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The History and Development of De-swiddening among the Ersu in Sichuan, China

Edwin A. Schmitt

The process of coercing or persuading farmers to transition from shifting agriculture to more sedentary agricultural practices, a process I refer to as 'de-swiddening,' has been well documented for many decades. Most often this process takes place in the political context of a state's attempt to make an agricultural system more 'legible,' as Scott (1998) has aptly described it.

In a more recent context, de-swiddening has actually been taken under the banner of environmental protection. In both instances, institutional bodies which design de-swiddening policies rarely consider its unintended consequences. In China, to prevent erosion in upland regions of the country, the Ministry of Forestry and the Ministry of Agriculture established the Sloping Land Conversion Program (SLCP) in 1998 to pay households not to cut down timber. At the local level, this has effectively created an altitudinal boundary preventing households from cutting any trees

above 2000 meters where swiddening practices would traditionally take place.

In this paper I plan to show that the policy itself was part of a historical process of the de-swiddening of various ethnic groups in Western China. Such a policy did not develop in a vacuum of knowledge but is connected to a Chinese understanding of intensified agriculture. To demonstrate this I show how the ethno-agricultural system in an Ersu Tibetan community, has been undermined by an adherence to the Chinese state's interpretation of 'scientific agriculture' over the past 80 years. Yet, I also argue that Ersu villagers engage directly with these changes as their own desire to obtain economic wealth has increased in recent decades.

Keywords: swidden, anthropology, Sichuan, Ersu, history.

Introduction

In Asia, there are a few foundational scholarly works that have examined upland farming systems that utilize swidden practices (Conklin 1957; Geertz 1963; Cairns 2007; Mukul, Byg, and Herbohn Forthcoming), but, with a few exceptions (Yin 2001; Urgenson 2010; Trac 2013), research on this topic in China is quite limited. Swiddening, an agricultural strategy of rotating fields which are allowed to go fallow for multiple years (five to 15 years or more), requiring the cutting and burning of vegetation that grows during that period, is often misinterpreted as being ecologically damaging to the soil and forest ecology as well as economically inefficient because of the need for long fallow periods (Conklin 1957). Moving beyond the efficiency debate (Boserup 1965), recent studies are now more concerned with changes occurring in communities who engage in swidden agriculture as they are influenced by and integrated within larger socio-political systems (Ellen 1982; Denevan 1992; Heckenberger 2006). Through their intrinsic hierarchical nature, states tend to impose a form of legibility on those within their political reach (Scott 1998). Within the context of upland agrarian societies, I consider this imposition of political will by the state over agricultural practices to be called de-swiddening (Scott 2009; Schmitt 2011). In Western China, de-swiddening is a historical process that has impacted a variety of cultural groups to different degrees. The purpose of this paper is to examine how the process of de-swiddening has developed in the socio-ecological system of the Ersu Tibetans of Western Sichuan. I will first consider some of the broader historical pressures that led to the eventual de-swiddening of the Ersu and then how villagers perceive agricultural change in the village up to the present. Overall this is a story of socio-political processes which drive “frontier land use changes” (Rindfuss 2007) in Western China, the implications of which crystallize in an ethnographic context.

In Western China, agricultural production processes are influenced by internal and external shifts in social and political discourse. Harrell’s rendition of the ‘Han,’ who populate the core regions of China, implementing various civilizing projects among minority ethnic groups in the periphery, provides a historical spectrum of shifting politics which has influenced concepts of cultural identity in the Southwest frontier (1995).¹ Here I also recognize that the use of a common culture, kinship and history by the Han was a means of creating an imperialistic or nationalistic unity (Harrell 2001), but I am more concerned with the way Han Chinese hegemonic power altered local knowledge of agricultural production in recent history. In this volume Gros also shows how the Chinese state’s political

discourse claims that the Dulong of Yunnan are unable to ‘properly’ manage their natural resources and agricultural practices. This has serious implications for the ‘environmental subjectivity’ of Dulong farmers. The socialization of nature through the agricultural practices of the Ersu Tibetans has been affected by the same discourse which has a historical origin in the various guises of the Chinese state. In this paper, I will explain how a changing political environment over the past 150 years has developed into the current standard for agricultural practices among the dominant Han and how the Ersu coped with this development as it was introduced into their community.

Historically speaking, the socialization of nature² has been central to the cultural identity of many of today’s ethnic minorities in China’s periphery and contrasts strongly with the cultural identity of the Han Chinese and their own socialization of non-human objects, such as agricultural products. Wang (2009) has documented quite clearly that Han Chinese often describe highland grain crops and those who consume them as being uncivilized. Such interpretations had a direct influence on the local identity of the Qiang in Beichuan County. One of the key components of China’s civilizing projects was to promote the idea that the agricultural practices of the ‘Western Tribes’ were ‘backwards’ (Yin 2001), which certainly includes swiddening systems. In the context of production it was important for the modern Chinese state to replace local knowledge in peripheral areas with the legibility and standards associated with the core’s understanding of how agriculture should be practiced (Scott 1998). As we will see though, the impact of de-swiddening is a historically contextualized negotiation of power within a given community.

Bamboo Village

Bamboo Village, the main field site of this research,³ is located in Asbestos County in Sichuan Province. It is part of Songlin Township which governs over the highlands above the Dadu River that flows through the heart of Asbestos County.⁴ Traveling from the Dadu River to Bamboo Village, one must climb 1,000 m in elevation along the Songlin River⁵ in less than 15 km. The village households are located along the base of the mountains or at the top of small rises. The valley floor was typically left to be used as plowed and furrowed cropland. These fields were primarily used to grow a mix of corn, potatoes and soybeans. Before the logging ban of 1998 (discussed below), swidden fields were located on high ridges above the village. Villagers can still denote at least five such areas and say that they would rotate their fields every year, giving each field a fallowing period of about four to five years. At an elevation

of approximately 2,000 m and with a fairly high precipitation of around 1000 mm/year (Shimian Xian Xieluo Zangzu Xiang Renmin Zhengfu 2007),⁶ the vegetation is primarily fast growing broadleaf trees, shrubs and ferns. At the beginning of the agricultural cycle, the vegetation is cut down, allowed to dry during the extremely arid months of winter and finally burned to help the return of nutrients to the rocky soil. The positioning of the homes between these two agricultural systems maximized village access to fertile land. Additionally, all of the households are positioned so that a sacred stone usually protruding from a crossbeam has an unobstructed 'path' facing the sacred mountain above the village. This 'path' connects the household to the spiritual realm of their ancestors who watch over their household and provide for good harvests each year. The local religious leader called the Shaba guides the positioning of new households in the village along with much of the spiritual, social and political direction of the village.⁷ The Shaba is responsible for the management of ceremonies and celebrations, such as Guzazi,⁸ and their relationship to agricultural practices.

The village is populated by two lineages of Ersu heritage, the Huang and the Wang clans. The Huang's were the first to arrive and according to local mythology learned to farm from the previous residents of the valley. The swidden practices used at the time encouraged the original residents to migrate away but the Huang's were determined to settle more permanently due to their connection with the local sacred mountain. The Huang clan has resided in the village for at least 18 generations. The Wang clan arrived after the Huang clan and according to local myth they were allowed to stay and farm the local land after the Wang Shaba performed a series of rituals which drained a 'lake'⁹ thereby providing extra land for the whole community. It is clear that, once the two clans were living together, land on the valley floor and in the swidden fields was regulated according to lineage relations, which were overseen by the Shaba. Eventually, labor sharing crossed lineage lines and intermarriage became quite common.

Ersu Historical Context

The Ersu are speakers of a Southern Qiangic Language (Yu 2012) that have resided within the culturally diverse Tibetan-Yi Corridor for many centuries (Li 2007). Wang Ming-ke has described this region as the "ecological frontier of the Han Chinese" (1999). Most of the ethnic groups which have passed through this region at some point have adapted to the mountainous environment by becoming swidden farmers and/or pastoralists. Livelihood strategies for those living in this region were far from permanent as their cultural foundations allowed them to shift their primary

mode of production from intensive horticulture to livestock herding depending on the environment into which they could migrate.

Towards the beginning of the eighteenth century, the Chinese empire began to take great interest in this region due to a shift in their political relationship with Tibet and Mongolia (Herman 1993; Dai 2009). In 1711, a member of the Wang clan was officially designated as the Songlindi Tusi¹⁰ by the Imperial Court (Ma and Sun 1968). Afterwards, the Songlindi Tusi, which governed over Bamboo Village, was responsible for administering the primarily economic activity of the households in the region. I was told that during this era occasionally there were land claim issues between the Huang and Wang clans. Yet these issues were resolved locally under the watchful eye of the Tusi. While some of the crops grown in the region were now needed to pay taxes to the Tusi, the actual land itself was still controlled by an Ersu clan.

This system of governance did not necessarily include the local Han Chinese who lived in the lowlands of the Dadu River Valley. As the region became further integrated into the Qing Empire, more Chinese families began to move into the valley. In these areas, landlord ownership and tenant cultivation was quite common while taxes were generally paid by the landlords to the local Qing magistrates. Eventually, these families began to migrate into the Songlin River Valley. Several informants mentioned that some of the Han families in the lower Songlin Valley have been farming these lands for well over one hundred years, while the area was still technically under the control of the Tusi. When visiting the region in the 1870s, Baber, a British military explorer intent on mapping trade routes from India to China, was told that the migration of Han farmers into the Songlin River Valley was fairly recent (Baber 1882). It is somewhat unclear though if the Tusi actually collected taxes from the Han in their region of governance or if farmers simply paid their local Han landlord. It is quite likely that most of these farmers were purposely evading taxes and so little was collected from them at all.

Additionally, as mentioned above, the Ersu farmed corn, potatoes and soybeans on the valley floor. According to local farmers, these were typically intercropped together. Harvests were diversified to protect them from possible crop shortfalls due to pest infestations, disease or climatic events. Around the household women would raise chickens and pigs which they fed corn and other plants weeded out of their fields. Manure from these animals was used as nightsoil for fertilization in the fields. The main source of taxes was paid in either buckwheat or corn grains since rice, a common form of payment for taxes in China, could not grow in the Songlin Valley.

By comparison, the Han farmers that lived in the Dadu River Valley were primarily rice farmers and harvests of rice were the main form of tax paid to local Qing Dynasty magistrates. Many grew a variety of vegetables for self-consumption and some households would plant corn on hillsides as feedstock for their chickens and pigs. Potatoes and soybeans were also common subsistence crops for Han farmers that lived within tributary valleys of the Dadu. The Han have never participated in swidden farming in these valleys and really did not have a set of forest management practices. Most of the trees on either side of the Dadu River had been harvested in multiple cuttings according to imperial decree at one time or another (Menzies 1994). As local magistrates during the Republican Era (1911-1949) gained a stronger foothold in the region, Han farmers simply became more preoccupied with monocropping rice to pay taxes.

Agricultural Intensification and Collapse

Two important events did take place during the Republican Era. First the Tusi system was abolished¹¹ making those of the Wang lineage, who were related to the Tusi, a bit weaker in the village hierarchy. The Tusi lived closer to the Dadu River and was more vulnerable to the encroaching power of the Republican government. Additionally, the Republican government in Sichuan set up a small military post at the confluence of the Dadu and Songlin Rivers. This effectively sent more Han Chinese further upland along the Songlin River, establishing households that are still present today. One such Han Chinese village, today known as the first Production Brigade, is only two km downstream of Bamboo Village. These households brought with them their established understanding of monocropped rice farming. However, rice could not grow at this elevation in the rocky soil and would have required serious terracing due to the slope of the valley floor. Instead, the Han farmers began to monocrop potatoes and corn in neat orderly rows; a stark contrast to what the Han considered the 'disorderly and wasteful' intercropping and swiddening practices of the Ersu. Additionally, timber harvesting began in earnest for the first time in Songlin Valley. Such activity likely relegated Ersu swidden practices to a more limited range.

As more Han farmers began to move into the region in the early 1940s, it was the hope of the Republic to integrate the periphery into the agrarian economy. Additionally, officials in Sichuan's administrative capital of Chengdu began to call for the freedom of "farmers from the bonds of imperialism and poverty" (Zhongguo Nongmin Yinhang 1976: 765), which in the region surrounding Bamboo Village

was seen as the result of the centuries long relationship between the Tusi and the old Qing Empire. Introducing scientific agriculture to farmers was considered to be part of 'freeing' locals from hardship since swidden agriculture was viewed as backward and inefficient. At the same time, the Republican government was also determined to unite the country under the auspices of a *zhonghua minzu* (a singular Chinese nation)¹² based on the old boundaries of the Qing Dynasty. However, swiddening would have been antithetical to such a discourse since it was not a form of agriculture with which the Han Chinese¹³ could identify. Thus scientific agriculture based on intense monocropping, heavy fertilization and field rotation was praised for its ability to increase yields. Such a discourse also doubled as encouragement for those on the 'ecological frontier' to identify more closely with a Han Chinese ethno-agricultural system. Thus, in the lead up to the rise of the Chinese Communist Party, farmers in Bamboo Village began to be influenced not only by a new political and economic system, but also a new knowledge base of ecological processes that was previously foreign to them.

Asbestos County was established within the People's Republic of China in 1951, which resulted in rapid changes to the agricultural system. At that time, the extraction of asbestos was by far the most pressing matter to the newly formed county (Shimian Xian Difangzhi Bianzuan Weiyuanhui¹⁴ 1999). Initially, the collectivization of agriculture and industry in the Songlin Valley proceeded slowly. According to local government documents, before 1958 very few of the ethnic minority residents of the county were incorporated into the experimental production units (XLXZ 2007: 38-39). By 1956 the Ersu Shabas had organized their local villages into 'mutual aid teams,' which really meant that they were supposed to provide reciprocal labor without charge. In other words, in terms of the social relationships of agricultural production they were essentially allowed to preserve the status quo. A great deal changed in 1958 when the wave of Great Leap Forward propaganda began to reach even the remote communes of the Songlin River Valley. It then became imperative for all in the villages to become a part of the nationwide system of production. In 1958, land that had been previously owned and managed by individual households was collectivized and farmed by the entire work unit. During an interview one local resident explained to me:

We still farmed the same land; the only real difference was the organization. Since it was a collective we all put labor into each of the land parcels and the harvest was distributed amongst those in the production team.

At the time he was the vice production team leader, which meant he was not responsible for farming but organized village labor to farm all of the village land.

The system of payouts and incentives that was established for the production brigades at this time gradually became more organized. In 1960, everyone initially ate together in the village kitchen. The gongfen system¹⁵ (work-point system) was still not quite set but a portion of the harvests were reserved specifically for supplying the kitchens. The amount of the harvest set aside for subsistence purposes was a rate that was determined by the local township. The rest of the harvest was then sent to the county and redistributed to the industrial workers in the mines and processing plants. All of the agricultural work was done in teams including the swiddening on the mountain ridges and the planting of corn and potatoes on the valley floor. For the first few years of the township cooperative's existence the main focus was corn production; that was until 1961 when the effects of the famine began to be felt.

As with other regions of the country (Yang 2012), monocropping must have had disastrous impacts on the quality of the soil in the region. As I have noted above, the mountain ridge and valley floor agricultural systems were both complex and diverse. Most of these characteristics changed very little during the Republican Era. However, what was seen in Songlin at the beginning of the Great Leap Forward could be described as a battle between two crops that had become ecologically resilient in the local environment (corn and buckwheat) competing with the sudden drastic increase of a crop that local farmers typically grow only at lower elevations (soybeans). This battle played out quite dramatically in 1958-1963 with wild fluctuations in the total area sown with these three crops.¹⁶ As the cooperatives came together it was 'scientifically' determined that 'traditional' swidden farming practices did not produce at the intensity needed to feed the quickly industrializing population in Asbestos County.¹⁷ Thus people were 'encouraged' by their communes to spend more of their time on intensifying their agricultural output in terms of corn and soybeans through monocropping. Yields for all three crops were erratic from one year to the next as the nutrients of the valley soils attempted to recover from the intensification that was needed to keep pace with national expectations and decreases in labor inputs. It was not until 1963 that crop yields and total area of the three crops started to stabilize. While morbidity rates were higher than normal, likely due to starvation, and there was a steady decrease in total population of the township,¹⁸ the impact of the Great Leap Forward on Bamboo Village would be considered 'minor' in comparison to some of the

results of the Great Famine in other parts of the country (Yang 1996, Yang 2012).

Starvation is something that should never be truly classified as a minor incident. While the hardship of the Great Famine is still present in the minds of those who lived through it, the system was eventually able to right itself. In 1961, the county implemented a series of welfare support projects providing food and other goods to the commune. Additionally, in 1963 they decreased the local grain tax by 49 percent and implemented a more rigid system of meal coupons and work incentives. Many of the Ersu residents in Bamboo Village were able to easily describe the system: each adult in the household was awarded 10 points, which could be used to purchase food and goods supplied by the collective. Sometimes women might be awarded less if they were taking care of young children. Children who were old enough to work were awarded anywhere from one to three points. These points guaranteed the household a share of the collective's harvest. After the harvest covered state taxes and the pay-in to the collective, the rest was divided up by the members of the collective as 70 percent to individuals, 20 percent to cover work point incentives, and 10 percent for individual fertilizer usage (XLXZ 2007).

One last important set of events happened during the pre-reform era, which likely had a direct impact on the socio-ecological structure of agriculture in the Songlin Valley. In 1955, a mass harvesting of the forest, including most of the trees on the local sacred mountain, decimated the ecological stability of the area surrounding Bamboo Village. A strong taboo against even touching a few specific trees allowed them to be spared during this period. Even so, many elders explained to me that this harvest had stirred up ghosts and insulted the ancestors. Beyond these cultural implications, the clear cutting of the surrounding forest also freed up certain parts of the land that was originally used in rotational swidden activities. Locals agreed to cultivate these lands with soybeans starting in 1958. This decision does fall into line with local understanding because they would have considered it difficult to grow healthy upland grains, such as buckwheat, without the burning of felled trees during the swiddening process. A second harvesting of the forestlands further up the mountain valley occurred during the Cultural Revolution and a third at the beginning of the 1980s with the opening of the market system. There is no doubt that the destruction of these forests had a serious impact on the ecology of the valley as villagers even today still say that the cause of flooding and subsequent damage to fields is due to the cutting of the forest.

Introduction of the Market and Normalization of Scientific Agricultural Practices

After 1978, the economic reforms in China slowly began to impact the farmers of Bamboo Village. Agricultural market reforms were first introduced through a kind of semi-market-based policy called the Household Responsibility System (HRS). As Robert Ash notes, the initial purpose of this institution was two-tiered: to provide state support and subsidies that would encourage the positive aspects of collective production while providing micro-based incentives at the household level to emphasize the benefits of decentralized agricultural organization (Ash 2001: 80).

During this period of market liberalization, two important interrelated issues were developing in the countryside of West China. The first was the reform of the bureaucratic system from party controlled organs to a more decentralized system of governance. But contradictory to the logic of decentralizing reforms, the central government simultaneously decided that it would require a larger percentage of the taxes collected from around the country, leaving the local governing agencies with minimal economic resources to support their social welfare policies (Chung 2001). Thus towards the close of the twentieth century, geographically uneven economic development progressed in the country that resulted in serious levels of inequity. Eastern provinces were in a better position to weather the negative impacts of decentralization as they were able to attract foreign investment and were closer to the core regions of the nation where the bulk of the country's resources were amassed due to central economic development policy bias (Wang and Hu 1999). These 'decentralizing' shifts in social governance have increased economic dependence in rural regions on local development which has led to some very close relationships between government officials and entrepreneurs (Oi 1999).

The second reform that had a lasting impact on the countryside revolves around land reform policy. Following the introduction of the HRS, the Chinese government in 1984 also signed into existence the Land Contracting Law. While this helped redefine some of the land tenure issues associated with the HRS, it also allowed for an exceptional amount of interpretation and variation in governance strategies (Lohmar 2006). Two major land-tenure security issues arise from the vague nature of this law. The first issue regards the short time period rural farmers are contracted to farm the land. The land was originally leased for only a few years at a time, but now those leases have been extended to at least 30-year contracts (Ding 2007). New privatization laws have been recently signed by the government but it is still unclear if these laws will even-

tually extend to rural farmland (Lee 2010).¹⁹ The second issue is that, although they have been encouraged by the central government not to do so until the end of the 15 or 30-year lease cycles, technically speaking, land can be reallocated by village administrators how and when they see fit (Krusekopf 2002). The general result is that a lack of secure land-tenure rights has encouraged farmers to maximize their output without investing for long-term resource management. This contrasts quite a bit with the long-term commitment found in swiddening cycles where land tenure is socially regulated in perpetuity.

Moreover, with a lack of resources available to support social programs in the countryside, farmers were intent on maximizing their output of agricultural goods for sale on the market to bring an income to their household. Initially for the first two decades of the reforms when prices were held artificially low, agriculture as a commodity was not much of an option for most villagers in Songlin Township. Instead, male household heads began to search for wage labor work outside of the village. Mothers who stayed behind in the village gradually became more interested in commodified agriculture as shifting to market crops has allowed them to participate in the process of economic development without having to leave their family behind.

Most of the Ersu farmers of Bamboo Village who have already decided to start growing market crops are simply following in the steps of the nearby Han Chinese villages. The farmers learn about planting, upkeep and harvesting procedures directly from county officials and from occasional conversations with farmers from the 1st Production Brigade. From what I observed, most villagers are currently only growing cabbages, green peppers, and carrots to be sold on the market. It is becoming well known in Bamboo Village that these vegetables can help a household earn income. As Auntie Su told me: "Some households do not have to go find wage-labor jobs, their income from market crops is already enough to support them." Thus, some people are already completely enmeshed in the market system and the village as a whole will become even more interconnected with the market in the coming years.²⁰

A recent forestry policy also served to further integrate the villagers with the market and placed increased strain on their agricultural land. In 1999, the Sloping Land Conversion Program (SLCP), a national reforestation campaign to combat severe flooding that subsidized farmers to convert their fields above 2,000 m to forested land, was introduced to Asbestos County. Officials in Asbestos County were determined to ensure that the policy was upheld throughout the countryside to pay their due diligence for flood control. This has resulted in a de facto ban on the cutting of



Figure 1. Multicropped Field.

(Edwin Schmitt, 2010)

trees along the ridgelines for any purpose. Thus, one of the many reasons the Ersu of Bamboo Village have completely given up swiddening is that they have lost control over farming on the ridgelines. Those areas are now fallow and deciduous forestland has indeed returned. This shrinkage of arable land has further encouraged female members of the household to intensify the land that has been allocated to them on the valley floor. Conversely, male members of the household have had their labor power freed up as they are no longer required to cut and burn swidden fields.

These three political changes—decreasing support for social services, lack of strong land tenure rights, and the restriction of land above 2,000 m from being sown with crops—which arose in the context of a market-based national discourse of uneven development, compelled villagers to intensify their agricultural production on the valley floor through monocropping and multiple plantings during the growing season. From a governance perspective, there are three main benefits of monocropping. First, its ability to be successfully implemented and justified based off of simple scientific models. Second, the fact that it makes the standardization of agricultural practices quite easy. Finally, and most importantly, that it simplifies accounting procedures for the calculation of harvest outputs and yield.

Despite more than 60 years of state propaganda and policy promoting monocropping, I still found a few Ersu farmers who did utilize a multicropping system. I would like to highlight this point by describing a brief encounter during a visit to another Ersu village, White Road Village. Here I discovered two contrasting fields, as seen in Figures 1 and 2, separated only by a narrow cement pathway. This



Figure 2. Monocropped Field.

(Edwin Schmitt, 2010)

particular instance of multicropping was striking as it contrasted so starkly with the surrounding fields of monocropped maize.

The texture and sight of the soil in these two fields was completely different. As it turned out, I was staying with the owner of the multicropped field and he explained:

Oh yes [multicropping] is much better for the soil, and I do not use any pesticides or chemical fertilizer in my fields at all. Every year I plant using the same method, multicropping potatoes, soybeans and maize together,²¹ and the results are always quite good. This is a tradition for the Ersu; we have never been monocroppers.

I discovered that there was a larger number of insecticide, herbicide and chemical fertilizer bags littering the ground surrounding the monocropped fields. I also noticed that the usage of Green Revolution products was proportionally higher in White Road Village compared to those used in Bamboo Village. There could be ecological reasons for this, as this village is located at a higher elevation and sits on a hilltop rather than in the midst of a mountain valley like Bamboo Village. However, I also found that social and cultural cohesion was not as strong in White Road Village, which could be related to their lack of interest in traditional agricultural methods. There are no living Shabas left in White Road Village and many of the younger residents have already moved into the county seat, leaving elderly household members behind in the village. The family I was staying with, and owner of one of the only multicropped fields I saw in White Road Village, identified much more readily with its Ersu heritage²² than the other households neighboring it. The farmers I talked to in White Road Village identify more closely with the Han Chinese in terms of their agricultural processes, meaning that they generally prefer valley or lowland crops and find short-term intensive monocropping strategies to be more effective practices. This preference for monocropping in White Road Village contrasts quite a bit with agricultural strategies found in Bamboo Village, where it is still common for many farmers to use multicropping strategies.

While monocropping practices may have been more prevalent in White Road Village, it also became apparent that single plantings of fields in one growing season were not common in any of the Ersu villages I visited. In contrast to the shift to monocropping, the shift to multiple-plantings is not related to governance but rather to the new way Ersu farmers have begun to interpret their relationship with agricultural practices. The new desire to intensify agricultural output is related to 'scientific' discourses from the collective period where farmers were encouraged to

push the limits of their planting and harvesting schedules. From this perspective, it only made 'rational' sense to have more than one planting in each of the fields per year. This of course required more labor to be focused on individual fields for any given year. Moreover, as the soil was strained from over-production, such strategies also required more intensive inputs from chemical fertilizers. According to the farmers in Bamboo Village, household organic fertilizers would not have been able to keep up with the demand for two plantings per year.

Even before the logging ban and the introduction of the Sloping Land Conversion Program (SLCP) in 1998, with more labor needed to focus on the 'scientific' forms of agriculture in the valley bottom, there was very little time left available to allocate toward the continuation of swiddening practices. Even so, as many studies have shown, in communities with sparse populations the ratio of labor inputs per unit of agricultural output from swiddening is generally considered lower and ecologically more sustainable than more sedentary, intensive practices (Conklin 1957; Geertz 1963; Yin 2001; Grist, Menz, and Nelson 2007; Menzies and Tapp 2007). This could explain why those practices lasted in the community as long as they did. It is important to note that even though more sedentary crops such as corn, potatoes, and soybeans had been integrated into the Ersu agricultural system more than 300 years ago, they did not replace the highland grains grown on swidden patches.

While collectivization may have begun the trend away from swiddening practices, ultimately the death knell for swiddening throughout Western China came in 1998 with the introduction of the SLCP, effectively preventing the further use of such methods. Yet, to gain a more grounded perspective on these changes, in my survey of village households I asked residents why they stopped growing traditional highland grains. Some gave the answer that swiddening is too laborious or even would explain that it is bad for the environment, which sounds very much like the modern scientific agricultural discourse that is critical of swiddening practices. The most common response was that these crops do not have economic value on the market. While all Ersu farmers explained to me that highland grains play an important role within Ersu culture, they still were not interested in growing them because now they wanted to participate in a modern form of commercial agriculture. Thus, swiddening and highland grains are neither considered 'modern' nor are they considered a source of income for the household.

From one perspective, the Ersu have been pressured into this commodified system because of hierarchical power structures within the Chinese system. The core/periphery

relationships in China have certainly influenced the way policy is developed to further enfold those in the remote rural regions of the country within the authority and sovereignty of the state. The vegetable site project reflects that dynamic quite well. The agricultural bureau provides the seeds and the knowledge for growing the market vegetables, and leaders from Han Chinese villages help to provide access to larger markets now that the Provincial government has built a system of more stable transport. However, it is important to keep in mind that ultimately the program is voluntary. Some Ersu households even feel reluctant to participate because they feel they do not have the cultural and social capital to effectively market their own crops. Even so, as demonstrated above, the existence of this system of commodified agriculture has only furthered the de-swiddening of agricultural practices among the Ersu.

Conclusion

Swidden farming, because of its long cycles, formlessness and mobility, is extremely difficult to govern. As I have shown above, the land was traditionally shared amongst a lineage group who had not only usufruct rights to the land, or the right to gain benefit from the land, but also the abuse rights to the land, or the right to transfer ownership of the land as they saw fit. Most decisions of individual plots would have been negotiated amongst the male household heads and sanctified via rituals performed by the local Shaba when new fields were opened. Even when abuse rights fell under the control of the Tusi and he began to collect taxes in the name of the imperial system, he still was forced to negotiate with the household heads. This is because they were all connected to the two clans through intermarriage. The household heads were closely connected to the Shabas who were essential for performing rituals that were crucial to ensuring the continued renewal of the Tusi's position of power within the clan at ceremonies such as Guzazi. Without the support of the Shaba, the Tusi's position in society would not have garnered the legitimacy needed to govern. The mediating power of the Shaba not only prevented excessive exploitation by the Tusi, but it also prevented individual farmers from overusing the sparse land resources by ensuring that households timed their harvests according to the local ritual schedule (i.e. preventing them from having multiple plantings per year). Such practices are another example of a local socially regulated system of resource management which contradicts the argument of Garrett Hardin (Hardin 1968) who claimed that in order to prevent the tragedy of the commons' governments either had to enforce a formal system of private property that would ensure these rights to individuals or that these rights had to be nationalized and

then organized through a command and control economy. Before 1949, Ersu land-use rights were not exactly formally or informally vested into individuals, but when land was nationalized under a command and control economy the system collapsed. Studies from around the world have documented that locally defined rules of usage which are well adapted to socio-ecological systems can provide effective prevention of degradation to the commons (Ostrom 1990; Jones 2003). The traditional swidden farming found in China which vested land rights in lineage structures would fit well into such a category.

Over the last three decades, political and social discourse in the People's Republic of China has certainly undergone rapid changes. These changes have had direct economic and political consequences for ethnic border areas in this region of the Himalayas. One central convention from the pre-Reform-Era ideological system that has a direct impact on life in the highlands remains firmly unchallenged: starting with the collectivization of land in 1949, it is generally accepted that the People (read: the State) hold ownership rights to the land. While usufruct rights to the land were officially granted with the beginning of the Household Responsibility System, allowing farmers to engage more fully in a system of commercial exchange, abuse rights have not been re-established in the countryside (Oi 1989; Lee 2010). Historically speaking, 'commercial exchanges' are not necessarily all that exotic to these remote highlands (Schmitt 2011). The central difference since 1949 lies in the ownership of the means of production for agriculturalists. Moreover, since 1978, land was reallocated (in some cases more than once) and 30-year leases issued to households according to the whim of the government, often with no bearing on the historical or social ties which connected those households and lineages to specific plots of land. In places like Bamboo Village, the swidden system itself had never really fallen under such political constraints.

Thus, swidden farming represents a much deeper symbolic threat to the Chinese economic system. Swidden farming highlights a contradiction both in the communist ideology of the perceived need to nationalize ownership of land as well as the notion of privatized land ownership which was at the heart of the Republican regime. It highlights the fact that the right to use or sell land or the products that come from that land is not a natural right given and protected by the sovereignty of a government entity at all but is socially constructed and can easily be recognized and managed at the local level. For instance, in the past, individual households using social pressure through their clan connections had the ability to negotiate within the local discourse, whether it be dominated by the Shaba or the Tusi, to determine if swidden land should be opened or

closed. Therefore swidden farming symbolized an affront to the normalization of nationalized governance over land utilization and scientific agricultural practices. To be clear, swiddening is not an affront to individual planners or bureaucrats but to the Chinese system of agricultural production and governance which has been in use for centuries. Thus the process of de-swiddening is not placed in motion by individuals in the Department of Agriculture, but is historically contextualized as a method of changing 'backward' agricultural practices of non-Han villagers into practices which support and are accepted by a modern science-driven nation-state.

As I have shown, the process of de-swiddening has its roots in the introduction of scientific agriculture and the gradual wearing down of traditional agricultural knowledge. However, because of the strong cultural and social ties associated with swidden practices, some groups are unwilling to entirely give up that way of life. According to Chinese authorities, the floods of 1998 provided them with scientific reasoning that the harvesting of crops on forestlands had negative impacts for all of society. As Schmidt et al. have shown (2011), there is no causal relationship between highland forestry and agricultural practices and siltation which has been deemed the culprit of the floods. Yet rather than issuing leases of forest land²³ to be managed by swidden farmers, all forested land above a certain elevation was restricted from any kind of cutting or harvesting according to the SLCP. Moreover, because of the connection of deforestation to flooding, villagers began to feel a moral responsibility to support the de-swiddening discourse that had been developing long before 1998. This development required a form of discipline which has effectively normalized such policies in everyday practice but also introduced economic incentives to promote adherence to the policies (Trac 2011). The disciplinary part came from the cadres who were under pressure to enforce the new policy as part of their job security and utilized the moral responsibility villagers felt towards the prevention of natural disasters to promote de-swiddening further. Additionally, providing economic incentives through the SLCP has further played into villager's desires to more fully participate in the market economy.

In the end, two main processes have ensured the progression of de-swiddening in Bamboo Village. First, scientific agriculture has played a strong role in changing the way farmers relate to and understand their agricultural and ecological environment. Secondly, as local government services were cut during the 1990s, villagers' dependence on the market economy required that all of their laboring efforts were directed at making money for household security. Both of these discourses were then united

through government intervention to create the SLCP which has effectively localized the belief that swiddening is ecologically unstable, economically inefficient and culturally 'backward.' In such a context the de-swiddening of Bamboo Village highlights the relationship between agricultural practices and social, ecological and cultural change. Additionally, the shift to multiple plantings and monocropping in single fields as a result of deswiddening brings to light the way politics influences and shapes our agricultural practices. However, as shown above, in certain contexts older agricultural practices such as multicropping persist. Moreover, the decision to implement multiple plantings per year has been based on the *individual* desire to engage with the collective and market economies. Thus, there is no reason for us to assume that de-swiddening is a wholly encompassing and irreversible process. In other words, it is crucial to recognize de-swiddening as a hierarchical political discourse while simultaneously allowing for responses of resistance and acceptance by individuals affected by that discourse. It is through this lens that we can understand how the agricultural practices of the Ersu, even those of the so-called scientific or 'modern' variety, will be re-invested with a new social and cultural meaning of their own choosing.

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Endnotes

1. It is still important to note that today the Han also inhabit the periphery and in some cases they are in fact peripheralized within their local communities. Both Harrell (2001: Chapter 14) and Hansen (2005) have examined these issues in greater detail.
2. By the socialization of nature I mean the way that the Ersu perceive non-human objects and how they integrate relationships with the non-human into their everyday lives.
3. For contrastive purposes, I will also draw very briefly from fieldwork experience in White Road Village, a nearby natural village with a small Ersu population. The process of deswiddening is identical in both villages but was accelerated in White Road Village after 1978, which is the subject of a forthcoming paper.
4. Asbestos County is a direct translation. The county was established due to the large-scale asbestos mining operations in the region. Both Songlin Township and Bamboo Village, as well as the names of individuals, are pseudonyms used to ensure the anonymity of my informants.
5. A small tributary of the Dadu River which eventually becomes a small stream flowing through the middle of Bamboo Village.
6. Here after XLXZ.
7. See Schmitt (2011) and Li (2007) for more details on the Shaba.
8. The Ersu New Year celebration, for details see Schmitt (2011).
9. As far as can be determined a lake never existed in this area so it is unclear what this myth may represent.
10. *Tusi* 土司, essentially a local lineage that was recognized by the Emperor as being the local extension of imperial rule. For more on the *tusi* see Took (2005), Herman (1997) and Gong (1992).
11. While the *tusi* system was abolished by the Republican government, both the Kuomintang (KMT) and the CCP (Chinese Communist Party) continued to use local appointees to help them implement policy reforms. For an example in Southern Sichuan see Wellens (2010).
12. *Zhonghua minzu* 中华民族 This might be translated as 'Chinese Nationality'. It is important to recognize though that for various political reasons the concept of *minzu* is terribly difficult to translate. While the term is difficult to separate from a Western concept of ethnicity, it is most often considered to be the Chinese translation of nationality. Moreover, *zhonghua* does not constitute a single *minzu* but rather is an assemblage of people who all supposedly have a single historical origin. See Leibold (2007) and Mullaney (2011) for an in-depth discussion of these issues.
13. The dominant ethnic group within the *zhonghua minzu* identity. The 'Han' ethnic classification is a fairly recent construction by the Chinese state which has been well outlined by Mullaney et al. (2012).
14. Hereafter SMXZ.
15. *Gongzuo zhidu* 工分制度, otherwise known as a work point system which allowed workers to accumulate points in return for goods and services.
16. For detailed data analysis and figures see Schmitt 2011: Appendix A. It should be noted though that land measurements for buckwheat fields must have been estimates, as officials explained to me that it was extremely difficult to know the precise size of swidden fields due to their transitory and illegible nature.
17. All of the Ersu farmers I talked with used the dichotomy of "chuantong" (traditional) and "kexue" (scientific) to describe what they saw as two different types of agricultural practices and could trace the beginnings of this dichotomy to the Great Leap Forward. Yet, I think it is important to recognize that their use of this dichotomy is the result of their negotiation with many of the discourses introduced to the community that have been discussed in this section.

18. Number of households in township changed from 3025 in 1960 to 2927 in 1963 although data for outmigration is not available for 1961-1963 (XLXZ 2007) so these numbers, as well as most aggregated data in China, must be considered with a bit of caution.

19. As of this writing (November 20, 2013), it does seem possible that a great deal of changes will soon be taking place following the end of the Third Plenary Session of the 18th CPC Central Committee. Some of these changes have already begun to take place; for instance, in Bamboo Village a large proportion of land has been leased for 30 years by one Ersu farmer from the neighboring White Road village.

20. See Schmitt (2011) for more detailed discussions of commodification and its impacts on Bamboo Village.

21. The only crop which the local government does not report acreage for is potatoes (XLXZ 2007). I can't help but wonder if this is because the bulk of potato plants are multicropped with other crops, making it difficult (i.e. non-legible) to record the total cultivated area.

22. The father of the household was the head of the township cultural bureau and the mother of the household was born and raised in Bamboo Village.

23. Interestingly, I know of areas where leases of forest land started to be issued experimentally in 2009 in parts of Western Sichuan but it is unclear if that will extend throughout the province or the nation.

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