenous researchers' calls for transparency and accounting for one's emplaced responsibilities and genealogical connections to place (Smith 2011; Nakoa and Wright 2015).

In determining case study selection, I sought to balance considerations of farm size, the number of people working on farms and farming methods employed. The focus on 'alternatives' to the majority of production yielded three stylised case studies – 'outliers' at the very large and small ends of the agrifood spectrum and with differing production

practices. The research focused on these ‘outliers’ on the island of O‘ahu, which hosts the islands’ most diversified forms of farming, with some limited site visits and interviews on Maui, Kaua‘i and Hawai‘i Island (see Appendix B). Within these cases, I sought to identify important tendencies and questions regarding how participants understand and address intersecting social inequalities.

By interviewing differently positioned employees and ultimately focusing on the narratives of powerful actors (managers, farm owners and policymakers), I sought to ‘research up’ as one way in which to expose some of the relations of power that shape how work is undertaken and organised, the meanings given to tasks and the qualities of those who perform them. I focused specifically on narratives concerning embodied field labour as one set of activities through which to address the intersecting gendered relations of production that materialise within different agrifood practices. While I hope that these case studies offer research participants and other scholars food for thought in their work, a number of tensions, limitations and new developments also shape and delimit the research claims. While I have outlined the principal issues that arose within the research process in Chapter 4, I offer several concluding thoughts towards the end of the chapter on analytical tensions present and directions of future research.

How alternative are alternatives?

To return to the original thesis questions, I have sought to show how agrifood practices frame their understandings of intersecting inequalities in various ways, although common threads of gendered essentialisms and the masculine framing of farmers were found across cases. This is reflected already in the language that is used to describe women in agriculture as ‘female farmers’ and ‘women farmers’ by many participants and initiatives, a specification required by the underlying masculine framing of ‘farmer’. Across the research,

masculine ideals of the farmer and worker continue to shape how farming is defined, leaving gender-nonconforming subjects and women farmers in ambivalent positions. Women farmers within different forms of alternative agriculture continued to report barriers to their work even while gendered divisions of labour varied, especially in relation to the composition of the workforce and depending on combinations of paid, unpaid and work-trade work activities. In this way, the research determined that alternatives do not necessarily offer more gender-equal, inclusive or transformative patterns of work and division of labour but that there were some opportunities to undertake work that could challenge gendered essentialisms

This was especially the case where participants described opportunities to re-vision femininities as being associated with physical weakness within 'āina work and on some pilgrim farms. However, I showed that assumptions about ableism raise important caveats about the extent to which such practices can be considered to alter the broader gendered order and that possibilities for re-visioning masculinities or exercising gender-nonconforming agency were unclear. As has been found in research elsewhere, these opportunities are shaped by the composition of the surrounding workforce and other relations of power and difference that constrain or enable such performances (Brandt and Haugen 2010). While some women farmers may indeed have greater autonomy and decision-making power in their work by virtue of operating a farm, lack of formal policies also appeared to lead to the blurring of personal and professional boundaries – issues which the research suggested were pronounced between work-trade participants and farm hosts. However, in the case of 'āina work, the research did not find an explicit emphasis within these practices of offering women greater control over production or goals of more gender-just community and family relations, as compared to other agrifood practices that have

foregrounded such goals within their work (McMahon 2011; Allsopp 2012; Acero 2012). In this way, the thesis has demonstrated that alternative agriculture raises distinct dilemmas and contradictions in relation to gender-inclusive work, greater social equity and well-being. Within different agrifood practices, it is possible to see how aspirations for gendered change can remain individualised, whether through individual employee contracts and benefits packages (seed production), discourses of individual gendered agency (pilgrim farming) or concepts of self-selection ('āina work).

Additionally, thesis also argued that the (re)production of settler whiteness and accumulation of agricultural land raise important questions for further research and that, across the research, settler colonial logics of gender and race continue to shape how social qualities are associated with individual farm tasks and the material roles assigned to, or selected by, individuals (Lukens 2013: 73; Rotz 2017; Kame'eleihiwa 1999; Glenn 2009; Stoler 2016). At the same time, while the research raised concerns about settler overrepresentation in both seed production and pilgrim farming, findings suggested that relationships to capitalism, profit motives and markets are complex across agrifood practices, and that alternatives continue to interact with and be shaped by both market values and practices (Kneafsy et al. 2008).

In conclusion, the research found that the extent to which different agrifood practices offer more gender-inclusive conditions depends on organisational structures, methods and philosophies as others have also found (Bacon et al 2012; Mostafahnez and Suryanata 2018) as well as on the particular social relations of production that materialise through these individual practices. The case studies suggested that while seed production could offer more formalised gender-inclusive policies that other forms of outlier agriculture, alternative practices offer different opportunities and points of tension for different

participants and for how work is organised along gendered lines. In this sense, the case study of seed production demonstrates that formal social scrutiny and regulatory pressures shape how the social relations of production are organised and how attempts to create more gender-inclusive work are imagined. Comparing corporate policies to practices described within pilgrim farming and forms of 'āina work demonstrate the discrete and fraught possibilities for achieving gender-inclusive work in the absence of explicit aims of deconstructing and revisiting social relations. When considered within the broader political economy of agriculture in Hawai'i, questions remain about how a majority of producers, excluded in this analysis, undertake production in the absence of strong public scrutiny and as part of other ideologies and practices of farming which are less linked with discourses of 'sustainable', 'alternative' agriculture.

As a comparative analysis in the present, the thesis findings raise multiple questions about under whose names agrifood visions of sustainability crowd. In each case, I have sought to highlight how relations of power, tensions and contradictions shape tendencies with agrifood practices, and to highlight weaknesses as sites for potential openings for new politics and practices of solidarity. In the following sections, I revisit and thread together the findings of the individual analytical chapters, propose adaptations to the original research framework, suggest common yet differentiated themes and return to consider research limitations and future trajectories of research.

Pilgrim Farming and 'Agrigentrification'

The first part of the thesis analysed what are at times framed as alternatives to agroindustrial production: agroecological small and community-based farming practices. Chapter 5 analysed some examples of small agroecological farming, termed 'pilgrim farming' and including some organic and other forms of small agroecological growing that

may be for market, subsistence and/or exchange. The chapter drew on interviews and observations with farmer-owners, farm managers, farmer organisations and food policy actors in order to analyse how divisions of labour are organised within small agroecological farms and the social qualities associated with different work and tasks. While contemporary dynamics of agroecological and organic farming, for example, involve a number of sustainability issues, Chapter 5 focused on how intersecting differences shape divisions of labour.

Some research has suggested that these forms of farming are more gender-inclusive, in that women farmers are better represented, report greater acceptance of their identities as farmers and can experience their farms as refuges from patriarchal forces, even while important barriers remain (Kimura 2016). Questions about the raced and classed dimensions of these forms of farming remain, however, and are raised in Mostafanezhad et al.'s research that determined that the farmers participating in a popular work-trade programme in Hawai'i (WOOF) were 80% white, mostly from the continental U.S. and more likely to be beginning farmers with less than five years of experience (2016). Chapter 5 suggests that these demographics are usefully understood not only with relation to counter-cultural movements and 'landscape consumption for people seeking an alternative lifestyle' (Kimura and Suryanata 2016: 190) but also with relation longer histories of settler spiritual investment in the islands, the promotion of settler forms of farming and other 'good food' projects (Guthman 2008).

The research found that, within a small sample of 4-5 farms researched, small agroecological farms are extremely diverse and are organised through kinship-based networks as well as in the form of business entities and cooperatives. I sought to show that economic motivations are often intertwined with eco-socio-spiritual ones. This can make

the distinction between lifestyle and livelihood farming not wholly tenable as pilgrim farmers draw on a range of 'multifunctional' agricultural strategies to carry out their work. The research also found that newcomers from the continental U.S., many of whom are white, are strongly if not over-represented in agroecological farming organisations. The demographics of the farming sector appear to be changing, as highlighted by growing interest in new farmer programmes and the changing demographics of state agricultural lease requests. I submitted, as others have in different contexts (Levkoe 2017), that it is these very privileges of wealth and whiteness that often enable pilgrim 'alternative agriculture,' and that there are historical connections between such forms of spiritual 'pilgrimage' to Hawai'i and the accumulation of material wealth, as in the case of missionary families. At the same time, I suggested that women farmers, in ways that are somewhat analogous to histories of missionary women, are positioned differently in relation to their ability to capitalise on these privileges, including barriers accessing land and receiving recognition for their work. I also suggested that the use of 'family farming' as an ideal solution to the 'labour problem' represents not only subsidisation based on unpaid family labour but also idealises a U.S., masculinised, heteronormative view of the farm family. Taken together, these concerns about on-farm as well as intra- and inter-household power relations clearly limit the extent to which pilgrim farming (as one form of alternative agriculture) offers greater social equity, well-being or gender-inclusivity.

In reflecting on the findings of Chapter 5, I suggest that the term 'agrigentrification' describes some of the dynamics of settler whiteness and class privilege that are shaping some forms of alternative agriculture, which this analysis of pilgrim farming helped to expose. Agrigentrification can thus be considered as a form of material accumulation of agricultural land, as well as processes of gentrification that work through cultural

valorisation of particular white values of health, wealth and leisure. In this way, agrigentrification materially remakes agricultural landscapes through the presence of pilgrim farmers and their relatively privileged, often young white work-trade visitors—forms of displacement that function through a combination of tourism, rural gentrification and settlement. Participation as WWOOF farm hosts is more likely to be possible for people with the economic resources to purchase or lease property, notably white men of wealth, and may reinforce heteronuclear framings of the farming homestead as healthful for settler families seeking an ‘alternative lifestyle’. At the same time, gendered relations of power between and amongst pilgrim farm hosts and guests requires further research and analysis. I propose that processes of agrigentrification are significantly shaping Hawai‘i’s agrifood landscape and that these processes require more direct theorisations of power, whiteness and settlement within Hawai‘i’s increasingly unequal economy (Lincoln 2018; HUD 2018). Later in the chapter, I draw out the implications of the research for putting power and space at the centre of theorising ‘diverse economies’ and offer that this may be helpfully approached through a revised conceptualisation of ‘divergent economies’ which better visibilise the shifting and spatialised role of inequalities in economies.

‘Āina Work: AlterNative¹⁹⁴ AgriCultures?

In the second case study I analysed, I drew upon Native Hawaiian-led land and agricultural revitalisation programmes, using the term “‘āina work’ based on an interviewee description (NC). I discussed some of the ways in which such practices are grounded in explicitly political movements for *aloha* ‘āina or love for the land (Gupta 2014; Beamer 2014; Fujikane 2016; Akutagawa 2015; Marshall 2012), which are action-oriented (Goodyear-Ka‘ōpua 2013:

¹⁹⁴ This is also the name of an academic journal.

Location 2889–2896) and have been at the root of major struggles by Native Hawaiians to obtain access and management rights to natural resources under the settler state (McGregor 2007; Akutagawa 2015, Akutagawa et al. 2016). These movements have also converged with efforts to protect plants (Ritte 2015) and important sites and spaces (Goodyear-Ka'ōpua 2017) as well as to build demand for Native foods as part of decolonising educational, cultural, health and political efforts (Goodyear Ka'ōpua 2017, Marshall 2012).

Chapter 6 drew on observation, participation and two interviews with participants to analyse how the gendered social relations of these practices might relate and compare to those analysed in other parts of the agrifood system. The research found that these agrifood practices may create space for reconsidering intersecting social relations, including gendered identities, even though the organisation of this work can at times rely on the same gendered essentialisms found in other kinds of agrifood practices. The research demonstrated how the politics of indigeneity, diaspora and authenticity as well as hierarchies of paid/unpaid staff, experience and genealogical ties are key intersecting dimensions that shape the socio-ecological effects of 'āina work and offer participants differentiated possibilities for relationship-building and belonging. In analysing stonework, I suggested, along with others (Goodyear-Ka'ōpua 2013; Baker 2016), that these labour-intensive tasks may convoke collective work that at times relies on essentialised understandings of gender and age to organise work, even when the work is self-selected. In this sense, 'self-selection' does account for gendered performativity, wherein skills and experiences are shaped through gendered socialisation.

At the same time, thatching work showed how fine motor work can not only be associated with the feminine sphere or qualities but linked with histories of Native Hawaiian

men's work in house (*hale*) construction. Thatching work demonstrates the need to account for Native Hawaiian and settler histories of gender and work, to understand some of the potentially productive but contradictory associations different work may have from the perspective of different gendered histories. Finally, the research determined that masculine conceptions of 'authentic' farming may continue to shape some views of those who eschew the title of *kalo* farmer, even while farming practices rarely conform to such ideals, especially in the case of *kalo* farming, which often blends subsistence and commercial work. Efforts to restore taro production continue to face unmet demand. Although such projects are important from the perspective of politicising taste and challenging inequalities, care must be taken to understand how labour-intensive food preparation or growing activities are being managed within households, as they may intensify women's work (Castellano 2013).

Chapter 6 argued that it is important not to read these risks, opportunities and contradictions against a tradition/modernity binary or to assume that somehow white and settler subjects have 'moved beyond' questions of tradition as they relate to gender, as I hope I have shown throughout the thesis. The research found that 'self-selection' of work and selective reconsideration of gender do not resolve gendered dilemmas in 'āina work, but nonetheless may create room for exercising gendered agency differently and for reflecting upon gendered logics as part of wider, explicitly politicised projects. In short, while 'āina work provides no clear answers, such practices, at minimum, create dedicated spaces for (re)considering intersecting inequalities, including gendered ones. In extending this analysis, the discussion section proposes a broader conception of 'becoming agriCultural' or 'agriCultural becomings' that foregrounds the role of belonging ('Culture') and processes of (inter)subject formation as they relate to agrifood practices.

Plantation Remix: Gendered Colonialities in Seed Production

The findings presented in Chapter 7 may be interpreted to show how seed companies represent hallmark sites for flexible accumulation, which utilise ‘flexible labour processes and markets, [and...] geographical mobility’ (Harvey 1992: 124). In the words of one employee, ‘we’re basically just here to help speed up the pipeline’ (AA 1), since seed corn varieties can be produced in Hawai’i at 3–4 times the rate of continental U.S. production. Such ‘speeding up’ recalls Harvey’s analysis of spatial and temporal displacements aimed at shortening production turnover times (Harvey 1992: 183) – in this case through technological processes in which seeds represent key nodes of accumulation (Schrager and Suryanata 2017). Chapter 7 made the case that seed production functions through the recuperation of both material and discursive plantation infrastructure. Such recuperations echo what Tsing calls ‘salvage’ or the process through which capitalism takes advantage of value produced without capital, such as human labour (2015: 62) and the gendered socialisation of skills (2015: 65).

At the same time, it found that benefits packages, including healthcare and family leave policies, were highlighted by interviewees as key to job satisfaction and may indeed represent higher standards than what is available within other spheres of agriculture. However, the research also found that such benefits are uneven in coverage, differ by company and exclude temporary workers. At the same time, compared with the low regulatory threshold set by U.S. agricultural labour laws and what was found about conditions, benefits and pay in other agricultural sectors, seed production offers relatively gender- and socially-inclusive work through organisational policies, such paid family leave, which extend beyond regulatory minimums. The provision of such benefits can be understood as part of strategies to reduce turnover and training costs as well as in relation

to modern corporate efforts to compete on the basis of the ‘lifestyle’ they can offer (Tone 1997: 175). As I argued, these policies are important as well as limited: they may support women’s labour force participation but do not necessarily aim to support gendered change in the structure of work more broadly.

Moreover, Chapter 7 sought to highlight some possible strategies that seed production companies utilise as they engage with local Hawai’i labour markets (Jonas 1996: 331), including by drawing on social networks to recruit agricultural fieldworkers. In this way, seed production uses a number of strategies to reduce the costs of recruiting and training workers, including temporary fieldworkers, as they attempt to shape and control the conditions of labour reproduction (Jonas 1996: 331). Seed production companies thus draw upon historic and cultural social relations within ‘local’ Hawai’i labour markets through some processes of migrant-niching that are also gendered. These gendered processes work through assumptions of masculine norms for agricultural fieldwork and through how individual employees negotiate different gendered regimes in and through which they are interpellated. Policies that support women’s entry into the seed production workforce and aim for ‘holistic’ approaches to employee well-being can thus be understood in relation to these multiple and converging rationales and strategies for influencing the reproduction of the workforce as part of broader seed production accumulation strategies. In the discussion section below, I draw out how ‘remixing’ or reworking historic practices can link to broader questions about ‘agrifood formations,’ or how agrifood practices recuperate, reproduce and/or contest histories of settler colonial food and agriculture, and the broader logics of settler colonialism and imperialism as they emerge in agrifood economies.

In the next section then, I take up extended discussion of the chapter findings showing how ‘agrigenrification’, efforts toward ‘alterNative agriCulture’ as ‘agriCultural

becomings' and the 'remixing' of plantation social relations can be said to characterise some recent, and quickly shifting, dimensions of Hawai'i's agrifood economies. Theorising these dynamics, I reason, can be helpful to understanding key aspects of intersecting gendered social relations in Hawai'i and potentially help to theorise agrifood economies beyond the Hawai'i case. The final section concludes by commenting on the ways that all three cases evoke explicit and implicit agrarian ideals and norms which I suggest can be considered through how they organise and understand time, history and change.

Divergent Economies, Agrifood Formations and Becoming AgriCultural in Hawai'i

This research has proposed that a diverse economies perspective is useful for analysing different agrifood practices and wider agrifood systems and is specifically useful for analysing how different agrifood practices might offer gender-inclusive work as well as greater social equity and well-being. At the same time, the findings indicate that movement and mobility, interconnections and intersecting relations of power are perhaps better indicated through a language other than 'diverse', which positions practices in a neutral, equalising field. I propose that the language of 'divergent economies' better highlights these processes of movement, connection and power as well as spatialised inequalities and their growth within current economic practices. In this sense, 'divergent' engages with the multiple significations of what it means to diverge: to extend in different directions from a shared point, to lie, move or branch off; to deviate or differ in type, form or opinion; to turn aside or deflect; (within mathematics) to have no unique or set limit, infinity as a limit and; (within botany) plant organs whose tops are further apart than their bases (Dictionary.com). From the Latin, meaning to incline or to bend, turn, divergent economies, divergent is a term originally used in the field of optics to describe a lens (Dictionary.com). Divergent also

highlights the productive, coercive way that power shapes and also foreground the epistemological implications of ways of seeing. In this way, divergent economies perspectives are also consonant with the reflexive practices of Eye/I/'Ai that I proposed in Chapter 4 as they relate to ways of seeing as well as the categories through which one sees (Butler 2011 [1991]), discussed below. In summary, the framing of divergent economies seems particularly apt for analysing a range of political-productive alternatives in the present that aim to transform economic and social life (see Chapter 4 for theoretical map).

A second shift that the research proposed relates to the language of 'agrifood practices' I have used in the thesis to describe individual sites, spaces and activities linked with particular forms of agriculture. While this framing was useful to the research in order to individuate particular sites from larger systems or networks, the research findings suggest that another reformulation may be useful. In particular, these practices may be viewed as 'agrifood formations,' similar to the concept of imperial formations (Stoler et al. 2007), in order to highlight the ways that agrifood practices recuperate, reproduce and/or contest histories of settler colonial food and agriculture, and the broader logics of settler colonialism and imperialism. In other words, if divergent economies highlight inequalities within the economic present, agrifood formations unpick the continuities, selective recuperation and resistance to settler colonial and imperial histories, practices and logics that shape contemporary food and agriculture. As Stoler has shown, such projects are marked by their peculiar temporalities or 'livid histories' in the present (2016).

Thirdly, as the research findings above have outlined, processes of subject formation are key to the ways in which agriculture (re)produces relations of power and difference. I propose the framing of 'becoming agriCultural' or 'agriCultural becomings' in order to highlight the emergent, processual and relational aspects of subject formation as they relate

to specific agriCultures—forms of belonging as well as organising practices, work, beliefs and visions that may be said to characterise individual agrifood formations. Since ‘cultures’ can be understood in the social sense as loosely bounded, never static but in some sense shared conventions, ‘cultures’ also highlights that such conventions are actively ‘cultivated’. Thus, how subjects articulate themselves, their work and that of others in relation to agrifood formations foregrounds the importance of agrifood sites to broader processes of subject formation, not only in alternative agrifood spaces but in agroindustrial ones as well. As research on gendered processes of subject formation and belonging have shown, such processes always entail exclusions (Butler 2011 [1991]) and socio-spatialised relations (Ahmed 2004) that directly relate to how inequalities are discursively and materially (re)produced.

Common Themes: Agrarian Temporalities

The theoretical extensions offered above represent openings for future research, as well as call for some final analyses of common threads in the present research. The latter specifically relate to the implicit and explicit norms, values and visions which shape what is understood to represent the ‘agrarian’ or that which relates to the fields and land (Dictionary.com). In the following section, I suggest that these implicit and explicit agrarian norms, values and visions organise time, history and change in ways that bear on processes through which ‘gender’ becomes intelligible.

These reflections draw from the work of others who have demonstrated how contrasting agrarian values and visions lead to differentiated forms of what could be considered as ‘agrarian nostalgia’ and related interest in agricultural revitalisation (Mostafahnezed and Suryanata 2018: 228). They show how agrifood sites are spaces in which the value of farming is negotiated (Mostafahnezed and Suryanata 2018: 228) and

practices of food and taste come to represent particular versions of Hawai'i's agricultural past as well as its contemporary landscape (Hobart 2016; Costa and Besio 2011; Autio et al 2013). In Hawai'i, nostalgic representations of agriculture have largely been analysed in relation to romantic settler visions of the bygone plantation era (Costa and Besio 2011: 842) and as part of subjective practices of place-making for Asian settlers in particular (Fujikane and Okamura 2010). In contrast, my research on outlier agriculture shows how different 'alternatives' to plantation agriculture and to the majority of contemporary farming also invoke, rework and represent the past in how they frame the social and gender-inclusive nature of their work. I suggested that these narratives needed to be understood within relation to how they elide past histories ('agrigentrification'), rework historic practices ('alterNative agriCultures') and recuperate plantation social relations and infrastructure ('remixing plantations').

Taken together, these different processes may be considered for their 'agrarian temporalities' or how their narratives of agriculture conceive of and organise time (McBean 2016). The concept of 'agrarian temporalities' is useful for understanding how romance for the past (agrarian nostalgia) animates different practices, and I suggest that such forms of nostalgia must be differentiated. Differentiation of framings of the past is needed because nostalgias implicitly construct 'communities' and conceptions of belonging, with different consequences for who is considered to belong or not within them. I suggest that 'agrarian temporalities' helps to think through the very different work that settler-led agrarian nostalgias do, compared with, for example, Native Hawaiian-led narratives of agricultural time. Below I explain how I see these temporalities relating to the cases of pilgrim farming, 'āina-work and seed production.

In the first case, pilgrim farming narratives that appeal to the past can be said to inhabit a nostalgic orientation to time which positions this form of alternative agriculture as an escape from agroindustrial development, a return to the land as an authentic outside to capitalism. In Chapter 5, I ventured that, similar to what has been found elsewhere (Getz and Brown 2008, 2008b; Besky and Brown 2015), these forms nostalgia for 'family farming' privilege particular definitions of sustainability based on farmers' positionings (Getz and Brown 2008: 20) and construct a particular 'imaginative geography' of 'sustainable' Hawai'i (Costa and Besio 2011: 845). Chapter 5 showed how these narratives of family farming worked by erasing the precolonial and colonial past of agriculture as well as the contemporary realities of 'family farming' amongst (im)migrant farmers. These elisions frame and freeze a particular version of the agrarian past which, when reworked in the present, limit, in my view, the extent to which pilgrim farming can engage with creating gender and socially-inclusive work. In other words, to draw on the ideas of Mostafahnez and Suryanata, efforts to address alienation through food system work continue to struggle to account for the multiple forms of exploitation found in the food system (2018: 230). When sustainability is defined through nostalgic representations of 'family farming' from the perspectives of pilgrim farmers, these definitions may work as 'oppressive deployments' of notions of community (Joseph 2002: Kindle Location 50) reinforcing settler kinship as norms in the past and present. This normalising of settler family farming, I posit, helps to naturalise the presence of relatively privileged, mostly white pilgrim farmers and their work-trade visitors as they remake agricultural landscapes through accumulation and displacement (agrigentrification).

In a different way, seed production practices are also oriented in time with implications for who belongs. Many of the discourses that surround this form of 'high-tech',

agroindustrial agriculture highlight the future and progress (Schurman and Munro 2010), which may even be exemplified by the inclusion of 'progressive' corporate gender, healthcare and diversity policies (Chapter 7). I sought to show how policies that support women's entry into the seed production workforce and aim for 'holistic' approaches to employee well-being must be understood in relation to multiple and converging rationales and strategies for influencing the reproduction of the workforce within broader seed production accumulation strategies. At the same time, similarly to the other cases, seed production companies also draw upon historic and cultural social relations in organising their production in ways that represent a less continuous break with the plantation past than at first appears. With relation to conceptions of time then, I propose that seed production accumulation can be understood in part through what Stoler calls 'colonial histories of the present'.

Stoler frames these relationships between colonial past and present as a form of 'duress' exhibiting three qualities:

'the hardened, tenacious qualities of colonial effects; their extended protracted temporalities; and, not least, their durable, if sometimes intangible constraints and confinements' (Stoler 2016: Location 183-188).

Perhaps it is these forms of extended, protracted temporalities that are most apt to considering the work that seed production practices do in 'remixing' plantation pasts. Rather than purport clean breaks with plantation labour histories, for example, one must interrogate not only the potential continuities but also question what it is we *expect* historic linkages between past and present to look like (Stoler, 2016: Location 160-163). In other words, what we expect colonialities to look like shapes what we look for and are trained to see.

Finally, the agrarian temporalities of the third case study offer distinct, if not separate, frames for organising agrarian time. In Chapter 6, I outlined how 'āina work re-engages with historic practices and how some struggle against hegemonic interpretations of Native and different settler gender norms. Working through 'a portfolio of activities at the intersection between simple reproduction and accumulation' (Baglioni 2017: 5-6), I argued that 'āina work creates room for reflexive and relational work that can at times reinforce and at times challenge settler and native gendered logics. I argued that 'āina work creates important opportunities to exercise gendered agency precisely because processes of Native resurgence and decolonising work are often acknowledged as 'always selective' (Kauanui 2017: Location 14) thus creating room to revisit and revision native gender norms and practices.

This acknowledgement that Native agrifood practices are always selective reworkings of the past therefore involves a different temporal relationship to agrarian ideals compared to the settler-led practices outlined above. By actively refusing a firm break with the past, 'āina work temporal orientations could be read as forms of temporal defiance, of not allowing the past to be past (McBean 2016) and thereby rejections of settler colonial logics of native disappearance. In this way, 'āina work orientations to the past depart from settler logics that consolidate linear models of progress and 'instead puncture the present' (McBean 2016) in their insistence on survivance (Vizenor 1999). Moreover, if understood within a Native Hawaiian epistemological frame, the past is spatially conceived as in front (Meyer 2003), in ways that illuminate and animate the present. In other words, a spatio-temporal vision that challenges what historic continuities are expected to look like and the agency and animacy of past events and people in the present. As Meyer writes:

if one views a past relative not as a ghost, but as someone to help and guide them through life's problems and hardships ('*aumakua* concept), then when this person shows up in a *hihi'o*¹⁹⁵ [a breeze], *akakū*¹⁹⁶ [a reflection] or '*ūlāleo*¹⁹⁷ [a chant], they will be welcomed and listened to (2003: n.p.).

While I have perhaps presented some of these agrarian temporalities as discrete and distinct, there are also a number of overlaps and common points of tension. As the thesis has sought to show, all of the agrifood practices analysed draw on historic social relations to fulfil contemporary labour needs. At the same time, I suggested that agrarian ideals too fixed on linear narratives of time (rather than recognising the immanent selectivity of narratives of the past), can work as 'oppressive deployments of community' (Joseph 2002) (in the case of pilgrim farming) or represent too-neat disjunctures from past practices (seed production). In all three cases, strict interpretations of the past implicitly create, in the present, boundaries of who belongs within these visions of agriculture and 'sustainability'. It could thus be said that differentiation in these visions obtains from how they interact with settler colonialism (Wolfe 1996) when they affectively nurture misplaced settler nostalgia (pilgrims) or obfuscate the colonial durabilities in their work (seed production). For 'āina work, in contrast, dangers inhere to the uncritical reproduction of particular versions of settler and native gendered logics as well as to the dangers that inhere to native practices in the context of settler colonialism which aims to extract value from "'authentic" Hawaiian otherness' (Desmond 1999).

For all three agrifood practices, stylised for some of their important tendencies, shared perils include the 'presumptions of community' that 'offer extraordinary promise as a ready-made basis for collective action' (Joseph 2002: Locations 207-208). However, as

¹⁹⁵ Soft whistling sound, gust or draft of wind; to whistle (Wehewehe).

¹⁹⁶ A vision, trance; reflection, as in a mirror; hallucination; to see a vision'(Wehewehe).

¹⁹⁷ 'An intense emotional appeal to the gods, as in chant' (Wehewehe).

with all constructions of belonging, agrarian visions are 'marked by the particular interests of a dominant group', where those who do not embody norms may be 'disabled in their participation, forced to change, or even fully excluded' (Joseph 2002: Locations 207-208). Much research remains to be done to account for the overlaps between these agrifood practices, their visions and how their frames for organising time, change and belonging shape gendered and social relations.

Research Limitations and Futures

The present thesis has presented some of the differential trade-offs, opportunities and limitations that concrete agrifood practices and proposed agrarian visions offer for different subjects. I also suggested some initial research limitations in Chapter 4, including: the small research sample; exclusion of the majority of 'mainstream' food production; the focus on fieldwork; and the emphasis on important tendencies rather than exhaustive characterisation within cases. Such limitations also mark out important areas for future research, including more research with Hawai'i's majority of small farmers and farmworkers. In this section, I revisit some of the limits to the research by way of commenting on what the present thesis has aimed to do and what, as yet, remains to be done.

In the first case, the analytical focus on 'alternative agriculture' presented some conceptual binarisms which, at times, could be difficult to reframe. While I attempted to utilise a framework that questions such divisions (Watts et al. 2005; Kneafsey et al. 2008; Pepper 2010) and opted for an analysis of different practices within *diverse* agrifood economies, such binaries between 'alternative' and 'conventional' or agroindustrial forms of production were often nonetheless at times reinforced. The thesis interrogated the alternative-conventional binary directly, in order to show how these binaries are unevenly (re)produced, reinforced and/or reworked (see Adams and Nelson 2009 for a similar

approach elsewhere). However, at times this may have reinforced such divisions, or these were reproduced in participant narratives or in scholarly debates split along such divides (see Brown and Besky 2015 for an excellent overview). In this way, while analysing outlier cases was meant to help unsettle binary conceptions and demonstrate the diversity within Hawai'i's agrifood economies, this approach may have also solidified these binaries even while seeking to explicate them. In an early version of the thesis, I approached the analytical work differently, by focusing on commonalities and differences amongst the cases, rather than through individual case-specific chapters. Future writing may perhaps productively engage with these methods and further engage with the work of queer ecologies (Chen 2011; Mortimer-Sandilands and Erickson 2010). Such a lateral approach of analysing across practices may better refuse the framing that 'alternatives' form some kind of outside, escape or space beyond the norms and majority of agrifood production.

A second tension within the thesis is the proposal of concrete criteria for definitions of gender-inclusive work and the conceptual difficulties that inhere in defining what this means. In the first instance, definitions of gender-inclusive work, greater social well-being and good quality and conditions of work cannot be so simply defined as their mention in Chapter 1 has suggested. Indeed, the project of identifying some sort of stable criteria for how gender *should* be being problematic for how this view then requires subscription to 'a certain normative view of how the gendered world *ought* to be' (Butler 2011 [1991]: xxi, emphasis added). I shall return to this tension at the end of this chapter, but for the moment it is important to highlight the friction between normative and descriptive accounts of 'gender' and the problems of establishing stable criteria for what constitutes more gender-inclusive work. This friction is partly related to the impossibility of stabilising criteria for the subversion of normative gender over time or in any particular context (Butler [1991]:

xxi). Secondly, this tension is also related to the limits of proposing that subversion or ‘gender otherwise’ can be found within practices of ‘work.’ This is because, even if broadened to include consumption and a range of activities undertaken to achieve aims (e.g. Baglioni 2017), the concept of ‘work’ may still privilege a notion of the public associated with the separation of production and reproduction, and retain masculinist, capitalist connotations. How and under what conditions might work create space for liberatory practices of gender? For whom? And who decides? While these questions were, in a sense, the central questions of the thesis, this framing of the research interest in ‘work’ may also have limited my ability to analyse consumptive practices and sites, as I mentioned in the ‘Research Limitations’ section of Chapter 4.

A third analytical limitation concerns the small research sample and the indicative, rather than definitive, nature of the findings. On the one hand, the case studies provide for analytical breadth and the small sample size was useful for carefully thinking through particular tendencies within those instances. However, this also means that they are not representative of all ‘alternatives’, all agroindustrial production nor the wider agrifood system in Hawai‘i. In this sense, as a comparative study, a trade-off was made between comparing disparate practices and in-depth observation on individual sites or supply chains. While this was productive for the objectives of the thesis—to understand the extent to which alternatives address social inequalities—in-depth research on specific examples could have offered further fine-grained insights. While limited in their representation of the wider field, it is hoped that the case studies nevertheless offer useful insights on the intersections of gender and agriculture in contemporary Hawai‘i and help to prepare the ground for such further research.

Finally, given the problems associated with the concept of ‘alternatives’, stabilising criteria for practising gender otherwise and the limits of doing so through the study of work, one may be tempted to propose, as both Passidomo (2016) and Guthman (2008a) have, that a focus on ‘alternative supply’ be abandoned in favour of focusing on policies that go beyond the food system, such as the minimum wage (Guthman 2008: 442–443). This question of the problematic nature of ‘alternatives’ is an important one, yet one that the research has turned towards, rather than away from, in its focus. The research has thus aimed to highlight the limits of alternative projects, as others have done (Getz et al 2006; Getz and Brown 2008, 2008b; Levkoe 2017; Guthman 1997, 2004, 2008b; Allen et al 2004), by attending to the differential trade-offs, opportunities and limitations that concrete agrifood practices and proposed agrarian visions offer for different subjects. It is also hoped that the project of analysing the appeal of alternatives is also useful for revealing the colonialities that often sustain them, wherein colonialities function not as ‘finished histories of a victimized past but consequential livid histories of differential futures’ (Stoler 2016: Location 8372–8373). Such ‘livid histories’ were discussed in the sections building on the analytical chapters and via the cases’ points in common via the analysis of agrarian temporalities.

Conclusion

If the research has raised questions about the gendered politics of sustainability, theorising agrarian temporalities returns us to the original scene of the research which began by inquiring after the appearance of normative gender in the field of agriculture. While the thesis highlighted that some gendered norms endure, it also found that much remains muddy in the *muliwai* [estuary], as Goodyear-Ka’ōpua reminds us in her commentaries on gendered divisions of labour ‘āina work (2011, 2014). Indeed, as I remarked above, tensions

also materialise within the project of describing the appearance of normative gender, describing gender-inclusive work or subversive, agentic gendered practices (Butler 2011 [1991]). In some ways then, the research has amplified wider problematiques facing interdisciplinary gender scholars who wish to describe the field of normative gender – ‘what is’-- in its intersections and failures, without necessarily prescribing opportunities for gender otherwise or ‘what ought to be.’

Butler cautions against such prescriptions for gender which promise a good life – ‘what ought to be’ -- which base their judgements on particular descriptions of how gender appears (Butler 2011 [1991]: xxi). In other words, these prescriptions are normative judgements made on the basis of the appearance of gender. And yet, Butler asks, ‘what conditions the domain of appearance for gender itself?’ There is a distinction, she asserts, between critical description and normative accounts of gender:

a descriptive account of gender includes considerations of what makes gender intelligible, an inquiry into its conditions of possibility, whereas a normative account seeks to answer the question of which expressions of gender are acceptable, and which are not, supplying persuasive reasons to distinguish between such expressions in this way. The question, however, of what qualifies as “gender” is itself already a question that attests to a pervasively normative operation of power, a fugitive operation of “what will be the case” under the rubric of “what is the case.” Thus, the very description of the field of gender is no sense prior to, or separable from, the question of its normative operation (Butler 2011 [1991]: xxi).

In other words, Butler argues that descriptions of gender are invariably questions of how power operates, wherein ‘what must be’ (power) underwrites ‘what can be’ (the possible). Critical accounts must therefore describe how power operates to delimit what is possible or what can be considered as ‘intelligible gender’ or ‘a good gendered life.’

While the research has not sought to argue that some practices inevitably lead to the good gendered life, there remains a tension in how I have sought to describe, from my own situated location in the field, ‘what I see to be the case’ without necessarily stabilising

‘what should be the case.’ In its small way, the research has sought to contribute to theorising on how to transform the power of normative gender as part of questioning what constitutes an intelligible, liveable life (Butler 2011[1991]: xxii) by highlighting some of the contradictions, failures and possibilities of collective agrifood projects. Taking forward this project has meant questioning ‘the categories through which one sees’ (Butler 2011 [1991]: Xxii) as well as what the ‘connectivities between past and present are *expected to* look like’ (Stoler, 2016: Location 160-163, emphasis added). In so doing, I hope to highlight how ‘the sedimented and reified field of gender “reality”’ ‘might be made differently and, indeed, less violently’ (Butler 2011[1991]: xxii).

Part of this violence relates to the work that supposedly gender-inclusive or progressive practices do to cover over other inequalities of race and class, as intersectional feminist theorists have long shown (Crenshaw 1989, 1991; McCall 2005; Trask 1999). In this way, attending to gender often requires a tactics of deconstructing alibis,¹⁹⁸ for example, in how supposedly gender-inclusive practices work to reinforce racialised or classed differences, and vice versa. The research analysed these tensions, possibilities and contradictions within the three case studies: how seed production may promote relatively gender-inclusive organisational policies but exclude temporary workers, who are disproportionately (im)migrants; how pilgrim small farms may offer important spaces for some women’s participation and also facilitate settler accumulation through processes of agrigentrification; and how ‘āina practices grapple with both settler gendered logics and selective (re)interpretations of Native ones, while power relations imbue to genealogical ties and age.

¹⁹⁸ Thanks to Clare Hemmings for this way of framing how intersectionality works.

In the shifting sediment of this field, one could easily become tangled in intersectional nets, aiming to deconstruct alibis but remaining ensnared in the limits of what appears, can be seen (Butler 2011[1991]) and sensed (Stoler 2016). Agrifood work is one scene wherein projects of gendered inclusion appear sticky (Rao 2014), unfinished, and often, as I have argued, provide alibis for other inequalities of race and class. Often, this inclusion operates as a steady current in one direction, aimed at including more women within given agrifood practices or at times, expanding the boundaries of what agrifood work must accommodate. Explicitly aiming beyond the limits of inclusion, challenging normative gendered logics, in contrast, is often a muddy process (Goodyear-Ka'ōpua 2013), requiring attention to the multiple forms of sediment that connect and cover both sea and fields.

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Appendices

Appendix A: Methods and Data Sources

Method	Number
Site visits	14
Formal in-person interviews	35
Formal Skype audio interviews	1
Formal telephone interviews	1
Informal in-person interviews	20
Informal telephone interviews	2
Volunteering (days)	16
Education (days)	26
Events	20
External surveys analysed for comparison	2
Document analysis (organisational materials, website materials and news coverage)	N/A

Appendix B: Activities by Island

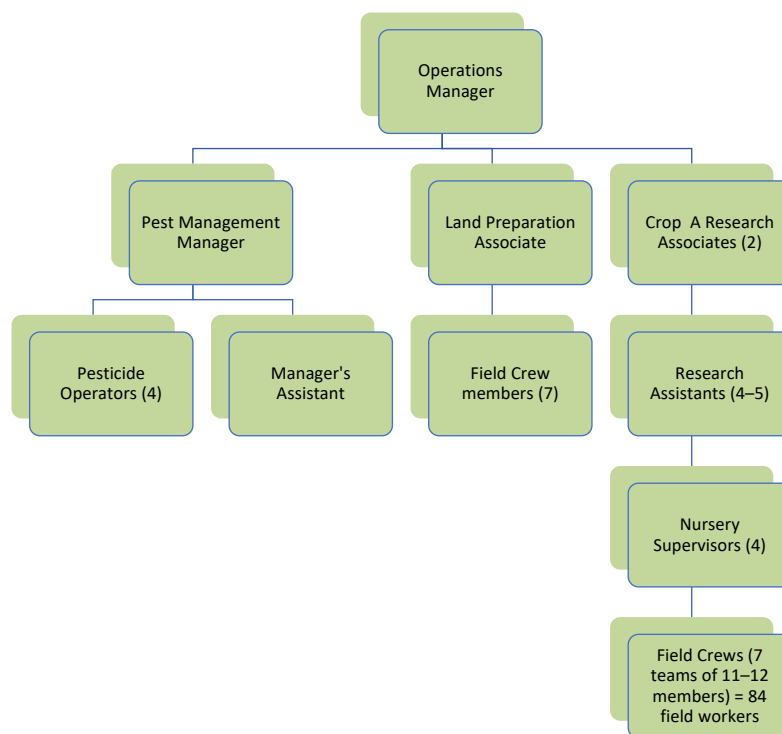
	Methods
O’ahu	Formal and informal interviews, volunteering, aina work, education, event attendance, site visits
Hawai’i	Site visits, formal and informal interviews, site visits
Kaua’i	‘Āina work, formal and informal interviews, site visits, event attendance
Maui	Event attendance, formal interview

Appendix C: Seed Production Interviews

Position	Number
Senior Manager	2
Site Manager	2
Pest Management Manager	2
Assistant	1
Land Preparation Team Leader	1
Field Crew	2

Area Team Leader	2
Team Assistant	1
Field Crew Supervisor	2
Field Crew	
Human Resource Manager	1
Independent Labour Consultant/contractor	1
External research industry professional	1
Total Interviews	18

Appendix D: Sample Organisational Hierarchy



Appendix E: Formal and Informal Interviews with Pilgrim Farmers and Others

Position	Number
Farmer	10
Home Grower (solely)	1
Farm Manager	2
Work-trade Volunteer	5
Box Scheme Operator	1
Food Worker	2

Policymaker, Advocate	5
Work-trade organization representative	1
Educator	4
Total	30

Appendix F: Pilgrim Farmer Characteristics Interviewed

Ethnicity	Women	Men
Native Hawaiian	1	0
Asian	3	2
White	6	9
Unknown	3	6
Total	13	17
	30	

Appendix G: Sample of Pilgrim Farm Characteristics

Method	Structure, Organization or Event (number)	Paid Participants and Workers or Owners (number)	Unpaid Participants and Workers (number)	Tasks, Products and Activities (list)
Formal interview, attending events, volunteer work, on-farm paid course	Wholly owned partially productive permaculture farm	Farm couple (with male farm family owner)	5 full-time work-trade participants and community workdays	Field crops, community events
Formal interview	Leased for-profit high-value organic farm space	One main owner/proprietor, plus 2–3 paid employees	None	Indoor speciality crop, manure production
Informal farm tour, interview and buying farm products	Owned, 25-year-old orchard and small-square-footage gardens (around \$800 per year income)	Married couple owners with off-income	Not formally—some friends	High-value fruit and flowers surplus sold to co-op and restaurants
Volunteering and	Community Cooperative	1 paid manager	30+ volunteers,	Selling local produce, food processing, cleaning

formal interview			with a core of 5 or 6	
Formal Interviews and farm volunteering	Farmer training programme	1 paid manager and several paid field crew	Students and some volunteers connected with individual farmers	Farm work and selling produce to farmers markets and co-operatives.

Appendix H: Permaculture Design Course Details

This two-week intensive course was based on the 72-hour curriculum needed to obtain the Permaculture Design Certificate. Course curriculum included a number of agroecological design techniques focused on utilising ecological systems and on building and regenerating soils. After weeks of daily research, a group design project was completed.

Appendix I: Spaces of Regular Volunteering

Place	Description	Time Period (hours)
‘āina Work space	An average of 4 hours per week over 3 months	48
Cooperative	An average of 2 hours per week over 3 months	24
Box Scheme	2 x 4 hours	8
Farmer Training Programme	3 x 3 hours	9
Fishpond Restoration	2 x 4 hours	8
‘Āina Workspace	6 hours	6
Organic Farm	6 hours	6
Fishpond Restoration	6 hours	6
Labour Union	4 x 3 hours	12
Total		127

Appendix J: Āina Work Volunteering

Place	Time Period	Sample tasks
‘Āina Work space	An average of one half-day per week over 3 months (48 hours)	Weeding, planting, land work, stone removal, plant processing, food preparation, cultural activities.
Fishpond Restoration	2 x 4 hours (8 hours)	Mangrove removal, stone transporting, gathering and stacking.
‘Āina Work Space	6 hours	Weeding and stone removal from <i>lo‘i</i> (taro terraces) and land clearing work.
Fishpond Restoration	6 hours	Gathering stones, cultural activities.

Total	68	
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Appendix K: ‘Āina Work Methods

Method	Number
Informal Interviews	2
Event attendance	6
Volunteering	68 hours

Appendix L: Production Tasks: Hybrid and Genetically Modified Corn (Maize)

Production Phase	Task/Activities	Skills and Knowledge Required	Risks	Labour
Land preparation (after harvest)	Tilling, ploughing and fertilising with machines; maintaining water in the soil.	Machine operation and maintenance (tractor, disk, combine); knowledge of soil contouring/erosion prevention.	Insufficient training, danger of accidents and injuries.	Permanent workers.
Chemical application	Application of nitrogen and pesticides through irrigation and machine sprayers. Includes selection, protective measures, mixing, loading chemicals into sprayers, cleanup and storage. Transporting, operating, decontaminating and storing machines and equipment. Posting signs regarding employee re-entry.	Operation and maintenance of sprayers and equipment; knowledge of protective gear and health protocols; proper storage, mixing, loading and decontamination; Inventory and supplies, record keeping.	Accidents and exposure; re-entry periods not observed.	Permanent workers.
Sowing and Seed Planting <i>Establishment (15–25 days)</i>	Seed planting with machines, laying of drip tape.	Knowledge of tractor operation and training for laying drip tape, fixing blockages.	Danger in fixing clogged machines; exposure to elements; excessive overtime.	Mainly trained and certified permanent workers.
Pest Management <i>Vegetative (25–40 days)</i>	Observing pest patterns in relation to crop growth, pesticide application as needed.	Restricted Use Pesticides (RUPs) require certification, in-depth training and continuing education hours.	Chemical exposure and injuries from equipment; excessive overtime; continuing education not undertaken.	Certified permanent workers
Rogging <i>Vegetative (25–40 days)</i>	Manually clearing weeds and irregular plants, with hand tools such as hoes and machetes.	Knowledge of safe equipment use and corn growth phases.	Cuts, injuries, and repetitive strains; exposure.	Seasonal workers?
Detasseling <i>Ears reach maturity; flowering (silk) and pollination (15–20 days)</i>	Mechanised detasseling in some operations with manual labour to remove what has been missed. Removing corn tassels (removing pollen-producing flowers called tassels from the corn plant) in order to control pollination so that varieties can be cross-bred (hybridised). Manage pollen flow, isolation.	Minimal training.	Long working hours, exposure, Peak labour demand, excessive overtime.	Often seasonal workers.
Yield formation (35–45 days) and ripening (10–15 days). Harvesting, sorting and drying	Mechanical harvesters (pickers, shellers and sorters or combines). Transport to processing facilities.	Machine operation and maintenance training.	Risk when clearing jams; excessive overtime.	Both permanent and seasonal workers.

Processing, seed treatment and shipping	Factory drying and shelling (mechanised). Conditioning seed by removing debris, sizing seeds and treating seeds with fungicide-insecticide prior to bagging.			Both permanent and seasonal workers.
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Adapted from FLA 2012; 2014.

Appendix M: Production Tasks: Hybrid and Genetically Modified Soy

Production Phase	Task/Activities	Skills and Knowledge Required	Risks	Labour
Land preparation (after harvest)	Tilling, ploughing and fertilising with machines; maintaining water in the soil.	Machine operation and maintenance (tractor, disk, combine); knowledge of soil contouring/erosion prevention.	Insufficient training; danger of accidents and injuries.	Permanent workers.
Chemical application	Application of nitrogen and pesticides through irrigation and machine sprayers. Includes selection, protective measures, mixing, loading chemicals into sprayers, cleanup and storage. Transporting, operating, decontaminating and storing machines and equipment. Posting signs regarding employee re-entry.	Operation and maintenance of sprayers and equipment; knowledge of protective gear and health protocols; proper storage, mixing, loading and decontamination; Inventory and supplies, record-keeping.	Accidents and exposure; re-entry periods not observed.	Permanent workers.
Sowing and Seed Planting <i>Establishment (15–25 days)</i>	Seed planting with machines, laying of drip tape.	Knowledge of tractor operation and training for laying drip tape, fixing clogs.	Danger in fixing machine clogs, exposure to elements; excessive overtime.	Mainly trained and certified permanent workers.
Pest Management <i>Vegetative (25–40 days)</i>	Observing pest patterns in relation to crop growth; pesticide application as needed.	Restricted Use Pesticides (RUPs) require certification and in-depth training and continuing education hours.	Chemical exposure and injuries from equipment; excessive overtime; continuing education not undertaken.	Certified permanent workers.
Rogging <i>Vegetative (25–40 days)</i>	Manually clearing weeds and irregular plants, with hand tools such as hoes, machetes	Knowledge of safe equipment use and corn growth phases.	Cuts, injuries, and repetitive strains; exposure.	Seasonal worker.
Detasseling <i>Ears reach maturity; flowering (silk) and pollination (15–20 days)</i>	Removing corn tassels (removing pollen-producing flowers called tassels from the corn plant) in order to control pollination so that varieties can be cross-bred (hybridised). Manage pollen flow, isolation.	Minimal training.	Long working hours; exposure; peak labour demand; excessive overtime	Often seasonal workers.
Yield formation (35–45 days) and ripening (10–15 days); harvesting, sorting and drying.	Mechanical harvesters (pickers, shellers and sorters or combines). Transport to processing facilities.	Machine operation and maintenance training.	Risk when clearing jams; excessive overtime.	Both permanent and seasonal workers.
Processing, seed treatment and shipping	Factory drying and shelling (mechanised). Conditioning seed by removing debris, sizing seeds and treating seeds with fungicide-insecticide prior to bagging.			Both permanent and seasonal workers.

Adapted from FLA 2012; 2014.

Appendix N: Farmworker Needs Survey (2016)

The Hawaii Immigrant Justice Center is a not-for-profit organization focused on supporting children and adult immigrant victims of human trafficking, domestic violence, sexual assault, victims of violent crimes and children who have been abused, neglected or abandoned through immigrant crime victim visas and special immigrant juvenile visas. The center also offers support for family unification and engages in other immigration and rights education work. The center is affiliated with Legal Aid Society of Hawaii.

The Center conducted a survey to assess the needs of farmworkers, many of whom are immigrants, and included data from 51 farmworkers and farmworker advocates. The survey was undertaken to understand the workplace safety issues facing Hawai'i's immigrant farmworkers. Most respondents were Thai, Ponapean and Marshallese and 18.8% of whom were women. The main subject areas included information about farmworker demographics, health and safety concerns as well as training needs.

Appendix O: Women's Farmer's Survey (2016)

The O'ahu Resource Conservation & Development Council is a non-profit entity working to improve quality of life, by focusing on assisting rural enterprises and farmers, including conversation education and practices. The Council received support from a number of Farm Bureau members, including some seed companies (see page 8 of the 2016 annual report). They partner with a number of Hawai'i-based public and private initiatives.

The Survey of 106 women farmers in Hawai'i, focusing on risk management topics about which farmers were interested in receiving training. Age and ethnicity information was unfortunately not collected. The aim of this survey was to identify training needs for women farmers in Hawai'i and it included 43 questions concerning a range of farm operations: not all questions were answered by every farmer. Topics included: agri-tourism, new technologies and production systems, insurance products and / or product diversification; market fundamentals, marketing plans and strategies, identity preserved marketing, and/or direct marketing; managing assets, business/strategic plans, cost of production, financial records and analysis, and/or value-added enterprises; farm programs, contracts and leases, environmental regulations, food safety liability, labour regulations, and/ or personal and business liability; recruiting, retaining and managing employees, interpersonal relationships, health and well-being, communications, and/or transition planning.

The survey formed part of O'ahu RC&D Women Farmers Workshop Series on O'ahu, Kaua'i, Maui, and Hawai'i Island concerning information on risk-management topics to improve local farms. The workshops were then followed by a small grants cycle aimed at women farmers. More information is available about the broader project and its funders can be found at the website (<http://oahurcd.org/womenfarmers/>) and in the 2016 annual report (http://oahurcd.org/wp-content/uploads/2017/03/2016-Yearbook-Annual-Report_FINAL-VERSION.pdf)

Appendix P: Coding Framework

1. Farmwork Issues
2. Gender Issues in Farmwork and New Farmer Programs
3. Ethnicity, Race, Migration in Agriculture
4. Classed Issues
5. Race in Alternative Food Spaces
6. Race and Plantations
7. Gender, Race and Current Land Access
8. the Politics of Agricultural Land Accumulation
9. The Role of the State
10. The Viability of Farming: Agriculture Livelihood and Lifestyles
11. Difficulties in Growing Farmers and Farmworkers
12. Themes (Family, Marriage etc.)
13. Different Farming Models
14. Ideas about Food Self-Sufficiency and Sustainability
15. Decolonizing Food and Identity

Second Order Coding

16. Spirituality
17. Consumption
18. Gendered Divisions of Labour
19. Gendered Essentialisms
20. Gender and Skills
21. Work Trade
22. Public/Private Boundaries
23. Family Farming
24. Agrarian Romanticism

Appendix Q: Hawaiian Language Glossary

All definitions have been adapted from the dictionaries available at: Wehewehe.org

ahupuaʻa: Land division, usually in wedge-shaped parcels from the ocean to uplands.

ʻai: Food or food plant.

ʻaikapu: segregated eating practice.

ʻāina: land, that which feeds.

kalo: taro plant.

kāne: man.

kapu: Taboo; prohibition; sacredness; special privilege.

kuleana: Right, privilege, concern, responsibility.

lāhui: Nation, race, tribe, people.

māhū: often translated as third gender or transgender.

loʻi: irrigated taro terraces.

mana: Supernatural or divine power.

mōʻī: King, sovereign, monarch, majesty, ruler, queen.

ʻōiwi: abbreviation for *kanaka ʻōiwi*, people of the bone; Native Hawaiian.

pili: to cling, join, associate with, be with.

poi: staple food made from pounded cooked taro and water which forms a glutinous paste.

pōhaku: stone.

wahine: woman.

Appendix R: Sample Interview Protocol

These are some of the broad questions I asked interviewees as relevant, and expanded on these based on information provided during the interview.

Farmers and Farmworkers

1. How did you come to do the work you are currently doing?
2. How did you end up in Hawaiʻi– why did you come here?
3. What does your current role involve exactly?
4. What kinds of sites does it take place in?
5. What kinds of people do you work with? Who are your employers, coworkers and who do you manage?
6. How do you decide who does what on the farm? (Who decides)
7. What is your sense of the Hawaiʻiag workforce – what different kinds of people are represented?
8. What are your favourite and least favourite parts of your job?
9. What kinds of personal qualities does your work demand?
10. How do you balance your work and family/social/community obligations?
11. how would you describe yourself? How do you identify in terms of your ethnicity and socio-economic background?
12. What are your personal preferences in terms of agricultural methods?
13. What personal protections do you put in place in relation to agriculture? Have you suffered any health issues because of it?

14. Are you able to make a living from your work?
15. What do you think the most important issues facing Hawai'i agriculture?
16. Do you practise gardening or farming at home? (if at work)
17. What is the relationships between what you do at work and how you grow/eat at home, if any?
18. Who cooks on your farm/at home?

Additional questions for Seed Companies

1. What is your sense of the Hawai'i ag workforce – what different kinds of people are represented? How does this compare with your company's work?
2. What kinds of jobs are available at Hawai'i locations?
3. What kinds of workers are you looking for – what kinds of personal qualities?
4. How have recent controversies shaped your recent hiring decisions if at all?
5. What do you see as the needs for Hawaii's ag workforce – what do we need more of? Technical education?
6. What policies do you have regarding diversity or gender equality?

Additional Questions for āina Work Participants

- What are the main issues facing the community you work with?
- How do you think women are placed to benefit from new food and farming movements?
- How are women balancing work and home life?
- How do you understand decolonisation?

Food Preparers/Processors

- How did you end up working in kitchens?
- How would you describe your relationship to food and foodwork?
- What do you see as the connections between Hawaiian culture and foodwork?
- What is it like to work in a male-dominated kitchen? (one person that had described difficulty)