A Review of Derung History, Society, and Culture

Minhua Yan

June 22, 2024

Introduction

The Derung are an ethnic group living at the border of China and Myanmar. I chose the Chinese Derung living in Derungjiang Xiang[1], Gongshan County, Nujiang State, Yunnan Province in southwest China to study how norms are maintained and how they change, because Chinese Derung people have experienced recent market integration events. These market integration events have introduced new ecological, economic, and social pressure on the Chinese Derung and the Derung norms may change as a result. Given that any new norm not only has to replace the old norm that governed behaviors in the same context, but also fit into the more general socio-cultural environment, it is important to build a holistic view of Derung society and culture. Here, I review the ethnographic information about Chinese Derung living in the Derung Valley, focusing on both traditional lifestyles and modern changes, to provide background for the Derung co-farming division norm. The discussion on Derung living in Myanmar will be brief because there is insufficient work on the Myanmar Derung and my fieldwork does not involve the region.

Modern and Historical Politics of Derung

Derung as an independent nationality

The "Derung" are also known as "Dulong", "Drung", "T'rung" "Tvrung" and "Qiu". In early English and French writings, the group name was also written as "Tourung", "Taron", "Tarong" or "Trun" (Gros, 2004). The Derung were recognized as an independent minority nationality (Mandarin: shaoshu minzu) in the nationality identification project carried out in the 1950s. The status of Derung as an independent nationality, and as the nationality with the smallest population size in China, lead to substantial attention from the PRC government and consequently, dramatic social changes from 1950 up to the present. I will start by introducing how Derung gained their status as a nationality.

Many believe that the identification and naming of Derung in the nationality identification project resulted from the meeting between KONG Zhiqing, the Derung's self-elected civilian district major in the 1950s, and ZHOU Enlai, the prime minister of PRC at the time. KONG Zhiqing documented this interaction (Kong, 1999):

> On Jan. 4, 1952, ZHOU Enlai and other PRC officials met with Chinese minority nationalities' representatives at the central nationality committee extended meeting in Beijing. ZHOU Enlai kindly shook hands with every representative and asked them what their names were, where they came from, and what nationality they belonged to. When Prime Minister Zhou came to me, I was so excited that my heart was jumping out of my chest. I held Prime Minister Zhou's hand and said, "My name is KONG Zhiqing. I came from the most distant part of Yunnan, Derungjiang (Derung River). Our nationality used to be called 'Qiuzi'. We call ourselves 'Derung'." Upon hearing this, Prime Minister Zhou said to the southwest department director, WANG Weizhou, who was next to him, "WANG, remember, the nationalities' names should be based on what they call themselves, not what other nationalities call them." At that time, I teared up from excitement, because after this meeting, our nationality was officially identified as the Derung nationality. This is not just another nationality identification. It represents the ending of Derung people's history

[1] A "Xiang" is a Chinese administrative unit below a county, above a village and smaller than a city.

of getting discriminated, and shows that we have officially become an equal member of our country's family of nationalities.

The Derung people saw the recognition and naming of their group as a result of their desire for this outcome and its communication to government officials. From the government's perspective, however, the people's desires were probably only one of the many elements that were considered in the nationality identification project. After all, more than 400 nationalities were registered at the beginning of the nationality identification project, but only 56 were eventually recognized. From historical records, it seems that the identification of Chinese Derung as an independent nationality was at least partially due to the fact that previous governors and other nationalities all recognized Derung ("Qiu") as an independent unit (Gros, 2004; He, 2011). Therefore, the current political status of the Chinese Derung resulted from their past political status.

Historical political influences

Because the Derung did not have a writing system and lived in relative isolation, there are few historical records on them. The Derung are first mentioned in "Yuan YiTong Zhi", written in 1286 A.C., but there was no description of their society or culture (YANG Yan, 2017). Therefore, there is no way to tell whether the people bearing the same exonym were the ancestors of the current Chinese Derung. Some informants in the 1950s reported that their clan came to their current residence location 13 generations ago. This testimonial coincides with the documents on "Qiu" from the Qing Dynasty, the first written in 1735 (Yang, 2017). Therefore, it is safe to say that modern Chinese Derung has a history of at least about 300 years, and maybe 750 years.

According to LI Ya-feng (Li, 2018), the political forces acting on Derung people before the Republic of China's government established direct governance in 1912 mainly came from chiefs from other ethnic groups that were appointed by ancient Chinese dynasties, and from Lamaist churches. The details, however, are often missing. The first record of politics touching the Derung Valley is associated with a war. The Mu family, ethnically Nakhi, had been hereditary Lijiang Tuzhifu (local prefecture administrators) since 1253 (FitzGerald and Rock, 1949). Sometime between 1573-1620, they won a war with Tibetan chiefs, conquered Weixi and then went further to arrive in upstream Nu Valley and upstream Derung Valley. The Mu Tuzhifu then left Mu-surnamed hereditary military directors behind to govern this region. These military directors were stationed at Kangpu village along Lancang (Mekong) River and were known as Kangpu chiefs. They focused mainly on managing the people in Lancang River Valley, and paid little attention to people living in Nu Valley, let alone to Chinese Derung who lived one more mountain range to the west. This only changed in 1728, when the Kangpu chief's territory was greatly reduced by Qing Yongzheng Emperor[2] 's frontier political system reformation. Therefore, external political forces entered upstream Chinese Derung's life no earlier than 1728. The downstream Derung were integrated into ancient China's "central government — Tuzhifu — local chief" political system even later, after Mu-surnamed Kangpu chiefs' line ended in 1810 when the newly appointed Kangpu chief and chief assistant expanded their power into downstream Derung Valley.

Later Yezhi chiefs also came to govern the Chinese Derung. In 1875, the Yezhi chiefs were promoted by the Qing government and extended their power to downstream Derung Valley. Then in 1902, the Kangpu chief was dismissed because of "BaiHanluo JiaoAn" (the event in which Lamaist believers in Nu Valley burned a Catholic Church directed by French missionaries under the encouragement of Lamaist churches) and Yezhi chiefs replaced Kangpu chiefs and started governing the whole Derung Valley region.

In addition to chiefs from other ethnic groups, Chinese Derung were governed by Lamaist churches. Lamaist churches from Tibet were granted the power to collect taxes from upstream Nu Valley region and upstream Derung Valley region by the Kangpu female chief *HE*[3] sometime between 1728 and 1753 (Li, 2018), either because Tibetan Lamaist monks helped treat her sick son (Gros, 2011) or because they performed rebirth rituals for him after he died (Editing committee for Records of Gongshan Derung Nationality and Nu Nationality Anonymous County, 2006). In 1825, another Lamaist church

[2]Yongzheng was the fifth emperor of the Qing Dynasty. He ruled from 1722 to 1735.

[3]*HE* was the wife of a hereditary Kangpu chief. She acted as the Kangpu chief after her husband died because their son was still young.

was built in Bingzhongluo, Gongshan, and also claimed rights to the people nearby. The local chiefs and Lamaist churches both collected taxes and requested labor from the Chinese Derung people.

The local chiefs and Lamaist churches mainly brought the Derung abuse and exploitation. Only Kangpu, and later on, Yezhi chiefs, were granted the right to collect taxes from the Nung and the Derung by the Qing central government, and they were supposed to defend the frontiers and manage the people. They, however, collected more taxes than permitted and did not care about the people's quality of life. XIA Hu, a Qing dynasty officer, (1908) writes:

> Although there are chiefs, all they do is to collect money and crops. They do not station armies and do not manage the people. They not only do no good but also bother the people... As to Qiu (Derung) River Valley, they are supposed to be the people of Weixi (a sub-department of Lijiang local government) and they pay money and crops to the chiefs. However, because the chiefs never come to this region, there is no one who actually manages the people. This leads to Qiu people being bullied by Tibetan monks and raided by other groups. Qiu people were almost not able to live.

The local chiefs and Lamaist churches forced the Nung and the Derung to pay many different taxes and perform free work (Editing committee for Basic situations about Gongshan Derung and Nu Autonomous County, 2008) and forced them to trade items at unfair rates (Xia, 1908). When people could not pay enough, the chiefs and churches whipped them and took them as slaves. As a result, the Derung people could hardly accumulate any wealth.

From XIA Hu's descriptions, we can see that Derung were also at a disadvantage in interactions with other ethnic groups probably because their population size was smaller than any of their neighboring groups, and because they had inferior tools and fighting weapons. Lisu, Tibetan, and Nung people raided and enslaved Derung and used Derung slaves to pay taxes (Gu, 2012). One explanation for the Derung custom of female facial tattoos is that it prevented Derung girls from getting taken by other ethnic groups. These other ethnic groups also routinely extorted tribute from the Derung in return for exemption from raids and charged extremely high interest rates on loans to Derung. These negative interactions may have contributed to Derung's "shy and cowardly" nationality personality (Fu and Dong, 1763).

The exploitation by local chiefs and Lamaist churches and the bullying by other ethnic groups were reduced but not eliminated when Kuomintang entered in 1912. XIA Hu visited Derung Valley in 1904, named local leaders, and told them that the Derung were Qing Dynasty's people and should not pay taxes or tributes to the Tibetan and the Lisu, but such exploitation quickly resumed after XIA Hu left because the Qing dynasty did not have the power to control the local political forces. Kuomintang established direct governance in Gongshan County in 1912 and appointed prestigious family community heads and household leaders as village directors. According to Basic Situations about Gongshan Derung and Nu Autonomous County (2008), Kuomintang's governance was also exploitative. For example, they collected "airplane watching fees" when an American airplane flew over. It is unknown whether such exploitation was the individual doing of certain greedy Derung village directors or Kuomintang's formal policy.

The Derung were not much affected by WWII, except attempts by the British in Myanmar to spread their power into China. Three groups of British people came to the Derung Valley in the 1920's (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 20). One group that intended to go to Tibet withdrew to Myanmar after their director was killed by the Derung. Two groups successfully reached the North end of the Derung Valley, but local people did not know what they wanted or where they went afterward. British invasions also affected the China-Myanmar border. North Kachin belonged to China during Ming and Qing dynasties. In the first half of the 20th century, the status of this region became ambiguous. The current China-Myanmar border was set to lie along the Kaolikong mountain range in 1960 (Editing committee for Basic situations about Gongshan Derung and Nu Autonomous County, 2008, P. 60). The Chinese communist party established governance of Gongshan County in Feb. 1950, after their army won the war with the united army of Kuomintang and Dêqên chiefs. From then to Apr. 1953, the PRC government gradually set up the local autonomous government in Gongshan County, as to be described in the next subsection.

Modern Political Units

In the modern Chinese Derung political system, Derungjiang Xiang, in Gongshan County, Nujiang State, Yunnan, China, where most Chinese Derung reside, is divided into 6 administrative villages. Each administrative village is composed of 4-7 actual villages that are close to each other. Henceforth, I will use "village" to refer to naturally formed residence settlements and use "administrative village" to refer to the most basic Chinese political unit, which can be composed of multiple villages. The villages in the same administrative village share an administrative village government and are subject to the same government policies. Therefore, the within-administrative-village differences are usually minimal, while the between-administrative-village differences can be significant. To study modern changes of the Chinese Derung accurately and comparatively, we need to consider the administrative villages individually. In addition, the six modern administrative villages experienced different historical political influences. In some documents, these historical influences are described using the old political divisions in effect from the 1950's to the 1970's and 1980's, or geographical locations relative to Derung River. I now introduce how the current Derung administrative units correspond to these old divisions.

Currently, Derungjiang Xiang has six administrative villages: Dizhengdang, Longyuan, Xianjiudang, Kongdang, Bapo, and Maku, from north to south (Fig. 1). From the 1950s through the 1980s a four-administrative-village system was in force. In this system, the four administrative villages were "Yixiang" (first town, corresponding to Dizhengdang and most of Longyuan), "Erxiang" (second town, corresponding to a small portion of Longyuan and the whole Xianjiudang), "Sanxiang" (third town, corresponding to Kongdang) and "Sixiang" (fourth town, corresponding to Bapo and Maku). Another commonly seen division system in historical documents about the Chinese Derung is upstream/downstream, or upstream/midstream/downstream, based on a village's geographical location on the Derung River. It is, however, unclear how these units correspond to the six modern administrative villages. I could only safely infer that "upstream" includes Dizhengdang, Longyuan and Xianjiudang, while "downstream" includes Bapo and Maku. When midstream is mentioned, it includes Kongdang. Where Kongdang lies in the upstream/downstream division system, and whether Xianjiudang belongs to upstream or midstream in the upstream/midstream/downstream division system is unknown. If information about the current administrative units cannot be inferred from old records, I will use the geographical or old administrative terms instead.

Other groups related to the Chinese Derung

The boundary for the Derung nationality was set more for political convenience than anthropological rationality (Thoraval, 1999; Gros, 2004). To understand Derung cultures and societies in a comparative framework, we need to understand where Derung stands in the ethnic phylogeny. The Chinese Derung are most closely related to the Nung in China and Myanmar and the Rawang in Myanmar. All these groups, including the Derung, belong to the Jinghpaw branch of the Tibeto-Burmese people. Next, I present the evidence for these conclusions.

Researchers believe that the Chinese Derung came from the Chinese Nung people, who live alongside the Nu (Salween) River (He, 2011). To understand the relationship between the Derung and the Nung, we have to first understand the composition of the Nung. The marker "Nung" is an example of the nationality identification project identifying groups in a politically convenient but scientifically incorrect manner. The Chinese Nung are actually composed of four different subgroups: Anu in Gongshan, Nung (or Anung) in Fugong, Nusu in what was previously known as Bijiang[4], and Zauzuo in Lushui. For clarity, I will use Anung to refer to the subgroup and reserve the term Nung for the umbrella nationality henceforth. The Anu and Anung are linguistically related to Jinghpaw (Kachin), while Nusu and Zauzuo are related to Yi. The languages of these two branches are fundamentally different. They were grouped together because they were traditionally grouped together by the local chiefs and by other nationalities. The four groups, however, never shared a common group identity and still recognize themselves as separate people in daily life (He, 2011).

The Nung subgroups that are believed to have given rise to Derung are mainly Anu in Gongshan, but also Anung in Fugong. The close ties between Anu and Derung are reflected in their languages, their cultures, and their historical interactions (Editing committee for Basic situations about Gongshan

[4]Bijiang was a county in Nujiang state between Liuku and Fugong. In 1986, the administrative unit of Bijiang was canceled, and its area was partially grouped into Liuku and partially grouped into Fugong.

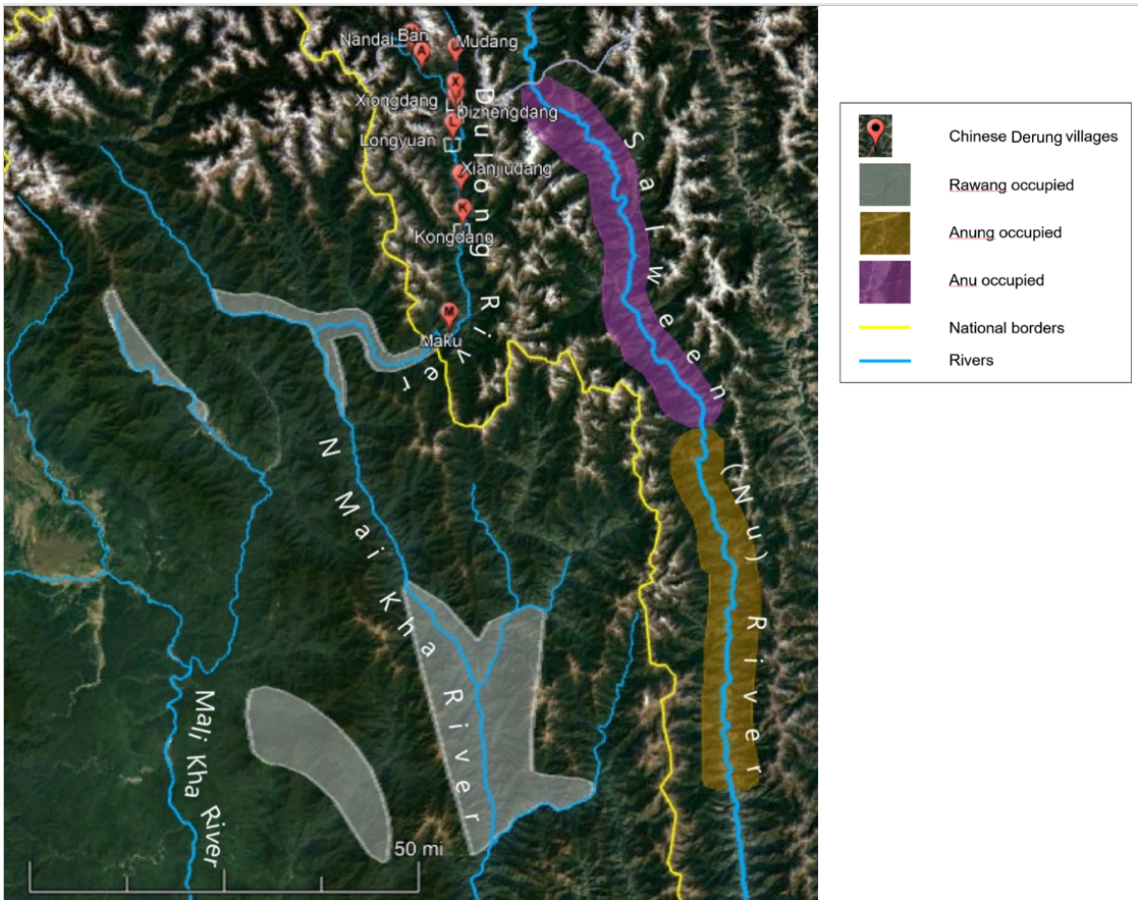

Figure 1: The Distribution of Chinese Derung and Related Ethnic Groups. Nandai, Ban, Mudang, Xiongdang and Dizhengdang are the five different villages composing Dizhengdang the administrative village. They are shown separately in this map because different "groups" in Dizhengdang administrative village are distant from each other.

Derung and Nu Autonomous County, 2008, p. 26; Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 2; Gros, 2004; He, 2011). Linguistically, the Anu language and the Derung language are similar grammatically and mutually intelligible, and their vocabularies are similar, with 120 of the 200 words surveyed being identical (Editing committee for Basic situations about Gongshan Derung and Nu Autonomous County, 2008, p. 26; Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 2, p. 17; Sun, 1981). Culturally, the Anu, the Anung and the Derung have similar legends about how the world was created and similar kinship terms and marriage systems (He, 2011). Historically, the self-reported migration routes of the Anu and the Anung coincide with those of the Derung in the early migration stages (He, 2011). In addition, Anu, Anung, and a fraction of Nusu people share stories that some of them climbed over the Kaolikung mountain range, and became the "Qiu" (Derung) (Hong, 1992). In Derung legends, their ancestors came from "Han people's place": two brothers arrived in the Nu River Valley and wanted to go to the Derung River Valley. The younger brother crossed the Nu River using a zip line. Before the elder brother could also cross, lightning struck and cut the zip line. After that, descendants of the younger brother lived in the Derung Valley and became known as "Qiu" people, while descendants of the elder brother lived in the Nu Valley and became Nung people (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 1-2). Based on these similarities, some scholars suggested that the Anu and the Anung within the Nung should be unified with the Derung in the same nationality (Editing Committee for A Compilation of Yunnan Minority Nationality Society and History Survey Data, 1987, p. 48-49). This suggestion was not adopted, because the Derung and the Nung had always been treated as two different groups by previous governors and other by ethnic groups, and the two groups recognized themselves as separate.

There are, however, two Derung clans, Jiangle and Longwu, with legends about migrating to the upstream Derung region from Chawalong, a Tibetan-occupied town upstream from Gongshan County along the Nu River (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 31-32). They and the Mulang clan in Chawalong believe they came from the same ancestor. According to their legends, the ancestors of Jiangle and Longwu climbed over the mountains and reached the Derung Valley when hunting. They saw the forests were dense and the land was flat, so they left barley seeds on the ground. The next year, they came back to the region and found the barley to have grown well. Such legends suggest that the Chinese Derung might have multiple origins.

The Rawang (also known as "Riwang" or "Rvwang") in Myanmar is largely believed to be the same ethnicity as the Derung in China (Morse and Morse, 1966; Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 43). The Rawang mainly live along N Mai Kha River (the name of Derung River in Myanmar) and Mali Kha River in Kachin State in northern Myanmar. They speak languages related to Derung and were recognized as one of the six linguistic tribes in Kachin by the Myanmar government in 1962. The three main subgroups composing Rawang people are the Rawang, the Daru, and the Anung. A small number of Nusu who migrated to Myanmar mostly after 1950s were also granted the identity of Rawang. The Anung and the Nusu, as mentioned above, were grouped into the Nung and separated from the Derung in China. Myanmar Anung and Nusu, like Chinese Nung, do not recognize themselves as Derung or Rawang, and are now fighting to be recognized as a separate group parallel to Rawang, or as an umbrella group whose appropriate name, Nung, is used for all subgroups, including the Rawang (He, 2011). The within-tribe variation of the Rawang is beyond the scope of this review, so I will only briefly mention that Daru and Rawang subgroups' languages are quite distinct and not mutually intelligible (Brown, 1936; Leach, 1954), and that the Daru have unique ironwork and distinctive female facial tattoo patterns (Morse and Morse, 1966).

Myanmar Rawang people's close ties with the Chinese Derung are understood both by outsiders like historical governors and other ethnic groups interacting with them, and Derung and Rawang people themselves. Chinese Derung's historical exonym, "Qiu" or "Qiuzi", applied to both the Chinese Derung and the Myanmar Rawang living next to N Mai Kha (Derung) River downstream from the Chinese Derung (Xia, 1908; Gros, 2004). This region belonged to China and was under Qing dynasty's governance. In addition, Rawang people in Myanmar and Derung people in China share similar

languages, folk religions (Guo, 2010, p. 80) and life styles, and they recognize each other as kin (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 38; Guo, 2010, p. 209). Many Chinese informants have told me their clans have sub-branches that live in Myanmar now. In addition, Rawang people believe they migrated to their current residence regions from "the place of the rising sun", i.e., China.

Derung Language

There is consensus that Derung language is a Tibeto-Burman language, but scholars disagree about which branch it belongs to. Most researchers believe the Derung language belongs to the Jinghpaw branch (e.g., Sun, 1981) , but Benedict (1972) suggested that the Derung language should belong to the Lolo-Burmese branch instead, although he also acknowledged the similarity between Derung and Kachin languages.

The Derung language does not have a writing system. Traditionally, Derung people marked woods and tied knots to represent items and numbers if they needed to keep records, and they used paintings and embroideries to express their thoughts and feelings (Editing committee for Basic situations about Gongshan Derung and Nu Autonomous County, 2008, p. 13). Three different writing systems were developed for the Derung people by missionaries and linguists in the 20th century, but none of them became widely accepted.

Upstream, midstream, and downstream Chinese Derung have different dialects. Before the man and horse walkway connected different villages in Derungjiang Xiang in the 1970's, there was relatively little interaction among them. As a matter of fact, the different Derung villages communicated with Tibetan, Nung, and Lisu people more than with each other (Tan, 2017). This allowed the dialects in different Derung villages to diversify. Among the 1000 words surveyed in Sixiang (Bapo and Maku) and Sanxiang (Kongdang), 643 were the same and 138 pairs had phonetic corresponding relationships, while 191 pairs were completely different (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 15). According to my informants, dialects in Dizhengdang and Longyuan are different from those in Kongdang. Chinese Derung villagers from different regions can still communicate but might have occasional misunderstandings because they use different terms.

Religions and Supernatural Beliefs

Traditional Derung folk religion

Derung people traditionally believed that every object and every individual had spirits. In this religious system, some of the supernatural spirits are good and some are bad. Other than the supernatural spirits, each individual has a living spirit. This living spirit usually follows the individual but may occasionally wander off. This is when bad supernatural spirits can hurt the person's living spirit and make the person's body sick or create accidents. When the body dies, the living spirit then becomes a dead spirit, which goes to the dead spirits' place and lives there for as long as the person lived on earth. When the dead spirit's time is up, it then becomes a butterfly and flies back to the living world. Once the butterfly dies, the individual's journey is finished (Zhao, 2014).

"Nanmusas" were one of the two forms of shamans in the traditional Derung folk religion, and they played a critical role in the Derung life. "Nanmu" meant "sky" in the Derung language and was extended to mean "supernatural spirits" in the phrase "Nanmusa". "Nanmusa" thus meant "spirits' representative". Nanmusas were believed to have spiritual eyes that could see things other people could not. A person became a Nanmusa after getting signals from a Nanmu. The person would first see supernatural scenes, and after the scenes continued for some time, the Nanmu(s) behind them would visit the person in its/their true form(s). At this time, the person had to accept the Nanmu(s)' invitation to be its/their friends. Otherwise, he or she would encounter misfortunes or illnesses. After accepting the invitation, the person became a Nanmusa. He or she would then serve alcohol to worship their Nanmu(s) at home, thus declaring their Nanmusa identity to the village (Cai, 1998, p. 121). Nanmusas were usually outstanding individuals in the village, who were smarter, more

productive, more attentive to Derung culture and history, and sometimes better at singing (Cai, 1998, p. 123).

Because they were believed to have supernatural abilities, Nanmusas had critical responsibilities, including 1) organizing "Kachangwa", the Derung New Year's festival, where people worshiped their clan or patriline's spirits; 2) directing production, e.g., giving advice on whether a plot of land is suitable for farming and holding spirit worshiping rituals before developing new swiddens; 3) holding rituals related to health, including lifesaving rituals for weak or sick people, and spirit recalling rituals for people who died unnaturally; and 4) holding funerals for all deaths. During the rituals, Nanmusas would speak in tongues, which no other individual could understand. An informant told me that a Nanmusa usually served his or her own village, but if a neighboring village did not have a Nanmusa of its own, or if the Nanmusa was believed to be especially powerful, he/she might be invited to solve issues for people in other villages.

Traditional Derung folk religion declined in importance between the 1960s to the 1980s. This was a natural consequence of the Derung being integrated into the PRC's new political system. As they tried to direct village life in the traditional way, Nanmusas unintentionally acted as a barrier to the government's communist reformation and inevitably became marginalized in the new village politics. Their traditional knowledge was deemed to be false and their attempts to preserve traditional Derung practices were deemed to hinder the communist reformation movement, for example, when they told the agricultural production cooperatives some land pieces were unsuitable for farming and when they protested not being given enough food in the agricultural production cooperatives (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, pp. 103, 105).

Derung folk religion revived in the 1980s after the government drew back from organizing people's lives. However, even after its revival, the traditional Derung religion lost the central role it previously held in the Derung village life (Guo, 2010, pp. 235-245). Both people's opinions and their objective circumstances changed. Due to the government's information campaign, most started to believe that the traditional Derung folk religion was a form of "misbelief". At the same time, Derung individuals gained much better access to modern medical treatments and better insurance against misfortunes since the 1980s, because of the government's support. Consequently, "Nanmusas"' curing power was no longer critical. They are, however, still feared by some and respected by most, as people believe Nanmusas can cause misfortunes and illnesses (Guo, 2010, p. 244).

Baptist Protestantism

Currently, the dominant religion among the Chinese Derung is Baptist Protestantism (Yan, field observation). It was first introduced to the Derung by American missionaries around 1935 (Yang, 2017). The missionaries visited many villages in the Derung Valley, but Baptist Protestantism was only accepted in Maku and Bapo. The mission with midstream and upstream Derung was unsuccessful because Lamaist churches had greater powers there and the people valued their own traditions and found Baptist teachings incompatible with their traditions (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, pp. 146, 157). For example, people in Xianjiudang rejected Baptist Protestantism because they thought it was unreasonable that God did not allow them to enjoy alcohol made from crops that they worked hard to produce (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 84). In 1999, there was a second expansion of Baptist Protestantism. Missionaries from Bapo visited Kongdang, Xianjiudang, Longyuan, and Dizhengdang, and successfully recruited Baptist followers in each administrative village.

The spread of Baptist Protestantism into Derungjiang Xiang greatly changed the lifestyle and ideologies of its believers. Baptist Protestantism does not allow its believers to drink alcohol, smoke cigarettes, or perform Derung folk religion rituals. It offers a new cooperative network in addition to the kinship-based traditional network. In Bapo and Maku, it also contributed to the falling decline of matrilineal cross-cousin marriage (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 158). However, it is hard to tell whether these changes were the results of Baptist doctrine, or a wish to make such changes led to the spread of Baptist doctrine. Chinese Derung people, especially those upstream and midstream, selectively adopted Baptist teachings and decided to convert

or quit based on practical considerations. The American missionaries tried to arrange marriages for people in Bapo and Maku and claimed that Baptists were not allowed to marry non-believers. This rule was not followed after they left. In addition, Baptist Protestantism prohibits sex before marriage, but upstream Derung still largely follow their custom that a marriage is only official and in need of a government-issued certificate after a child is conceived. During my 2018 survey in Dizhengdang, most subjects reported that they converted to Baptist Protestantism so that they could quit drinking and smoking and thus save money, stay healthy, and stay away from misbehaving alcoholics. Some reported they converted so they did not have to waste chickens and pigs on Nanmusa rituals. Among the non-believers and the quitters, their reasons for not converting or quitting were mainly 1) they felt it was a waste of time that people had to rest on Sundays, and 2) they could not quit drinking and smoking.

Supernatural Beliefs

Under the influence of their folk religion, the Derung have many traditional mysterious beliefs and taboos. Summarizing the literature (Editing committee for Basic situations about Gongshan Derung and Nu Autonomous County, 2008, pp. 22, 83; Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, pp. 8, 31, 53) and my field experience, I offer a list below.

1) Land plots the Nanmusa deemed occupied by ghosts cannot be used for farming.

2) Outsiders are not allowed to visit a household if the household has members going out to hunt or plant, otherwise the hunting or farming would be fruitless because the outsiders' souls can take prey and harvests away.

3) Seeds saved for next year's farming cannot be brought into the house, otherwise, they will not grow.

4) When cutting and burning forests for farming, people have to first worship the spirits under the leadership of their family community heads, otherwise crops will not grow.

5) After spirit worshiping rituals, family community members should cut down the trees and bamboo, select several and order them in a pattern on the ground. If the trees or bamboo stay in this pattern the next day, it indicates good luck and the farming begins; otherwise, people abandon that land and search for another plot.

6) Feces is dirty and brings bad fortune. If someone defecates on a piece of farming land, the land has to be abandoned.

7) If people see snakes when working, they have to return home immediately. Research records and informants disagree on the consequences and applications of this taboo. Some say seeing snakes and not returning will lead to more snakes appearing, while others claim misfortunes will happen to the witness and their families. Some researchers and informants claim that this taboo applies to big snakes, while some claim that it applies to seeing multiple snakes sequentially. There are also informants who claim that it only applies to seeing multiple snakes together.

8) A man cannot go hunting when his wife is pregnant, otherwise it will upset the mountain gods, and the man will have no luck in future hunting.

9) A woman cannot give birth in her parents' household, otherwise, the offspring will not prosper. If such cases occur, the woman's parents have to compensate their son-in-law with alcohol, meat, etc.

10) Birth giving can only occur outdoors, otherwise, the crossbows and arrows hung inside will get polluted and future hunting will go in vain. 11) No one in the same or nearby villages should work on their farming land within three days after a person dies. Otherwise, the person will run into evil spirits and get sick, and the crops will not grow.

From this list, we can see that most taboos are aimed at ensuring production yield and avoiding personal misfortunes like sickness and death. This might have resulted from the Derung people's lack of control over their environments in the past. Nowadays, most of the taboos are extremely loose, especially in the downstream region that has been under Christian influence for almost a century. Even in Dizhengdang, the administrative village where Derung traditions are best preserved, most people do not follow these taboos very faithfully. Some young people have not even heard of these beliefs.

Derung Customary Law

Traditional Derung customary law mainly focused on three domains: marriage, property, and violence. Customary law about marriage was mostly about bride price and children's belongings. Bride price customs were already introduced in the section "marriage". As to children, illegitimate children that a woman had before her marriage can be brought to her husband's household, and they would be treated just like the couple's own children. If a couple got divorced after having children, they split the children (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 88; Yan, field data). If they had multiple children of both sexes, the husband and the wife would split their children by sex and age evenly. It was as if the husband and the wife took turns in claiming children of the same sex from eldest to youngest. For example, the husband would take the oldest son, the wife would take the second oldest son, and then the husband would take the third oldest son and so on. The same went for their daughters. If the couple only had one son and one daughter, the son would live with his father and the daughter would live with her mother. If the couple had only one child, the child belonged to the father regardless of the child's sex, unless the child was still nursing. Divorce rarely happened in traditional Derung societies and is still uncommon in modern within-Derung marriages. These rules about child custody are still in practice. In addition, Derung customary law specified that when a wife cheated on her husband, her lover had to give the husband items as compensation for his shame, known as "face-washing money".

The Derung had detailed rules on ownership identification and ownership protection of property. To announce ownership of one's own items or newly found items, Derung would mark the items with knife cuts, or put branches or stones on the items (Xu, 2011; Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 81). Others thus knew the items had owners and would not take them. To announce ownership of a selected piece of land, people could either cut some trees or grass down, cross two pieces of bamboo and stick them to the ground, or select a few trees on the edge of the land, remove the bark, and left cross or zigzag knife marks on the exposed tree trunk, or select a few trees on the edge of the land and cut off all the branches. Others thus knew that piece of land was already taken and would look for other pieces instead.

Stealing, especially of food, was the most severely punished crime in traditional Derung societies. A thief could receive the death penalty. There were only two cases of stealing in the Derung oral history (Xu, 2011). In one case, the thief was sentenced to be beaten to death in front of all the villagers. In the other case, people judged that the thief should give his daughter to the victim as a slave. Nowadays, such severe punishments are banned by the PRC government, but stealing is still one of the most condemned behaviors in Derung villages (Yan, field data).

The penalty for violence was relatively mild in comparison. When people from different family communities engaged in fights and hurt or killed one another, the more severely hurt party could ask for material compensation for their wounds or mortality. If the damage was mild, they would receive several buckets of alcohol; if the damage was severe, they would receive a pig, a cow, or an iron pan. When death happened, they could ask the killer to compensate 9 types of items, 9 pieces of each type. If the death happened during fights between two family communities, the aggressor's family community took it upon the whole community to compensate the victim's family community. Otherwise, it was the responsibility of the aggressor himself/herself and his/her close kin (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 9). After the compensation was made, the two parties had to agree not to hold any grudge. Sometimes the judges would treat the two parties to food and drinks to encourage them to make up. When rape happened, the man had to pay the woman her choice of items, like a cow, an iron pan, or a piece of blanket. The compensation for rape was also called "face-washing money". Like how a man had to pay the husband for cheating with hiser wife, this compensation was also to make up for the shame the wrongdoer brought to the victim (Wang and Gao, 1994; Xu, 2011).

Derung people judged whether a wrong behavior actually happened through either a human trial or a god trial. In a human trial, a judge, usually the leader of the family community, known as "Kasang", or if the matter involved more than one family communities, both the "Kasangs" and the "Kasang" from a third neutral family community when people felt necessary, would serve as the judges. The plaintiff and defendant would then list their reasons or evidence. For each reason or piece of evidence

presented, the judge(s) would put a corn kernel or a piece of bamboo in front of the person it favored. In the end, whoever had more in front of them was judged to win. In god trial, the prosecutor would provide a pan, boil water and throw into the water a stone, and the defendant was asked to take the stone from the pan with bare hands. If the defendant could do it without hurting his/her hands, he/she was judged to win and could take the pan and some additional agreed-upon items, like a pig or a knife. Otherwise, the plaintiff was judged to win and the defendant had to face punishments according to the charge (Wang and Gao, 1994).

Derung Clans, Family Communities, and Households

To understand how norms change and linking such group-level patterns to the individual-level normative behaviors and attitudes, we must first identify who make the normative decisions and to what degree. We can then measure these agents' normative behaviors and attitudes, quantify the ecological and social payoffs they would receive from each normative behavioral option, and predict whether and how their behaviors and attitudes would change, and whether such changes would persist or spread. Nowadays, the agent that makes decisions about subsistence crop farming is each individual household. One or more members in a household may offer inputs on what to farm, whether to co-farm, who to co-farm with, and what division offers to make. This, however, has not always been the case. In this section, I introduce the productive and diplomatic unit in Derung life at different periods.

A clan is the highest level of Derung social units, but there is no information on what role they played in Derung life. is There are 15 clans along the Derung River in Dizhengdang, Longyuan, Xianjiudang, Kongdang, and Bapo (Editing committee for Basic situations about Gongshan Derung and Nu Autonomous County, 2008, p. 76; Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 23) (Data from Maku is missing). Each clan is composed of the descendants of one man who migrated to the Derung Valley. The names of these clans usually indicate good fortune and virtue, like "born from heaven", "good at adapting", etc. (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 54). Informants from the 1950s could not recall living or producing in whole clan units. Other than feeling closer when meeting each other, and visiting each other during wintertime (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 21), individuals from the same clan but different family communities interacted the same as individuals from different clans.

Among the Derung before 1900, family communities were the basic social units in which people lived, produced and conducted diplomacy. The 15 clans mentioned above included 54 family communities. The family communities' names usually came from their residence locations but stayed with the people even when they moved. Each family community was composed of one man's descendants and their wives. Usually, each family community formed a village, but two or three family communities might also live in close proximity. A village could also have people from more than one family community when a new couple stayed with the woman's family. Family communities owned forests, farming lands, and fishing plots. Before 1900, members in the same family community mostly worked together and divided game and crops among themselves (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 25). Each family community had a head, called "Kasang", meaning a person good at talking. This person organized subsistence activities, like deciding when the family community sowed, gathered, or hunted together. They also resolved conflicts within the community and acted as representatives in interactions with other family communities (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 41). The position of "Kasang" was not inherited and had to be earned through personal virtues. In the 1950s, however, sons of the old "Kasang"s were more and more likely to become the new "Kasang"s (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 39). The "Kasang"s from different family communities were equal. The only exception was when some were appointed as administrative village leaders by Kuomintang and started directing other "Kasang"s and other family communities.

Between 1900 and 1950, households gradually replaced family communities as the basic social unit. During this time, the typical household size and composition also changed. Before 1932, the most common composition of a household was an extended family with three or four generations (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 18). An old couple, the old couple's sons and their wives and sons, and the old couple's unmarried daughters lived together. When a son got married, the newlyweds would set up another fireplace in the house and separate an area around the new fireplace to use as their room (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 54). Within a household, the eldest and most senior male was the natural leader, but he was by no means a dictator. Matters were usually settled through household-wide discussions (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 5). Even small decisions like purchasing a piglet had to be supported by the whole household (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 119). The household leader may have done less work than everyone else, but he still had to work.

Among nuclear families within a household, equity was the rule and was reflected in the division of farming returns and delicacies, and in sharing workloads. Members of the same household farmed together. Some of the gains would be stored in the public storage room. The rest would be divided equally among the nuclear families and stored in their individual storage rooms, no matter how many laborers or dependents each nuclear family had (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 118). Wives of the young generation took turns in cooking. Food was first taken out from the household public storage room. When it ran out, each wife took food from her nuclear family's individual storage room when it was her turn to cook (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 42). Because nuclear families had started to conduct independent farming and cooperative farming with partners outside the extended family by the 1950s, the nuclear families in an extended family household may have had different amounts of crops stored. In this case, the nuclear families with additional food would continue to feed the whole household (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 42; Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 23). When a household received delicacies, the distribution was equal by person instead of by nuclear family. Each person, including children, received an equal share. Disputes seldom arose within households (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 119)). This "fairness means equity" philosophy is also reflected in the Derung co-farming division norm.

From 1900 to 1950, Derung households gradually shifted from extended families to nuclear families. Even in Bapo and Maku, where extended family households were more common than in other villages, only 16% of the households were of extended families in the 1950s (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 55). After the shift, each son, except the youngest who was the inheritor of the house and the caretaker of the parents, would build a new house after getting married. The brothers' nuclear families may still conduct production together. They could also work on their own or form cooperative partnerships with other kin or friends. In 1932, an average household had 14 individuals. In 1957, this number varied from 6.1 to 7.6 in different administrative villages (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 13). The change in household composition was motivated by economic, cultural, and political factors. Economically, as the tools and technologies for production developed through the first half of the 20th century, big production units became less and less necessary, so the power of family communities and extended households became weaker and weaker. Cooperation in production shifted from kin-based to location-based. Newly established nuclear families thus had the opportunity to move and select their own cooperative

partners. Culturally, after XIA Hu's visits, the Derung people were increasingly influenced by Han and Lisu people and adopted the custom that sons should go out and establish a new household after getting married (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 13, p. 42). Politically, sometime between 1912 and 1949, Kuomintang (the party leading the Republic of China) asked Derung extended families to split to increase household-based tax income (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 42).

From the 1950s to today, the average household size decreased further. In 2019, the average size of households in village D was 3.1 (Yan, field data). This is partly due to increased access to modern tools and technologies, which has enabled production in even smaller units, and partly due to the insurance the PRC government provides to Chinese Derung people, which has decreased their dependence on support from kin. In addition, the government's "family planning" policy started in Gongshan County in the 1970s and gradually increased in intensity. According to this policy, each Derung couple is allowed 3 children (Zheng Xin-zhe, 2017, p. 154-155). If they want more, they have to pay a fine for each additional one. The amount of the fine is considerable relative to their income and has effectively suppressed their birth rate.

Marriage

Kin selection is an important mechanism for cooperation, of which cooperative farming is an example. When asked about kinship with another villager, a Derung person often answers "we are all kin here" if there is no clear trackable relation between them. While sharing a common ancestor connects Derung people in the same family community, Derung marriages connect all family communities by creating a unilateral circle along which women from different family communities move.

Traditionally, the Derung performed within-group matrilateral cross-cousin marriage. The preferred form of marriage was between a man and his mother's brother's daughter(s) (Chen, 2019). Such matrilineal cross-cousin marriage was commonly seen among Tibeto-Burmese people (Leach, 1954). Although the relatedness between a husband and his wife would be the same in other forms of first-cousin marriages, these were forbidden. A man and his father's brother's daughter or his mother's sister' daughter inherited the same paternal or maternal bloodline and were seen as siblings, so marriage between them was seen as incest. Although a man and his father's sister's daughter were first cousins with different bloodlines, their marriage was thought to be in the "wrong direction". As explained by an informant, "Derung River can only run from north to south. It cannot go the other way from south to north. Otherwise there will be floods and people will all die" (Sang, 2017). When there was no mother's brother's daughter suitable for a Derung male to marry, he would consider his mother's paternal cousins' daughters. If there was again no suitable girl, he could look in the secondary-choice or third-choice marriage partner family community. The preference for unilateral matrilineal cross-cousin marriage thus led to a unilateral exchange of females among the family communities. Through the exchange of females, the different nuclear families, different family communities, and different clans became connected (Chen, 2019). This marriage rule was strictly followed. Unless there was no such male or all males fitting the above specification gave up their rights to marry her, a Derung girl could not marry other men. Otherwise, she would be frowned upon by other villagers (Chen, 2019). Many young couples that were committed to each other but had to separate because their parents were to marry them to their cross-cousins committed suicide so that they could stay together in the afterlife (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 87).

Nowadays, this marriage rule is no longer enforced among the Chinese Derung (Sang, 2017). There is no record of when this change happened, but based on my field observations, the Derung marriage norms are abandoned more thoroughly in Bapo and Maku than in Dizhengdang and Longyuan, probably because Bapo and Maku received Christian influences much earlier. The within-group marriage rule is also abandoned. Derung girls now more and more frequently marry Lisu, Nung, Tibetan, or Han people out in the Nu Valley or even farther regions. Occasionally, women and men from these ethnic groups also marry into Derungjiang Xiang. From 1999 to 2010, 35% of the newly established marriages in Dizhengdang were between a Derung and a partner from another ethnic group (Sang, 2017). The matrilineal cross-cousin marriage rule also lost its power. Today's young Chinese Derung

people select their own partners, and even if their parents do not think much of the person, as long as the young couple insists, the parents always eventually agree. However, the belief that tabooed marriages, like the marriage between a man and his father's sister's daughter, will lead to bad fortunes for the couple and their children, still exists in Dizhengdang villagers' minds (Sang, 2017).

In the past, to marry a girl, the male's family had to pay a bride price to her family. After that, the girl became her husband's family's property. However, he was still obligated to help his in-laws with labor work and to bring gifts to them when visiting. Marriage rituals were optional (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 56). If a woman wanted to cancel the marriage or wanted a divorce, or if she died soon after the marriage due to no fault of the man, then either one of her sisters had to marry the man, or her family had to return all the bride price (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 45). If it was the man who wanted a divorce and if the woman had not made any big mistake, like cheating on him, some informants said half of the bride price had to be returned, while some claimed the girl's family could keep all the original bride price (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 88). If a man killed his wife or pressed her to kill herself, he would not get punished, since his wife was his family's property. For the same reason, if a Derung woman's husband died, she had to marry the dead husband's brother, father, paternal cousin or uncle, or other paternal male kin, even if they already had wives. If nobody in the family community could take her, which was rarely the case, she could marry into other family communities. Some informants claimed that her parents had to return the bride price to her previous husband's family in that case (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 45), but others claimed it would be the dead husband's family that asked her new husband to pay a bride price, usually half of the price of marrying a never-wed girl. As marriage became the young people's own choices, bride price and norms about bride price have largely disappeared from Derung life.

Monogamy was the most common form of traditional Derung marriage (Liu, 2006), but polygyny also existed. Some polygynous marriages resulted from a woman getting remarried to a man in her husband's family after he died. In other cases, wealthy family community leaders or household heads married multiple women. This phenomenon appeared no earlier than two generations before the 1950s (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 46). The senior wife's younger sisters were natural first choices, but the man could also marry other women after gaining the senior wife's permission. The main aim of marrying multiple wives was to increase the number of laborers in the household. The family community leaders or household heads basically used their junior wives as servants to reduce their own workload (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 46). The PRC government's marriage law does not allow for polygyny, so currently monogamy is the only form of marriage in the Chinese Derung.

Subsistence modes and division norms

Derung subsistence modes include swidden horticulture, hunting, fishing, honey collecting, gathering and livestock rearing. This same subsistence system persisted from the first records of Derung lifestyle to the present, although the importance and scale of different activities have changed. There were and still are no professionals specializing in only one trade among Chinese Derung villagers. Even the individuals with administrative positions farm and gather. Farming is the context I focus on to study individual norm decision-making and norm evolutionary dynamics. It will be discussed in depth in the next section. In this section, I give a brief overview of Derung hunting, gathering, livestock rearing, and the cooperative production division rules for each activity, with cooperative production defined as multiple units (individual or household) that do not consume the products working together to generate the products.

Hunting

Prey animals for the Derung included black bears, monkeys, forest rats, bharals, musk deers, muntjacs, wild cows, wild chickens, sparrows, etc. Most of these animals have been listed as protected animals and hunting them is banned by the PRC government. However, forest rats and sparrows are still legally available for hunting. Other than consuming meat, Derung people use animal parts as medicines to treat illnesses. For example, wild cow horns are used to treat fever, and bear fat is used to treat insect bites (Yan, field observation). Whether such treatments are effective is a question yet to be answered. Traditionally, animal products, like rock sheep skin, were also used to pay taxes and tributes to the local chiefs and Lamaist churches.

Derung people used either crossbows and arrows or bamboo snares to acquire game. The arrowheads were made of iron or hard-textured bamboo. Derung people used plain arrows to kill small game and applied poison on the arrowheads to hunt larger ones. Snares were composed of sharpened bamboo, a motion activator, and a string attaching the bamboo to the motion activator. The string would release the sharpened bamboo once an animal steps on the motion activator. The placement of the snare depends on the target prey. For example, if a hunter wants to kill a bear, he will set the trap next to honeybee hives.

Traditionally, Derung hunting was mainly performed during wintertime. Hunting in the summer was informal and only targeted bears and monkeys that came to people's farming land to steal crops. Hunting of small game could be carried out by individual hunters, while big game required larger groups. If hunting was performed by a group, the prey would be divided equally among the participants, except for the head, the skin, and one hind leg, which belonged to the person who first shot the animal (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, pp. 4, 22, 97). This division rule was the same in all Chinese Derung regions. People who participated in hunting and received meat were then supposed to share it with households that did not participate (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 97).

Gathering

The Derung gather subsistence plants and medicinal plants. Gathering subsistence plants was the most important form of subsistence activity before the 1930's: it took up two thirds of all time spent on production (Editing committee for Derung Society and History Survey: Vol. 1, 2017, p. 21). Over the first half of the 20th century, the importance of subsistence plant gathering in Derung life decreased. According to some informants, this was maize was introduced to the Derung sometime between 1900 and 1932, and potatoes were introduced in 1932 (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 21). These crops made farming more productive and allowed it to replace gathering as the most important subsistence activity. Nowadays, although Derung people can rely completely on farmed and purchased food items, they still gather subsistence plants, including lilies, kudzu, bamboo shoots, mushrooms, and a variety of vegetables, to diversify their diet.

Medical plants that the Derung gather include Chonglou (paridis rhizoma), Beimu (fritillary bulb), Huangjingguo (polygonatum sibiricum), Chongcao (cordyceps), Huanglian (coptis chinensis), etc. In the past, the Derung people used these items to pay tributes to the local chiefs and Lamaism churches. They also used them to trade with the Nung, Lisu, and Tibetan people for goods like salt and farming tools. Nowadays, gathering medical plants is an important source of cash income for Chinese Derung people, especially for people in Dizhengdang and Longyuan, where Caoguo (Tsaoko), a highly profitable cash crop introduced to the Derung by the PRC government in 2014, whose fruits are frequently used in the making of meat dishes to remove the smell of blood, does not grow well .

Before 1900, the gathering of either subsistence or medical plants was mainly performed by whole family communities under the "Kasang"'s organization. The gathered items would then be divided equally among all households within the family community. Even those who did not successfully gather anything would receive an equal share (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 21). Over the first half of the 20th century, the gathering units gradually shifted from family communities to individual households.

Livestock rearing

Livestock rearing was not a big part of traditional Derung subsistence. Records from the Republic of China (1912-1949) claim, "[Derung people] do not know what livestock rearing means. They have few chickens and pigs, let alone horses and cows." In the 1950s, many households had chickens or pigs, and a few had cows, but no horses or goats (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 4). Traditionally, chickens and pigs were mainly consumed for religious rituals (introduced in the section "Traditional Derung folk religion").

Nowadays (Yan, field observation), almost all the households in Dizhengdang village rear chickens and pigs. The number of chickens in a household varies from four or five to 20-30, while the number of pigs is usually one to three. Both Derung chickens and Derung pigs take around a year to mature. Since 2018, the PCR government has been distributing fast-growing chickens and chicken-rearing necessities (water feeder, meal feeder, chicken feed) to Chinese Derung villagers, but only about 40% of them survive to consumption. Many Derung households own cows. The most common breed is the Derung cow that only exists in Derungjiang Xiang. They live in fenced mountain ranges used as village pastures and only come back to the village for salt. Dizhengdang villagers rarely sell their cows, probably because the downstream Chinese Derung villages have a more developed livestock-rearing industry and already control the market. They also rarely eat the cows. The cows thus either die of old age or from accidents, like falling down cliffs. The main motivation for cow rearing reported by the informants from Dizhengdang is that the PRC government issues subsidies for each living Derung cow, to preserve the breed. Only a small number of the households in Dizhengdang (3 out of the 60 interviewed in 2018) rear goats. The goats forage on their own and occasionally feed on other villagers' crops, in which case their owners have to compensate for the crop owners' damage with money or goat meat. The Derung do not milk their livestock.

Derung Farming

Derung farming has been changing from about 1750 to the present. The Derung may have performed farming before 1750, but that is the date of the earliest historical records. The changes occurred in every aspect of farming. The Derung originally practiced basic swidden horticulture, and then invented alder swidden horticulture where they planted alders (Alnus nepalensis) to burn, then shifted to a system with small pieces of fixed land, and finally settled at pure fixed-land farming with the PRC government's promotion. Land originally belonged to family communities, then to partner households, and finally to individual households. The Derung originally used bamboo, wood, and stone tools, and then borrowed iron tools of different forms from the Nung, Tibetan, and Myanmar people. Then in around 2010, the market brought gasoline-fueled motorized tools. Derung began with simple slash and burn, shifted to artificial cultivation of trees; then started to use oxen and to grow paddy fields, and later incorporated the use of fertilizers and plastic land films. Derung originally only had subsistence crops that grew on dry land. They received rice in 1952, later quit farming rice in many regions, and then started receiving multiple kinds of cash crops in 2010. In this section, I will introduce the evolution of Derung farming chronologically. Because the PRC government played a major role, I divide the phases according to government policies and actions.

Traditional Derung farming before 1950

Derung farming was first documented by Qing officials (Fu and Dong, 1763). Before 1950, the Derung crops included maize, potatoes, barley, wheat, buckwheat, tartary buckwheat, and multiple varieties of millet. Among these, the history of maize and potatoes was the shortest. Maize entered Derungjiang Xiang sometime between 1900 and 1932, while potatoes entered in 1932. When government-organized survey teams entered in the 1950s, Derung farming was starting to transition from swidden horticulture to fixed land farming; the most common farming unit had transitioned from whole family communities or partner households to single households; private ownership of land also started to appear. In this sub-section, I introduce Derung farming as observed by the survey team in the 1950s. Information about Derung farming before that was recalled by the informants surveyed in the 1950s.

Basic swidden horticulture

Basic swidden horticulture was the most traditional form of farming for the Derung. It was the only mode of Derung farming before alder swidden horticulture was invented and was still the most common form in the 1950s. In Kongdang in 1956, basic swidden horticulture took up 49.7% (346 Mu) of the total 696 Mu[5] of dry farming land (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 27-31). In Longgun (a family community in Longyuan) in 1960, it took up 75.9% (141.8 Mu) of the total 186.8 Mu of land (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 57). In this form of farming, Derung people would select a piece of forest, cut down the trees, burn them to provide fertilizer, and farm a mix of crops in a mixture on the swidden. Usually, each land plot was abandoned after one year of farming and was only reused after 4-7 years (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, pp. 26, 49, 59), when the trees grew back and could be burned to once again to provide nutrients. Occasionally, the land was farmed for a second year, but then people had to clear the grass and loosen the soil for the second year's farming. This option was seldom chosen because such work was difficult with traditional Derung farming tools. As the number of times a piece of land had been burned and farmed on increased, the yield decreased, and the resting period extended. This is because the tree roots were less and less able to grow new branches and the soil became depleted (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 50). The longest resting period could be 15 years or more.

Swidden horticulture requires rotation of land. Derung family communities' residence location had to change within their home range based on land availability. To plan land usage, family communities divided their forests into different sections and divided each section into different plots. They would start with one plot in one section and move to another plot in the same section the next year. After all plots in a section had been farmed 3-5 times and overexploited, the whole family community would move to another section together and farm there (Lu, n.d.).

Originally, whole family communities were the production units for basic swidden horticulture, but over the first half of the 20th century, it became more common for a subset of the members to farm together. In the 1956 survey on Kongdang farming, within the 346 Mu of basic swidden, only 30 Mu was farmed by whole family communities (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 27). Most of the basic swidden was farmed by cooperative farming partner households , while 22 Mu was farmed by individual households (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, pp. 27-31). Because mountains and forests were owned by the whole family community, if some members wanted to take a piece of land and farm on their own, they had to receive the permission of the whole family community. This rule, however, was seldom enforced in the 1950s unless the land to be taken was a recently cleared swidden that had only gone through one or two rounds of farming or was an abandoned swidden plot that was in a larger, flat area. Individuals from other family communities may farm in mountains out of their home range after receiving permission from the owner family community. Another mechanism to access other family communities' land was to join the cooperative farming groups from that family community.

Alder swidden horticulture

A more productive advanced version of swidden horticulture, which I will call alder swidden horticulture, involved planting alders to speed up the land rotation in swidden horticulture. Alders (Fig. 2) have soft, medium-density wood and are easy to cut down and fast-growing. They also fix nitrogen (Gros, 2014). These properties make them perfect for land fertility preservation. Instead of waiting for 5-7, or even 15 years for trees to grow naturally after farming for one year, with alder swidden horticulture, Derung only had to rest the land for 2 years after 3 years of farming. On swiddens that had already been farmed for several rounds, Derung farmers would plant alders and then on the same plots of land farm tartary buckwheat in the same year, millet in the next year, and maize in the year after

[5]Mu is a Chinese area measurement. Each Mu is roughly equal to 666.67 square meters.

Figure 2: Cross-Section of a 6-Year-Old Alder Tree, with Yan's Left Fist for Scale

that and abandon the land for 2 years (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 26). After the 2-year rest, the alders that had been growing for 5 years would reach six meters in height and could be cut down and burned to serve as fertilizer. The process of planting alders, farming for 3 years, and resting for 2 years could then be repeated. There did not seem to be a limit to how many times this process could be repeated. Other than increasing land availability, alder swidden horticulture produced twice as much as basic swidden horticulture for a given area of land (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 55). Alder farming land plots were semi-fixed and indicated a transition from shifting cultivation to fixed cultivation.

Alder swidden horticulture was among the most important forms of Derung farming in the 1950s. It was reported to have been invented first in upstream Derung and then spread to Bapo and Maku in the 1880s. Due to less experience with this form of farming and having more available forest in which to conduct basic swidden horticulture, Bapo, and Maku had less alder swidden than Dizhengdang, Longyuan, Xianjiudang, and Kongdang. In upstream and midstream villages, Alder swidden horticulture and basic swidden were both popular in the 1950s. In Kongdang in 1956, 315 Mu (compared to 346 Mu of basic swidden) of the 696 Mu of dry farming land was of Alder swidden horticulture. In Xianjiudang in 1960, basic swidden took up 47%, alder swidden horticulture took up 45%, while garden land (introduced below) took up 8% of all dry land (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 65). Alder swidden horticulture could be performed by cooperative farming groups or individual households. The division rules for Alder swidden cooperative farming were the same as for basic swidden cooperative farming in the same village. These rules will be introduced in "Division for labor and land contribution".

Fixed land

A third form of traditional Derung farming was fixed land farming. Only a small proportion of farming area was used for this form of agriculture in the 1950s. Fixed land included garden land and mature fields. Unlike swidden horticulture, fixed land farming does not require land rotation or burning trees and using the ashes as fertilizers. How the Derung maintained the fertility of their fixed land was not mentioned in the historical records. Derung only started to use feces[6] as fertilizers only during the government's agricultural production cooperatives during the 1950s. My educated guess is that they

[6]Ulthough it was unspecified, the feces the Derung used at this time was probably human feces instead of manure, because until 2000, Derung livestock roamed freely to forage on their own.

might have collected rotten leaves and used them as fertilizers for their fixed land, as this practice still is prevalent in contemporary Derungjiang Xiang. Garden plots were next to Derung people's houses, while mature fields were usually farther on flatter areas of the village. Another difference is that most mature land was farmed for 3-4 years and then left to rest for 1-2 years, while garden land was farmed every year. In some villages, mature land was also farmed every year. According to the informants, fixed land farming spread from Tibet to Dizhengdang and Longyuan, and then downstream to other Derung villages. Garden land farming started in Kongdang no earlier than 1920 and started in Bapo and Maku not long before 1957 (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 32). In the 1950s, Bapo and Maku still had no mature land. The Derung people grew potatoes, maize, millets, beans, peppers, and vegetables on their garden land and mature fields. Garden land yielded 1.5 times as much as Alder swidden horticulture, making it the most productive of the three forms. All garden land was privately owned and privately farmed. Even within a household, the different wives had their own garden plots (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 64).

Land ownership

Originally in the Derung farming history, all the land was owned by family communities. Starting from around 1850 (based on informant recalls), private ownership appeared (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, pp. 50, 81). From then to the 1950s, land ownership gradually shifted to units with fewer and fewer households. Although there were occasional reversions, for example when several households inherited the land together, the general pattern was set. In the 1950s, private ownership of land by single households was the dominant form of landholding, while only a negligible amount of community-owned land was still farmed by whole family communities (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 91). Privately owned land took up 69% of all land area in Xianjiudang (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 7).

Labor investments that increased future land productivity would grant individuals making the investment temporary ownership. The investment could be clearing dense forest for the first time, or planting alders. In basic swidden horticulture, land that had been farmed once or twice was preferred, because the new tree branches were easy to cut down and the land was still highly fertile. Therefore, the people who first converted a piece of forest to farming land earned the claim to it for more rounds. After three rounds of farming, however, the initial investment in the land no longer mattered and anyone from the family that owned the forest could take the land if they wished (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 93). Growing alders, on the other hand, was an investment that could be renewed. No one else was allowed to use the plot of land when it was resting without the tree planters' permission, and there was also a consensus that original alder tree planters retained the right to plant alders again (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 70). In some villages, if the original tree planters did not continue to plant alder trees, others could take the land, whereas, in other villages, the original alder tree planters and their descendants had a permanent claim to the land even if it was left uncultivated (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 93). Growing alders continuously could thus establish long-term land ownership. Individual households or partner households could plant alder trees not only on forests owned by their family communities, but also on basic swidden plots that had been farmed for multiple rounds by a cooperative farming group they were a part of. For example, in the survey on Yixiang farming situations conducted in 1957, an individual acquired his three alder swidden plots by planting alders on basic swiddens previously owned by him and his 3 partner households (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents

Series, 1985a, p. 69).

Group-owned land could also turn into privately owned land when all but one of the households withdrew from cooperative farming. When a cooperative farming group developed land from scratch for basic swidden horticulture or planted trees together for alder swidden horticulture, they gained co-ownership of the land. If some of these partner households wanted to withdraw, they could do so freely. The land, however, stayed with the households that did not withdraw, even if there was only one household remaining (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, pp. 27, 80-81). This rule discourages withdrawal from cooperative farming as people who withdraw from cooperative farming lose their investment.

Land trading appeared together with private ownership. By the 1950's all three forms of land had been traded, but trading of alder swidden plots was the most common (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, pp. 34, 70). Among the 31 land trading cases in a village with 17 households in Longyuan, 23 were with alder swidden, 5 were with basic swidden, and 3 were with garden land (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 70). In Kongdang, all 9 cases of land trading were with alder swidden (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 34). Land was exchanged for items like crops, iron knives, pigs, chickens, etc. There was no constant trading price, but the prices paid in these cases were all low compared to the land plots' value calculated from their yields (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 71). In the 1930's, a villager in Longyuan traded a plot of alder swidden that could yield 600kg of harvests (kind unspecified) every year for a piglet (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 71). The authors did not mention why they deemed this price-to-value ratio low. In addition, land trading required no witness, contract, or formal procedures (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 70; Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 93). Therefore, in the 1950s, land trading was casual and still at an early stage (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 70; Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 71).

The possibility of trading land created a third mechanism for turning group-owned land into privately owned land: trading of partial ownership among co-owners. For example, in Sixiang, two households converted a parcel of the community-owned forest into basic swidden and gained co-ownership of it. After one round of farming, one of the households faced starvation and transferred their partial ownership to the other household for 5 liters of corn (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 80). The land may still be farmed cooperatively by the original group, but now the household with full land ownership could take the land with them if they wished to withdraw. They could also decide to farm alone or with other households.

Farming tools

Before the PRC government distributed farming tools in 1952, the Chinese Derung used a combination of bamboo, wood, and iron tools. Iron tools were the most efficient but also the fewest in number. They spread to the Derung from Nung, Nakhi, Tibetan, and Myanmar people. On the contrary, wood hoes and bamboo or wood point-seeding sticks were traditional Derung farming technologies passed down from generation to generation (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 2). Derung people may have also used stone tools, but these never took on an important role in Derung farming. The forms of Derung farming tools were basic. As documented by

Figure 3: Derung "Knife"

XIA Hu (1908), "Their farming tools do not include plow or hoe. When they farm, they cut the trees down with knives and burned them. They use bamboo to drill holes in the ground, and 'point-seed' corn. If they farm buckwheat, wheat, etc., then they only spill the seeds on the ground and sweep them even with bamboo brooms. They let the seeds grow and fruit on their own, and they all do." The same farming procedures were still practiced in the 1950s. Contemporary Derung "knives" are long machete-like tools (Fig. 3).

There was no firm record of when iron farming tools first reached the Chinese Derung. According to informant recalls, iron cutting knives were the first to enter. When this happened, however, was ambiguous, with some claiming around 1750 (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 74; Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 2) and others claiming around 1850 (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 20). Iron tools were much more efficient than the corresponding wood tools. For example, "Kyaka" and "Gela" were both hoes. The only difference was that "Kyaka" had a small piece of iron wrapped around the head, while "Gela", the traditional Derung hoe, was made of only wood. The iron head made a "Kyaka" 3 times as efficient as a "Gela". It could also be used to loosen rocky land plots while a "Gela" would break (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 74). Although Derung people knew iron farming tools were superior, they did not use them very often before the 1950s, because they did not know how to produce iron, and had to trade with other ethnic groups at high prices to acquire them.

Division for labor and land contribution

When a family community farmed as a whole, gains were divided equally among all households. Under the "Kasang"'s direction, each household would contribute the same number of laborers and the same amount of seeds, and finish sowing together in one session. The gains were divided by elder women (and occasionally men) equally among all households in the community. The equal division by household rule was true for Chinese Derung in all regions when they performed community farming.

The division rules for cooperative farming among selectively formed partner households were different in different Chinese Derung villages (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, pp. 53, 71). Cooperative farming was second to single-household farming in popularity before the PRC government entered in 1950. It took up 25.5% and 27.1% of the farming land area in Longgun and Longyuan, two villages in the administrative village of Longyuan, and 24.2% in Xianjiudang (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 10). All the six administrative villages shared the principle that a household would not receive more in the division for land ownership, but they would for providing more seeds (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies

and Histories Survey Documents Series, 1985a, pp. 64, 69). The rules for division based on differential labor contribution, however, varied. In upstream and midstream villages, including Dizhengdang, Longyuan, Xianjiudang, and Kongdang, cooperative farming partner households usually contributed the same number of laborers, but occasionally contributed as many as possible (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 10). The gains were divided equally among the partner households regardless of labor contribution (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, pp. 53, 69). In downstream villages, including Bapo and Maku, the gains were divided in proportion to labor contribution (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 53). This applied even to cooperative farming among relatives. For example, in Bapo in 1956, one mother farmed together with her three sons. She participated by herself, while all the sons participated with their wives. The mother ended up earning half of a share, while the sons' households each earned a whole share.

A variation of this rule applied in Bapo and Maku when the cooperative farming partner households cut and burned the forests together from scratch. In this case, the second round of cooperative farming's division was based on labor contribution in the first round, when they cut and burned the forests, even if the relative number of laborers in the second round changed. This is because cutting down dense forests for the first time was labor-intensive, and increased land fertility for the first several rounds of farming. From the third or fourth round, division switched to being based on labor participation in that year (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 65).

Other than participating in cooperative farming and gaining a share of the yields, Derung could contribute to others' farming by lending their farming land plots or lending their labor. Such contribution, however, was under-compensated, if we compare the Derung arrangements to sharecropping, land renting, or labor hiring contracts from other societies.

A household, or a cooperative farming group, could borrow land from others. This usually happened when the alders the household (or group) farmed had not matured, when the slash-and-burning of new basic swidden failed, when the available community-owned land was of low quality, or when the household (or group)'s other swiddens were still resting. The land borrowed was almost always basic swidden (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 70). Land borrowing agreements were usually for one year. Some land borrowing was cost-free, while some land required payment, usually a piece of Derung blanket, an iron cutting knife, some crops, one handful of Huanglian (a kind of medical plant), or a bucket of alcohol (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 9). Just as in land trading, the price of borrowing land was low compared to its value. The borrower could also compensate the land owner by giving the land owner his land to farm the next year. By the 1950s, there had been 16 cases of land borrowing in Xianjiudang, an administrative village with 62 households and 340 individuals in 1960 (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, pp. 64, 71).

Traditionally, Derung people did not hire wage labor to help in farming. If a family had enough wealth but not enough laborers, they could hold helping sessions. The helping session caller's relatives and close friends were obliged to help (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 9). In these helping sessions, the household that needed help would call other villagers to work on their land and offer food and alcohol to the helpers as they were working. Before wealth differences appeared, each household gave similar hours of help as they received through these helping sessions. After surplus accumulation appeared, however, the helping sessions became a mechanism of labor acquisition predominantly used by wealthy households. The helpers provided much value through their work, but their "wage" was only 2 meals and some alcohol (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 9).

Between-region variations among the Chinese Derung

Aside from the cooperative farming division rules, Derung traditional farming in different regions differed in other ways. Generally, the level of complexity in farming technology among the Chinese Derung decreased from upstream to downstream villages, and . There were also reports that the Derung in Myanmar having even less advanced complex farming tools and technologies than downstream Chinese Derung (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 2). The reason for this pattern was probably that upstream Chinese Derung people interacted more frequently with more technologically advanced groups, like the Lisu and the Tibetan who had more complex farming technology, more frequently than the downstream Chinese Derung or the Myanmar Derung did.

The decrease in sophistication from upstream to downstream can be seen in many aspects of farming. First, the farming procedures of upstream Derung were more advanced. Alder swidden horticulture and garden land fixed agriculture were first invented and more commonly practiced in Yixiang (including Dizhengdang and Longyuan) (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 50). Second, upstream Derung had better farming tools: Yixiang, Erxiang, and Sanxiang had more iron tools and fewer wood tools serving equivalent functions than Sixiang. Third, farming in upstream was more efficient than in downstream: the per laborer yield in Dizhengdang, Longyuan, and Xianjiudang was higher than that in Kongdang, Maku, and Bapo.

To me, it is interesting to review the different cooperative farming division rules in upstream and midstream vs. downstream Chinese Derung after learning about the technological and ecological differences. My expectation would have been that the upstream and midstream Derung, who had looser family community structures, more wealth differentiation, and more dependence on farming that divided co-farming harvests by labor, but reality was the opposite. This counter-intuitive pattern could have resulted from the Protestant influence on Bapo and Maku villagers since the 1930s, other cultural factors, or random events and the personal decisions of certain Derung villagers. Unfortunately, ethnographic and historical information is not sufficient to identify the origins of the current division norms.

The Introduction of paddy farming

Chinese Derung people in all regions started farming rice in paddy fields in 1952, under the PRC government's direction. Xuewadang village in Kongdang was selected as the pilot site.

The government officials taught the local people paddy farming procedures and technologies and ran the paddy farming program as an agricultural production cooperative, promoting task divisions and harvest divisions based on detailed labor participation. The rice grew very well in Xuewadang: every Mu of paddy field yielded more than 300 Jin of rice (Yang, 1999). Paddy farming was thus further promoted to the whole Derungjiang Xiang and was taken on by the people themselves. In Kongdang, people farmed rice as individual households and in cooperative farming groups, but they borrowed the traditions from swidden cooperative farming and divided equally by household regardless of labor contribution. In the whole Derungjiang Xiang, 850 Mu of paddy was developed between 1952 and 1959 (Yang, 1999). The success, however, was not replicated everywhere. Probably because of the high altitude, villagers in Dizhengdang reported that the paddy farming program took up much time but yielded little rice and as a result, some people almost starved to death (Guo, 2010, p. 104). Consequently, paddy farming quickly disappeared among upstream Chinese Derung. In 2008, only Kongdang, Bapo, and Maku still farmed paddy rice (Guo, 2010, p. 105).

As a part of the socialist reformation, the paddy farming program introduced both "advanced productivity" (XianJin ShengChanLi) and "advanced productive relations" (XianJin ShengChanGuanXi). Culturally, it was the first time the roles of Derung family community heads and folk religion shamans in directing people's production were challenged. It was also the first time the Derung experienced agricultural production cooperatives (to be introduced in the next subsection), whose rules contradicted their traditions. Derung people were taught to use feces (probably human feces instead of manure but unspecified in the document) as natural fertilizers. This conflicted with Derung traditional beliefs that considered feces to be dirty and unacceptable in farming land (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies

and Histories Survey Documents Series, 1985b, p. 100). Derung also adopted plows, different forms of Han hoes and oxen. These technologies and paddy farming itself were abandoned in Dizhengdang, Longyuan, and Xianjiudang when the Chinese Derung took control of their own farming in the 1980s (Guo, 2010, p. 106).

Agricultural production cooperatives organized by the PRC government

The paddy farming program could be seen as a PRC government agricultural production cooperative, but it was only with a new crop and did not fundamentally transfer the traditional Derung productive relations. Government-organized agricultural production cooperatives were at the center of the PRC government's socialist reformation and played a critical role in Chinese Derung life between 1957 and 1983 (Guo, 2010, pp. 108, 182). In 1957, six agricultural production cooperatives were established in Derungjiang Xiang (He and Li, 1995, p. 19). The agricultural production cooperatives confiscated newly developed rice farming land and all group-owned basic or alder swiddens (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 101). They also encouraged individual households to let the cooperatives use alder swiddens owned and farmed by individual households, although such encouragement was not always successful. The participation rate quickly grew. By May 1958, 85% of the agricultural households in Nujiang State participated in agricultural production cooperatives (Editing committee for Records for Nujiang Lisu Nationality Autonomous State, 2006, p. 413). However, interest cooled between 1961 and 1962, because the agricultural production cooperatives proved to be much less efficient than the government thought they would be and provided insufficient food and nutrition for the people (Editing committee for Records of Gongshan Derung Nationality and Nu Nationality Anonymous County, 2006, p. 13), Nujiang State government started allowing households to withdraw freely in 1961. The participation rate declined from 100% before 1961 to 43% after 1962. Then between 1981 and 1983, land usage rights were gradually returned to individual households, and government-led agricultural production cooperatives ended (Cai, 1998, pp. 197-198; Editing committee for Records of Gongshan Derung Nationality and Nu Nationality Anonymous County, 2006, p. 182).

Bingdang, a village within the administrative village of Kongdang (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 101) was selected as the pilot site for agricultural production cooperatives in 1955. This pilot program left behind many vivid records that showed how Derung traditions interacted with PRC government policies yielding a compromise. The government-led agricultural production cooperatives aimed to increase productivity by assigning different tasks to individuals with different levels of strength or skills and rewarding resource contribution, labor effort, and labor quality. Specifically, the participation of a plow-pulling ox was worth twice as much as a human laborer's per unit of time. Human laborers were at first classified into 6 types: for each day of work, proactive ones earned 6 points; an average laborer earned 5 points; less devoted ones earned 4 points; half laborers (elders and teenagers) earned 3 points; children earned 2 points or 1.5 points depending on age. The agricultural production cooperatives would then divide the gains based on how many points each participating household's laborers had earned in the farming cycle.

Because these rules contradicted the Derung cooperative farming traditions, the government-led agricultural production cooperatives faced quite a few issues. Traditionally, all households in a cooperative farming partnership would go to the farming plot together, rest together, and go back home together. If they had multiple plots of land to work on, they would work together on one, finish it, and move to the next together. People did not like it when the agricultural production group organizers asked them to take on specific tasks in different land plots. Eventually, the officials had to allow people from the same household to work on different tasks in the same land plot (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 100). Traditionally, Derung people did not acknowledge that the quality and efficiency of laborers could differ. They felt that each person had two hands, and that the elders raised the young people in the past, and children would support their guardians in the future, so everyone who participated should be equal (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 100). Probably because of this ideology, when the cooperative first started, the villagers in charge of documenting labor participation

registered 6 points for all participants. In response to this, the officials shifted to giving 6 points to all adults and 3 points to all children. People were still unsatisfied. Eventually, it was accepted that everyone who worked before breakfast and then again with everyone else after breakfast should earn 6 points, and others who started working only after breakfast should earn 5 points. Traditionally, people in Kongdang divided the gains equally by household regardless of labor participation. This was at odds with dividing in proportion to detailed labor participation, which was at the heart of these communist agricultural production cooperatives. Bingdang people tried multiple ways to fit the division rule of the agricultural production cooperative to their equity ideology. They frequently asked the government officials to give more to the households that had fewer laborers and gained less in the division. They also requested that the last bit should be divided equally among the households and were all extremely pleased when the officials agreed (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985b, p. 103). They tried to modify the labor participation counting rules to disadvantage households with more laborers. For example, Kongdang-Zeng had 5 laborers and 6 oxen, so his household earned much more crops than others. This greatly upset the villagers. Some proposed discounting oxen's value in the division, while others proposed oxen should be excluded from production (Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series, 1985a, p. 31).

There were no detailed records of how successful the agricultural production cooperatives were in Derungjiang Xiang. Maybe Derung agricultural cooperatives faced the usual problem that people lacked incentives and no participant was qualified to be the cooperative director, accountant, and so on (Guo, 2010, p. 111). Maybe dividing tasks based on skills and dividing gains based on labor contribution promoted work efforts and increased efficiency. However, the fact that Chinese Derung people faced famine and malnutrition in 1959 suggests that the agricultural production cooperatives might have been overall less efficient, or at least less adaptive, than the traditional Derung subsistence style that included hunting and gathering in addition to farming.

After the disappearance of agricultural production cooperatives, Chinese Derung people quickly abandoned the farming technologies and productive relations imposed on them by the cooperatives. They gave up plows, Han-type hoes, and the usage of oxen (Team and Government, 1999). Cooperation based on location proximity, which was established in the cooperatives, was also replaced by traditional kinship-based cooperation (He, 1995, p. 18).

Converting sloping farming land to forests

In Nov. 2002, the PRC government signed a "sloping land conversion" contract with the Chinese Derung (Guo, 2010, p. 286). This contract specified that any farming land on mountain areas with a slope of 25° or higher had to be converted back to the forest and that as compensation for giving up their farming land, Derung would receive cash and rice in return. Nationwide, this policy aimed to control erosion and subsequent flooding problems. In Derungjiang Xiang, however, the application of this policy was more about following the national trend than solving local ecological problems: in the Derung Valley, the area of forests taken up for farming was less than 1% of the total surface area, and there was no erosion or flooding (Gros, 2014). The contract between the PRC government and the Chinese Derung was supposed to last for 8 years but was extended in 2010 and eventually ended in 2016. This policy brought many changes to the Derung people's subsistence and general lifestyle.

From 2002 to 2005, 7000 Mu (1.78 Mu or roughly 1187 square meters per capita) of swidden was converted (Guo, 2010, p. 286) in Derungjiang Xiang. It was 97.2% of the total area of farming land the Chinese Derung people had at the time. In other parts of China, people received rice according to the area of land they had to give up. In Derungjiang Xiang, probably because almost all land had to be converted and the government wanted to make sure people all received enough rice to bring them up the poverty line, each individual received 374 Jin (187 kg) of rice per year for the length of the contract (Guo, 2010, p. 287; Gros, 2014). It was a significant amount, compared to the 214 Jin (107 kg) of grains (mainly maize) that Derung could harvest from their own farming (Data from Dizhengdang village) (Gros, 2014). Currently, although the sloping land conversion contract ended and the Chinese Derung people no longer receive rice, they receive cash compensations that are distributed in proportion to the area of land converted.

The sloping land conversion policy affected the Chinese Derung societies and culture in many ways, some intended, some unforeseen (Guo, 2010, pp. 291-297; Gros, 2014). First, it pushed swidden

horticulture out of the Chinese Derung subsistence. Between the "sloping land conversion" policy and the law that tree cutting requires special permission, the basis for swidden horticulture—using tree ashes as fertilizer, no longer existed. Second, traditional crops, including several forms of millet and several forms of buckwheat, have almost disappeared. These crops were always farmed on swiddens. Since swiddens no longer exist, and people now have easy access to rice, these traditional crops have no role in the contemporary subsistence of the Chinese Derung. By 2005, 5 out of the 49 crops Derung traditionally farmed had disappeared, and 17 were maintained by only a few households, either to preserve their tradition or because they are older and carry on out of habit. Only 8 were still regularly planted (Shen et al., 2010). Third, because Chinese Derung people now receive rewards for "not working", they find themselves with more free time and grains. This may have led to more manufacture of alcohol and more drinking.

In 2008, Chinese Derung people were granted the right to use forest land that used to be their swiddens. Although still not allowed to cut down trees, they can farm under the trees. In 2010, the Derung nationality poverty elevation program started distributing cash crop seeds and saplings, especially those that could grow well under shading. Among these, the farming of Caoguo (Tsaoko), an herb plant foreign to the Derung Valley, has been extremely successful and become the main cash income source for Derung villagers in Xianjiudang, Kongdang, Bapo, and Maku. A profitable cash crop is yet to be found for Dizhengdang and Longyuan.

References

Paul K. Benedict and James A. Matisoff. *Sino-Tibetan: a conspectus.* Berkeley, CA: University of California Press, 1972.

R. Grant Brown. Handbook of the răwang dialect of the nung language. *Journal of the Royal Asiatic Society of Great Britain Ireland*, 68, 1936. ISSN 0035-869X. doi: 10.1017/s0035869x00076899.

Jiaqi Cai. *An Investigation of Societies and Histories of Derung in Tibeto-Yi Corridor [Zang Yi Zoulang zhong de Dulongzu Shehui Lishi Kaocha].* Beijing: Publishing House of Minority Nationalities [Beijing: Minzu Chubanshe], 1998.

Jianhua Chen. The matrilateral cross-cousin marriage of the derung people and its functions [dulongzu gujiubiao danxiang huanzhuang hun jiqi gongneng]. *Journal of Guangxi University for Nationalities*, 41:99–105, 2019. ISSN 0030851X. doi: 10.2307/2751814.

Editing committee for Basic situations about Gongshan Derung and Nu Autonomous County. *Basic situations about Gongshan Derung and Nu Autonomous County [Gongshan Dulongzu Nuzu Zizhixian Gaikuang].* Beijing: Publishing House of Minority Nationalities [Beijing: Minzu Chubanshe], 2008.

Editing committee for Records for Nujiang Lisu Nationality Autonomous State. *Records for Nujiang Lisu Nationality Autonomous State [Nujiang Lisuzu Zizhizhou Zhi].* Beijing: Publishing House of Minority Nationalities [Beijing: Minzu Chubanshe], 2006.

Editing committee for Records of Gongshan Derung Nationality and Nu Nationality Anonymous County. *Records of Gongshan Derung Nationality and Nu Nationality Anonymous County [Gongshan Dulongzu Nuzu Zizhixian Zhi].* Beijing: Publishing House of Minority Nationalities [Beijing: Minzu Chubanshe], 2006.

C. P. FitzGerald and Joseph F. Rock. The ancient na-khi kingdom of southwest china. *Pacific Affairs*, 22, 1949. ISSN 0030851X. doi: 10.2307/2751814.

Heng Fu and et. al. Dong, Hao. *Qing Dynasty tribute offering ambassadors picture book [Huang Qing Zhigong Tu].* 1763.

Stéphane Gros. The politics of names: The identification of the derung (drung) of northwest yunnan. *China Information*, 18, 2004.

Stéphane Gros. Merchant missionaries' new religion: The first steps of the french catholic missionaries in northwest yunnan, 1846-1865 ["shangren xing chuanjiaoshi" de xinxing zongjiao: Faguo tianzhujiao chuanjiaoshi zai dianxibei de zaoqi huodong (1846-1865)]. *Chinese Social Science Digest [Zhongguo Shehuikexue Wenzhai]*, 5, 2011.

Stéphane Gros. The bittersweet taste of rice: Sloping land conversion and the shifting livelihoods of the drung in northwest yunnan, china. *Himalaya*, 34, 2014. ISSN 19352212.

Yongji Gu. Nung societies in ming and qing dynasties. *Journal of Yunnan Nationalities University (Social Sciences) [Yunnan Minzu Daxue Xuebao– Zhexue Shehuikexue Ban]*, 29:101–106, 2012.

Jianbin Guo. *Wandering on the edge—- the changes in almost 60 years in a frontier minority nationality village [Bianyuan de Youyi– yige Shaoshu minzu Cunzhuang jin 60 Nian Bianqian]*. Kunming: Yunnan People's Publishing House [Yunnan Renmin Chubanshe], 2010.

Daming He. *Evolution of the Complex People-Nature System in Alpine Canyon—a Comprehensive Investigation on Derung Societies, Economics, and Environment in Recent Years and a Study on Coordinated Development [Gaoshan Xiagu Ren Di Fuhe Xitong de Yanjin– Dulongzu Jinqi Shehui, Jingji he Huanjing de Zonghe Diaocha ji Xietiao Fazhan Yanjiu]*. Kunming: Yunnan nationality publication house [Kunming: Yunnan Minzu Chubanshe], 1995.

Daming He and Heng Li. *A Comprehensive Study on Derung River and Derung Nationality [Dulong Jiang he Dulongzu Zonghe Yanjiu]*. Kunming: Yunnan Technology Press [Kunming: Yunnan Keji Chubanshe], 1995.

Lin He. The ethnicity construction and ethnicity imagination of nung in china and myanmar [zhongmian "nuren" de zuqun goujian yu zuqun xiangxiang]. *Southwest Frontier Nationality Study [Xinan Bianjiang Minzu Yanjiu]*, 9, 2011.

Jun Hong. The legends and origins of derung nationality [dulongzu chuanshuo yu zuyuan]. *Nationality Studies (Minzu Xue)*, 2, 1992.

Zhiqing Kong. *Recalls from the first Derung county major [Dulongzu Diyi Ren Xianzhang de Huiyi]*. Mangshi: Dehong Nationalities Publishing House [Mangshi: Dehong Minzu Chubanshe], 1999.

E. R. Leach. *Political systems of highland Burma: A study of kachin social structure*. Athlone Press, 1954.

Yafeng Li. Mingqing Shiqi Yunnan Nujiangbiandi de Tusi Tongzhi [The chief governing in Yunnan Nujiang border during Ming and Qing dynasties]. *Changjiang Shifan Xueyuan Xuebao [Journal of Yangtze Normal University]*, 2018.

Xiaohai Liu. On derung marriage forms [lun dulongzu hunyin xingtai]. *Journal of Kunming Teachers College [Kunming Shifan Gaodeng Zhuankexuexiao Xiaobao]*, 2006.

Xun Lu. Slash and burn agriculture in derung nationality [dulongzu de daogenghuozhong nongye]. n.d.

Robert Morse and Betty Morse. Oral tradition and rawang migration routes. *Artibus Asiae. Supplementum*, 23, 1966. ISSN 14230526. doi: 10.2307/1522651.

Kun Sang. The contemporary changes of traditional derung marriage exchange circles–with village d in derungjiang xiang town, gongshan county as an example [dulongzu chuantong tonghunquan de dangdai bianqian- yi gongshanxian dulongjiangxiang d cun wei li], 2017.

Shicai Shen, Andreas Wilkes, Qian Jie, Yin Lun, Jian Ren, and Fudou Zhang. Agrobiodiversity and biocultural heritage in the dulong valley, china: Impacts of and responses to the sloping land conversion program. *Mountain Research and Development*, 30:205–211, 2010. doi: 10.1659/MRD-JOURNAL-D-09-00085.1.

Hongkai Sun. *A short review of Derung language [Dulongyu Jianzhi]*. Beijing: Publishing House of Minority Nationalities [Beijing: Minzu Chubanshe], 1981.

Liying Tan. *A linguistic anthropology study on SWK and MLK in Derung language [Dulongyu SWK he MLK de Yuyan Renleixue Yanjiu]*. PhD thesis, Yunnan Universiry, 2017.

Yunnan Province Derungjiang Nationality Work Team and Derungjiang Xiang Government. Derungjiang helping the poor agenda and annual plan [dulongjiang fupingongjian guihua ji niandu shishijihua], 1999.

Joël Thoraval. L'usage de la notion d'≪ ethnicité ≫ appliquée à l'univers culturel chinois. *Perspectives chinoises*, 54, 1999. ISSN 1021-9013. doi: 10.3406/perch.1999.2406.

Xuehui Wang and Dengrong Gao. A primary investigation of the traditional custom laws of derung in yunnan [yunnan dulongzu yuanshi xiguanfa chutan]. *Legal History [Fazhi Shilun]*, 1994.

Hu Xia. *Details about Nu and Qiu Frontiers [Nuqiu Bianai Xiangqing]*. 1908.

Wen Xu. A study on custom laws of derung nationality in gongshan county, yunnan [yunnansheng gongshan dulongzu xiguanfa yanjiu]. *Information and Study on Law Literature [Falv Wenxian Xinxi yu Yanjiu]*, 3:54–64, 2011.

Shirong Yang. The start of derung oxen facilitated farming [dulongzu niugeng de kaishi]. In *Derung Nationality [Dulongzu]*. Mangshi: Dehong Nationalities Publishing House [Mangshi: Dehong Minzu Chubanshe], 1999.

Yan Yang. Desiring change and facing change: a historical anthropological interpretation of Derung cultural change from Yuan Dynasty to the present [Sibian yu Yingbian: Yuandai zhijin Dulongzu Wenhua Bianqian de Lishirenleixue Jiedu]. *Qinghai Minzu Yanjiu [Qinghai Nationalities Studies]*, 2017.

Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series. *Derung Society and History Survey: Vol. 1 [Dulongzu Shehui Lishi Diaocha (Yi)]*. Beijing: Publishing House of Minority Nationalities (Beijing: Minzu Chubanshe), 1985a.

Yunnan editing committee for Five Books on nationality issues and Editing committee for Chinese Minority Nationalities' Societies and Histories Survey Documents Series. *Derung Society and History Survey: Vol. 2 [Dulongzu Shehui Lishi Diaocha (Er)]*. Beijing: Publishing House of Minority Nationalities (Beijing: Minzu Chubanshe), 1985b.

Xudong Zhao. Bridge of symbols: Religion of derung and its transformation under the influence by modern medical science ["xiangzheng zhi qiao": Dulongzu zongjiaoxinyang ji qi zai xiandai yixue yingxiang xia de zhuanbian]. *Journal of Beifang University of Nationalities [Beifang Minzu Daxue Xuebao]*, pages 107–116, 2014.