

Typological Analyses of Urban Forms along the Tarim River during the Qing Dynasty

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How to cite this paper: Wang, P. (2022). Typological Analyses of Urban Forms along the Tarim River during the Qing Dynasty. *Advances in Applied Sociology*, 12, 263-276. <https://doi.org/10.4236/aasoci.2022.126021>

Received: May 9, 2022

Accepted: June 19, 2022

Published: June 22, 2022

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Abstract

This research aims at exploring the urban forms along the Tarim river during the Qing dynasty by using textual critical analyses and field investigation in order to restore and study the interactions between the arid environment and Manchuria administration. The reunification of Xingjiang during the Qing dynasty was a defining event in the dynastic history of China, yet it remains less-discussed how water-mediated oases interacted with Manchu governance. Restricted by the water resource, cities along the Tarim River could be divided into three different geomorphological regions, namely, piedmont alluvial fans (represented by Kuche), river alluvial plains (represented by Xinping), and river tails (represented by Ruoqiang). The typological analysis of these cities subsequently reveals that the driven factors of urbanizations in arid areas go to government-led migration, promotion of cultivated-farming and opened-up official routes. In light of the results obtained, this research could be useful for reviewing the borderland reclamation during the Qing while offering new elements of observation likely to improve regional development in arid areas.

Keywords

Urban Morphology, Human-Earth Interactions, Tarim River, Qing Dynasty

1. Introduction

Cities represent the geography, history, culture, and civilization of a certain place, and the changing urban landscape may reflect how human activities alter natural ecology. The Qing dynasty was characterized by the starting period of massive urbanization along the Tarim river. And cities were developed and administered in conformity with the core concepts and practices of the Manchu government regarding local administration, the regionally natural resources, and

local development (Hao, 2020). The analyses about Ili and Kashgar have captured the character of the “city at the borderland”. During the Qing dynasty, the strategies for city development in southern Xinjiang were to locate new cities and to restore old ones (Wu, 2007). Case studies on urban morphology have explored in Aksu, Kashgar, Usher, and Ingisar (Wang, 2019, 2020). The gravitational centre of Xinjiang’s cultural sites grew in a “north-south-north” orientation from the Palaeolithic to the present (Luan et al., 2016).

Long-term studies of regional culture and development can be undertaken by utilising sites of human cultural activities (Jia et al., 2017; Xue et al., 2018; Zhang, 2018). Analyzing the urban pattern of Xinjiang during the Qing dynasty may help compensate for a lack of knowledge on locations of human activities. The number of cities and their populations in Xinjiang has been steadily increasing through the Qing. Subsequently, Urumqi, Yining-Tacheng, Hami-Turpan, Aksu, and Kashgar-Yarkand-Hotian grew to become five major urban clusters (He & Li, 2018; Huang, 2006). In addition, cities around the Tarim Basin developed into 3 city belts with shapes of a modest “c”, a star-stubbed one, and a massive “c” (Liu, 2013).

Xinjiang city development and management have evolved in accordance with the central government’s border governance (Lin, 1988). The Manchurian cities of Ili, Urumqi, Balikun, and Gucheng were set to rearrange the soldiers and migrations from the inland (Su, 2007), while the cities in southern Xinjiang saw a complex ethnic composition and a conversion to county system (He, 2014). Modernisation in southern Xinjiang during the Late Qing, according to existing research, has turned the indigenous urban traditions into a diverse fusion one (Cheng, 2019). It’s believed that the urban form’s “bi-core structure” symbolises ethnicity and multiculturalism (He, 2019).

Yet, it remains less-discussed how water-mediated oases in deserts interacted with Manchuria administration by exploring the urbanization during the Qing. What’s more, uneven study regions also impacted the discussions on cities forms in Xinjiang during the Qing. Northern Xinjiang has received more scrutiny than southern Xinjiang. The focus is mostly on strategically, militarily, and economically important nodal cities such as Ili, Kashgar, and Aksu.

Human-Earth interactions in small sizes and for short periods of time are still in their infancy (Leng & Song, 2005; Turner et al., 1995). Given the profusion of human activities and their geographical background in South Xinjiang, this research aims at exploring the urban forms along the Tarim river during the Qing dynasty by using textual critical analyses and field investigation in order to restore and study the interactions between the arid environment and Manchuria administration.

2. Natural and Historical Bases for Urbanisation in Arid-Zone

Xinjiang is situated in northwest China’s vast, arid interior dry zone, which contains more than 60% of the country’s Gobi desert. Human activity there is li-

mitted to the region's numerous oases, which are critical for community creation and development. These are the areas where human activities are closely tied to and dependent on.

2.1. Oases along the Lower Tarim River

The natural conditions such as water resource and geological landforms of the oases were the basic conditions for urban development and construction in the middle and lower reaches of the Tarim River.

The oases around Tarim river were supplied with water by two massive rivers, the Weigan and the Kuche, that both originate in the Tianshan Mountains, as well as springs and groundwater. The Kuche oasis encompassed the largest area in the middle Tarim river and had a long history of development (Figure 1). By the Qing Dynasty, the majority of the Kuche oasis had evolved from a natural oasis to a cultivable one. The location of the city of Kuche had remained the same throughout history. The oasis in the Tarim river coccyx, where Xinping County (Figure 2) was located, had been split by the expansion of the Tarim river branches, and no metropolis or regionally significant regime had emerged in this area since the departure of the previous Loulan state in the Han Dynasty. The Tarim river eventually flowed into Lake Taitma and then into the Lop Nor, which was dotted by starry oases. Due to the shifting waterways of the lower Tarim river, the Ruqiang region, located south of Lake Taitma, was a small agricultural oasis during the Qing dynasty, but its regional economic development was promoted by its function as a freight station on the transportation route connecting the Tarim Basin to the Qinghai-Tibet Plateau and the Hexi Corridor (Figure 3). Apart from this, Ruoqiang was found abundant in mineral resources during the late Qing, making it a resource base for the Manchuria Government.

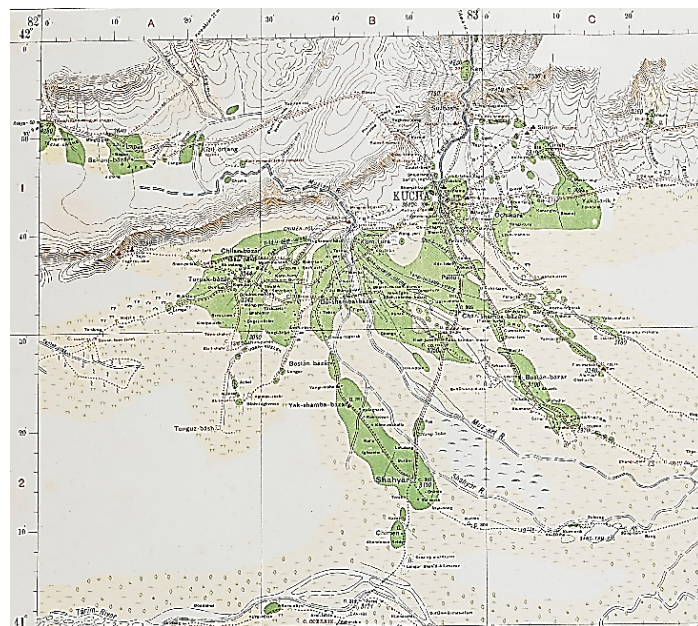


Figure 1. General view of Kuche and its surrounding oases.

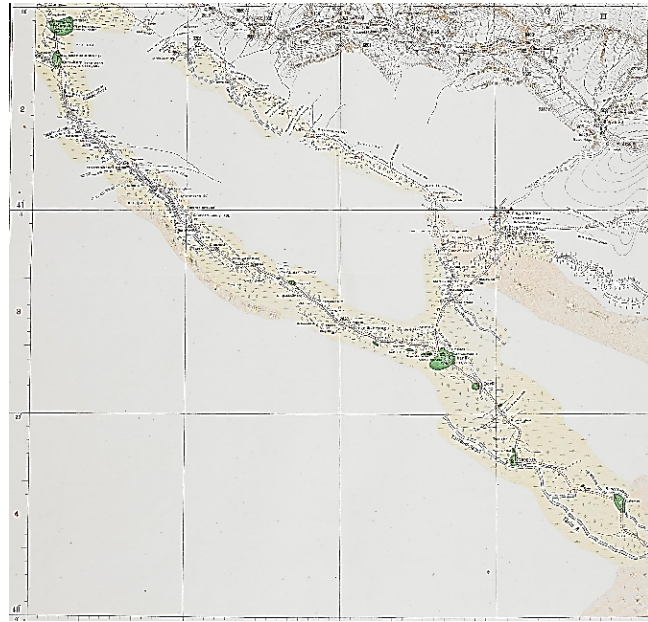


Figure 2. General view of Xinping and its surrounding oases.

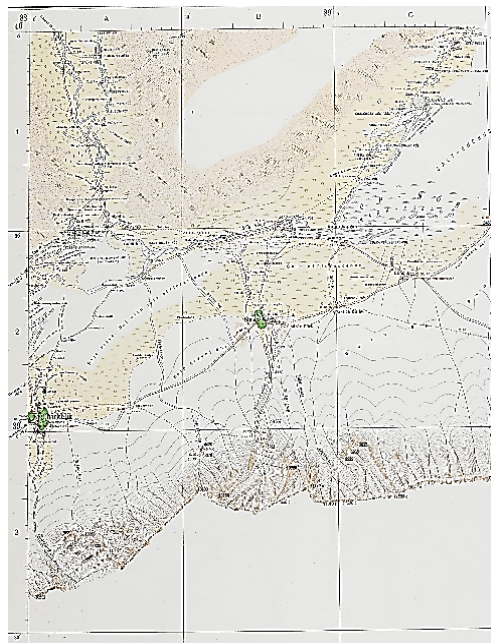


Figure 3. General view of Ruoqiang and its surrounding oases.

These figures numbered 1 to 3 were cited from: Stein, Marc Aurel. “*Innermost Asia Detailed Report of Explorations in Central Asia, Kan-Su and Eastern Īrān.*” Vol.4. Oxford: The Clarendon Press, 1928.

2.2. History of Regional Development

During the Han and Tang dynasties, the Tarim River’s middle and lower sections had already produced communities centred on Qiuci and Shanshan. Oasis settlements were dominated by seasonal agriculture, with intensive

Table 1. Climate changes along the Tarim river (10,000 B.P).

Stage	Period	Dynasty	Climate	Feature
I	10,000-4000 B.P	Neolithic age	warm humid	Abundant river course, vast forest and grassland
II	4000-3500 B.P	Xia	cold humid	Increased river runoff, emerging of civilizations
III	3500-2500 B.P	Shang, West Zhou, Chunqiu Period	warm dry	Geochemical elements indicate the warm and dry environment
IV	2500-2000 B.P	Warring States Period, Qin, Han	cold humid	Suitable for cultivation
V	2000-1500 B.P	Wei, Jin, Southern and Northern Dynasties	warm dry	Reduced ground water, restricted farming activities
VI	1500-1000 B.P	Sui, Tang, the Five Dynasties	cold humid	Re-flourished Social Activities
VII	1000 B.P-date	Yuan, Ming, Qing	warm dry	Rise in temperature, increased precipitation, and intensified drought

Cited from: P. Zhang (2019). *Research on the Coupling System of Society, Environment and water in Tarim River Basin*. [Ph.D. Thesis, China Institute of Water Resource and Hydropower Research, China].

farming being the most common type. Because of their comparatively fertile soils, these oases were excellent for agricultural production and, when properly maintained, were capable of long-term farming and settlement. Environmental data from historical sites of Han and Tang suggested that the majority of people's activities took place in ancient oasis regions and the tributaries' alluvial plains along the Tarim river (**Table 1**). Due to their location on the front edge of the foothill flood fans, where moisture and soil fertility were best, the old oases had been exploited for the longest time, whilst the Tarim River and its tributaries were the principal route for the newly recovered region.

Furthermore, during the Han and Tang dynasties, the majority of human activities occurred in the core areas of ancient oases with low elevations and abundant water sources. Whereas, during the Qing dynasty, the central government either re-opened up the former sites of the Han and the Tang where natural conditions remained favourable, such as Kuche, Aksu, and Luntai, or established new cities at the river alluvial plains where the land kept less reclaimed at the early Qing. Sand dunes had buried some of the ancient Han and Tang settlements over time as a result of changes in temperature and hydrological conditions, as well as the effects of military warfare. The Kuche region had been recharged by the Weigan and Kucha rivers and was able to maintain a sizable oasis area by the Qing dynasty, and the Uyghurs and other people continued to live in

the vicinity of the former Han and Tang dynasties' Qiuci cities, though little of the former cities remained. However, Xinping and Ruqiang, located in the lower reaches of the Tarim River, were already dominated by the Gobi desert during the Qing period, and Ruqiang was refilled by the water systems originated from Aljin mountains, allowing for the building of tiny oases in clusters.

These three places along the Tarim River's middle and lower reaches, namely Kuche, Xinping, and Ruqiang, had been treated as part of "Four Major Eastern Cities in Southern Xinjiang" during the Qing Dynasty. The Weigan-Kuche River delta was the Qing's favoured location for farming and migration due to its relative superiority in water resources. And considering the destruction of Qiuci city built in Han and Tang dynasty, the Manchuria rulers chose the high terrain west of the Tongchang River for building a new city to arrange military and migration. Because of the migration to the city of Kuche mainly from the inland, the new city was also called "City of the Han People". A so-called "City of the Hui People" was created at the same time to the south and east of "City of the Han People" to house the Uighur. Square in design and facing south, the "City of the Han People" had four gates, no corner towers, and was served by a single major road in each direction. The residence of the Uighur leader in Kuche was located west of "City of the Hui People", near the Han city's southern wall, while a dock connecting to Qiuci's old city was located southeast. Throughout Qianlong's reign period, the Han and Hui cities in Kuche were kept apart from each other. This limitation was not lifted until emperor Guangxu's reign period, when people were allowed to freely migrate between the two cities, resulting by the policy of ethnic blending.

The urban development in Xinping County, which was located on the Tarim River's lower reaches, was more reflective of the social restrictions imposed by the natural environment, and was characterised by regional expansion powered by the environmental factors. The city built in Xinping did not include a city wall as an amenity. The increased population and decreased soil fertility had driven the regional administration centre rearranged several times. The government and settlers worked together to find sites within the vast and diverse plain of the Lop Nur reclamation region with better soil and water conditions. As the cultivated land in Xinping grew saline, the regional administration centre shifted from the band of branches of Tarim river, north band of Kongque river to the centre part of the Kongque River's pre-mountain floodplain fan. To make it specific, the administrative centre of the reclamation region migrated eastward from Yinggekeli, on the desert's southwestern boundary, to the river-bound city of Dunali/Puchang, and then to the higher, better-drained terrain of Karagong/Xinping/Yuli (Wang, 2022).

Ruoqiang County was set in the 25th year of the Guangxu era, making it the last of the Tarim River cities to be formed. The Qing governors recognised Ruoqiang as a transportation hub during the combating or war time. And the discovery of gold mines in Hotan and other parts of Southern Xinjiang sparked the exploration from the Russian and the British, reinforcing the Qing government's

enthusiasm for mining and its awareness of border security. Thus, the road from Ruqiang to the Tibetan Plateau was reopened, and the number of government-led migrants from Xinjiang and the inland surged substantially. The Manchuria administrators initially focused its efforts on the Kaklik Oasis of Ruqiang, where they constructed administrative offices, shrines, and other fundamental facilities. Post stations and post roads were built in places like the Milan Oasis to help with official documents travel and mining transportation, creating a regional network.

The impact of human activities on the environment was not a one-way linear relationship of “reclamation-destruction” from a small local scale perspective on the transformation of city sites at the southern foot of the Tianshan Mountains during the Qing dynasty. Land cultivation tailored to local conditions could significantly slow the process of land desertification. “If the area is unsuitable for farming, hunting, or herding, it may be retained as a fishing, hunting, or herding location; however, if it is opened up, the cost of dredging canals and establishing defences will be twice as great as the gain,” wrote Tao Baolian, a son of the then governor of Xinjiang Province. In the early 1920s, another official of the Republic of China, Xie Bin, observed the southern area of Xinping or the lower reaches of Tarim river, and stated, “If we keep to the pastoral plan, we will succeed.”

The Qing dynasty’s administration of oasis cities along the Tarim River had a significant impact on the oases’ general ecology and urban form. The most visible embodiment of this trend had been the replacement of natural oasis areas with man-made ones. The oases land-use pattern saw a major rise in arable land and a significant drop in water and grazing acres as a result of significant migration, land reclamation, and the building of water conservation facilities. According to the historical document *Xinjiang Tuzhi (Records and Maps of Xinjiang)*, after the establishment of Xinping and Ruqiang counties during the Guangxu period, Xinping County gained 8793 mu of newly reclaimed land, Ruqiang County gained 20,294 mu of newly reclaimed land, and Kuche gained 637,112 mu of newly reclaimed land due to its earlier and continuous development. This transformation of land-use was particularly visible in regions adjacent to or on the outskirts of alluvial plains. Desertification along the lower Tarim River was caused by a combination of climate change, watercourse changes, and human activities, all of which have varying effects on desertification on different temporary and geographical scales. Irrigated agricultural growth has the potential to sustain the integrity of the oasis system in a short duration, and create new acres of farmland on the oasis’s outskirts. However, once the governmental assistances were suspended, the reclaimed land would quickly deteriorate into a new desert.

3. Urban Morphology and Its Driven Factors

3.1. Politically Motivated Urban Form

Natural conditions laid the groundwork for the development of cities along the

Tarim river's middle and lower reaches, but how that groundwork evolved into distinct cities and local societies as development progressed was dependent on the intervention of adequate financial resources and more effective local governance. These forces would only intervene when the central government maintained political strength and worked cooperatively with local troops.

Confronted with the pressure from the south-east frontier in the second part of the 19th century, the Qing government's grip on the north-west deteriorated. Xinjiang, on the other hand, was influenced by external powers during the conflict in Central Asia between Britain and Russia. Particularly, the British and Russian troops casted eyes on the gold mines and other minerals at Hotan and Qiemo. As a result, the Guangxu government prioritised transportation and local development in Ruqiang and Xinping, as well as urban development in the lower reaches of Tarim river.

During the Qianlong, Daoguang, and Guangxu periods, urbanisation aligned with the Qing government's goal of encouraging settlement and migration. In terms of urban development, the city in Kuche followed a special "twin-city" layout (Guo & He, 2013). During the early Qing dynasty, the central government divided Uighur communities into sections inhabited by local Muslims, known as "City of the Hui People", and areas inhabited by garrison and inland people, known as "City of the Han people" or "Manchu city". Kuche used to be a twin city for its having city of the Han and city of the Hui at the same time while the Manchu governors adhered to the policy of "Ruling by Customs". At that time, the Uighur Begg in Kuche served as the local leaders of a "united religion and state." During the Qianlong reign period, the north and south parts of Xinjiang were united, and policies toward the Uighur Begg were influenced by the strategy of compassion and appeasement, while fresh acres of territory were made available for the Qing's troop arrangement and migration. With the development of local administration, the Qing governors imposed strict limits on the number of reclaimed land available to various Begg, enforced the separation of Beg politics and religion, and restrained the power of Begg at the local level, while also distributing government-reclaimed farmland and areas abandoned during the war to the impoverished Uighur population. Accordingly, the Manchu governors were able to garner support from the ordinary Uighur people while avoiding Beg's power from exercising local control. Because the province did not exist until the Guangxu era, it was not subject to the ruling systems the same to the mainland ones.

The lower Tarim river was progressively incorporated into human settlement and local transit planning when the central government of the Qing founded Xinjiang province in the 10th year of Guangxu-reign period (1884). With increased inland migration and rearrangement of Uighur populations, Xinping and Ruqiang in the lower Tarim river region progressively expanded into places where the military and civilian habitation got along well, and the civic function of urban development was considerably enhanced.

The expanded urbanization in Xinping was particularly “water-based,” showing the characteristics of government-led municipal development in an arid location with few oasis resources. The shifting water system had a significant impact on the social behaviour in Xinping. The administrative authority was required to respond to the shifting oasis resources provided by the flowing water systems. The dispersed Uighur communities were unprepared to deal with the implications of the shifting water system, and the mainlanders that arrived were policy-driven migrants as well. Under the supervision of the government, the Tarim River’s thin and broken coccyx in the oasis began to gather people, undertake incipient agricultural operations, and create towns of a specified population. Concurrently, government-sponsored water infrastructure had contributed to the area’s continued growth. The sequence of oases had slowed the urbanisation of Ruqiang. The Qing government’s attention on the development of Kaklik/Ruoqiang had driven the local Loplik people to migrate from their native hometown Abdal to the southern Milan oasis, a place next to the official routs, without causing direct space conflict.

The shifting form and expansion of the three cities of Kuche, Xinping, and Ruqiang along the Tarim River’s middle and lower reaches, were an undeniable reflection of the Qing government’s rule and development in southern Xinjiang. The intervention of Qing central government troops, as well as their interactions with local Uighur Begg and people, exemplified the specific characteristics of Qing-era urban development in southern Xinjiang.

3.2. Transit-Oriented Urban Form

The oases in southern Xinjiang were geographically divided, with each oasis having a limited territory and resource base. Aside from the isolation of the desert and saline areas, urban and social activities were confined by the oasis’s small physical boundaries. The routes connecting the oases across the Gobi desert were a lifeline for the oases.

Since the Han Dynasty, Kuche, Xinping, and Ruqiang had been on the Silk Road’s arid and branch routes. However, as a result of their location and the expansion of the oases, the cities of Kuche, Xinping, and Ruqiang, as well as the transportation routes that linked them, changed over time and were influenced by the central government’s relationship with Xinjiang.

After the suppression of the intrusion from the Dzungar and the rebellions from the Hui, the Manchu governors established the military road which passed through the entirety of Xinjiang, as well as the post road systems which were administered by the Prefecture and centred primarily around Urumqi, on the basis of the original dispatch roads and military roads to the north and south of the Tianshan Mountains. Xinjiang was in upheaval throughout the Tongzhi reign period, with all of the traditional military-post routes demolished and their infrastructure drastically damaged. During the Guangxu era, Zuo Zongtang reunited Xinjiang and transformed the ancient highways to post roads, contributing

to the region's socioeconomic stability.

During the late Qing, Kuche, located at the southern foot of the Tianshan Mountains and on the northern border of the Tarim Basin, was an important transit hub, serving as the main route connecting Yanqi, Korla, Aksu and Kashgar. Therefore, Kuche became an important transportation hub for the Qing's military road system and post station systems. The easy access to highways on a daily basis made Kuche remained a hive of migration and commerce.

Xinping was situated on a branch road from Korla to the southern border. During Qianlong's reign period, the Qing army made a point of establishing military outposts along the path from Korla to Aksu in order to quell the uprising. After the establishment of the province in Xinjiang during the Guangxu era, the majority of existing military stations and post stations were converted into prefectures and counties, with the reestablishing of official transport systems. Xinping acquired a new post station during that time, and the route along the Tarim River was improved to a post road.

Although Ruqiang was functioned as a transit outpost for Qinghai and Dunhuang, the route from Hotan to Ruqiang was not yet created as an official road in the early Qing Dynasty, and Ruqiang was only connected to the outside world via a tiny road utilised by the local populace. Due to military and economic reasons, the potential of creating an official route to the southern border was studied. On the eve of the establishment of a province in Xinjiang in 1884, the Qing government began reconstructing the road connecting Dunhuang and Kaklik/Abtan. When the rebellions were quelled during the Guangxu era, the fort of Puchang on the west bank of the Lop Nor was erected to the Xinping county. At the same time, a post road was built connecting Ruoqiang and Korla via the moraine and the Tarim River. Due to the late opening of official roads, Ruqiang was not as active in inland migration, trade, and business as Kuche or even Xinping, which were also on the route. Kuche benefited from both transportation convenience and an abundance of water supplies, whereas Xinping and Ruqiang operated primarily as supply transit hubs, resulting in Kuche being significantly more prosperous and densely populated than Xinping and Ruqiang.

In comparison to Xinping and Ruqiang, the opening of the various routes through the desert increased people's movement, commerce, and cultural contacts between Xinjiang and the mainland, allowing for the establishment of counties in the two areas and administration by the systems that the same as the mainland ones. Effective traffic flow enabled the central government to transport goods during conflicts, and trade and commerce during peacetime, all of which were critical components in ensuring the stability of the oasis cities.

3.3. Migration/Population-Led Urban Form

To consolidate the rule and border defence in Xinjiang at the early years of the Qing, the Machu governors dispatched the Eight Banners and Green Battalion troops to carry out military cantonments and permitted cantoned soldiers to

bring their families, effectively transforming them into immigrants at the actual border. During the mid- and late-Qianlong era, the number of government-led migrations to Xinjiang ranged from 1700 and 4500 per year, with the Han people and their descendants accounting for 53 percent of the population in Xinjiang by the 42nd year of the Qianlong era (1777).

The demographic changes also occurred in Kuche, Xinping, and Ruoqiang during the Qing, including individual migration from the inland, the Uighur migration within the province, and the indigenous migration.

Due to its proximity to major transit routes and plentiful food and water supplies, Kuche was a vital military cantonment, settlement, and migration destination during the late Qing Dynasty. During the Xuanton period, Kuche had a total of 16,936 households, a population of 74,513 individuals, an average of 4.40 persons per family, and a male to female ratio of 114.90. In the whole of Xinjiang at the same time, there were 471,205 households with a total population of 20,853,340 individuals, an average of 4.57 persons per family, and a male to female ratio of 115.37:100. Kuche not only had the most people of any city along the middle and lower Tarim river, but its male-to-female population ratio was also equivalent to the rest of Xinjiang.

The Population in the cities in the middle and lower reaches of Tarim river accounted for 81.81 percent of the total population in Xinjiang. In Xinping, the indigenous people accounted for 16.95 percent, and people from foreign provinces took 1.24 percent, but only 3.96 percent of indigenous populations live in urban compartments, with up to 92 percent living in rural compartments. Both Ruqiang and Kuche had a local population of approximately 97 percent, with fewer than 1% of each area's population migrating from other provinces. Rural population was around 89 percent in both Kuche and Ruoqiang. Luntai County was another place along the Tarim River's main stream with a non-provincial population of more than 1%, with indigenous people constituting 95.56 percent.

"To some extent, the expansion of the territory mainly depended on military means," Mr. Ge Jianxiong wrote, "but the consolidation of the territory was inseparable from the population from the ethnic group and the regime, and from the stable foundation formed by immigrants from the Central Plains." (Ge, 2008) The ethnic composition of the cities along the Tarim river changed as a result of integration and rearrangement, with the Uighurs in southern Xinjiang relocated to the northern Xinjiang, and the Han population in the northern Xinjiang migrated to the southern and eastern parts.

During the Qianlong reign period, the Han and the Uighurs in Kuche were strictly separated from each other, but by the Guangxu era, Kuche had evolved into a "multi-ethnic" metropolis. In Xinping and Ruqiang, the myriad institutions and infrastructure required for mainland and local people's daily lives were expertly constructed, representing the cohabitation of various groups of people. Throughout the Qing government's development in Ruoqiang, however, the authorities paid little attention to the indigenous Loplik people, and the Loplaks saw their treasured oasis resources encroached upon by the influx of immi-

grants. As a result, the Loplik people migrated from their historic village in Abdal to the southern Milan Oasis to asserting their land rights. Unlike the tacit understanding of governance that emerged through time between central and local administrations in Kuche, similar political trust and communication between the Qing government and indigenous peoples in the Ruqiang, Top-down local development fueled by Qing government demands, combined with aggressive private endeavour to neutralise the politically strong reaction, resulted in policies that favored neither party. This suggested, on the other hand, that even as the demographic profile and structure of the population changed, the concept of “ruling by custom” remained critical to the Manchu governance in ethnic areas, if only as a platform for dialogue and understanding, and to bridge the gaps between them.

4. Conclusion

Kuche was built as a bi-core city with the “City of the Han” of inland characteristics and the “City of the Hui” of the Uighurs patterns during the Qianlong era. The physical boundary between the two cities steadily shrank as the Manchu government’s ability to administer Xinjiang got stronger and people began to interact more. People from various ethnicities and tribes coexisted peacefully in Kuche during the late Qing dynasty. For the city of Xinping, its reengineering efforts were concentrated on the development of the Lop Nur reclamation region and the construction of a municipal centre. The Qing government’s efforts on urbanisation and migration in Xinping might be described as an environment-driven result. The rise of Ruoqiang city benefited greatly from its importance in transportation, while the unproper development policies had driven the Loplik people to relocate themselves to the Milan oasis in the aftermath of the Qing government’s cantonment and migration initiatives.

After the establishment of a province in Xinjiang, the Manchu governance over Kuche, Xinping, and Ruqiang sought to build cities that were “identical to those on the mainland”. The creation of government offices and temples dedicated to mainland folk beliefs during the Guangxu era indicated the local government’s pragmatic attitude to local power.

Judging from the urban construction and regional development of Kuche, Xinping, and Ruoqiang, the dominance of government power was the decisive force for social life in arid areas. And the exchange of population was the flexible force that promoted the differentiation and integration of urban landscapes. In addition, traffic was the factor that stimulated the government to develop and communicate with the native people. It can be said that the urban development and forms of Kuche, Xinping and Ruoqiang were inseparable from the influence of government policies, migration and transportation.

Acknowledgements

Fund Project: Basic Resources Investigation Project, Ministry of Science and

Technology of China (No. 2017FY101002).

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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