Taiwan Journal of Anthropology 臺灣人類學刊 14（1）：113–148, 2016

The Resilient Landscape:

Fijian Village Gardens in the Age of Commercial Agriculture*

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Commercial agriculture in the Pacific has typically resulted in increased monoculture, reliance on purchased food, and environmental degradation. This is particularly the case on Taveuni Island, Fiji, a well-known hotspot for commercial taro enterprises. Using ethnographic data on the agricultural landscape in an indigenous Fijian community there, I demonstrate how the community maintains a degree of crop diversity and flexible land-use arrangements despite the sweeping effects of export-based farming practices. The capacity for diversity and flexibility, I argue, is sustained in a landscape consisting of hilly terrain with fragmented gardens, which enables the community to respond resiliently to the disciplining influence of commercial agriculture, even while engaging in many of its practices. I also point out that the everyday acts of walking and seeing in the rugged landscape are neglected aspects of farming that allow the villagers to maintain a profound connection to an environment filled with meaning, memories, and a sense of time. This agricultural landscape

* The data of this article were gathered from periods of fieldwork conducted in March–July 2010, November 2010–March 2011, and October–December 2012. These field trips were funded by the 2009, 2010, and 2012 World Austronesian Studies Fieldwork Grant for Ph.D. students by the Office of World Austronesian Studies, Taiwan. I want to thank the Waitabu villagers for providing valuable assistance to this research, particularly Mikaele Waqa and Ian Ropate Drakabula. I would also like to thank Richard Scaglion, Gabby Yearwood, Terre Fisher, and the two anonymous reviewers for their comments and suggestions.

Received: October 22, 2015 Accepted: February 24, 2016

is forever a complex social space, rather than a place defined solely by commercial productivity. The results of this study show how resilience may be cultivated in indigenous agricultural systems even given the impact of globalization.

Keywords: Fiji, landscape, commercial agriculture, land tenure, walking and seeing

Taveuni is the third largest island of the Fiji archipelago and is famous for its commercial taro (*Colocasia esculenta*) and kava (*Piper methysticum*) production. These crops are planted throughout the island but are heavily concentrated on freehold land occupied by mostly foreign and part-European entrepreneurs and Indo-Fijian farmers. With a long history of participating in the capitalist plantation economy, indigenous Fijian communities on the island are also engaging in these export-based ventures on their native land. The intensity of cultivation today, however, is far greater than that of traditional farming practices. How the villagers have coped with the impact of commercial agriculture while maintaining food security and crop diversity, and how their landscape enables them to respond resiliently to these changes are my main focus here.

The ethnographic data for this article was gathered from a small indigenous Fijian community called Waitabu, located on the northeastern coast of Taveuni. Just looking at the gardens in Waitabu, they seem to be dominated by taro, kava, and some cassava, with a strong focus on particular varieties that have high export values. The intensification of cash-cropping has led to not only a process called "agrodeforestation" in which diverse tree crops are cleared to make way for the monoculture of cash crops (Clarke and Thaman 1997:124-125), but also growing reliance on purchased food and increasing nutrition-related health issues (Mavoa and McCabe 2008; Taylor et al. 2013; Thaman 1988:220). However, from my fieldwork in Waitabu I learned that under the cover of these dominant cash crops, there remains a multitude of crop varieties and plants grown in village gardens, as well as in less visible corners of the village compound, on the village outskirts, and deep in the forests. As a whole, they belong to an open landscape that has accumulated layers and layers of biodiversity through different historical processes and continues to provide sources of food and well-being to the villagers.

More importantly, I argue that the Waitabu landscape itself has the capacity to preserve crop diversity, mainly due to its irregularity and ruggedness, the antithesis of what capitalist agriculture regimes strive to produce. The customary territory of Waitabu is situated in the Bouma region, one of the roughest areas on the island in terms of its topography. The village gardens of Waitabu are scattered along the sides and on the tops of hills, along the river valley, and by the roads. They are irregular in shape and lack clear boundaries from one to the next, and are part of a continuum that extends from the edge of the village compound to the wild forest (see Figure 1). I argue that this complex space of village gardens allows crop diversity to withstand erosion from commercial agricultural practices. In other words, this is a landscape that has the physical quality that James Scott termed "friction of terrain," which makes it inconvenient to the effective reach of state power (Scott 2009:43-47), or in

this case, the disciplining influence of commercial agriculture.

Figure 1 A taro garden in one of the forest farm sites of Watiabu. Photo taken by the author.

This landscape also has the capacity to absorb the constant movement of people. The common perception is that out-migration is prevalent in rural areas, but in Waitabu movement is a two-way street. Some kin move back from urban centers and require farmland immediately. There are also "floaters" who hop from village to village and only engage in temporary farming. There are even outsiders who acquire usufruct through various kinship connections and establish gardens within Waitabu's customary territory. This mobility is accommodated through flexible land-use arrangements on numerous named farm sites established by ancestral founders; on numerous named farm sites established by ancestral founders, hidden under the officially fixed patrilineal territories. hidden under the officially fixed patrilineal territories. The presence of these farm sites thus prevents the consolidation of large holdings that is key to the success of mass-production agriculture. The situation of land tenure and land use is equally diverse. Within framework of the farm sites, new gardens are constantly developed and old ones are passed down, replanted, or dissolved. The unit of ownership ranges from individuals and households to sub-lineages or lineages. Farmers are responsible for their own gardens and employ different strategies for their commercial farming ventures. They appear to be very

practical, always aware of the number of cash crops planted in their gardens and the projected profit they should be able to make.

It should thus be noted that lingering crop diversity and flexible land use do not represent outright resistance to commercial agriculture. Waitabu farmers still actively participate in the global chain of agricultural commodities and their profit is the single most important cash income for their households. They are concerned about the productivity of their gardens and use chemical fertilizers and herbicides extensively to achieve their goals. At the same time, they are bounded by communal obligation, which explains why they still plant certain non-commercial crop varieties for ritual use.

The crops and plants cultivated by their forefathers have left marks on the landscape, which serve as sensory cues to their identity and history. This is similar to Anna Tsing's study in the backcountry of Oregon, U.S., where wild matsutake mushrooms are picked and sold by different ethnic groups, in particular Southeast Asian immigrants, who have been mobilized by war and the idea of "freedom" in different ways. Their seemingly uniform engagement with the global chains of capital and commodity is in fact a heterogeneous patchwork of values, held together in a forest landscape where war memories come to life in divergent forms of violence, survival, and livelihood (Tsing 2013:36-37). Similarly in Waitabu, the perceived one-dimensional farming practices are part of a mosaic that includes the perseverance of crop diversity, flexible land use, commercial practicality, aspirations for productivity, and memories of the past. I argue that these are actively held together by the routinized acts of walking and seeing in the rugged terrain. Through these everyday actions, the fragmented gardens, hills, forests, and life forms unfold into a holistic environment to which village farmers have profound connections. Memories of the past and prospects for the future become visible, able to be touched, felt, and managed. This makes the agricultural landscape of Waitabu a complex social space rather than a simple platform for commercial productivity.

Environmental Impact of Commercial Agriculture on Taveuni

Taveuni Island is known for its fertile volcanic soil with high levels of nutrients derived from rapidly decomposed basaltic materials (Twyford and Wright 1965:402). With a high volume of annual rainfall providing moisture to this soil, the island's ecology is perfect for cultivating valuable tropical cash crops such as cotton and coconut. Since the 1860s European planters have taken advantage of this landscape and gave the Taveuni its popular moniker "Garden Island." The large

plantations and estates established by the Europeans greatly altered the landscape and social relationships on the island; the situation was eventually stabilized under British colonial land policy after 1874 (Lin 2012). The British also laid the foundation of commercial agriculture for the indigenous Fijian communities, including infrastructure such as ports, roads, and various means of production and transportation, as well as networks of buyers and middlemen.

After the independence of Fiji in 1970, Taveuni's economy was initially centered on the continuous but declining value of copra. Around the same time, kava had become a viable second option for the local farmers due to growing demand from the expanding urban and suburban Fijian population, particularly in and around the capital Suva. The National Marketing Authority (NMA) established in 1971 also began to purchase taro in bundles to sell to these urbanites, but its economic performance remained low on the island due to low purchase price offered by NMA, the long distance to market, taro's short shelf life, and high freight costs (Chandra 1979:79). Other less significant cash crops included cassava and yams, whose market was restricted to the island (Brookfield 1978:7).

As copra prices continued to drop and the kava trade eventually became international in scope in the 1980s (Mangal 1988:61), the Fijian taro industry reached a turning point in 1993. That year the taro leaf blight fungus (*Phytophthora colocasiae*) invaded Samoa, then the leading taro exporter in the Pacific, almost completely destroying its production. The following year, Fiji quickly took over the taro export market, chiefly shipping to New Zealand and Australia, and the planting area saw an immediate 50 percent increase (Fleming and Blowes 2003:12; Onwueme 1999:21). With a looming taro beetle (*Papuana uniondis*) threat on Fiji's main islands, commercial taro production became centered on Taveuni where the pest was never reported. Today, Fiji is the world's second leading taro export country, behind only China, and nearly 70 percent of its taro comes from Taveuni, which produced over eight thousand tons in the peak years of 2006 and 2007 (McGregor et al. 2011:13).

However, even with its reputation as the fertile Garden Island, Taveuni currently faces dire environmental issues. Taveuni saw the demand for kava skyrocket in 1998, and subsequently signs of unsustainable farming began to appear. Not only were deforestation and the opening of new plantations at higher elevations reported (Merlin and Raynor 2004:281), but increased monoculture planting, premature harvest of kava plants, and the application of chemical fertilizers and pesticides to a crop that traditionally did not much sap soil fertility were also widespread. More importantly, the reliance on capital investment and poor farming practices had left the island's economy vulnerable. Once buyers became aware of the low quality of Taveuni's kava, sales quickly declined in the following year and the farmers suffered

greatly (Murray 2000:368-369).

The commercialization of taro produced similar outcomes. As early as in the 1970s the use of chemical herbicides on taro plantations had been observed (Haynes 1976:16). The demand for increased production and sustained export performance after the boom in 1994 had turned farmers' focus to two particular varieties, the *Tausala ni Samoa* and Samoa hybrid (called "tausala" and "hybrid" by locals), which were preferred by the market due to their longer shelf life and shorter time to maturity. This shift came at the expense of other traditionally cultivated taro varieties and has created a genetically identical environment highly vulnerable to disease (Masibalavu et al. n.d.). The fertility of land has also rapidly deteriorated. In southern Taveuni, the most intensive taro production area on the island, it is common to find taro cultivated on the same piece of land for up to fifteen years with no crop rotation or long fallow period (McGregor et al. 2011:13). This has led directly to recent high reject rates of small or deformed taro harvested on the island. Moreover, with the ever-expanding commercial taro plantations, Taveuni now has the highest rate of deforestation in Fiji (Rohit Lal. Interview with Hao-Li Lin. Personal interview. Taveuni, June 25, 2010).

The Waitabu Agricultural Landscape and Farming Practices

While the environmental problems caused by modern market-driven farming practices took place mostly on freehold and leased lands in Taveuni, indigenous landscapes were not entirely immune. My field site, Waitabu village, is a case in point. But while farming practices influenced by commercial agriculture, such as monoculture and the use of fertilizers and herbicides, are indeed being employed there, the whole picture is rather more complex.

Situated in northeastern Taveuni, Waitabu had a population of 126 people living in 25 households according to my 2010 data. Other than a handful of people in the village who earned regular wages between 2010 and 2012, all households earn their income primarily through cash cropping. Most adult males in Waitabu are categorized as "semi-commercial farmers" in government surveys. They sell a portion of their products, but have an irregular harvest schedule and work small-scale gardens. Some raise livestock for cash but this number is not significant. Most of the adult women are not from Waitabu but came to live there through marriage. Their primary subsistence activity is net fishing and reef gleaning, though these catches are seldom sold. When the copra price in Fiji was still very high in the 1950s, Waitabu had established cooperatives to handle all transactions and made a good

income from their coconut groves. Since the return from copra had gradually fallen, by the early 1990s the village farmers' focus had almost completely transitioned to root crops. The Waitabu Marine Park ecotourism project, officially begun in 2001, has also brought profit to the village, but it mostly contributes to children's school fees and the organization of village functions.

Today, household livelihoods in Waitabu come from taro and kava sales. As I was frequently told by Waitabu farmers, "We have two sources of income: long term it's kava, and short term it's taro." A commercial taro crop typically takes seven or eight months to be ready to harvest, while kava requires three to five years. These two crops dominate the gardens scattered across the landscape of Waitabu. Their intensity, however, cannot be compared with that of the commercial farming areas on the island. The consensus of Waitabu farmers is that a consistent village farmer should plant thirty-six hundred taro tops and six hundred kava plants a year, which, according to Rohit Lal, the agricultural officer serving in Taveuni, is not a huge burden on the soil fertility. Elsewhere in Taveuni the fully commercial farmers are planting more than fifty thousand taro tops and over ten thousand kava plants annually. But the small scale of Waitabu gardens is not only due to the hilly topography of the Bouma region, it also derives from the nature of local land use arrangements, which I will discuss below.

With the constraints of their physical environment and other factors such as low-tech farming methods and the long distance to commercial centers, Waitabu farmers have a hard time turning their cash crops into large-scale business ventures. As Rohit told me, the problem with agricultural development in the region is not so much environmental degradation as how to increase production. Waitabu farmers themselves nevertheless acknowledge that by planting regularly and having a clear plan for selling their harvests, they can usually generate a consistent flow of cash income, even if it is only modest. All the farmers with whom I interacted also expressed a strong sense of security and confidence in the fertility of their land. With this perception of their environment, and the ongoing need for cash to pay provincial, village, and church levies, the villagers continue to pursue commercial agricultural ventures.

Kava in its processed form (chopped, dried, and pounded) may be the more profitable crop, since it can be sold for FJ$15/kilogram locally and higher elsewhere, but here I want to focus on taro because of its status as a short-term crop that is planted frequently and sold year-round in Taveuni. As mentioned earlier, taro of the tausala and hybrid varieties are the ones preferred by Waitabu farmers because of their higher financial rewards. The planting procedure is very practical. First a farmer needs to have as many taro tops (*mata*) as he can get. Most are gathered

from other family members' gardens after a harvest, when the tops are cut from the corms or from suckers lying in old gardens that have been separated from the harvested mother corms. These suckers will also grow small corms called *vaqe* that were only sporadically used for consumption. In Taveuni, the hybrid variety is known to produce up to ten suckers, while tausala has just three or four. Therefore, theoretically taro plants are forever multiplying, which feeds into the perception that land fertility is everlasting. For ambitious farmers who want to expand their gardens, they can purchase taro tops from large villages like Welagi or Vuna for 20 Fijian cents a stalk. The Agriculture Department is also keen on providing taro tops to villages to stimulate production.

Once the source of taro tops is secured, the next step is to find a piece of land and clear it. In Waitabu, all the current gardens are cleared on grasslands or secondary forests where previous cultivation of coconut trees and taro can still be seen. Traditionally clearing by tools and by burning was reported (Williams 1858:63). Nowadays almost all clearing work is carried out by spraying herbicides like paraquat, with the occasional use of machete. The next steps are digging holes and planting the taro tops. Elders recalled that in the 1960s no more than six hundred taro were grown in the garden in a whole year. Now in a given planting session, around one or two hundred taro tops can be planted, and in the course of a year it is common among the consistent cash-cropping farmers to grow at least three thousand taro. The technology used today is exactly the same as that described by 19th-century observers (Horne 1881:81; Seemann 1862:303; Williams 1858:63-64), which involved the use of digging sticks (*i-toko*) or narrow spades (*i-sivi*). This is the most burdensome part of taro farming and some senior farmers hire youngsters to do this work. As a hole is formed, the stick serves as a lever to open it further up, and then the taro top is thrust inside with the leaf stems sticking out above the ground. According to most Waitabu farmers, in the second week when rain is coming in, NPK fertilizers are put in the holes, and in the fifth week when the first leaves have sprouted, urea is added to boost their growth. I have also seen a Waitabu farmer, B1, use a more traditional method, putting down seaweed as fertilizer. Other farmers like M2 have adopted the method of planting mucuna beans introduced by a local agricultural NGO, to capture nitrogen from the air and fix it in the soil as an organic fertilizer. But most people still prefer NPK, which is supplied by the Agricultural Department. After the application of fertilizers, the only care put into the taro is constant weed control, which is often done by spraying herbicides, until the crops are eight months old and ready to be pulled.

Aside from his sons who help with the work, each farmer is largely responsible for his own gardens. There are, however, group farming practices that balance

individual farming ventures and communal prosperity. I observed two common methods of group farming in Waitabu. The first is when all the village farmers gather to plant for the common benefit of the community. Traditionally this was a customary service that the chief called together (Sahlins 1962:342), but today it is initiated by the more recently developed village organizations such as the agriculture committee. This type of group farming has been practiced in Waitabu for a while. It requires the use of a common plot on which all the farmers plant cash crops designated for a particular goal. A successful example is the building of the first church in the village twenty years ago. After selling the harvest, the profits were used to purchase building materials and hire carpenters to do the construction.

The other form of group farming is the non-kinship-based "rotational work party" (*balebale*). In the entire literature on Fijian societies, only Marshall Sahlins has referenced this form of organization in his research in Moala Island, which he transcribed as *balibali* (Sahlins 1962:350). In Waitabu, *balebale* is much more flexible and informal, which is an efficient way of dealing with a wide array of situations. Any two farmers can form a *balebale* anytime to work together on each other's farm alternately. It can also be a form of social service. For example, due to the many responsibilities a village elected headman must shoulder, a *balebale* may form to help him at his garden for a day. Elders who are too weak to farm also receive help from a *balebale*, which is called a "work of compassion" (*cakacaka ni loloma*). In May 2010 when the church offering from each parish (*soli ni parisi*) was about to be collected, [1] every five households in Waitabu were grouped into *balebale* to help one another raise funds by planting cash crops in their individual gardens. The agricultural committee in the village also frequently mobilizes *balebale* to boost its members' production.

While small groups of farmers sometimes sell their taro together, calling a middleman to drive over and do the weighing and purchase on site, most of the time they catch the bus or hire a vehicle and take their harvest directly to export buyers at the commercial centers like Waiyevo or Naqara, or sell the crops at the local market or to the nearby Matagi Island Resort. When selling to export middlemen, taro corms are cut from their leaf crowns and packed inside a bag for a price that varies between FJ$1 and $2 per kilogram for tausala and 20 cents cheaper for hybrid. A mature acceptable corm generally weighs slightly more than one kilogram. Any that are rejected are taken back home for consumption. When farmers sell at the local

1 The church offering is collected three times a year to support the Holy Cross Catholic Church in Wairiki. In 2010, Waitabu contributed FJ$1,815 to the church.

market or to the resort, six to eight taro corms with leaf stalks are tied into a bundle and sold for anywhere from FJ$6 to $10 each, which is not too much of a fall-off from selling to the middleman when the taro price is low.

Overall, taro harvesting is a year-round activity in Taveuni, and consistent village farmers have a continuous flow of cash income from their sales to provide for their families and pay the various fees associated with village life. Adding in the occasional sale of kava, a household can sustain itself without wage labor opportunities. Land and gardens are therefore vital to rural livelihoods. Despite their commercial practicality and individual aspirations for productivity, farmers in the Waitabu landscape remain open to different land-use scenarios and the movement of people in the rural area. This flexibility I argue is enabled by the fragmentation of gardens sited in named farm sites; this arrangement hides change under the cloak of official customary territories.

Fragmented Gardens and Flexible Land-Use Arrangements

The Waitabu agricultural landscape appears to be dominated by cash crops like taro and kava, with a focus on commercially valuable varieties. Farming practices are also individual-oriented and practical; they aim at consistent production and profitability through a mixture of different methods. The sense of community, however, has not been eroded by the commercial drive to invest in the individual gardens. We had a glimpse of this communal spirit when discussing Waitabu's group farming activities earlier. Here I turn to how the complexities of movement and life situations of the people there are accommodated by the land tenure system.

Scholars working in Fiji have long challenged the official ideology of Fijian land tenure as an exogamous patrilineal land-owning system (Deane 1921:3; Nayacakalou 1957; Quain 1948:182-183), but few have noted the different layers of land use within the local environment. Even the land tenure system in Waitabu is more complicated than the official record. At the official level where ownerships are registered with the Native Lands Commission, the 655 acres of Waitabu land are communally owned, divided among the two patrilineages (*mataqali*) in the village, which are the basic land-owning units, each possessing its own customary territory (see Figure 2). Within these territories, there are numerous named farm sites that are not recorded in the books but are generally respected by community members. During fieldwork I collected data on twenty-six such farm sites around Waitabu, most of which had been developed by founding figures only one or two generations ago. They are now owned by direct descendants, both male and female, as personal gardens (*i-kanakana*).

Some families used to have houses on these farm sites and chose to live there rather than in the village.

The ownership of these parcels is diverse and does not always follow the official patrilineal boundaries, which generally remain an important factor in land distribution.[2] Some farm sites, like Namatiu (see figure 2), were owned by an extended family headed by a founding figure and later shared among several descending nuclear households (*matavuvale*). Some were owned by sub-patrilineages (*i-tokatoka*). There are also areas controlled by either of the village's two patrilineages. In these areas, patrilineal ownership is recognized, but usufructs tend to be flexible and the farmers working there might be from different descent lines. Finally, outside the village there remain remote places like Vunivulavula (see Figure 2) where ownership is not specified and the land is available to anyone from Waitabu, but especially youngsters who want to set up their first farms.

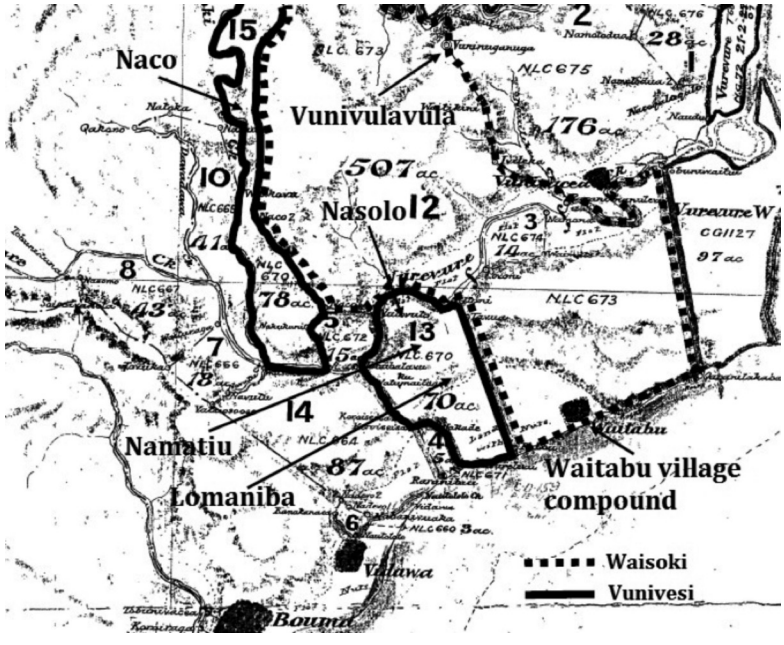

Figure 2 Map of Waitabu's land tenure system. Modified from the survey map provided by the Fiji Lands and Surveys Department.

2 During my fieldwork, 72.5 percent of the farmers of Waitabu worked on farm sites within their official patrilineal territories.

These arrangements and the different degrees of flexibility more or less follow seniority. The favorable alluvial flats like Nasolo (see Figure 2) closer to the village are securely in the hands of senior leaders and their families, while lower-status youngsters typically farm the steep slopes or in more distant places like Vunivulavula. This has created certain constraints for young farmers in the village and they have to be strategically creative. For example, farmer O, a young married villager, told me that his biggest problem was "not enough land." He has taro gardens in two separate farm sites and a kava garden deep in the forest. He is typical of young farmers, who tend to have gardens in several different places. While O has rather secure ownership of the sites he works through his paternal grandfather, most young farmers working on different farm sites are members of the village through less secure maternal ties. Farmer J2, for instance, lives in his mother's sister's household in Waitabu, and was often mocked for working on six different farm sites but failing to properly keep up with his crops on all of them.

Due to the complexity of land tenure and the existence of numerous named farm sites, it is not surprising to find that the gardens on them are extremely fragmented, irregular in shape, and scattered everywhere: at the edge of the village, on top of a hill, and by the roadside. The farm site Lomaniba is a clear example (see Figure 2). Favored for its large size and close proximity to the village, Lomaniba is said to be the possession of the extended family of the village chief Tui Nasau whose title is passed down through the sub-patrilineage Vunivesi. In the 1950s, the area was borrowed by the village cooperative to raise cattle. In fact, the name Lomaniba, which means "inside the fence," may have be created during that period. After that operation ended, many farmers from different descent lines began to move in and establish small gardens. Today it is a complex maze of gardens used by fourteen farmers from twelve different households of both patrilineages. At a 2011 Vunivesi patrilineage meeting, I heard discussion of re-enclosing Lomaniba by the families of Tui Nasau, who felt it had been encroached upon for far too long. The proposal was soon rejected, however, due to the project's difficulty and because other members present at the meeting stressed the idea that this area is a loving gift (*loloma*) to everyone in the village.

During my fieldwork from 2010 to 2012, forty-one active adult male farmers from thirty-one different households (mostly nuclear families) worked gardens in Waitabu, employing diverse styles of land use (see Table 1). These men are generally responsible for their individual cultivations but their nuclear households comprise a basic working unit. It should be noted that women also have their own plots where they raise vegetables, fruits, or fabric crops. For example, the wife of H1 is famous for tending the pandanus palms (*Pandanus whitmeeanus,* Fijian *voivoi*) in her husband's

garden, which she uses for making mats. A group of young unmarried women also works a small collective farm at the outskirts of the village, but the scale and intensity cannot be compared with that of the starchy root crop gardens cultivated by the men. Although they are not primary cultivators, women's ownership of farm sites is also recognized. Four of the forty-one farmers have established their usufruct rights through their wives. Moreover, eleven of the forty-one gain ownership of the farm sites where they work through their mothers' membership in the village.[3] If we counted the presence of any female community members when a farmer traced his ownership to a founding figure, then this number would jump to seventeen. In fact, the number of farmers in Waitabu who trace ownership strictly through the patrilineal line is only eighteen, 43.9 percent of the total number of farmers working in the Waitabu landscape.

Table 1 Profile of Waitabu farmers 2010–2012

Name	Lineage	Household	Farm site founder's relationship to farmer	Registered	Farming within lineage boundary	Notes
1. A1	V(N)	1 (nuclear)	FF	Y	Y	Consistent farmer.
2. A2	V(N)		MFF	N	Y	Floater (Student).
3. A3	V(N)	2 (not in Waitabu)	FF	Y	Y	Had a household in Waitabu. Now residing outside due to work. Comes back to farm irregularly.
4. A4	V(N)	3 (nuclear)	MFF	N	N	Consistent farmer. W from Waisoki.
5. B1	V(N)	4 (nuclear)	FF	Y	Y	Consistent farmer. W from Vunivesi.
6. B2	V(N)		MFF	N	Y	Floater.

3 While the right to use or seize the resources of a maternal uncle's or mother's natal village is widely documented in Fiji, a phenomenon known as a *vasu* relationship, this privilege has ritualistic connotations and is often strategically executed or temporarily performed (Sahlins 2004:68; Williams 1858:34). In Waitabu, however, it is more often a permanent choice in which the "sister's son" is viewed as an accepted member of the community. This kind of arrangement was also discussed by Quain in his research in Vanua Levu, Fiji's second largest island (1948:182-183).

7. C1	V	5 (nuclear)	MF(FF)	Y	Y	Elder farmer. Over 60 years old. Membership of Vunivesi established through M. F is from Nasolo.
8. C2	V		FMF(FFF)	Y	Y	Floater.
9. C3	V	6 (nuclear)	FMF(FFF)	Y	Y	Consistent farmer. Married in 2008.
10. D1	V	7 (nuclear)	MF	N	Y	Consistent farmer.
11. D2	V		FMF	N	Y	Consistent farmer. Began farming in 2010.
12. E1	V	8 (extended)	FMF	Y	Y	Consistent farmer.
13. E2	V	9 (nuclear)	FMF	Y	Y	Residing outside due to work. Comes back to farm irregularly. Married in 2012. Family in Waitabu.
14. F	V	10 (nuclear)	MFF	N	N	Floater. Residing with M who moved out in 2012.
15. G1	W	11 (nuclear)	F	Y	Y	Elder farmer. Over 60 years old.
16. G2	W	12 (nuclear)	F	Y	Y	Elder farmer. Residing on plantation.
17. H1	W	13 (nuclear)	F	Y	N	Consistent farmer.
18. H2	W	14 (nuclear)	F	Y	Y	Consistent farmer.
19. H3	W	15 (nuclear)	WF	N	N	Consistent farmer. Established membership through W.
20. I1	W	16 (nuclear)	MFM	N	Y	Consistent farmer.
21. I2	W	17 (nuclear)	WFM	N	Y	Consistent farmer. Established membership through W. Left in 2011.
22. J1	W	18 (nuclear)	MF	N	Y	Consistent farmer.
23. J2	W		MF	N	N	Consistent farmer.
24. K1	W	19 (extended)	MMF	N	N	Consistent farmer. Moved in in 2009.
25. K2	W		MMF	N	Y	Consistent farmer. Left in 2010.
26. K3	W		MF	N	Y	Consistent farmer.
27. L1	W	20 (nuclear)	FF	Y	N	Consistent farmer. Moved in in 2009.

28. L2	W	21 (nuclear)	FF	Y	N	Elder farmer.
29. L3	W		FFF	Y	Y	Consistent farmer. Enrolled in the Tutu Young Farmers Course in 2011.
30. L4	W		FFF	Y	Y	Consistent farmer. Began farming in 2008 after graduating from FIT.
31. L5	W	22 (nuclear)	FFF	Y	N	Consistent farmer. Enrolled in the Tutu Young Farmers Course in 2008 but dropped out. Married in 2010. Moved in in 2012.
32. M1	W	23 (nuclear)	F(M); *i-kovukovu*	Y	Y	Elder farmer. Over 60 years old. Membership established through F. M from Vunivesi. M is also the owner of an *i-kovukovu*.
33. M2	W	24 (nuclear)	FF; *i-kovukovu*	Y	Y	Consistent farmer.
34. M3	W	25 (nuclear)	FF; *i-kovukovu*	Y	Y	Consistent farmer.
35. N1	W	26 (extended)	FF	Y	N	Consistent farmer. Moved in in 2009.
36. N2	W		FF	Y	N	Consistent farmer. Moved in in 2009.
37. O	W	27 (nuclear)	FF	Y	Y	Consistent farmer.
38. P	Not in Waitabu	28 (not in Waitabu)	*i-kovukovu*	N	N/A	Descendant of historical *i-kovukovu* owner.
39. Q	Not in Waitabu	29 (not in Waitabu)	WMF	N	Y	Established usufruct through W.
40. R	Not in Waitabu	30 (not in Waitabu)	WFF	N	Y	Established usufruct through W.
41. S	Not in Waitabu	31 (not in Waitabu)	*tavale*F	N	Y	Usufruct offered due to *tavale* (maternal cross-cousin) relationship.
Total: 41	Vunivesi: 14 (Nasolo:6) Waisoki: 23 Outsider: 4	Total: 31 Waitabu: 26	Patrilineal: 21 (51.2%)	Registered: 23 (56.1%)	Within: 29 (72.5%)	Consistent cash-cropping farmers of Waitabu: 26 (63.4%)

Today, the Waitabu environment is a very fluid space with people constantly entering and leaving through different channels and relationships. Of the active farmers there, six were actually from other villages. One of these was a descendant of a historical *i-kovukovu*[4] owner; the others had established usufruct through either affinal or an intimate classificatory cross-cousin relationship (*veitavaleni*). There is also a type of farmer that I term "floaters"; these are typically youngsters who do not always reside in the village but still have associated gardens. They are typically free-spirited bachelors who move between their fathers' place and their mothers' natal village, or head to the townships to find short-term wage jobs or pursue higher education. When residing in the village, they perform customary obligations like other villagers. Their farming tends to focus on short-term cash crops like taro, and during their absence their families in the village take care of their gardens. Once they establish a family of their own, they will come back and settle down permanently.

The presence of these "floaters" reflects how the complex movements of people can be accommodated by the open landscape. Many of these movements result from decisions taken at different stages of life. For example, L1 moved back to Waitabu with his family in 2009 at the age of forty because his work in the capital Suva was "slacking." With the help of his brother already residing in the village, he immediately began planting at two farm sites, one in Vunivulavula and the other in Lomaniba. In a counter example, I2, who is in his forties, had been farming in Waitabu through his wife's membership in the village and was regarded as one of the most diligent farmers. In January 2011 he pulled all his mature taro and sold the lot at a price of FJ$1/kilogram, which gave him a total of FJ$831, the most I had ever seen from a single transaction. That money funded his whole family's relocation to Suva, and his gardens were taken over by his wife's sister's son, I1. In another example, L4 studied at the Fiji Institute of Technology in Suva and, after graduating at the age of twenty-three, went back to the village in 2008 to begin his first farm in Vunivulavula. After farming for four years and moving to other farm sites through familial connections, he decided to pursue seminary studies and planned to leave the village in 2013. His elder brother, L5, demonstrated a similar mobility. He started farming in Waitabu at an early age and enrolled in the Tutu Young Farmers Course on the other side of the island, leaving the village in 2008 when he was twenty-four. He then got married, dropped out the program, and moved into his wife's village to farm. In 2012 he brought his whole family back to Waitabu and resumed farming on his old sites.

4 Reserved land commonly given to a woman as dowry and passed down to her descendants.

This flexibility echoes the research of John Overton (1993) who argued that Fijian villages are filled with different projects, movements, and linkages between communities and with the wider urban and international economies. They are thus fulfilling multiple roles as farms, suburbs, and retirement homes, providing the functions of a social safety net, as well as a site where material and social wealth may be accumulated. As demonstrated by Waitabu's diverse land-use arrangements, the numerous named farm sites and their fragmented gardens create an open platform that can accommodate this mobility, allowing different life situations to play out without interfering with one another.

Hidden Diversity of Crops and Plants

I have talked about flexible land use and the complex movement of people still possible even given the prevalence of commercial agriculture in Waitabu. In this section I will lay out the hidden diversity of crops and plants that have survived the dominance of cash crops. The agricultural landscape of Waitabu has been open to different processes of change from historical tribal migrations, the establishment of neighboring estates, colonial policies supporting cash-cropping, the population boom after World War II, and the more recent post-independence cash-cropping schemes. All these processes left their marks on the landscape but did not completely alter or dominate the environment. This is because the gardens of Waitabu remain fragmented, as reflected in the local land tenure system, making a wholesale transformation almost impossible. The processes of agrodeforestation and the reduction of biodiversity certainly have taken place in Waitabu, but they are only one aspect of a multi-layered landscape. This type of landscape is nicely captured in Overton's description of three models of farming found in the landscapes of the Rewa Delta in Viti Levu, the largest island of Fiji (Overton 1989). The first is the pre-colonial model where old ring-ditch fortification and giant swamp taro (*Cyrtosperma chamissonis,* Fijian *via kana*) complexes served as defensive and secure sites against warfare and natural disaster. The second is the colonial model where indigenous depopulation had taken place and root crops that required less labor such as the introduced cassava and tannia taro (*Xanthosoma sagittifolium,* Fijian *dalo ni tana*) had replaced giant swamp taro cultivation, and new crops like pineapples, chilies, rice, mangoes, and citrus, etc. were added to the local diet. Finally, the post-colonial model of the 1980s introduced the widening of urban food markets and an increased demand for surplus root crops, tree crops, and vegetable crop production. But more interesting is Overton's observation that this "agricultural modernization, such as it has occurred, has not been at the expense of overall crop diversity" (ibid.:65). An

important reason for this, he argued, is the traditional "wild" foods available in the customary landscape, which had been enriched by the recently introduced crops that had gone wild (ibid.:69). This produced a kind of food bank that preserves crop diversity for irregular or emergency consumption.

Similarly, the agricultural landscape of Waitabu also demonstrates a "hidden diversity" that is resilient and tenacious. I use the term "hidden" because it is easy to neglect its existence when attention is mostly paid to the more visible cash-cropping gardens. Cash crops represent only one layer of agriculture in Waitabu, while a wide range of crops and plants introduced through different historical processes still flourish in different niches across the landscape (see Table 2). Inside the village compound (*koro*), each household has its own small garden where a wealth of medicinal herbs as well as food additives such as the perennial pepper plants (*Capsicum frutescens*) and lime trees (*Citrus aurantifolia*) are cultivated. While purchased black tea bags are popular among households, lemon grass (*Cymbopogon coloratus*) is still frequently used to boil a pot of morning tea. Breadfruit (*Artocarpus altilis*) and papaya trees are commonly planted around the house, giving villagers immediate access to these foods. Due to their proximity to houses, the ownership of these plants and trees is clear and the borrowing of their crops is frequent. Generally this is purview of women who are masters at using them for different purposes.

At the edge of the village compound but not yet in the bush lies an outskirt zone (*saurusa*) that follows a swampy creek forming the border of the village compound. It is common to dump garbage and food wastes in this area, as well as raise pigs there that feed on the leftovers. There are also some sweet potatoes (*Ipomoea batatas*) initially planted by the earlier settlers, the cultivation and consumption of which was documented by the missionaries in the early 19th century (Heath 1988:206; Williams 1858:61). These plants do not seem to belong to anyone and are rarely harvested, though the young leaves at the vine tips are sporadically picked for eating. Tree crops found in this area and shared by all the villagers include the Tahitian vi apple (*Spondias dulcis*), Malay apple (*Syzygium malaccense*), oceanic lychee (*Pometia pinnata*), and the famous Tahitian chestnut (*Inocarpus fagiferus*), all of which are harvested in January. Elders who are not very mobile cultivate taro or cassava in the outskirt zone for their own subsistence. Families also tend the edible hibiscus (*Abelmoschus manihot*), one of the most common Fijian greens, as well as banana and plantains planted in this zone.

Table 2 Common food crops and edible plants in the Waitabu landscape.

Zones	Cultivars (Fijian name)	Cultivation
Village compound	lemon grass (*coboi*)	Not actively cultivated
	perennial pepper (*rokete*)	Not actively cultivated
	lime (*moli*)	Not actively cultivated
	breadfruit (*uto*)	Not actively cultivated
	papaya (*weleti*)	At times cultivated
Outskirts	sweet potato (*kumala*)	Wild
Outskirts/Forest	cutnut trees (*vutu kana*)	Wild
	Tahitian vi apple (*wi*)	Wild
	Malay apple (*kavika*)	Wild
	oceanic lychee (*dawa*)	Wild
	Tahitian chestnut (*ivi*)	Wild
Outskirts/Forest gardens	hibiscus leaves (*bele*)	At times cultivated
	banana (*jaina*)	Not actively cultivated
	plantain (*vudi*)	Not actively cultivated
	pumpkin leaves (*papukini*)	At times cultivated
	eggplants (*baigani*)	At times cultivated
Forest gardens	taro (*dalo*)	Heavily cultivated
	taro leaves (*waci*)	
	cassava (*tavioka*)	Heavily cultivated
	kava (*yaqona*)	Heavily cultivated
Forest	coconut (*niu*)	Not actively cultivated
	wild yam (*tivoli*)	Wild
	edible fern (*ota*)	Wild
	tannia taro (*dalo ni tana*)	Wild, not consumed
	giant taro (*via*)	Wild, not consumed

Finally, the territory entirely outside the village compound is referred to as the forest (*veikau*), and this is where all the main gardens are located. In fact, when someone says that he is going to the forest, this is synonymous with saying he is going out to do farm work. This not only shows the Fijians' holistic sense of land (*vanua*) that can be extended into the sea and wilderness, but also the "becomingness" of forests, which are not static but can become gardens and grow back to forests over time, blurring the line between the cultivated and wild (Tsing 2004:176-182,189-196). This is the realm of the men, where they construct their manhood and feed their families by cultivating starchy root crops and kava. In pre-colonial times, irrigated taro terraces could be found here (Williams 1858:61). According to findings

of more recent scholarhip, these taro gardens were typically constructed adjacent to fortified villages in times of hostility (Field 1998; Frost 1974; Kuhlken 1999). Yams (in particular *Dioscorea alata*) were an equally significant root crop in pre-colonial times, planted in mounds with well-drained soil. In 1840 Rev. Richard Lyth noted fifty thousand yams being distributed at a feast in the chiefly village Somosomo on Taveuni. (Heath 1988:216). Other minor crops being consumed at the time included giant taro (*Alocasia macrorrhiza*), wild yam (*Dioscorea nummularia*), sweet yam (*Dioscorea esculenta*), Samoan yam (*Dioscorea bulbifera*), sugarcane (*Saccharum officinarum*), sweet potato, hibiscus leaves, plantains, and tree crops like breadfruit and Tahitian chestnut, most of which can still be found in the Waitabu forest landscape today, either growing wild or being cultivated. The mid-19th century missionaries also introduced a wide range of fruits and vegetables, including English cabbage, watermelon, cucumber, pumpkin, beans and peas (Heath 1988:209), all of which were sustained and promoted by the colonial government.

As the population moved down to the coast after the 1875 measles outbreak, the old gardens were abandoned. But some of them have been reused and replanted by today's farmers, most notably the cutnut trees (*Barringtonia asiatica*) and taro planted on Nasau, an old village site on a hill near Waitabu. While old crops remained in the landscape, new methods of management were adopted. Cattle were raised in the flat valleys of the forest. Coconut trees were more intensively planted in the coastal area as the first significant cash crop. Irrigated taro was replaced by the less labor-intensive dryland taro cultivation, which was often intercropped with kava. Scottish botanist John Horne documented at least eighteen varieties of taro being planted in Fiji in the 1870s and this diversity was actively maintained by the farmers (Horne 1881:78). A later study shows that as many as seventy-two distinct types of taro cultivars were collected in Fiji, including the hybrid and others introduced later (Sivan 1984:55). Although this diversity can no longer be seen in today's Fijian taro gardens as farmers focus on the two high-demand varieties, it would be wrong to say that these gardens have been homogeneously conditioned. Back in the 1930s, tausala was not highly regarded (Parham and Raiqiso 1939), and the Samoan hybrid was not developed until 1984. According to elder farmers in the village, the most popular taro planted around the 1960s was not *Colocasia*, but a later introduction, tannia taro (*dalo ni tana*), which now grows wild in Waitabu and was never harvested during my fieldwork there.

Today a small degree of taro diversity is still actively preserved. I identified ten varieties of taro commonly found in the village gardens. Aside from tausala and hybrid, which together make up almost 80 percent of the cultivars grown, other varieties include the purple *dalo ni Moala*, white *dalo ni Toga*, and yellow

dalo ni Samoa. They are preserved mainly because of their continuous importance in traditional rituals and feasts, for which tausala and other hybrid varieties are never used. Preparation of the prestigious taro pudding (*vakalolo*) also calls for the traditional varieties such as the yellowish *dalo ni Samoa*, which is prized for its taste and texture. While youngsters tend to devote 100 percent of their effort to growing tausala and hybrid, elder farmers always reserve a corner for growing these traditional varieties to fulfill customary responsibilities. It should also be noted that the young leaves (*waci*) of harvested taro are frequently cooked and eaten, and represent another important source of food for the villagers.

New crops are also continually being introduced into the landscape through different channels. In 1957 a commercial cocoa planting scheme was brought to Bouma by the government (Brookfield 1976:15). Even though the scheme failed eventually due to low prices, choosing the wrong variety, and the humid climate, cocoa trees can still be found in the midst of the bush gardens, and the fruits have become "farming snacks" for the villagers.[5] Although cassava was introduced to Fiji in the mid-19th century, it did not become popular in Waitabu until after the 1960s. Other crops introduced later include ginger, tomato, eggplant, and pineapple. In March 2010 after the destruction caused by Cyclone Tomas, the government provided long bean and corn seed to the village to promote additional food security. The Catholic Marist Training Center at Tutu also sold Chinese cabbage seedlings for the villagers to grow. All of these have been adopted freely and grown on-and-off by Waitabu farmers either as small-scale secondary cash crops or subsistence crops. The wilderness also remains an important source of food for Waitabu households. Particularly noteworthy one is the edible fern called *ota* (*Diplazium esculentum*), which thrives in wet corners of the bush. In a realm dominated by men's activities, finding these edible ferns in the forest is often a women's endeavor. After taking them back home, it is common to see a group of women seated on the kitchen floor picking through and organizing the fern leaves for cooking.

As Pollock (1986) concluded, with increasing attention given to root crops in the Pacific Islands, it is even more important to have a lively forest territory that provides multiple subsistence and cash-cropping options. She further argued that bush plots, fallow, secondary growth, and exploitable forests are all part of a total environment and should thus be managed as one unified system (Pollock 1986:107).

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5 For distant gardens that require half-a-day of work, farmers often bring canned fish as a simple midday meal. But farmers working in closer gardens often grab whatever is handy in the bush for snacking, which includes cutting the green coconuts for the juice and meat, as well as chewing on wild sugarcane.

As the case of Waitabu demonstrates, this total environment should also include the village compound and the often overlooked village outskirts where different crops and useful plants may still be found. Therefore, although the processes of agrodeforestation are indeed taking place in Fiji, the diversity within this total environment is able to withstand wholesale transformation, or at least slow it down. Still, this is not by any stretch a self-regulating system and maintaining it requires careful planning and management.

Walking and Seeing in the Agricultural Landscape

We have discussed much about crops, labor, and production – the material aspects of Waitabu's agricultural landscape, but how do the farmers experience their environment, the gardens that they walk to and work on almost every day, the land that provides a livelihood for their village and families, the places where their forefathers lived and worked before them? Although it may seem that the agricultural landscape in Waitabu has been "disenchanted" and turned into a site of calculable production, locals recognize a sentient awareness in their environment that allows room for their diverse approaches to land management, the complex movements of people, and the fragmented gardens in the landscape, making their place resilient to the impact of commercial agriculture.

Much has been said about indigenous views of connection and the holism of the environment, but how are these concepts sustained in the age of globalization in which nothing is truly isolated and numerous local categories are at risk of being uprooted or transformed? As stressed by Christina Toren (1995), the Fijian notion of land (*vanua*) is not a "frozen, timeless, mythical domain" but historical and dynamic, with inherently conflicting qualities that require constant negotiation. Given that it is capable of being transformed, the everyday "embodied sensuous experience" such as "seeing, hearing, touching, and smelling the land" provides a tenacious source of identity that continuously binds the people to the land (Toren 1995:164). These minute daily sensory actions are important because they offer quick solutions to tensions within the environment and can maintain the changing togetherness of a dynamic environment without the performance of elaborate formal rituals. While in Waitabu I observed a wide range of these "senses of place" actions, such as villagers use sounds while fishing or sing songs that recite place names and construct communal identity. Here, however, I want to focus on walking and seeing because these acts are most relevant to farming. I argue that the bodily motions of climbing and walking along the trails between gardens and seeing the gardens as images of the past and future have created an aesthetic appreciation of a holistic environment that

is embedded with emotion, identity, and a sense of continuity.

I first became attuned to the sentient aspect of the landscape from a conversation I had with farmer A2 when we were walking back from a farm site to the village in December 2012. A2 was technically not a farmer but one of the few youngsters in the village who were still pursuing secondary education and helped out in the family gardens between school terms. On our way back we were talking about Prime Minister Voreqe Bainimarama who had seized power in a military takeover in December 2006 and had later been elected to the same position in the first general election in more than eight years in September 2014. After Cyclone Tomas hit Taveuni in March 2010 the village had received a fair amount of agricultural subsidies in the form of fertilizers, taro tops, and other crop seeds. A2 told me that he understood why Bainimarama was very invested in these aids to rural agriculture because "he is afraid of the curse of the *vanua*." Here *vanua* is more than the physical land—it involves notions of community and ancestors. The idea that there will be punishments if customary protocols of the *vanua* are violated is still a prevalent belief in Fiji, which usually take the form of injury, illness, or barrenness (Pulea 1986:68) caused by wicked spirits (*tevoro or veli*) or ancestral figures (*qase liu*).

Even though they are devout Christians, the existence of these spiritual agencies in the landscape is another aspect of tension within the environment that needs to be reconciled. For example, A1 offered his perspective on this matter with regard to the sacred site Nasau:

> One day my father brought a stone from the old house foundations at Nasau back to his house in Namatiu to use, and he could not fall asleep that night. The following day he immediately returned the stone. Even when they are just stones, you still need to ask for them from the ancestors. There are many forbidden things around the old village site. You cannot throw waste there. You cannot make noise, or else there will be punishments. When we converted to Catholicism, we understood that God created everything and gave them to the people. The power of the ancestors was weakened, but we still have to respect them. [A1. Interview with Hao-Li Lin. Personal interview. Waitabu, October 31, 2012]

Fear has always been a significant emotion that infuses the Fijian landscape. According to archaeologist Robert Kuhlken, the fear of enemies was a driving factor behind the fortified villages and isolated agriculture-settlement complexes in pre-colonial Fiji (Kuhlken 1999:284). Today, the fear of curses, as exemplified by the story given above, is a very common emotional response to the environment. However, the

idea of spiritual punishment does not result in a sense of avoidance. Rather, it should be understood in a wider framework of linkages to the past and community that are manifested in physical objects and landmarks. Therefore, Nasau is a sacred site not because it is secluded or untouched, but rather due to the many ancestral reminders such as old house foundations that can still be seen and touched when people go to the place. Moreover, these constant visits also give rise to other emotions and senses.

To reach Nasau, which sits atop of a small hill very close to the village, first you pass by a small cassava garden planted by current farmers at the foot of the hill. Then you make a steep climb through waist-high wild grasses that cover a burial site where previous holders of the village chiefly title Tui Nasau and other elders were laid to rest.[6] At the top is a secondary forest of sturdy flowering trees such as *vesi* (*Intsia bijuga*), *vunimocemoce* (*Albizia saman*), and fruit trees like the cutnut and taun trees. Abandoned taro gardens can also be found under the canopy of the trees. The old stone house foundations are covered by wild ferns and vines. Small kava plots maintained by current farmers are located not too far away down the slopes. The place is a tapestry of old and new activities, wild and cultivated vegetation, resulting from human design and grooming over different historical periods. This is also a neglected space situated between the primary rainforest of the higher mountains—the subject of much contention among colonial and current conservationists and the logging companies—and the more obviously thriving commercial taro plantations and coconut groves closer to the coast. To the Waitabu villagers, this ambiguous area is very meaningful, and the picture of diverse land use and productiveness there can create strong aesthetic pleasure (Clarke 1994:26), thus generating emotions that are not just fear, but also a sense of continuity to the past and future.

Walking is essential to the aesthetic appreciation of emotion, space, and time in the landscape. In his theorization of walking, Tim Ingold has argued that landscape is not a palimpsest inscribed by cultural imprints over and over again, but rather emerges "as condensations or crystallizations of activity within a relational field" (Ingold 2004:333). In other words, it is not a passive entity that simply hosts actions, but an active one filled with senses and relationships that can be awakened through everyday activities undertaken in its domain, particularly walking. Here I am not talking about the act of walking *per se*, but the embodied movement that one makes through the landscape, allowing things and beings to emerge and be seen. Walking and seeing therefore offer a continuum through which the environment becomes "alive" and is able to literally talk and act on people.

6 There is another common burial site located at a corner inside the village. The burial site on Nasau seems to be reserved for chiefs and respected elders from the patrilineage Vunivesi.

I could not fully appreciate this until one day I was walking in the creek valley of Nasolo with A2. As we headed to another farm site, a wild red-breasted musk-parrot (*Prosopeia tabuensis,* Fijian *koki*) suddenly flew through the trees above our heads. A2 then told me that these parrots know the villagers very well and sometimes even greeted them. He suddenly yelled *koki*! in a voice that resonated through the forest, and sure enough, the parrot responded with a sharp *ka*! as it flew out of sight. This scene immediately reminded me of a story Ingold tells of a Cree hunter and a caribou, in which the hunter interpreted the animal's act of "freezing" when they spotted each other as "offering itself up" even though there were biological reasons behind this momentary stoppage (Ingold 2000:13). As Ingold later explains, the hunter's interpretation should be understood in the wider framework of a sentient environment where both life forms are connected and the feelings conveyed at the moment of encounter needed to be given form.

There are always things happening inside a landscape, and the act of walking allows them to be seen, touched, and felt. I had walked numerous times with A1, my primary teacher of Fijian environmental knowledge. We walked on muddy trails to his farm sites and carried bundles of taro back to the village, tied with the bark of candlenut tree (*Aleurites moluccanus,* Fijian *vau*) that we had stripped along the way. We wove our way through the bush where there was no passage, cut back the fast-growing weeds with machetes, and waded the shallow creeks. Each time I clumsily tried my best to keep up with his steady steps even when he traveled barefoot. It is impossible to farm in Waitabu without doing a good deal of walking. One of the most distant farm sites, Vunivulavula, is located about two kilometers from the village. And it is not just the distance that is burdensome (at least to me), but the ruggedness of the terrain. I was told that there is a farm site called Naco (see Figure 2) so deep in the mountains that even horses get tired out traveling there. As mentioned earlier, the Bouma region where Waitabu is located is known for its hilly terrain. Walking in this challenging country therefore helps forge a kind of identity that links people to the environment. A young Waitabu farmer who is with the village rugby team once told me that all the climbing and walking he did when farming was enough physical training for him to compete on the rugby field, whereas players from other villages required additional exercise.

Walking often takes people beyond their own territory. It is very common to pass through other people's plantings due to the entangled arrangement of the gardens. I am always amazed at how any Waitabu farmer can say which garden belongs to whom in a maze like Lomaniba, where more than ten gardens are crammed together without any marked boundaries. It turns out that Waitabu garden boundaries are organic and non-continuous and can be identified by just a single tree

or plant. Cultivation therefore serves as visual guidance for community members. It is also a form of public display and a testament to the farmers' diligence. As I walked in the agricultural landscape with A1 or other Waitabu farmers, I frequently heard comments directed at the gardens along the way, talking about crop maturity, weediness, or how beautiful they look. This is why when theorizing the everyday practice of walking in the city, Michel de Certeau specified the act of "passing by" as a necessary and unavoidable social act by which to familiarize oneself within a fluid space; this further demonstrates how walking and seeing are linked together (1984: 97). Through these embodied actions the individual fragmented gardens become one holistic environment, and cultivation becomes part of a wider bio-social landscape rather than a strictly personal venture.

Temporality is also a significant aspect of the landscape that can be evoked by walking and seeing. As Barbara Bender noted, "Landscape is time materialized. Or, better, landscape is time materializing: landscapes, like time, never stand still" (Bender 2002:S103). Instead of talking about broader communal or regional histories that are manifest in landmarks or place names, here I want to focus on the more intimate family histories that materialize as plants and crops in the landscape. This again can be illustrated by walks I had taken with A1 and things we saw along the way. He would often point out a plantain tree, coconut tree, hibiscus plant, or a bunch of wild taro tops to me and said that his father had planted them. The most memorable experience was five days after Cyclone Tomas had ravaged Taveuni and the food supply was running so low that Polynesian flying foxes (*Pteropus tonganus,* Fijian *beka*) were being hunted and eaten, I accompanied A1 into the forest to find wild yams his father had planted more than thirty years ago. On the trail heading down to Namatiu, he quickly made a detour and spotted a tree under which the curling and spiky vines of the wild yams emerged. Using a digging fork, he dug a hole a couple of feet deep and soon located the rhizome. This not only is a clear demonstration of how the landscape can serve as source of crop diversity, it also illustrates how the acts of walking, seeing, and digging formed a continuum that connects the person to the past within the landscape. The past does not stay buried, but can be exposed and consumed, continually sustaining the well-being of the present community.

It is not just the past that is embedded in the landscape. The not-yet-revealed future also lives there. As mentioned earlier, the way cash crops are propagated by corms and suckers presents an image of everlasting productivity. For Waitabu farmers, gardens are places where the murky future can actually be seen and calculated. Most have their own year-round cropping schedule, but they always also plant with particular ends in mind. As A1 told me, "We should always plant for a purpose. If we are only planting for food, we are not looking to the future."

When I visited his garden, he pointed out a block of taro to me and said "This is for my son's school fees for the coming term." Similarly, when I went to K1's farm, he also circled a block of taro and said that it was planted in advance for his brother's wedding. Irregular social functions such as funerals also demand presentations of taro in bundles from each household. As a result, heads of household always keep a corner of the garden for non-export taro varieties like *dalo ni Moala* to use for these customary occasions. In other words, future events are prepared in the taro garden, which serves as a safety net for both the expected and the unexpected.

Kava cultivation is also done with a similar eye to the future. In January 2011 Waitabu farmers came up with a group farming project that required each one to plant three kava plots (*puke kasa*) for the community on each of four consecutive working days. The written proposal included a detailed calculation of the profit to be earned by selling the kava plants. It stated that there were twenty-six active male farmers in the village, so over the four working days these farmers could collectively produce 26x3x4=312 kava plots. Each kava plot contained twelve kava plants. Therefore, in a year the village would cultivate 312x12=3,744 kava plants. It normally takes three years for a kava plant to be ready to be pulled. A whole kava plant with roots, stems, and leaves is called *vuna*, which would bring F$10 for a three-year-old plant, and 3,744 of them should earn the village FJ$ 37,440. If this blueprint were to be followed over three straight years, then on the fifth year the village would have a total of FJ$ 112,320 with which to build a community hall.

These calculations do not mean that Waitabu farmers have become highly rational commercial agriculturalists. On the contrary, they reflect the strength of the farmers' confidence in their land (*vanua*), that it will never fail the community and always nurture them, supporting development for their well-being. This connection further strengthens the sense of community, which is also part of the Fijian notion of land. The common acts of walking and seeing mean that all community members share in the experience of these emotions and senses. These activities connect the people and their fragmented gardens in a way that enables a holistic and meaningful environment to emerge. The Waitabu agricultural landscape thus remains intensely social and resilient to the forces of commercial agriculture.

Conclusion

"Secondary forest is always a *social* place" argues Tsing in her study of the central Meratus Mountains in Indonesia, a seemingly degraded space of human-made (or disturbed) forests, weedy and patchwork plots, abandoned farms, and backward hillbillies. She continues that "to know it is to know the history of its

flora and fauna in relation to socially situated human biographies" (Tsing 2004:190). Tsing's main argument is that this zone of "messiness," which is unintelligible to conservationists and development workers, making the powerful universal values of environmentalism and development difficult to pursue there, is in fact a space that is intensely social and lively, filled with human and non-human interactions as well as a wealth of biodiversity. More importantly, the biodiversity it preserves is not the result of protection or seclusion. On the contrary, the Meratus people have long been involved in the market economy and trade networks that extend far beyond their mountains. Through their interactions with downstream traders who demand various forest products, they have become even more aware of their rainforest's biodiversity and have developed flexible ways of responding to the changing conditions of the market (Tsing 2004:183-184).

I see many parallels between the secondary forest landscape Tsing describes and the Waitabu agricultural landscape. In particular, like the Meratus people, Waitabu villagers have long interacted with outside forces, including Christianity, the plantation economy, colonial rule, and now commercial agriculture, even though they live in a rugged and peripheral part of the island. Through these historical and contemporary processes, biodiversity has persisted in the different layers of the landscape, and although commercial agriculture has increased the practice of monoculture, other layers and neglected zones in the landscape have been able to withstand its impact. This kind of resilience can be found in many agricultural landscapes in the Pacific, where biodiversity may be increased, rather than diminished, by complex human actions (Kennedy and Clarke 2007:87).

Another thing Tsing discusses is how the awkward weediness of the central Meratus Mountains allowed the local people to evade government authorities, the spread of Islam, and the might of military violence, while keeping their lands free from conservation and development interventions and massive resource extractions. In Waitabu, I argue, the ruggedness of the terrain and the physical fragmentation that keeps gardens small on the numerous named farm sites has tempered the sweeping influence of commercial agriculture. It should be stressed that in both cases, the locals are not conspicuously resisting the forces of globalization. Instead, they are actively participating, with the Meratus people long part of the market economy and the Waitabu farmers who are reliant on cash-cropping for their livelihood. We are thus presented with a picture of tensions and contradictions: In Waitabu individual farming ventures coexist with communal group farming projects; practical calculations of cash crops and profit are complemented by a profound spiritual connection with the environment; the land (*vanua*) provides the villagers with fertility and security, as well as fear and curses. These dynamic interactions challenge

stable categories and enable us to rethink the boundaries between sustainability and unsustainability, tradition and modern, cultivated and wild.

The diverse practices, values, and sentiments laid out above are also part of the Waitabu landscape that impedes the total imposition of commercial agriculture's values and practices, but this does not fully explain why Waitabu villagers continue to be invested in them and how they remain so vibrant in the face of new opportunities and attractions that might pull the community apart. In this article I argue that the everyday acts of walking in the landscape and seeing the cultivation in the gardens are the keys to understanding how these contradictions can be reconciled. Through these attentive actions, villagers perceive their holistic environment embedded with images of the past and future, telling them that they are on the right track and doing the right thing. Achieving prosperity in the here and now properly involves ancestors, community, and development. The Waitabu landscape is a resilient one in its openness to the globalized world and its continuing ties with the communal ritual world, both of which are made possible by the persistence of farming and villagers' aspirations for prosperity.

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韌性地景：商業性農業時代下的斐濟村落農田

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當代商業性農業活動對環境造成的影響已經為許多研究所討論。在太平洋島嶼社會中，作物單一化、對購買食物的依賴、以及森林與土壤品質的惡化是常見的狀況。特別是斐濟有「花園之島」雅號的塔妙妮島（Taveuni），在肥沃的火山土壤與溫暖多雨的氣候的外衣下，其實已開始因大規模的商業芋頭外銷事業而出現相關的環境問題。同樣地在村落農田中，儘管耕作規模偏小，但由於芋頭與卡瓦胡椒等現金作物帶來的經濟收益，使得其中栽培的作物也開始以市場重視的品種為主。農民為各自家戶生計努力，在自己的農地上使用除草劑與化學肥料耕種、估算每棵作物能帶來的收入。

本文以島上一個村落為例，指出看似橫掃全島的商業性農業活動，其實並沒有摧毀地方的作物多樣性，也沒有將村民規訓成理性算計的獨立農人。在村落農田中，儘管市場品種的確為大宗，但對傳統儀式性品種的種植仍未間斷。而在村落各家戶旁的小菜園、邊界的沼澤區、以及山區森林河川谷地這些不明顯的地方，不同歷史過程中引入的作物或野生的品種也在各個角落生長著，持續提供村民食物的來源。在土地利用方面，以父系世系群為主的官方土地制度下，其實有許多不同名字且使用權具有相當彈性的土地區塊。村落的農田散佈在這些區塊中，接納鄉村複雜的人群移動。除此之外，傳統共作活動也還在進行。

我認為這些多樣性與彈性是被當地崎嶇的地形、碎裂交錯的農田、與從村落延伸到森林的連續面所包容著，使得重視效率與一致性的商業性農業事業無法順利運作。更重要的是，本文提出這些複雜多樣的生計行為與人群移動，是由村民每日在地景中上下走動與觀看的感官活動所聯繫起來，使得一

個包含過去與未來、記憶與情感的全貌環境得以浮現在村民眼前、不斷地被感知。我將之稱為一種韌性地景：它並非對全球化的反抗，而是讓村民在參與商業性農業事業之餘，仍能保持與土地、社群的連結，而這正是斐濟土地（*vanua*）一詞的精髓。

關鍵詞：斐濟，地景，商業性農業，走動與觀看，土地制度