

Xinjiang's Vernacular Architecture

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

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Abstract

The Uyghur Autonomous Region of Xinjiang is home to numerous ethnic groups and their vernacular architecture that is uniquely representative of their geographical contexts, collective wisdoms, and cultural identities. In recent years, the Chinese government has implemented sweeping urban-rural “improvement” policies and facilitated extensive – arguably non-negotiable – architectural projects that have resulted in the rapid disappearance, modification, and reconstruction of vernacular houses and settlements. Claims have been made by the government, and supported by some Chinese scholars, that their architectural update endeavors are important for Xinjiang’s indigenous populations’ cultural advancements, lifestyle improvements, and economic developments. However at the same time, the government is using architecture – through selective preservation, demolition, renovation, and construction – as a powerful tool to manipulate the locals’ movements, thoughts, and lifestyles, reinforcing the state’s propaganda of ethnic unity and economic prosperity, and thus asserting its ruling authority through the newly established architectural and social order.

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CHAPTER 1. INTRODUCTION

This thesis identifies the Chinese government as the key facilitator of rapid transformations of vernacular architecture in the Uyghur Autonomous Region of Xinjiang in recent years. It analyzes the importance of Xinjiang’s vernacular architecture in terms of its sociality and contextualization, and examines how both central and local governments under the leadership of China’s Communist Party have enforced urban-rural “improvement” policies and directed large-scale architectural projects that have resulted in the rapid disappearance, modification, and reconstruction of vernacular houses and settlements. It argues that the government is responsible for the replacement of indigenous architectural traditions and functions with Han-dominated sensibilities, establishing a new architectural pattern and social order that are in tune with propaganda of ethnic unity and economic prosperity, and consequently reinforcing the Party’s governing authority in Xinjiang, a multi-ethnic cultural hub located along the historical Silk Road. This thesis brings together documented evidence, Western perspectives, Chinese government narratives, and scholarly research to paint a holistic picture on the past, present and future of Xinjiang’s vernacular houses and settlements. Despite the differences between these perspectives and opinions, three points appear consistently and seem irrefutable:

1. Xinjiang’s vernacular architecture is a reflection of its geographical and climate conditions, an embodiment of the indigenous communities’ centuries-old architectural traditions and collective wisdoms and memories, and a representation of personal and communal attachments that are critical to the community’s social identity;
2. The Chinese government, local authorities, academics, and architects all agree that Xinjiang’s vernacular architecture requires some degree of development or modernization, in order to improve the living conditions of indigenous communities and to increase possibilities of economic advancement;
3. The governing authorities recognize the storytelling, placemaking, and identity-shaping functions of architecture, and use them to manipulate the local residents’ behaviours, thoughts, and lifestyles to conform to the Han-dominated Communist secular standards favoured by the government.

Framed around the cultural, political, ideological, societal and economic implications of architecture and urban spaces, this thesis not only focuses on Xinjiang’s documented architectural and spatial transformations, their causes, their

physical manifestations, and their impacts, it also evokes discussions regarding the inseparable relationship between architecture, power, and people.

China's humanitarian crisis in Xinjiang has attracted significant global attention from both activists and governments. Worldwide, many countries, including Canada, have condemned China's treatment of ethnic minorities in Xinjiang, promptly declaring it a "genocide" or placing political sanctions on China, much to China's dismay. Despite this external pushback, the Chinese government has only intensified its population control and cultural modification program in Xinjiang.

Overshadowed by global political outrage over the infamous re-education camps, a less-known and government-led parallel project is also underway in recent decades in Xinjiang. Its scale and pace are comparable to that of the re-education camps; and its purpose cannot be analyzed in isolation without considering the context of cultural modification and assimilation demonstrated in re-education camps. Under Chinese government policies, vernacular houses and settlements that embody indigenous communities' culture and history – spaces which have played a crucial role in shaping their lifestyle and establishing their identity and sense of belonging in Xinjiang – have begun to make way for government-directed rural development and urban renewal projects that prioritize economic development and tourism opportunities, at the expense of the original materiality and forms of indigenous vernacular architecture.

While the government justifies these architectural "improvement" projects with reasons of modernization, cultural advancement, infrastructural improvement, and economic opportunities, underneath all the political performative speeches hides the fact that these projects lack flexibility, transparency, and voices from impacted local communities, who are arguably not the projects' primary beneficiaries. Arguments can be made that these architectural projects are a part of the government's efforts to renovate and replace indigenous spatial and material traditions, to rewrite their historical, cultural, and architectural narratives, mold their behaviours and beliefs, and hence revising their identities to live the "civilized" and "modern" lifestyles promoted by the government and reflecting national Chinese aspirations.

Given the global attention now focused on this politically sensitive region, and building on the expanding research in China on Xinjiang's vernacular architecture, this thesis examines the complex situation surrounding transformations of Xinjiang's vernacular architecture by examining and analyzing a broad range of historical, political and cultural outlooks. As Xinjiang's vernacular architecture is undergoing rapid, large-scale demolition, modification, and reconstruction under the central government's administration and direction, it becomes increasingly important to critically examine how manipulation of architecture is shaped by and in turn shaping the political, social, and cultural narratives, and how the recent urban, rural, and architectural transformations in Xinjiang are informed by government policies on preservation and development of vernacular houses and settlements. This thesis addresses the crucial part that Xinjiang's architectural, rural, and urban development efforts play in fulfilling Chinese national political agenda, and acknowledges the important role of architecture in preserving, shaping, defining, and reinforcing cultural identities and memories.

This thesis is divided into four main parts. Chapter 2 outlines Xinjiang's contexts, including its historical, cultural, political, economic, and geographic contexts, all of which influence – to some degree – the state of local communities and their built environments. Chapter 3 studies Xinjiang's vernacular architecture's forms, materials, history, and customs, as well as how they embody cultural memories and identities. Chapter 4 examines their recent transformations, causes, and impacts to both

Xinjiang's architectural pattern and indigenous communities. It presents the political capabilities of architecture, and especially, how the government takes control over them in order to accelerate political and economic advancements in Xinjiang. Chapter 5 concludes the thesis, and presents existing theories and proposals to preserve or improve the forms, materials, and "souls" of Xinjiang's vernacular houses and settlements. At the end, it poses the questions of what the future holds for Xinjiang's indigenous population and their vernacular architecture, and of what we as architects can and should do.

1.1. Research Approach

Due to travel restrictions during the pandemic and the potential danger involved in travelling to Xinjiang and interviewing locals in person, given the political sensitivity of the region, I have not had the opportunity to visit Xinjiang, the site of my research topic. Therefore sources for this thesis consist mainly of websites, journals, books, and academic and popular essays. They also include maps, peer-reviewed academic papers, newspaper articles, government statements, satellite imagery, tourist blogs, photographs, and witness accounts. All these materials collectively contribute to the foundation of a holistic inquiry into altered, curated, and increasingly politicized architectural narratives in Xinjiang.

Born a Han Chinese in People's Republic of China, raised in Canada, and having family members who still reside in China today, I recognize that my background can be a potential source of bias; however I also credit it for my unique perspective on China's political climate, and my ability to read both Chinese and English sources that inform me on my research topic. Almost all of English excerpts of originally Chinese articles and books in this thesis are translations by me. Unfortunately, I cannot read Uyghur; so I rely heavily on English or Chinese translations on Uyghur terms. I try my best to use English phonetic translation of Uyghur terms instead of pinyin of Chinese translations of Uyghur terms; however more often I find myself resorting to the latter simply because I could not find the former. I acknowledge that my use of pinyin to describe Uyghur terms is concerning because lack or presence of linguistic representation in object and location identifications can subconsciously influence our cognitive understanding of what they are and whom they belong to.

Reaching the conclusion in my thesis has certainly not been easy, as my perspective on the issue has shifted numerous times during my research, depending heavily on the sources and evidence that I was encountering. Detecting truths amidst them and formulating an unbiased – or at least less biased – opinion with critical thinking skills are the most difficult yet most important aspects in this entire process for me.

In the beginning of my thesis research, I focused mainly on the sources I could obtain on the internet, libraries, and archives in Canada. While global attention has been drawn largely to the issues surrounding the camps, forced labour, and forced sterilization, there have been only a few academic studies written in English that have looked at the architectural transformations happening in conjunction with “re-education camps” as a part of the government's greater agenda to culturally and ideologically control and shape the political and social psychology of the region. Western scholars and onlookers have all expressed some degree of concern for the impact of these recent architectural transformations, linking them to the well-documented human rights violations allowed by the authoritarian government in the notorious re-education camps. In these materials that are only accessible outside China, the overwhelmingly dominant opinion is very critical of the Chinese government, and its treatment of the ethnic minorities in Xinjiang. They focus mainly on the processes of replacement, repurposing, and erasure of traditional architecture that used to carry cultural identities and social and personal memories in Xinjiang such as repurposed mosques, reconfigured domestic spaces and restricted religious shrines, rebuilt old towns, relocated bazaars, and reformed digital surveillance. These are more or less built upon the affirmation that the government is committing human right abuses in Xinjiang. While compiling these sources, I inevitably agreed with these Western opinions written in English, and originally formed a heavily critical opinion towards the

architectural transformations in Xinjiang.

However this was very limiting, as the sources that support this critical perspective are typically not primary sources. I thus decided to seek out primary sources written in Chinese. After I received books published in China that were written by Chinese scholars who have spent years and even decades in Xinjiang studying vernacular architecture and villages, I changed my perspective and decided that contextualizing Xinjiang's new architectural projects solely on political motives has been unilateral and lacking. This is because, to my discovery, Chinese scholars are incredibly knowledgeable on Xinjiang's vernacular architecture. They have expressed opinions, some subtle and others articulate, on the matter of preservation and renovation of Xinjiang vernacular architecture and traditional villages. Some have even proposed approaches and interventions to conserve or modernize their architectural traditions. Intriguingly, contrary to what documented recent architectural transformations in Xinjiang might suggest, these scholars, who lived in Xinjiang for years, unanimously express a deep appreciation for the wisdom of Xinjiang vernacular architecture, and express a strong desire to protect and preserve the traditional culture. In contrast to the limited sources on Xinjiang architecture that I was able to find in English, these Chinese scholars have continued to conduct extensive research in recent years. I was fascinated by their rich bank of knowledge on architectural history, architecture styles, forms, regional and ethnic differences in styles and spaces, spatial relationships, decorative arts, methods of construction, construction materials, tools, labour, customs during construction etc. They have taken to document vernacular houses and villages through photography, illustration, and modelling.

Despite the sensitivity and care in their research of vernacular architecture, these Chinese scholars also support Chinese government policies that promote development and modernization in Xinjiang, although their proposed levels of conservation and renovation also vary greatly between each other. Some wish to give the traditional materials a slight upgrade while preserving the general appearance and respecting the building materials of traditional architecture. Others wish to preserve the vernacular architectural forms and advocate for the replacement of traditional construction materials with modern ones. There are also those who wish to inherit architectural symbols in their modern forms with modern materials. Lastly, some wish to only preserve the "soul" of traditional Xinjiang architecture, such as absorbing how it combats harsh desert climate of Xinjiang, while completely adopting modern forms and modern materials.

It is worth noting that a sizable portion of the Chinese books I came across were published by Chinese Construction Industry Publishing, which is directly under the Ministry of Construction in the central government of China. It likely explains why many of the authors acknowledge the government's "Belt and Road" Initiative and Chinese President Xi Jinping's ambition to "strengthen" villages and towns and his economic plan for Xinjiang are what motivates these studies. Political tone is very evident in some books; some would dedicate a chapter or subchapter to justify China's legitimacy in Xinjiang by reiterating the government's official claims. Many go a step further, thanking the government for the societal and economic advancements in Xinjiang, such as how it funded projects to give villagers better quality of life. I speculate that these publications could be politically motivated, or state-orchestrated, reflecting the government's interest in Xinjiang and its built environments. However, that is not to dismiss many of these authors' years of efforts in their research and their earnest wish to help the residents and villagers who dwell in traditional houses and live a traditional lifestyle to have improved living conditions and more economic

opportunities.

After reading these Chinese books, I decided that although it is undeniable that the Chinese government plays a significant part in shaping architectural narratives in Xinjiang, it was biased of me to confine the recent architectural transformations in Xinjiang only within the framework of the government's political agendas. I also thought that the government, scholars, and architects – together – are responsible for influencing Xinjiang's vernacular architecture's appearance, its spatial functions, and its relationship with its residents, and reshaping Xinjiang's built environments.

My perspective changed again when I learned recently about the fate of Gaotai Residential Area in the city of Kashgar, its vernacular buildings and its local community. Less than a decade ago, a team of Chinese architects and urban planners published a book titled *Terraced Households Kashgar (Kashgar Gaotai Houses)*, in which they state that some of their main objectives for their Gaotai documentation project are to preserve the community's architectural traditions, to respect the local residents' wishes, and to protect their legality of residing in Gaotai. Years later – in June of 2023 - "Gaotai Residential Area" has become "Gaotai Residential Scenic Spot" devoid of local residents, despite most of them having expressed strongly their wish to remain in Gaotai; their vernacular houses are also fated to complete reconstruction for tourism development.¹ Uyghur Human Rights Project speculate that the entire community could have "disappeared" into re-education camps.² It was then I realized the architects' voice – although insightful, important, and often influential in reinforcing certain policies – is sometimes dismissed if it clashes with the authoritarian voice of the Chinese government under the leadership of the Communist Party. In reality, execution of government policies precedes the architects' plans and recommendations. In other words, the government's political agendas determine the framework of Xinjiang's architectural "improvement" projects; and the scholars and architects only work within the acceptable bounds of this framework.

I have therefore reached my final conclusion that the Chinese government is the key stakeholder and director of rapid transformations of vernacular architecture in the Xinjiang in recent years. Under the leadership of China's Communist Party, local authorities have enforced urban-rural "improvement" policies and directed large-scale architectural projects that have resulted in the rapid disappearance, modification, and reconstruction of vernacular houses and settlements. I argue that the government is responsible for the replacement of indigenous architectural traditions and functions with Han-dominated sensibilities, establishing a new architectural pattern and social order that are in tune with propaganda of ethnic unity and economic prosperity, and consequently reinforcing the Party's governing authority in Xinjiang, a multi-ethnic cultural hub located strategically along the Silk Road.

1 Xinjiang Tourism Season. "Kashgar Gaotai Residence Reopens After Eight Years of Closure". Zhihu Column. 6 June 2023. <https://zhuanlan.zhihu.com/p/635145461>.

2 "Kashgar Coerced: Forced Reconstruction, Exploitation, and Surveillance in the Cradle of Uyghur Culture". Uyghur Human Rights Project. 3 June 2020. <https://uhrp.org/report/kashgar-coerced/>.

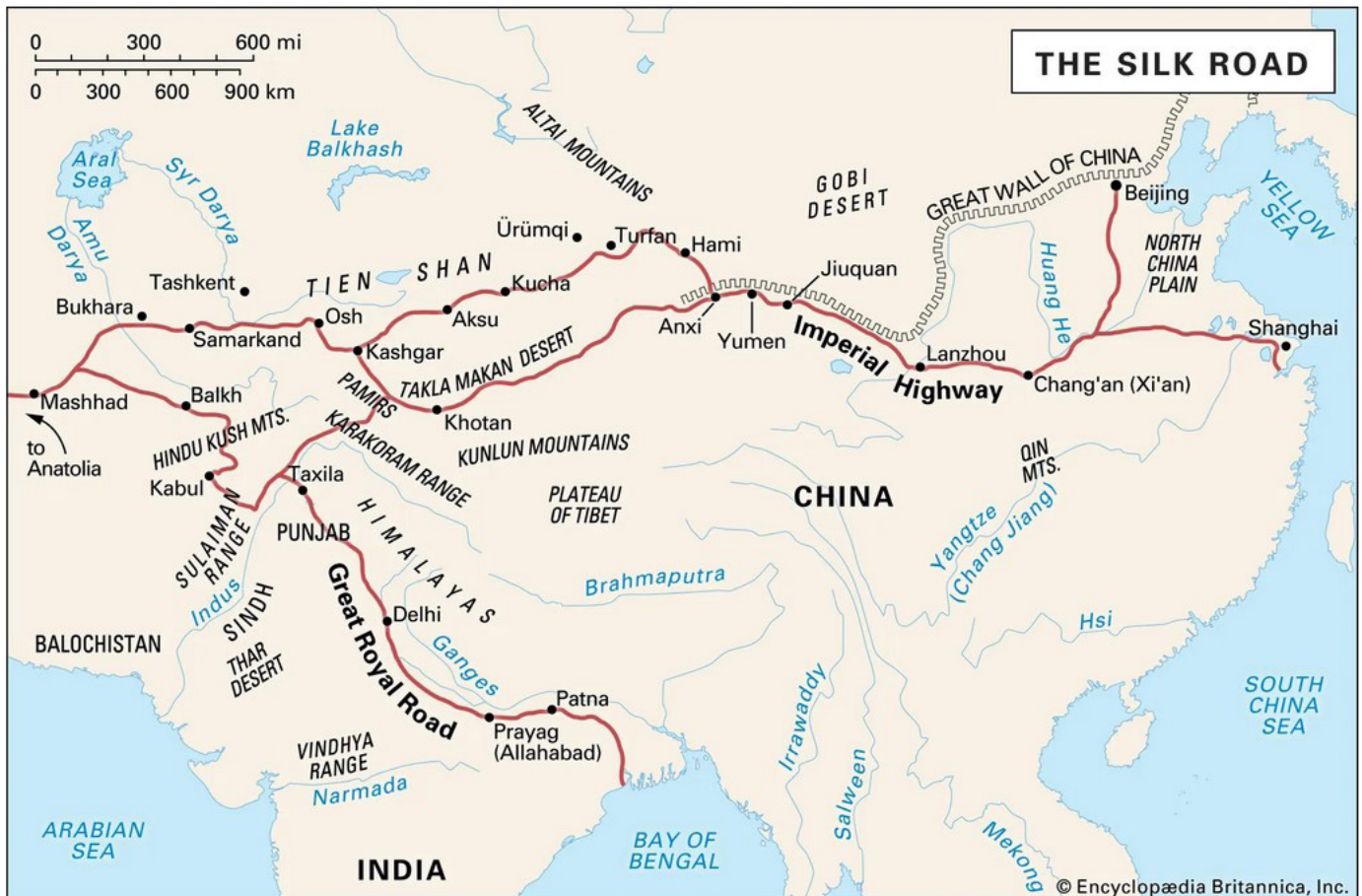
CHAPTER 2. XINJIANG AND ITS CONTEXTS

The Uyghur Autonomous Region of Xinjiang, located at the centre of the Eurasian continent, is also the largest single geographic region of the People's Republic of China (Fig.2-0-1¹). The arid ancient place has an extremely complicated history, one in which, over centuries, a diverse range of political, cultural and religious powers have sought to govern this geographically and politically significant hub.

Fig.2-0-1 Uyghur Autonomous Region of Xinjiang, China.¹

¹ 'Xinjiang (Autonomous Region, China) | Britannica'. Accessed 28 March 2022. <https://www.britannica.com/place/Xinjiang/images-videos>.





Xinjiang sits astride the historical Silk Road, the enormously important centuries-old historical cross-Eurasian trade corridor spanning from China to the Middle East and the Mediterranean Sea. Given its complex history, Xinjiang is home to many ethnic groups, including Uyghurs, Mongols, Hui, Kazaks and Uzbeks.

Fig.2-0-2 The Silk Road.²

Given its geographical location, Xinjiang inevitably is a key piece in China's economic and political expansion strategy (Fig.2-0-2²). As a part of its expanding Belt and Road Initiative of the first two decades of the 21st century, the Chinese government today aims to strengthen its political, cultural and economic influences globally but also especially in the central Eurasian province of Xinjiang due to its strategic and central regional location on both the historical and the new Silk Road.

As a part of the plan to better control this ethnically diverse region, and incorporate it better into the centralized Chinese nation, large state-orchestrated Han Chinese migration to Xinjiang took place in past two to three decades, rapidly replacing the Uyghur majority with a near Han majority. The Han Chinese are the most politically powerful ethnicity in the Chinese state, and their role in Xinjiang has been to dilute the ethnic distinction of the region. With this flood of new immigrants from central China, the housing demand in Xinjiang has grown significantly; as did the government's effort to urbanize and modernize the region in accordance with the continual economic and urban development in central and eastern China. Hence, the Chinese policies to establish a unified national identity with a mosaic of 56 distinct, indivisible, and theoretically equal ethnic constituencies" striving for prosperity together have been a part of China's "Sinicization" efforts for decades, and are now

² Britannica, T. Editors of Encyclopaedia. "Silk Road." Encyclopædia Britannica. <https://www.britannica.com/money/topic/Silk-Road-trade-route>.

more so applied to Xinjiang.³

However simultaneously, racial inequality between Han and Uyghur (and other ethnic groups) has increased, gradually building up social conflict and political tensions which often erupt in the form of protests, riots, and violence. In recent years, Chinese authorities have intensified their political crackdown on local resistance, aiming to control and assimilate Xinjiang's ethnic minorities in a hard extension of Sinicization. The most infamous of these political projects led by the Chinese central government are the re-education camps for ethnic minorities, which have prompted world-wide condemnation with accusations in global media of oppression and even genocide.

³ Leibold, James. 'Ethnic Policy in China: Is Reform Inevitable?' Policy Studies, East-West Center, 86 (2013).

2.1. Historical and Cultural Contexts

The Xinjiang Uyghur Autonomous Region, located at the centre of Eurasia, is the largest province in China, accounting for one-sixth of China's land mass. It has an extremely complicated history, in which a diverse range of cultural and religious powers had sought to govern this geographically and politically significant hub near the Silk Road. The once nomadic pastureland was gradually transformed into a transportation corridor and a commercial hub over the millennia, serving as a key place for economic and cultural exchanges between the East and the West.

According to James A. Millward in *Eurasian Crossroads: A History of Xinjiang*, the region was initially thinly populated by nomadic horse herders and farmers. Throughout the 2nd and 1st century BCE, Xiongnu (a tribal confederation of nomadic people who inhabited the Eurasian Steppe) and Han (the governing dynasty in the heartland of Chinese civilization at the time, which later became the name for the main ethnic group in central China) contested control over Turfan and Tarim Basin. In mid-1st century BCE, the Han established a protectorate general in the region. Later, as the Han's military control over the region gradually dimmed, multiple autonomous, and warring, city-states rose to power in the 1st century CE. Buddhism, as it spread from India, was first introduced to the region in the 2nd century. At the time, Chinese, Xiongnu, and the Kushan empire (based in Bactria and promoted Buddhism) had influence and control over different parts of the region. From 3rd to 5th century, oasis city-states were generally independently ruled by local elites. Their residents spoke Indo-European languages. Sogdian (an ancient Iranian civilization in present day Uzbekistan, Turkmenistan, Tajikistan, Kazakhstan, and Kyrgyzstan) commercial networks were established and later expanded. In the mid 5th century, Hephthalites (known as the White Huns who are based in Bactria) ruled Tarim Basin; they were later destroyed by Kok Turk Khaganate in 560. In the 7th century, Tang (Chinese dynasty) advanced into Tarim with Eastern Turk empire and established Anxi (安西, which means peaceful west) Protectorate General. Tibetan empire and Turk tribes contested with Tang for control over the region. Tang held control over the region until the Uyghur (a Turkic ethnic group) state was established in 840. Karakhanids (a Turkic khanate that converted to Islam) took control of western and northern parts of the region from 9th to 12th century. From 1142, Qara Khitai (a dynastic regime ruled by Khitan Yelu clan, also known as the Great Liao in Chinese) controlled territory of former Uyghur and Qarakhanid. In early 13th century, the region fell under the reign of Mongolian khans. From 14th to 16th century, Chaghatayid khans (descendants of Genghis Khan's second son Chagatai) rule the region. In the 17th century, the Khojas (a Shia community who converted to Islam from Hinduism under Muslim saints) came into power in the southern part of the region; while the Zunghars (an Inner Asian khanate of Oirat Mongol origin) controlled the northern part.¹

In the 1750s, with the passing of the Mongolian khans, the Qing dynasty (itself led by Manchu imperial rulers from Manchuria) conquered Xinjiang and renewed a sense of permanence of Chinese Imperial governance. They surveyed the region and made detailed maps (Fig.2-1-1²). One hundred fifty years later, the latter half of 19th century and early 20th century again marked a tumultuous era, filled with local rebellions and military invasion of the region by Imperial Russia, and Chinese

¹ James A. Millward. *Eurasian Crossroads: A History of Xinjiang*. Revised and Updated. New York: Columbia University Press, 2021: 405-414.

² Xinjiang quan tu/ 新疆全图. 1759. Library of Congress Geography and Map Division Washington, D.C. 20540-4650 USA dcu. <http://hdl.loc.gov/loc.gmd/g7823xm.gct00164>.



Fig.2-1-1 An overview map of Xinjiang in 1759 in after the Qing government conquered the region, and renamed it their “New Territory”.² These lines that look like branches represent waterways; and these wavy triangular strokes represent mountains.

and Tajik warlords. The Eastern Turkestan Republic was proclaimed twice, once in 1933 in Kashgar and once in 1944 in north Xinjiang, both times briefly. In 1949, the Communist Party of China took over the region and it has remained since under that governance.³

The name “Xinjiang” itself means “New Dominion”, which was given to the region in the 18th century after the annexation by the Qing. After the Communist Party of China regained control in 1949, it inherited the name “Xinjiang”, and designated it as the Xinjiang Uyghur Autonomous Region. In fact, Xinjiang had been known by many names in the past. It has been called “Altishahr” (which means “six cities”) by some local Uyghurs. Alternatively, “Yettishahr” (“seven cities”) is used by some. These older indigenous names reflect how the local inhabitants of the region understand the place they live in, and hint at the relationship between the land and its inhabitants. Today, there are far more than six cities; and there is no agreement on which particular cities are the original six. “Altishahr” is also a description of connected points rather than continuous territory, suggesting the locals’ imagination of the region as an archipelago of habitable oases.⁴ On the other hand, medieval Islamic writers and later European colonizers used the name “Chinese Turkestan” after Russian forces conquered

3 James A. Millward. *Eurasian Crossroads: A History of Xinjiang*. Revised and Updated. New York: Columbia University Press, 2021: 405-414.

4 Rian Thum. *The Sacred Routes of Uyghur History*. Harvard College: United States of America (2014): 6.

Central Asia in the 19th century. This name was intended to refer to the lands of the Turkic-speaking nomads, and to differentiate it from “Russian Turkestan”. In fact, for more than a millennium, Xinjiang has been a land of Turkic-speaking people, today represented by Kazaks, Kyrgyz, and mainly the Uyghurs. However, this term is unwelcomed by the Chinese government, as any reference to “Turkestan” in Xinjiang can evoke the “Eastern Turkestan Republics” of the 1930s and 1940s, the two short-lived breakaway Islamic republics before the Chinese Liberation Army re-captured the region in the 1949. Recent Uyghur separatist groups also use this name, which disputes Chinese government’s official claim that Xinjiang has always been part of China since the first century BCE.⁵

Despite the above claims, China maintains that Xinjiang has always been an inseparable part of China, backing this claim with historical records of governance of the region by several Chinese dynasties, and referring especially to the Han dynasty in the 1st century BCE, the Tang dynasty in the 7th century CE, and the Manchu Qing dynasty in the 18th century. The Chinese government also asserts that centuries of cultural and economic exchanges between West and East in Xinjiang have led to a close-knit family of peoples consisting of many cultural backgrounds, customs and values. China dismisses the region’s other past political and ethnic identities as the inevitability during the periods of separation and unification of China’s territory in the long-term historical process.⁶ Chinese scholar, Wang Xiao Dong, dedicates a chapter on China’s governing legitimacy in Xinjiang in the beginning of his book *Illustration and Analysis of Traditional Village Landscape in Xinjiang*:

Chinese cultural identity is the foundation for the prosperity and development of ethnic cultures in Xinjiang. In history, all central dynasties have effectively governed Xinjiang. In a period of social stability, the exchanges and integration between the cultures of various ethnic groups in Xinjiang and the culture of the Central Plains would be smooth, and the economy and culture would prosper. All ethnic cultures in Xinjiang uphold the Chinese culture of advocating benevolence, emphasizing on the people, and seeking great harmony. The more obvious the characteristics of absorbing and merging multiple cultures and the idea of pluralism and unity are, the more advanced the cultures of various ethnic groups in Xinjiang will be. To flourish and develop the cultures of all ethnic groups in Xinjiang, they must keep pace with the time, establish the concept of openness and inclusiveness, insist on exchanges and integration with the cultures of all ethnic groups in China, exchange and mutual learning with the multi-ethnic cultures of the world, and build a common spiritual home for all ethnic groups.⁷

Chinese scholars such as Wang Xiao Dong put emphasis on the significant influence the Chinese dynasties had on Xinjiang during their governance, but they also acknowledge how the “exchanges and integration between the cultures of various ethnic groups” lead to the unique cultural diversity in Xinjiang today. Despite what China officially claims, evidence shows that throughout Xinjiang’s long history, many governing bodies of different cultural and religious backgrounds took control of the region, which today creates a colourful mosaic of population in Xinjiang.

5 James A. Millward. *Eurasian Crossroads: A History of Xinjiang*. Revised and Updated. New York: Columbia University Press, 2021, xi.

6 Wang, Xiao Dong. *Illustration and Analysis of Traditional Village Landscape in Xinjiang*. Beijing: Chinese Construction Industry Publishing, 2021, 18-20.

7 Ibid, 22.

From the ancient ethnic groups such as Wusun, Yuezhi, Serbs, Xiongnu, Qiang, Xianbei, Rouran, Kuida, Turks, Uyghur, Kagasi, Mongolian, Tubo, Han, etc. to nowadays Uyghur, Han, Kazakh, Hui, Kyrgyz, Mongolian, Uzbek, Tajik, Tatar, Xibe, Daur, Manchu, Russian, Xinjiang's inhabitants include many ethnic groups who all help build what is Xinjiang today. Of these, there are 13 main notable ethnic groups. Uyghurs are mainly distributed in southern Xinjiang and parts of northern Xinjiang; while Han people live in various parts of Xinjiang, especially in northern Xinjiang. Kazakhs mainly live in Yili Kazakh Autonomous Prefecture (伊犁哈萨克自治州) and along the Tianshan Mountains in northern Xinjiang. Hui people are concentrated in areas such as Changji Hui Autonomous Prefecture (昌吉回族自治州) and Yanqi (焉耆), and scattered in other areas. Mongolians are mainly distributed in Bayingoleng (巴音郭楞) in southern Xinjiang and Bortala Autonomous Prefecture (博尔塔拉蒙古自治州) in northern Xinjiang. Kyrgyz people mainly live in Kizilsu Kyrgyz Autonomous Prefecture (克孜勒苏柯尔克孜自治州) and neighbouring counties in southern Xinjiang. Xibe people live in Qapqal Autonomous County (察布查尔自治县) and neighbouring counties. Tajiks mainly live in Taxkorgan Tajik Autonomous County (塔什库尔干塔吉克自治县). Uzbeks live in Yining (伊宁), Kashgar (喀什) and other places. Manchu people are scattered all over Xinjiang. Most Tatar, Daur and Russians live scattered in Yili (伊犁), Altay (阿勒泰) and Tacheng (塔城).⁸

As the name “Xinjiang Uyghur Autonomous Region” suggests, Uyghurs account for the majority of population in the region; but recently, that is changing as a result of decades of large state-orchestrated Han migration.⁹ It is not uncommon to see the term “Uyghurs” used to allude to the ethnic minorities in Xinjiang, as opposed to Han, the ethnic majority in China proper. Due to this, in this thesis research, it can sometimes be difficult to accurately identify Uyghurs, the Turkic ethnic group that have traditionally inhabited the Tarim Basin, from other minorities in Xinjiang. When discussing Xinjiang's vernacular architecture, however, more documentation and written materials on Uyghur architecture can be found than that of other ethnicities. In this thesis, I take this into consideration and carefully make the distinction between the Uyghurs and Xinjiang's ethnic minorities that include Uyghurs and other groups listed previously.

8 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018: 8-9.

9 Anthony Howell, and C. Cindy Fan. “Migration and Inequality in Xinjiang: A Survey of Han and Uyghur Migrants in Urumqi.” *Eurasian geography and economics* 52, no. 1 (2011): 122.

2.2. Political and Social Contexts

During the Chinese Civil War, the People’s Liberation Army re-conquered Xinjiang and took it under the control of the Communist Party of China in 1949. The province of Xinjiang Uyghur Autonomous Region was created. As an ethnically diverse region located on the new Silk Road - revived due to the Belt and Road Initiative - and as a region between China proper and Central Asia/Europe, Xinjiang is politically and economically important to China. As a main part of the plan to better control this ethnically diverse region, large state-orchestrated Han migration to Xinjiang has been taking place from late 20th to early 21st century, quickly, by historical standards, replacing the Uyghur majority with a near Han majority (Fig.2-2-1¹). By increasing the proportion of Han Chinese in Xinjiang, a region for the past centuries dominated by its ethnic Muslim groups, the Chinese government also aims to build a work force of Han peasants, specialists, and militia. Migration of Han Chinese to Xinjiang has always been high since the 1950s, but since the 1980s, large-scale state-orchestrated Han migration has shifted to self-initiated migration by Han workers looking for employment and ways to increase their earnings.²

Due to the massive Han migration as well as relatively high rate of growth in population in Xinjiang, housing demand has also grown substantially. Economic and urban development has been encouraged by the government, who has continuously put effort to urbanize and modernize Xinjiang, in accordance with the continual economic and urban development in central and eastern China.

1 ‘Graphics: Facts about Xinjiang’s Population and Ethnic Groups’. Accessed 30 March 2022. <https://news.cgtn.com/news/2022-09-02/Graphics-Facts-about-Xinjiang-s-population-and-ethnic-groups-1cvVZvrnu18/index.html>.

2 Anthony Howell, and C. Cindy Fan. “Migration and Inequality in Xinjiang: A Survey of Han and Uyghur Migrants in Urumqi.” Eurasian geography and economics 52, no. 1 (2011): 122.

Population in Xinjiang

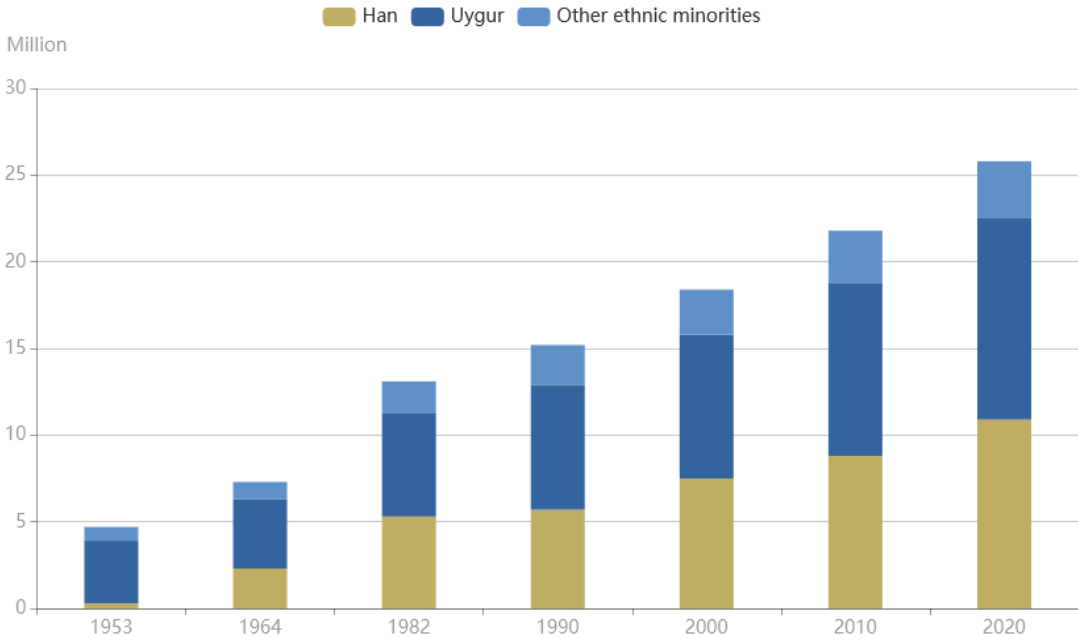


Fig.2-2-1 Demographic Graph of Xinjiang. Xinjiang has a population of 25.85 million, according to the seventh national census in 2020.¹

Sources: Statistic Bureau of Xinjiang Uyghur Autonomous Region, Xinjiang Population Dynamics and Data

Fig.2-2-2 Manual labourers on the construction site of a high-rise building in Urumqi (photo by Madlen Kobi, August 2012).⁵



Housing demand has soared; and so has the competitiveness in the labour market. Due to ethnic differences and racial biases, construction companies mostly offer work only to Han workers. A commonly heard explanation given for Uyghur's lower levels of involvement on urban construction sites is their laziness, even by Uyghur intellectuals. A Uyghur engineer in Urumqi (乌鲁木齐), in a field conversation with Madlen Kobi in 2015, described these stereotypical characteristics of Uyghur workers:

“Uyghur people often complain that their situation is worse than that of the Han, but in fact they just work less efficiently than the Han. In inner China the workload is very big and the pressure is much greater than in Xinjiang. Therefore, Han people have learned to compete in this situation and they are very hard-working. On construction sites, many Han start work at 7:00 a.m., while Uyghurs are barely getting up by that time. For lunch, the Han workers only eat two pieces of bread and drink some water and then continue working. Uyghurs often feel like they want to have a rest and a two-hour lunch break.”³

These prejudices lead to Han employers hiring fewer Uyghurs as they assume they will not work as hard as the Han. Another reason is the dietary restriction of Uyghur Muslim cuisine. Han employers on construction sites are often unwilling to install separate kitchen facilities for the preparation of ritually pure food for their Muslim workers.⁴

Because the work force in the construction industry is so exclusive, that the

³ Madlen Kobi. “Constructing Cityscapes: Locality, Materiality and Territoriality on the Urban Construction Site in Xinjiang Uyghur Autonomous Region, Northwest China: CONSTRUCTING CITYSCAPES.” *International journal of urban and regional research* 43, no. 1 (January 2019): 58.

⁴ *Ibid.*, 58.

How the Urumqi Riots Developed

At least 192 people were killed after a riot by ethnic Uighurs began July 5 in Urumqi, the capital of the Chinese region of Xinjiang. Chinese police were unable to control the mob in the deadliest civil unrest in decades.

Fig.2-2-3 How the Urumqi Riots in 2009 Developed.⁷



architectural language of the newly built urban landscape of Xinjiang is shaped by a Han-dominated industry, who have brought with them eastern-China architectural style and materiality. Consequently, in the name of “economic modernization” to keep up with Xinjiang’s booming population, urbanization in the region remodels urban areas that were originally shaped by vernacular oasis architecture, transforming them into concrete jungle like the rest of China (Fig.2-2-2⁵). Urban landscape is rapidly transformed from horizontality (old vernacular town structures) to verticality (eastern-China-style skyscrapers).⁶ As a result, Xinjiang is gradually “Sinicized”, as newly

⁵ Ibid, 57

⁶ Ibid, 46-47.

built environments, from design to construction, conform to the national standards of architecture.

As the Uyghur majority was quickly replaced with a Han majority, competition in the labour market became fierce; and racial inequality between Han and Uyghur grew; and so did social conflict and political tension. On July 5, 2009, an initially peaceful protest in Urumqi by Uyghurs, against the killing of Uyghur workers at the Guangdong toy factory, turned violent. Uyghur sources blamed the riot police for the excessive use of force, while Chinese authorities blamed external influences of separatism for inciting the unrest. Large groups of Uyghur youths launched brutal attacks against Han residents in southern parts of Urumqi, resulting in large casualties and buildings on fire. Retaliatory assaults by Han were launched against the Uyghurs on July 7 (Fig.2-2-37).⁸

In the wake of the event, Chinese authorities detained thousands of people in connection with the unrest; and “disappeared” at least 43 Uyghur men and teenager boys.⁹ Although denied repetitively in the government’s official narrative, surfacing evidence shows that near one million ethnic minorities are detained and forced to undergo ideological and religious cleansing in the massive prison-like “re-education camps”.¹⁰ Since the 2009 unrest in Urumqi, The Chinese government has significantly increased detainment capacity of Uyghur and other ethnic minorities population, in suspicion that they could pose threat to social stability of Xinjiang through organized rebellion. Shifting from previous makeshift use of public buildings, such as schools, hospitals, and retirement homes to more massive and permanent infrastructure, authorities have constructed hundreds of high-security “re-education camps” to detain and indoctrinate Xinjiang’s ethnic minorities.¹¹ The initially temporary solution of appropriating existing buildings has evolved into a new systemized architectural typology that serves the purpose of ethnically and ideologically cleanse the ethnic minorities.

The Xinjiang Data Project has identified and mapped more than 380 suspected detention facilities in Xinjiang since 2017; about 50% are higher-security, prison-style infrastructure (Fig.2-2-4¹²).¹³ Evidence of their existence includes eyewitness accounts, media reports, satellite imagery and tender bids. Architectural features of these detention facilities include but are not limited to extensive networks of barbed wire internal fencing that cages individual buildings, thick external walls, and watchtowers.¹⁴ Some fortified compounds are similar to typical Chinese prisons, featuring “little space between buildings, tiny concrete-walled yards, heavy masonry

7 “We Are Afraid to Even Look for Them’: Enforced Disappearances in the Wake of Xinjiang Protests.” Human Rights Watch. October 20, 2009. Accessed January 25, 2021. <https://www.hrw.org/report/2009/10/20/we-are-afraid-even-look-them/enforced-disappearances-wake-xinjiangs-protests>.

8 Ibid.

9 Ibid.

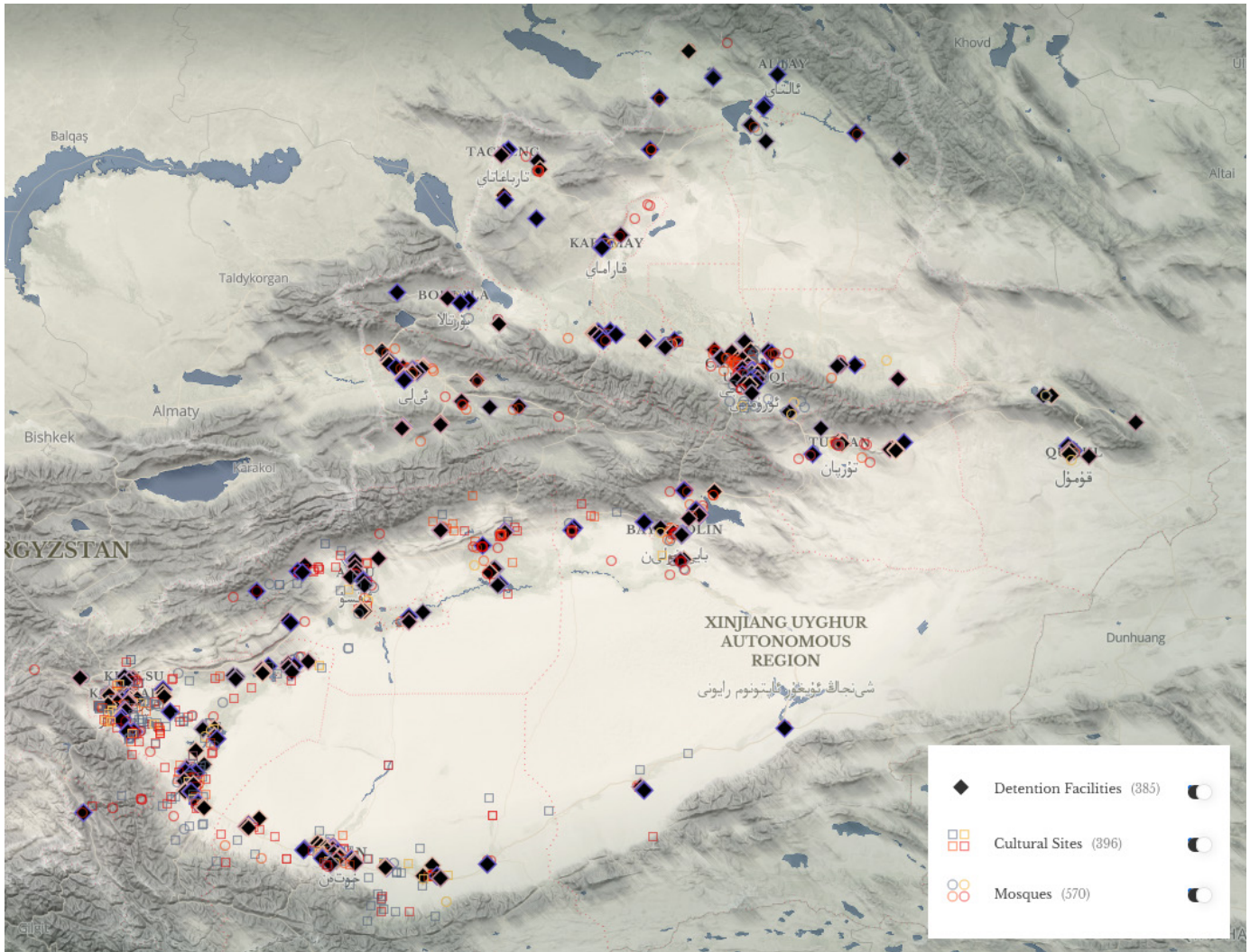
10 Megha Rajagopalan and Alison Killing. “Inside a Xinjiang Detention Camp.” BuzzFeed News. December 3, 2020. Accessed January 25, 2021. <https://www.buzzfeednews.com/article/meghara/inside-xinjiang-detention-camp>.

11 Megha Rajagopalan, Alison Killing and Christo Buschek. “China Secretly Built A Vast New Infrastructure To Imprison Muslims.” BuzzFeed News. August 27, 2020. Accessed January 25, 2021. <https://www.buzzfeednews.com/article/meghara/china-new-internment-camps-xinjiang-uighurs-muslims>.

12 “The Xinjiang Data Project.” Australian Strategic Policy Institute. Accessed January 25th, 2021. xjdp.aspi.org.au/map/.

13 Nathan Ruser. “Documenting Xinjiang’s detention system.” Australian Strategic Policy Institute. September 24, 2020. Accessed January 25th, 2021. <https://cdn.xjdp.aspi.org.au/wp-content/uploads/2020/09/25125443/documenting-xinjiangs-detention-system.cleaned.pdf>. 3.

14 “Table 1: List of Government Bids Related to the Re-Education Facilities.” The Jamestown Foundation. Accessed January 25th, 2021. <https://jamestown.org/programs/cb/79853-2/>.



construction, and long networks of corridors with cells down either side”, in addition to a cavernous layout with little natural light within.¹⁵ An interior model of a dormitory in Mongolkure County shows a typical layout of these prison-like facilities (Fig.2-2-5~7¹⁶). The cells, in which the detainees spend 23 hours a day, are often crowded and can hold up to 10 people or more per room, who all share one toilet.¹⁷ In addition to cells, the facilities also have classrooms, clinics, canteens, stand-alone shower facilities, police buildings, administrative offices, small visitor centers, and sometimes even factories.¹⁸

Reports show that detainees were subjected to human right abuses in these buildings, such as torture, starvation, overcrowding, solitary confinement, forced birth control. They were also put through pro-Communist-Party brainwashing programs;

Fig.2-2-4 The Xinjiang Data Project Map that shows the density of detention facilities and destroyed or damaged mosques and cultural sites.¹²

15 Megha Rajagopalan, Alison Killing and Christo Buschek. “China Secretly Built A Vast New Infrastructure To Imprison Muslims.” Buzzfeed News. August 27, 2020. Accessed January 25, 2021. <https://www.buzzfeednews.com/article/meghara/china-new-internment-camps-xinjiang-ughurs-muslims>.

16 Megha Rajagopalan and Alison Killing. “Inside a Xinjiang Detention Camp.” Buzzfeed News. December 3, 2020. Accessed January 25, 2021. <https://www.buzzfeednews.com/article/meghara/inside-xinjiang-detention-camp>.

17 Ibid.

18 Megha Rajagopalan, Alison Killing and Christo Buschek. “China Secretly Built A Vast New Infrastructure To Imprison Muslims.” Buzzfeed News. August 27, 2020. Accessed January 25, 2021. <https://www.buzzfeednews.com/article/meghara/china-new-internment-camps-xinjiang-ughurs-muslims>.

Fig.2-2-5 3D model of the main dormitory in Mongolkure County.¹⁶

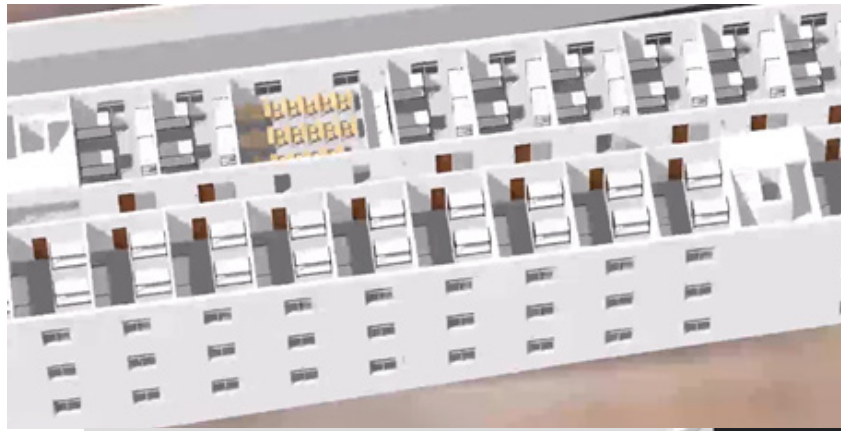
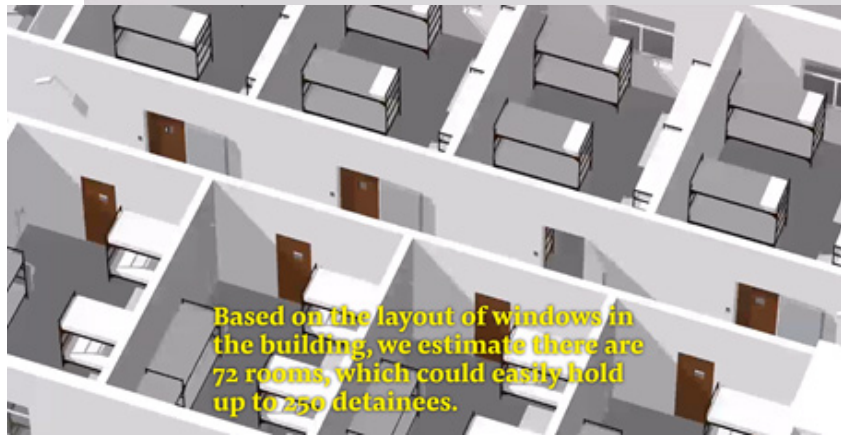


Fig.2-2-6 Classroom interior.¹⁶



Fig.2-2-7 Room layout.¹⁶



and were forced to speak only Chinese and eradicate any religious practices.¹⁹ Oppression is a prominent design language and the primary function of these detention facilities, effectively fulfilling the government's cultural modification (it could also be called cultural erasure) agenda. The incarceration infrastructure is used to evoke fear and hence forcefully assimilate Xinjiang's ethnic minorities into Han Chinese culture, or rather erode their ethnic identity and transform them into obedient citizens under the authoritarian regime.

Detaining a large quantity of ethnic minorities into tightly packed incarceration architecture also means removing them from urban hubs of activities, potentially functioning as an authoritative means of racial segregation. Thick external walls separate the ethnic groups within from the "law-abiding citizens" outside, who pose less political threat to the government due to their lack of cultural and ideological

¹⁹ Ibid.

	Prefecture	Total per census	Total sampled	Destroyed	Significantly damaged	Slightly damaged	Undamaged	Per cent sampled
Urumqi	乌鲁木齐市	341	129	22	12	11	84	37.83%
Ili	伊犁哈萨克自治州	1,384	51	8	30	2	11	3.68%
Kizilsu	克孜勒苏柯尔克孜自治州	1,503	13	10		1	2	0.86%
Karamay	克拉玛依市	19	10	4	4	1	1	52.63%
Bortala	博尔塔拉蒙古自治州	112	7	1		1	5	6.25%
Turpan	吐鲁番地区	955	41	18	5	3	15	4.29%
Hotan	和田地区	4,300	33	8	8	4	13	0.77%
Qumul	哈密地区	320	5	1	1	2	1	1.56%
Kashgar	喀什地区	9,865	50	16	5	2	27	0.51%
Tacheng	塔城地区	278	22	10	10	1	1	7.91%
Bayingol	巴音郭楞蒙古自治州	714	64	31	22	4	7	8.96%
Changji	昌吉回族自治州	301	40	11	26	2	1	13.29%
Aksu	阿克苏地区	3,361	39	20	6	4	9	1.16%
Altay	阿勒泰地区	133	12	2	5	1	4	9.02%
XPCC Cities		112	27	12	5	2	8	24.11%
Total		23,679	524	170	134	39	181	2.21%
Total (excluding Urumqi)		23,338	387	140	122	28	97	1.66%

	Prefecture	Per cent destroyed	Per cent significantly damaged	Per cent slightly damaged	Per cent undamaged	Estimated number of destroyed	Estimated number of significantly damaged	Estimated number of slightly damaged	Estimated number of undamaged
Urumqi	乌鲁木齐市	17.05%	9.30%	8.53%	65.12%	58	32	29	222
Ili	伊犁哈萨克自治州	15.69%	58.82%	3.92%	21.57%	217	814	54	299
Kizilsu	克孜勒苏柯尔克孜自治州	76.92%	0.00%	7.69%	15.38%	853	229	112	309
Karamay	克拉玛依市	40.00%	40.00%	10.00%	10.00%	8	8	2	2
Bortala	博尔塔拉蒙古自治州	14.29%	0.00%	14.29%	71.43%	16	0	16	80
Turpan	吐鲁番地区	43.90%	12.20%	7.32%	36.59%	419	116	70	349
Hotan	和田地区	24.24%	24.24%	12.12%	39.39%	1,309	1,176	415	1,400
Qumul	哈密地区	20.00%	20.00%	40.00%	20.00%	91	81	75	73
Kashgar	喀什地区	32.00%	10.00%	4.00%	54.00%	3,385	1,995	551	3,933
Tacheng	塔城地区	45.45%	45.45%	4.55%	4.55%	126	126	13	13
Bayingol	巴音郭楞蒙古自治州	48.44%	34.38%	6.25%	10.94%	346	245	45	78
Changji	昌吉回族自治州	27.50%	65.00%	5.00%	2.50%	83	196	15	8
Aksu	阿克苏地区	51.28%	15.38%	10.26%	23.08%	1,477	770	293	820
Altay	阿勒泰地区	16.67%	41.67%	8.33%	33.33%	22	55	11	44
XPCC Cities		44.44%	18.52%	7.41%	29.63%	47	9	5	54
Total		32.44%	25.57%	7.44%	34.54%	8,410	5,843	1,701	7,630
Total (excluding Urumqi)		36.18%	31.52%	7.24%	25.06%	8,352	5,811	1,672	7,408
					Per cent (excluding Urumqi)	35.79%	24.90%	7.16%	31.74%

differences from Han Chinese.

Additionally, the demolition of Uyghur Islamic architecture has accelerated after the 2009 unrest and has come into full speed at the end of 2020s. An estimate of 16,000 mosques (65% of total) in Xinjiang have been destroyed or damaged by Chinese authorities. A further 30% of Islamic sacred sites (shrines, cemeteries and pilgrimage routes) have also been demolished (Fig.2-2-8~9²⁰).

As for the rest of Uyghur religious and cultural architecture, many in Urumqi are spared for being tourist attraction, frequently visited by domestic and international tourists. Although still standing, a rough estimate of 75% of them had been locked and left vacant. Many have been secularised and appropriated under the guise of improving public services and safety. Some have been converted to commercial

Fig.2-2-8 Prefectural breakdown of the mosques in Xinjiang and sampling data.²⁰

Fig.2-2-9 Estimates of damaged numbers.²⁰

20 Nathan Ruser, Dr. Leibold James, Munro, Kelsey, and Tilla Hoja. "Cultural erasure: Tracing the destruction of Uyghur and Islamic spaces in Xinjiang." Australian Strategic Policy Institute. September 24, 2020. Accessed January 25th, 2021. <https://www.aspi.org.au/report/cultural-erasure>.

21 Ibid.

and civic spaces, and even public toilets. Some now spotlight an enormous red propaganda banner that reads “Love Party (Community Party of China), Love Country” at the entrance (Fig.2-2-10²²). Mosaic tiles and calligraphy on the mosque’s façade have also been covered. It is worth noting that none of the Buddhist temples or Christian churches have been damaged or destroyed.²³

As a result of destruction and appropriation of Islamic buildings and sites, Muslim practices of faith have dropped significantly. Perhaps to put on a show for the tourists, some mosque attendance is still allowed, but under heavy surveillance both inside and outside the mosques. Vigorous regulations on who can enter and who can pray are enforced. For example, a different style of praying than the state-preferred one can result in arrests.²⁴

Furthermore, the Chinese government has recognized the necessity to employ methods of movement supervision and restrictions outside the detention facilities, and in the urban landscape itself. Under the narrative of preventing religious extremism and reducing violence, the authorities rely excessively on the use of force and surveillance technology, to monitor the ethnic minorities for any suspicious activities. Racial injustices also prevail in the city, as Hans and Uyghurs (and other non-Han groups) live drastically different urban experiences.

22 Ibid.

23 Ibid.

24 Yael Grauer. “Revealed: Massive Chinese Police Database. Millions of Leaked Police Files Detail Suffocating Surveillance of China’s Uyghur Minority.” The Intercept. January 29, 2021. Accessed February 23, 2021. <https://theintercept.com/2021/01/29/china-uyghur-muslim-surveillance-police/>.

Fig.2-2-10 Kargilik’s Grand Mosque gatehouse in September 2018. Kargilik’s Grand Mosque is located at the centre of the old town of Kargilik in southern Xinjiang, and was the largest mosque in the area. Red banner with party propaganda marks the entrance.²²



After the 2009 Unrest, the Chinese authorities have quickly established an extensive and thorough digital surveillance network in Xinjiang's public spaces. A Chinese news article written on July 2nd, 2010, one year after the incident, reported on the installation of 8,370 new surveillance cameras in Urumqi alone. Locations include 3,400 bus stations, 200 bus terminals, 4,400 streets, 270 schools and kindergartens, and 200 malls and supermarkets. The article has proudly pointed out that the cameras can turn in 360 degrees, have night vision, and have the video quality equivalent to televisions at home. By the end of 2010, the total number of surveillance cameras in Urumqi was estimated to reach 60,000 when the news article was written.²⁵ In the following decade, the system has been continuously updated and expanded to cover every inch of Urumqi. A more recent English report written in 2018, states that there are eight to ten video cameras at regular intervals of 100-200 metres along every street, mapping the population's every movement and interaction.²⁶

The extent of digital surveillance goes further beyond cameras. In the guise of preventing Uyghurs from accessing separatism or terrorism information, the government authorized everyone in Xinjiang to have a spyware app on their mobile phone. Biometric information, including blood types, voice patterns, and facial imagery, are collected by the app,²⁷ under the "Physicals for All" health program that

Fig.2-2-11 A police smartphone app used in Ürümqi during a police stop or at a checkpoint shows facial recognition results, along with information about the top matches from police records. On the left, five possible matches are shown, with the top match rated 95.58 percent likely correct. Screenshot obtained by The Intercept.²⁹

25 Yang Yuanyuan. "Urumqi Installs 8370 Indestructible Surveillance Cameras to Monitor the Entire City." Tengxun News. July 2, 2010. Accessed February 23, 2021. <https://news.qq.com/a/20100702/000281.htm>.

26 "Apartheid with Chinese characteristics: China has turned Xinjiang into a police state like no other." The Economist. May 31, 2018. Published June 2, 2018. Accessed February 3, 2021. <https://www.economist.com/briefing/2018/05/31/china-has-turned-xinjiang-into-a-police-state-like-no-other>.

27 Kate Hannan. "China: Modernization, Development, and Ethnic Unrest in Xinjiang." The Palgrave Handbook of Ethnicity, 1011–1032. Singapore: Springer Singapore, 2019. 1018.



Fig.2-2-12 A security officer looks on as a woman passes through a checkpoint, equipped with a metal detector and facial recognition technology, to enter the main bazaar in Ürümqi, Xinjiang, on Nov. 6, 2018. Photo by Bloomberg via Getty Images.³⁰



feeds into the police surveillance system.²⁸ The app is checked regularly at police checkpoints, which can be as frequent as five per kilometer (Fig.2-2-11²⁹). Phone inspection tools called “anti-terrorism sword” at the checkpoints then gather text messages, phone contacts, and call records, as well as e-commerce and banking records (Fig.2-2-12³⁰). Overly frequent police stops for phone checks in the streets of Xinjiang has also become an everyday occurrence to the Uyghurs, in addition to police checkpoints.³¹ Under constant surveillance, and regularly questioned by the police, interactions with any urban space can be a nervous experience for the ethnic minorities.

To support the expanding security infrastructure, police force has also multiplied. In 2017 alone, 100,000 new police officer were recruited in Xinjiang. More police stations have also been built. In some places such as Hotan (和田), there is one every 300 metres. They are called “convenience police stations” because they sometimes offer bottled water and phone recharging services.³² The function of these stations is made apparent in one police note from Qidaowan(七道湾) Precinct of Urumqi that reads:

“(17-APRIL-2018)

(FOUR) Convenience Police Station Operational Notes:

There are 40 convenience stations in Qidaowan Precinct in total. [...] This

28 Yael Grauer. “Revealed: Massive Chinese Police Database. Millions of Leaked Police Files Detail Suffocating Surveillance of China’s Uyghur Minority.” *The Intercept*. January 29, 2021. Accessed February 23, 2021. <https://theintercept.com/2021/01/29/china-uyghur-muslim-surveillance-police/>.

29 Ibid.

30 Ibid.

31 Ibid.

32 “Apartheid with Chinese characteristics: China has turned Xinjiang into a police state like no other.” *The Economist*. May 31, 2018. Published June 2, 2018. Accessed February 3, 2021. <https://www.economist.com/briefing/2018/05/31/china-has-turned-xinjiang-into-a-police-state-like-no-other>.

week we searched 2,057 people with the anti-terrorism sword and did facial recognition on 935 people. No suspects. We sent 237 intelligence reports using the Intelligence Reporting System.”³³

Furthermore, all shops and restaurants have a part-time policeman on duty. They also have panic buttons with which they can summon the police under a minute.³⁴

Homes have also become areas for policing. One bizarre tactic that the government uses is state-mandated house visits, nicknamed “fanghuiju (访惠聚)”, during which policemen or local officials go from house to house to compile dossiers of personal information.³⁵ Minutes from “community stability meetings” reveal types of information collected: professions, place of employment, relatives and their ID numbers, schools of children, locations of children, and travel.³⁶ Reportable “extremist” behaviours can be not drinking alcohol, fasting during Ramadan, possessing Koran and prayer mat, or sporting long beards.³⁷ Any display of religious enthusiasm is considered a red flag. Similarly, applying for asylum abroad can result in being classified as terrorists, as foreign ideas are deemed dangerous.³⁸ It is worth noting that in January 2015, the provincial government demanded everyone in Urumqi to return to their homeland and obtain a new identity card, the information on which is scanned at checkpoints and even engraved on purchases of knives and scissors.³⁹ Their ethnic minority identity can also be the reason for being denied services or hotel accommodations.⁴⁰

In addition to the previous decades of replacements of traditional ethnic neighbourhoods, especially the Uyghurs’, after 2009, large numbers of Islamic architecture, especially mosques, and sacred sites have been either entirely demolished, significantly damaged, or defaced and appropriated at a rapid speed in recent years. As a result, open practices of Islamic faith, such as prayers and pilgrimages, have decreased significantly in fear of prosecution. At the same time, the construction of massive prison-like infrastructure called “re-education camps” have exploded in number and scale. They share a similar architectural typology that features thick external walls, watchtowers, long and dark corridors, and overcrowded cells, meant to control, brainwash, and segregate the minority population. Surveillance cameras scan all streets and public areas; checkpoints and police stations regularly

33 Yael Grauer. “Revealed: Massive Chinese Police Database. Millions of Leaked Police Files Detail Suffocating Surveillance of China’s Uyghur Minority.” *The Intercept*. January 29, 2021. Accessed February 23, 2021. <https://theintercept.com/2021/01/29/china-uyghur-muslim-surveillance-police/>.

34 “Apartheid with Chinese characteristics: China has turned Xinjiang into a police state like no other.” *The Economist*. May 31, 2018. Published June 2, 2018. Accessed February 3, 2021. <https://www.economist.com/briefing/2018/05/31/china-has-turned-xinjiang-into-a-police-state-like-no-other>.

35 *Ibid*.

36 Yael Grauer. “Revealed: Massive Chinese Police Database. Millions of Leaked Police Files Detail Suffocating Surveillance of China’s Uyghur Minority.” *The Intercept*. January 29, 2021. Accessed February 23, 2021. <https://theintercept.com/2021/01/29/china-uyghur-muslim-surveillance-police/>.

37 “Apartheid with Chinese characteristics: China has turned Xinjiang into a police state like no other.” *The Economist*. May 31, 2018. Published June 2, 2018. Accessed February 3, 2021. <https://www.economist.com/briefing/2018/05/31/china-has-turned-xinjiang-into-a-police-state-like-no-other>.

38 Yael Grauer. “Revealed: Massive Chinese Police Database. Millions of Leaked Police Files Detail Suffocating Surveillance of China’s Uyghur Minority.” *The Intercept*. January 29, 2021. Accessed February 23, 2021. <https://theintercept.com/2021/01/29/china-uyghur-muslim-surveillance-police/>.

39 “Apartheid with Chinese characteristics: China has turned Xinjiang into a police state like no other.” *The Economist*. May 31, 2018. Published June 2, 2018. Accessed February 3, 2021. <https://www.economist.com/briefing/2018/05/31/china-has-turned-xinjiang-into-a-police-state-like-no-other>.

40 Kate Hannan. “China: Modernization, Development, and Ethnic Unrest in Xinjiang.” *The Palgrave Handbook of Ethnicity*, 1011–1032. Singapore: Springer Singapore, 2019. 1018.

search personal details and look for suspicious activities from ethnic minorities; local officials conduct home visits to collect information and report on signs of religious practices, that are as minor as growing a beard. Undoubtedly, physical manifestations of control are visible in many aspects of Xinjiang, acting as political tools to regulate citizens' behaviours and beliefs.

The following are three relevant government policies and ideas that have informed the recent government-led projects that have transformed Xinjiang's vernacular architecture: "Belt and Road" Initiative, "Three Rural" Issues, and "Three News" Lifestyle.

2.2.1. "Belt and Road" Initiative (一带一路)

In September and October 2013, President Xi Jinping proposed the major initiatives to jointly build the "Silk Road Economic Belt" and the "21st Century Maritime Silk Road" ("Belt and Road") during his trip to the Southeast Asian countries, attracting great attention from the international community.⁴¹ Announced in 2013, but already in play for over a decade, the Belt and Road Initiative has been described as "a state-backed campaign for global dominance, a stimulus package for a slowing economy, a massive marketing campaign for something that was already happening – Chinese investment around the world", and was adopted by the government as its official strategic policy. The "Belt" concept stands for "Silk Road Economic Belt", echoing China's long standing historical stewardship of this trade corridor and expanding its purpose as an economic driver in globalization (Fig.2-2-13⁴²).⁴³

Jiang Dan, in his *Xinjiang Hotan River Area: A Study on the Evolution of Traditional Village Settlements*, asserts the crucial geographical position Xinjiang holds in China's economic strategy along the Silk Road:

*The joint construction of the "Belt and Road" aims to promote the orderly and free flow of economic factors, the efficient allocation of resources, the deep integration of markets, and the development of countries along the route; to realize economic policy coordination; to carry out wider, higher-level, and deeper regional cooperation; and to jointly create an open, inclusive, balanced, and regional economic cooperation framework. Xinjiang, as an important window opening to the west, is an important transportation hub, commercial logistics, and cultural, scientific, educational and economic core area along the Silk Road Economic Belt. It is a bridgehead for deepening exchanges and cooperation with countries in Central Asia, South Asia, and West Asia. Construction brings changes of the time.*⁴⁴

Under this premise, the government has laid out specific guidelines to reconstruct the traditional villages and city cores in Xinjiang. Many vernacular settlements are undergoing a transformational process, in which the boundary, density, and shape

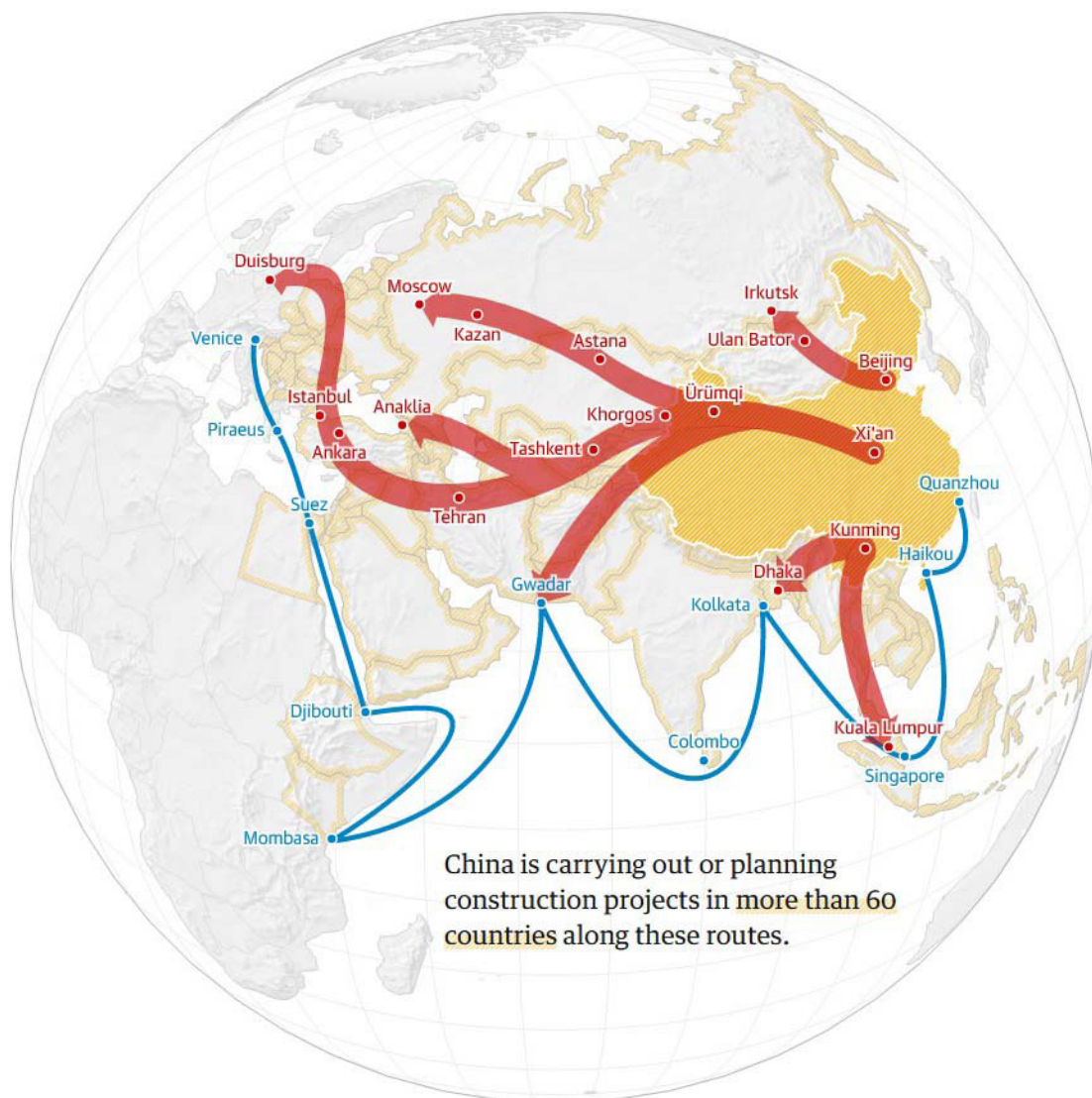
41 Jiang Dan, *Xinjiang Hotan River Area: A Study on The Evolution of Traditional Village Settlements*. Beijing: Chinese Construction Industry Publishing, 2016, 99-100.

42 Lily Kuo and Niko Kommenda, 'What Is China's Belt and Road Initiative?', the Guardian, accessed 29 September 2022, <http://www.theguardian.com/cities/ng-interactive/2018/jul/30/what-china-belt-road-initiative-silk-road-explainer>.

43 Ibid.

44 Dan Jiang, *Xinjiang Hotan River Area: A Study on The Evolution of Traditional Village Settlements*. Beijing: Chinese Construction Industry Publishing, 2016, 100.

Fig.2-2-13 Xinjiang, the west-most province of China, is a key geopolitical location for the Belt and Road Initiative.⁴²



of these settlements have witnessed significant changes. Some of the original settlements have expanded to form larger new settlements; their functions have also expanded as they group to form new settlement groups.⁴⁵ Jiang Dan categorizes the government-guided transformations into three types:

1. **Urbanization transformation.** Some traditional villages and towns have integrated the “Old Village Reconstruction Plan” in their land use plan. Some start to advocate for the construction of apartment-style farm houses to reduce land use per capita. There has been an emergence of special types of settlements such as “urban villages” and urban-rural fringe areas, which are rural areas in the process of transitioning into urban areas.
2. **Structural system transformation.** The original spatial structures and road networks are deemed decentralized and inefficient, thus requiring the rational adjustment of internal land use structure of the villages. The reconstruction plan encourages the joint construction of multi-household farm houses, the determination of area requirement for new houses according to standards, and the reclamation of old homesteads, idle land, abandoned pits and old factories.

45 Ibid, 100.

This is to improve the land use efficiency of the inner space of the settlement, and satisfy the new rural construction policy of “production development, affluent living, civilized customs, clean and tidy village appearance, and democratic management”.

3. Economic structural transformation. A large number of old city reconstruction projects, such as the old city core of Kashgar, Kuqa, and Hotan City, have been implemented, to address the differences in shape and pattern between the old and new urban areas, to reorganize social relations and social order with a new commercial economic model, and to encourage the natural bridging between the original spaces and new production spaces that emerge after more capital is introduced. Through the development of commerce and tourism in the traditional ethnic minority settlements, and the development of businesses in the surrounding area, ethnic minorities’ traditional customs can be retained and promoted, and their economy can become the main body of commercial production.⁴⁶

These transformations, adhering closely to the “Old Village/City Reconstruction Plan”, are drastically changing the appearance, spatial arrangement, and social relations of vernacular architecture and settlements in Xinjiang.

2.2.2. “Three Rural” Issues (“三农”问题)

The “Three Rural” issues refer to agricultural issues, rural issues and peasant issues in China. Agricultural issues are mainly problems regarding agricultural production and management, specifically on how to realize the industrialization of agriculture. The degree of marketization of agricultural production and management is low, and the price of agricultural products fluctuates greatly. Agricultural production mainly relies on small-scale farmers, and it is difficult to obtain large-scale economies. Rural issues are demonstrated by the division of urban and rural areas caused by the household registration system, and the differences between urban and rural areas are relatively large. Peasant issues are problems regarding the low income of farmers, the large income gap between urban and rural areas, and the low overall education level of the farmers, and the lack of protection of farmer’s rights.⁴⁷

In a 2022 article “Persist in Solving the ‘Three Rural’ Issues as The Top Priority of The Work of the Entire Party | Bring the Power of the Entire Party and The Entire Society to Promote Rural Revitalization”, Xi Jinping emphasizes on key strategies and future steps on revitalizing rural villages and towns:

1. Accelerate the development of rural industries.
2. Strengthen the construction of socialist ideological culture.
3. Strengthen the construction of rural ecological culture.
4. Deepen rural reform.
5. Implement rural construction actions.
6. Promote the integrated development of urban and rural areas.

⁴⁶ Ibid, 100-102.

⁴⁷ Qian ZiWen. “Deciphering “Three Rural”: On Farmer’s Income Increase in the New Stage 破解“三农”：论新阶段的农民增收”. Three Rural China 三农中国. 14 April 2010, https://web.archive.org/web/20140413132455/http://www.snzg.cn/article/2010/0415/article_18237.html.

7. Strengthen and improve rural governance.⁴⁸

Immediately following Xi Jinping's speech, Xinjiang's government authorities held a meeting in Urumqi and declared that they will thoroughly implement President Xi's strategies to address the "Three Rural" Issues. Ma Xingrui, Secretary of the Party Committee of Xinjiang, states:

It is necessary to steadily promote rural construction, follow the law of urban and rural construction development, continue to improve the living environment in rural areas, solidly carry out infrastructure construction in key areas, gradually fill in the shortcomings of basic public services in rural areas, and continue to improve the appearance of rural areas. It is necessary to highlight actual effects and improve rural governance, focusing on grasping the grassroots, strengthening the foundation, and solidifying the foundation, strengthening the establishment of grassroot party organizations, creating the platform for spiritual civilization construction, further promoting the construction of safe villages and rule-of-law villages.⁴⁹

These strategies to address the "Three Rural" Issues serve as the overarching political framework for Xinjiang's architectural projects and work alongside with other government policies mentioned in this subchapter to justify the mass-scale and rapid-pace transformations to Xinjiang's vernacular architecture.

2.2.3. "Three News" Lifestyle ("三新"生活)

On October 19, 2017, at the 19th Communist Party of China National Congress, Xi Jinping announced his "Beautiful China" initiative, promising to build China into "a great modern socialist country that is prosperous, strong, democratic, culturally advanced, harmonious, and beautiful" by the year 2035.⁵⁰ To interpret his words in Xinjiang's contexts, "prosperous" refers to economic development; "democratic" is fake; "culturally advanced" means to adopt and assimilate into the modern culture and lifestyle in central China; "harmonious" means 56 distinct ethnic groups blend together into a united national identity; and "beautiful" refers to improving basic sanitation practices and cleaning up pollution. Xi's word "beautiful" has laid the ground for the "beautification" programmes in ethnic minority communities carried by Xinjiang's authorities.⁵¹

In early 2018, Xinjiang government introduced the "Three News" Campaign: "advocating a new lifestyle, establishing a new atmosphere, and constructing a new order." In Timothy Grose's paper, "If You Don't Know How, Just Learn: Chinese

48 Xi Jinping. "Persist in Solving the 'Three Rural' Issues as The Top Priority of The Work of the Entire Party | Bring the Power of the Entire Party and The Entire Society to Promote Rural Revitalization 坚持把解决好“三农”问题作为全党工作重中之重 举全党全社会之力推动乡村振兴. The Government of The People's Republic of China 中国政府, 31 March 2022. https://www.gov.cn/xinwen/2022-03/31/content_5682705.htm.

49 Wang Xin Rui. "Thoroughly Implement General Secretary Xi Jin Ping's Important Exposition on 'Three Rural' Work | Promote The Overall Revitalization of Xinjiang's Rural Areas, and Realize the Modernization of Agriculture and Rural Areas". 18 March 2022. <http://xj.people.com.cn/n2/2022/0318/c186332-35180489.html>.

50 Xi Jinping. "Secure a Decisive Victory in Building a Moderately Prosperous Society in all Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era." Xinhua. October 18, 2017 [Updated November 4, 2017]. http://www.chinadaily.com.cn/china/19thcpconationalcongress/2017-11/04/content_34115212.htm.

51 Timothy A. Grose. "If You Don't Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space". *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 8. <https://doi.org/10.1080/01419870.2020.1789686>.

Housing and the Transformation of Uyghur Domestic Space”, a translation of “Three News” Campaign in full is written as follows:

1. **Advocating a new lifestyle:**

- a. *Advocate a new lifestyle **ideologically**: deepen the development of Chinese-style socialism’s core values, resolutely uproot ignorance, discard “pagan” ideas, conscientiously thank the Party, listen to the Party, and follow the Party.*
- b. *Advocate a new lifestyle **in everyday existence**: adhere to civil discussions and promote modern culture, eliminate the “four activities” (ceremonies, circumcisions, weddings, and funerals celebrated by pious Muslims and even most secular Uyghurs) – which are outdated habits and vulgar customs strongly influenced by religion – lead the rural masses to a secular life, and absolutely deny religious extremism from taking hold again.*
- c. *Advocate a new lifestyle **in activities**: colourful, healthy cultural and sports activities must be vigorously developed, in villages hold different types of ball games, patriotic singing competitions, allow the masses to sing together, and guide them spiritually and emotionally toward modernity.*

2. **Establishing a new atmosphere:**

- a. *Establish a new atmosphere **in everyday existence**: develop night classes with many types of training programmes, change concepts toward employment – i.e. opportunities inside and outside of Xinjiang, at village “satellite factories”, on-site training employment.*
- b. ***Vigorously develop courtyard economies**, promote the renovation and transformation of old courtyards and living spaces from front to back, increase the proportion of courtyard economy income to relieve poverty ... contain extremism, guide each ethnic collectivity to rely on scientific skills to become prosperous.*
- c. *Establish a new atmosphere **in the appearance of rural villages**: Advance the construction of beautiful villages, improve the living conditions and ecology of rural areas, resolve the rural issues of dirt, disorder, and destitution.*
- d. *Establish a new atmosphere **in spiritual appearance**: Through establishing various activities, use education to lead the masses to focus on civility, manners, hygiene while clashing against old customs, enhancing new healthy atmospheres, resolutely forbid strange clothing in order to create a positive spirit.*

3. **Constructing a New Order:**

- a. *Construct a new order. **Maintain the rule of law**, further develop publicity work on law, resolutely root out the ideologies of “Religious supremacy”, “theocracy”, and “religion” is law while forming among the masses an atmosphere that obeys, studies, respects, and implements the law.*
- b. *Construct a new order **for living**. Strictly examine the use of religion to have the courage for a secular lifestyle, educate believers to establish correct beliefs, resist extremism, to guide religion to carry out its*

*activities within the scope of laws and regulations, resolutely eliminate the problems of “religious wild police” and “wild imams” and never allow religion to intervene in administration, justice, education, or family planning.*⁵²

To summarize, the guidelines lay out several key political goals. First, Xinjiang’s ethnic minorities need to “correct” their ideologies by uprooting their religious traditions and beliefs, and following the Communist Party’s Chinese-style socialism’s core values instead. Second, they need to abandon the outdated and vulgar traditions in the way they celebrate and behave, and instead adopt the modern/civil way of living. And third, they, especially rural villagers, ought to change their living environment and atmosphere according to government’s modern hygienic standards.

The “Three News” campaign inspired the “Beautiful Spaces” programme, which aims to transform nearly 400,000 impoverished families’ “backwards” lifestyle, by improving their sanitation, cultivating “good habits”, and eliminating “outdated habits and vulgar customs”.⁵³ “Beautification” and “modernization” of domestic spaces and villages have then become justifications to radically alter the traditional lifestyle of Xinjiang’s ethnic groups, to fit within the principles of modern life laid out by the government, to adopt the customs, practices, and values defined by Chinese Communist-style secularism,⁵⁴ and to contribute to the economic production model in tune with the Belt and Road Initiative.

Architectural implications of this campaign, which has greatly influenced the government-led architectural projects in Xinjiang, and the other policies discussed in this subchapter, will be discussed in detail in Chapter 4.

52 Ibid, 8-9.

53 Ibid, 10.

54 Ibid, 9.

2.3. Geographic and Climate Contexts

Xinjiang is the largest province in China, with an area of more than 1.6 million square kilometres, accounting for about one-sixth of the country's total area. However, the geological distribution shows that only 35.66% of the land can be used. Among them, Aeolian sandy soil is widely found, and the content of organic matter is very low, generally between 0.5% and 1.5% (Fig.2-3-2¹).

About 30 million years ago, due to the early formation of the Himalayas, the sea retreated. About 5 million years ago, from north to south respectively, the Altay Mountains, Tianshan Mountains and Kunlun Mountains formed. The Tianshan Mountains divided Xinjiang into two geographical regions: the Tarim Basin in the south, the Junggar Basin in the north; the area between the basins is mostly desert (Fig.2-3-1³). Because the Kunlun Mountains block the warm and humid airflow of the Indian Ocean, Xinjiang has a unique natural environment of drought and little rain, which is why raw soil resources are traditionally used in building construction, as they can be effectively preserved. The northern part is a temperate climate zone with an

1 'Soil Map of Xinjiang Province. - ESDAC - European Commission'. Accessed 31 March 2023. <https://esdac.jrc.ec.europa.eu/content/soil-map-xinjiang-province>.

2 Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 9.

3 NordNordWest. Location map of Xinjiang, People's Republic of China. Wikipedia. 14 February 2020. https://upload.wikimedia.org/wikipedia/commons/8/8a/China_Xinjiang_rel_location_map.svg.

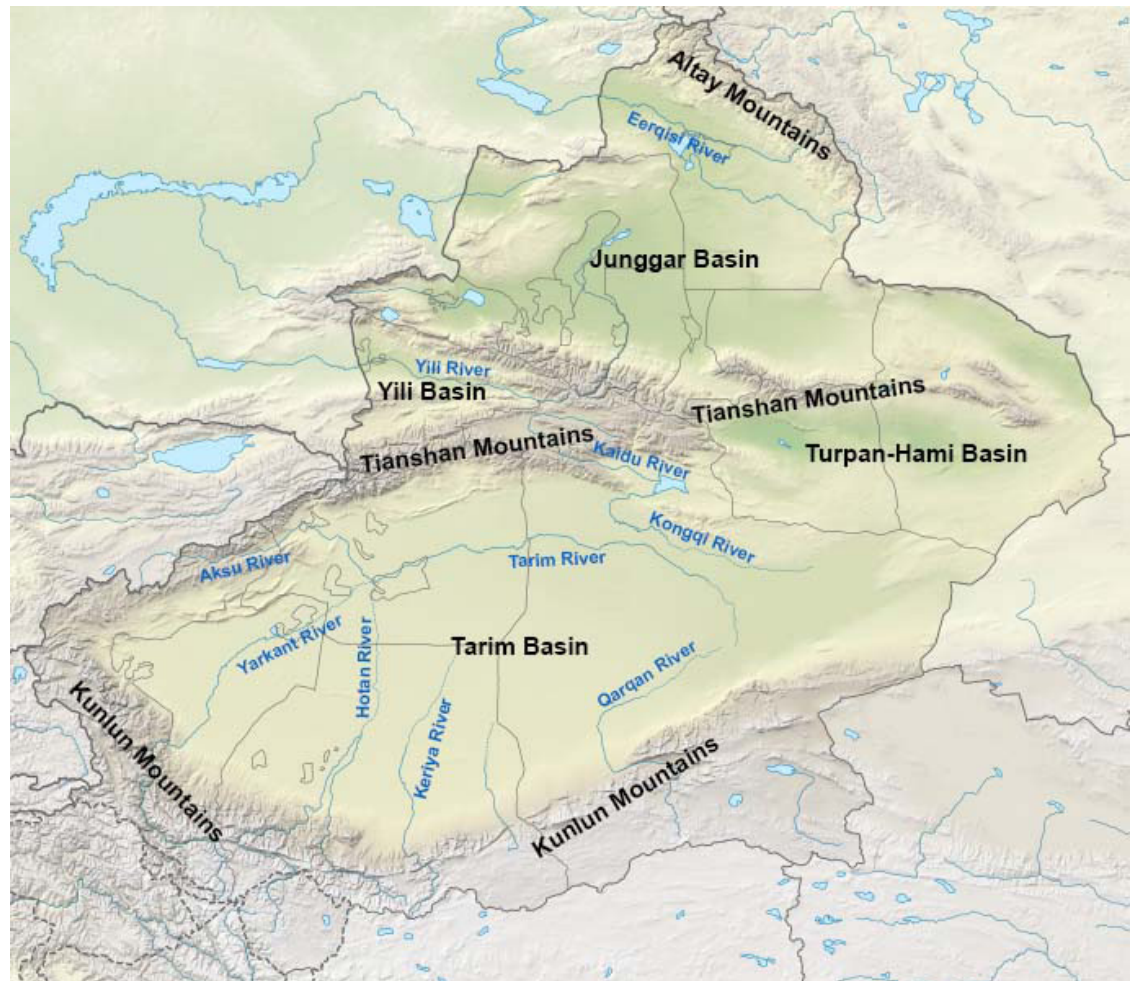


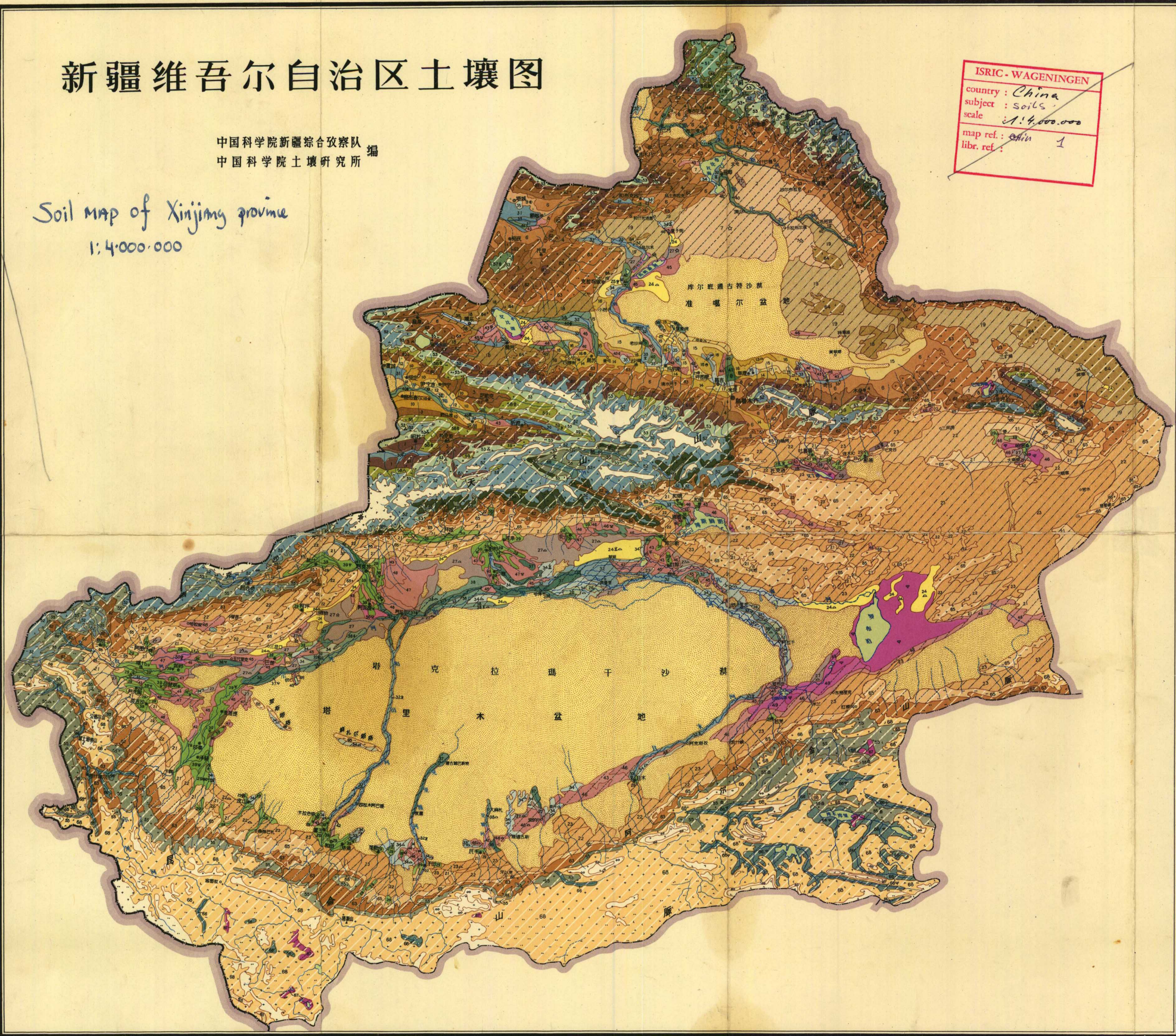
Fig.2-3-1 Map of Xinjiang indicating location of key mountains, basins and rivers. Original picture by NordNordWest.¹ Labelled by author.

新疆维吾尔自治区土壤图

中国科学院新疆综合考察队
中国科学院土壤研究所

Soil map of Xinjiang province
1:4,000,000

ISRIC - WAGENINGEN
country: China
subject: soils
scale: 1:4,000,000
map ref.: chin 1
libr. ref.:



图例

平地土壤	山地土壤
1 黑钙土	26 残余沼泽土
2 草甸黑钙土	27 残余盐土
3 栗钙土	28 明矾盐残余土
4 暗栗钙土	29 灌溉-自成型古老绿洲耕作土
5 淡栗钙土	30 灌溉-自成型古老绿洲耕作土
6 草甸栗钙土	31 草甸土
7 灌溉栗钙土	32 冲积性暗色草甸土
8 栗钙土	33 暗栗钙土
9 草甸栗钙土	34 冲积性淡色草甸土
10 暗栗钙土	35 暗栗钙土
11 淡栗钙土	36 灌溉草甸土(黑灌土)
12 草甸栗钙土	37 灌溉草甸土(黑灌土)
13 灌溉栗钙土	38 灌溉草甸土(黑灌土)
14 暗栗钙土	39 灌溉-水成型古老绿洲耕作土
15 草甸暗栗钙土	40 灌溉-水成型古老绿洲耕作土
16 暗栗钙土	41 灌溉-水成型古老绿洲耕作土
17 草甸暗栗钙土	42 沼泽土
18 暗栗钙土	43 水稻土
19 草甸暗栗钙土	44 盐土
20 暗栗钙土	45 冲积性草甸盐土
21 草甸暗栗钙土	46 暗栗钙盐土
22 暗栗钙土	47 干三角洲草甸盐土
23 草甸暗栗钙土	48 冲积性典型盐土
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25 草甸暗栗钙土	50 干三角洲典型盐土
	51 沼泽盐土
	52 湖沼矿质盐土
	53 次生盐土
	54 山地山原和高山谷地的土壤
	55 山地冰沼土
	56 山地黑钙土
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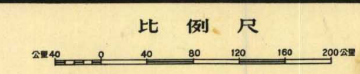
非土壤形成物等其它符号

△ 砂土包	○ 盐泽	□ 卵石堆
■ 沙漠	▽ 盐壳、盐泥	— 冰川

土壤机械组成和成土母岩

在疏松沉积物上发育的土壤	在坚硬岩石上发育的土壤
□ 壤质和粘质	□ 砂壤质和砂质
□ 砂质和粘质	□ 砂质和砂质
□ 粘质和粉砂质	□ 石灰岩大理石和其它石灰质岩石
□ 粘质和粉砂质	□ 以酸性为主的结晶岩和变质岩

本图上中国国界线按照地图出版社出版的“中华人民共和国地图”绘制



主编: 文振旺 编图: 文振旺, 石玉麟, 黄荣金, 李锦, 刘厚培, 林培
绘图: 中国科学院土壤研究所 吴以让, 张维新

Fig.2-3-2 Soil Map of Xinjiang Province. Created by Xinjiang Comprehensive Expedition Team and Institute of Soil Sciences of Chinese Academy of Sciences. Map produced in 2000 (assumed by author due to yellow tag on top right corner, unconfirmed).³

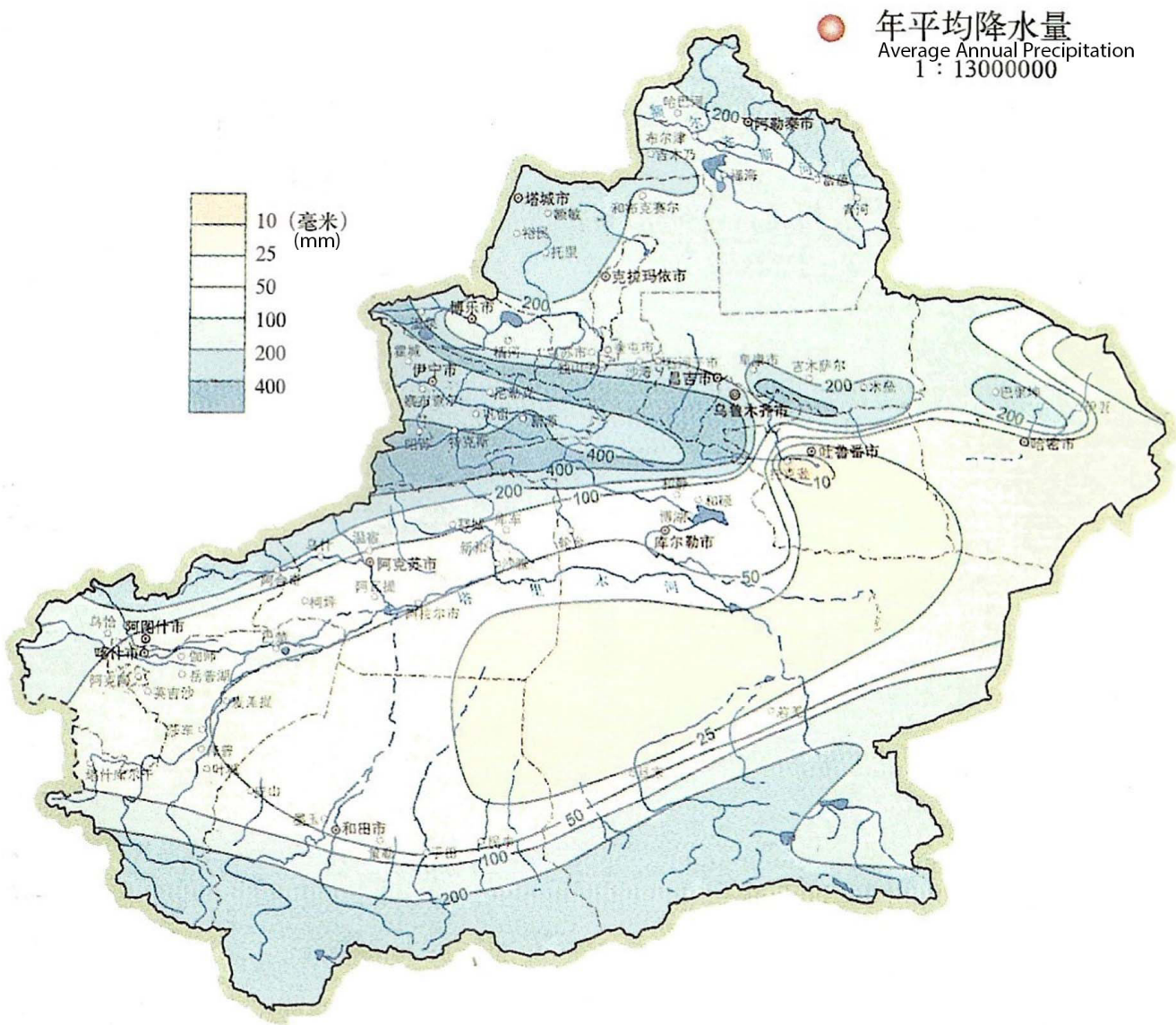
average annual precipitation of about 200mm and evaporation of about 2500mm; the southern part is a warm temperate climate zone with an annual average precipitation of about 50mm and evaporation of about 2700mm (Fig.2-3-3~4⁴).⁵

Between the Tarim Basin and the desert, there are many unconnected clay alluviums, that are deposits of clay formed by flowing water. Through the undercurrent of the gravel belt, Alpine water reappears on the ground, and forms oases suitable for farming. Additionally, there are many rivers in Xinjiang, mainly Tarim River, Yili River, Ulun Valley River, Irtys River and Manas River, etc., with many alluvial sections and rich alluvial clay materials. Due to the seasonal high temperature climate in the alluvial plain of the Tarim River, the soil formation has the characteristics of desert soil, and becomes the original building material. The plants commonly found near original raw-earth adobe buildings, such as camel thorn, pipa wood, water willow, aspen, populus euphratica, mulberry, jute, etc. are adopted to the low groundwater level of the region,

Fig.2-3-3 Average annual precipitation in Xinjiang (in mm). Map produced prior to 2009 (when Xinjiang Houses was published).⁴ Translated by author.

4 Chen, Zhendong. *Xinjiang Houses*. 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 22.

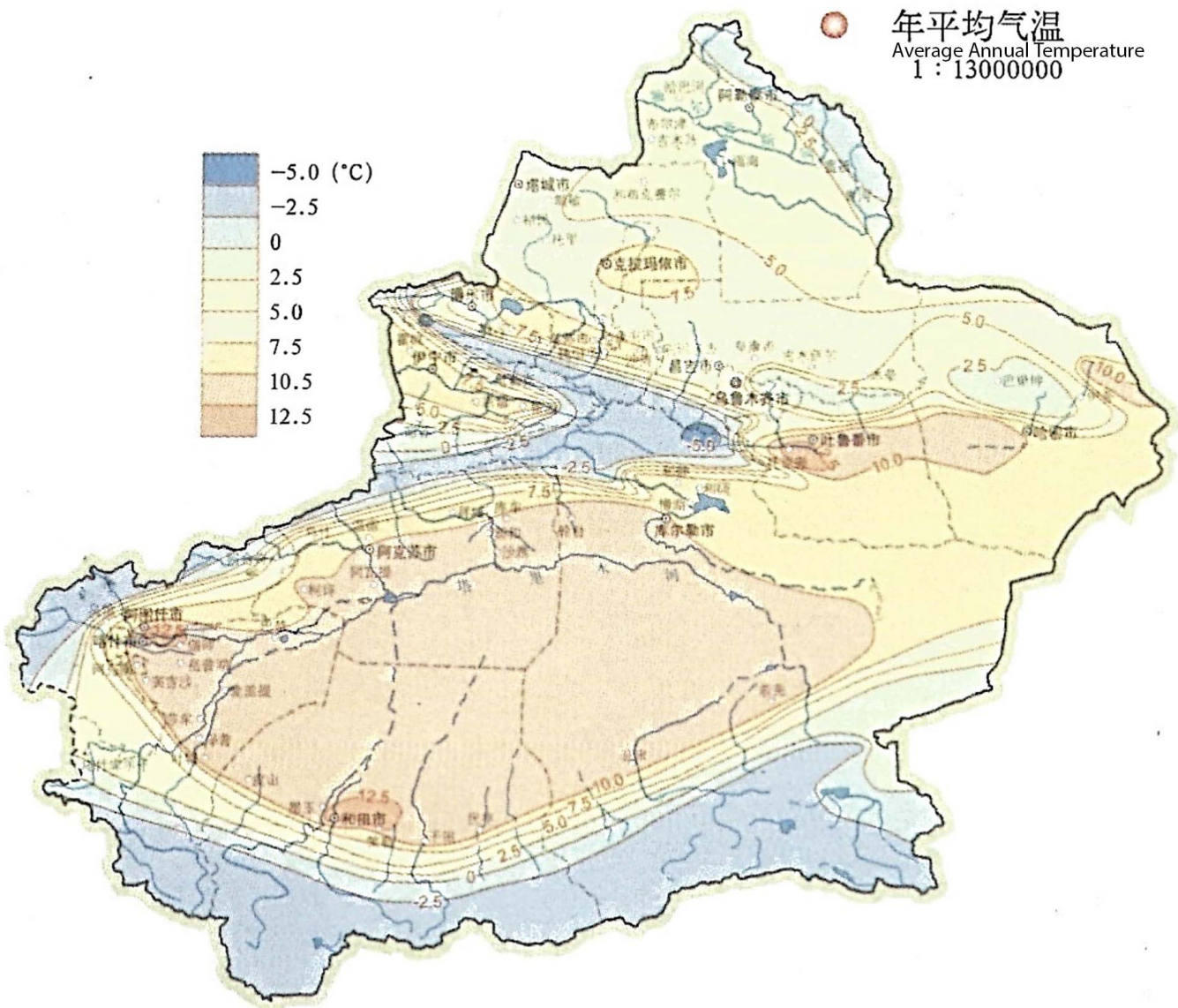
5 Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 8-9.



and are thus drought-resistant. They provide the timber needed for construction of raw-earth buildings. Adobe buildings are mostly found at low altitudes, where populus euphratica is abundant, and at the junction of deserts and mountains. Based on archaeological finds in Xinjiang, most ancient cities were built along water, located in places with high open terrain and abundant water sources.⁶

6 Ibid.

Fig.2-3-4 Average annual temperature in Xinjiang (in °C). Map produced prior to 2009 (when Xinjiang Houses was published).⁴ Translated by author.



CHAPTER 3. TRADITION AND CONTEXTUALIZATION OF VERNACULAR ARCHITECTURE

The physical arrangement of domestic and residential spaces in Zawut cannot be understood without situating those spaces in the wider social order that encompasses them. The spatial organization of domestic life is inseparable from many key categories of social identity in the lives of a key defining unit of the 'öy' (household). One idiom for expressing marriage and the formation of a conjugal unit is to say that the couple has become 'öylük-ochaqliq (home-and-stoved)', or simply 'öylen- (homed)', which suggests that they cook and reside apart from other, then is a home, a social unit as well as an architectural one.

--- Jay Dautcher, "The Blessed Home: Residence and Identity in a Uyghur Neighbourhood" in *Down a Narrow Road*¹

Note: Zawut is a suburban town and a Uyghur community at the periphery of the city of Yining in northern Xinjiang.

This chapter examines the architectural manifestations of Xinjiang's indigenous residents' cultural memories and identities. It establishes the importance of their close relationship with their ethnic communities and with the land they have lived on for centuries. By studying their built environments, from yurts and houses to settlements and villages, we can have a glimpse of their traditional lifestyles and social interactions, since their vernacular architecture greatly reflects their living environments, production modes, customs and beliefs.

"Vernacular architecture" is also known as "traditional architecture", "indigenous architecture", and "local architecture". The term refers to non-monumental, non-formal, and non-architect designed architectural traditions. Since the coining of the academic term "vernacular architecture" in 1964 in the Bernard Rudofsky exhibition, *Architecture without Architects*, there have been debates on the defining quality of vernacular architecture. Some argue that the end-users of the architecture are its builders; on the other hand, some think that the architecture's construction can be done by craftspeople while its design is by local residents according to traditions.² Despite their disagreement, the appreciation of vernacular architecture is established on the common understanding that it is a local construction by the local community who uses

¹ Jay Dautcher, *Down a Narrow Road: Identity and Masculinity in a Uyghur Community in Xinjiang China*, Harvard East Asian Monographs 312. Cambridge, Mass: Harvard University Asia Center, 2009: 11.

² Xiaoxin Zhao & Kelly Greenop. "From 'neo-vernacular' to 'semi-vernacular': a case study of vernacular architecture representation and adaptation in rural Chinese village revitalization". *International Journal of Heritage Studies*, 25:11, 2009, 1129.

local materials and relies on traditional construction methods. According to Rubenilson Brazão Teixeira, tradition and contextualization are the two major attributes associated with vernacular architecture. Vernacular architecture is traditional because it “originates from specific ethnic groups and is a result of a long process over time” and “is always based on familiar forms established by previous generations”.³ Vernacular respects local conditions, and especially sensitive to the geographical context of the surroundings, such as climate, vegetation, and topography.⁴ In the article “From ‘neo-vernacular’ to ‘semi-vernacular’: a case study of vernacular architecture representation and adaptation in rural Chinese village revitalization”, Xiaoxin Zhao and Kelly Greenop states that in their opinion, “the importance of vernacular architecture, especially in a heritage context, lies in its connection to local cultures, both in terms of people’s use and shaping of architectural spaces, and the skills of vernacular builders that encompass generations of tradition”.⁵

However, I believe that in the context of Xinjiang, the study of vernacular architecture should not be confined in its heritage context, or to its academic value in studying local cultures and traditional craftsmanship. As Jay Dautcher argues in beginning quote of this chapter, the physical arrangement of domestic spaces cannot be studied separately from the wider social order that encompasses them. The term “home”, or “öy”, is not only an architectural unit, but also a social unit, as the spatial organization of domestic life is integral to social and cultural identity. These units agglomerate to form vernacular villages and towns. Xinjiang’s vernacular architecture is so much more than a shelter to fulfill utilitarian needs, or a heritage site to remember a specific ethnic group or culture by – it is a form of expression and representation for the local people who live in it. The architectural envelope that defines the boundary between the exterior and the interior is also what connects those living within to their surrounding natural and social environments. Many aspects of the residents’ daily life, such as eating, cooking, praying, sleeping, celebrating, growing food, raising animals, and interacting with neighbours, are fulfilled in and around their houses, which not only reflect the local climate, soil conditions, and vegetation availability, but also reveal a substantial amount of information on the residents’ identity, such as history, religion, customs, family structure, occupation, and social order.

Throughout Xinjiang’s history, its architecture has inevitably evolved with environmental, social, political, religious, and economic changes. Historical events such as the introduction of Islam or the migration of Han or Hui people into Xinjiang after the annexation by Manchu Qing government have all brought some level of transformations to Xinjiang’s vernacular architecture. However it becomes fundamentally different when these transformations are no longer initiated voluntarily by the local communities, but rather promoted by governmental or professional efforts, such as in recent years in Xinjiang. Given the Chinese government’s attention to rural development, conservation practices of Chinese vernacular architecture have been under development in recent years. Some architects have undertaken adaptive-reuse projects on existing vernacular architecture; and some have even designed vernacular-style architecture to express local culture, which is called “neo-vernacular architecture”.⁶ The major distinction between these projects and traditional

3 Camilla Ghisleni. “What Is Vernacular Architecture?” Trans. Duduch Tarsila. ArchDaily. 25 November 2020, <https://www.archdaily.com/951667/what-is-vernacular-architecture>.

4 Ibid.

5 Xiaoxin Zhao & Kelly Greenop. “From ‘neo-vernacular’ to ‘semi-vernacular’: a case study of vernacular architecture representation and adaptation in rural Chinese village revitalization”. *International Journal of Heritage Studies*, 25:11, 2009, 1130.

6 Ibid, 1130.

Xinjiang vernacular architecture lies in the name of the influential Bernard Rudofsky exhibition in 1964, *Architecture without Architects*. Being distinct from the professional architectural practices that developed over the twentieth century in the west is a key defining feature of “vernacular architecture”.⁷ This chapter focuses specifically on the “architecture without architects” in Xinjiang. The concept of “neo-vernacular” or “semi-vernacular” architecture, which is architect-designed architecture to resemble vernacular architecture, or perhaps in more general term – “architecture with architects” – will be discussed in later chapters.

Meanwhile, this chapter emphasizes on the importance of Xinjiang’s vernacular architecture to its indigenous communities in two aspects. The first is its locality. Throughout generations, the people have developed a close relationship with and a strong dependency on the land they live on. They build on ancestral knowledge of their ecological environment and use locally sourced materials to construct their home and making a living from their collective experience on the land. Consequently, architectural forms and material traditions have evolved and are accepted as norms in local communities, much like the development of regional dialects. The second is its sociality. Members of the same community share systems of values, beliefs, and customs, which are reflected in their vernacular architecture. Like how domestic spatial arrangements in houses can be linked to familial customs and structures, the pattern and shape of settlements can also suggest the community’s social interactions and order. Vernacular architecture is not only social representation, but also documentation of the community’s collective wisdom and memories. However it is also critical to keep in mind that Xinjiang’s vernacular architecture and settlements are either undergoing massive transformations or disappearing entirely under recent government policies. People are displaced from their vernacular environment in pursuit of “improved quality of life”, “greater economic production” and “revitalized towns and villages”.

⁷ Ibid, 1130.

3.1. Vernacular Architecture as Regional Dialects

Those buildings that belong to a place, that express the local or regional dialect, are often called vernacular. The linguistic analogy of the vernacular speech of building and dialect is significant because it allows for comparison of grammar and syntax, as well as style or manner of expression in material and verbal forms.

--- Simon J. Bronner, "Building tradition: Control and authority in vernacular architecture"¹

Vernacular architecture, also known as "indigenous architecture", is closely related to their environmental contexts and available resources. The analogy between vernacular architecture and regional dialect above is apt to demonstrate the inseparable relationship between the buildings and the land they situate on. The region-specific climate, soil, and vegetation conditions enable the formation of a unique material culture and tradition on this land. Vernacular architecture in turn expresses this material culture and tradition of their builders and their owners, who are either the same or from the same community. This tradition is tested, evolved, and accepted as it passes down generations of the community.

This subchapter establishes that Xinjiang's vernacular architecture belongs to its place. It has the remarkable capability of indicating the surrounding environmental conditions, representing the material culture and tradition, and expressing the unique architectural dialect the community speaks. Xinjiang is vast and features a wide range of climate and soil conditions that provide distinct landscapes and vegetations to the many ethnic groups and communities that reside here. These factors contribute to the evolution and establishment of vernacular residential architectural styles that are characteristically regional and uniquely suitable to the community's lifestyle. From mountains and oases to deserts and hot arid regions, this subchapter examines local architectural forms, living spaces, and materiality that have been developed organically as an integral process of residents' adaptation to their environmental contexts. At the end of the subchapter, a well-documented settlement in the old city of Kashgar called Gaotai is used as a case study, demonstrating that as communities erect vernacular architecture with locally sourced materials along the geological landscape, the architecture itself has gradually become an integral part of the land, forming the anthropological landscape that expresses the local architectural dialect.

3.1.1. Architectural Forms and Materiality Based on Environmental Contexts

Xinjiang's vernacular architecture takes on distinct styles and forms across the region. Its construction methods are heavily influenced by local climate, soil conditions, available local building materials, and the residents' mode of production. The evolution of vernacular architecture in Xinjiang also heavily reflects the resident's adaptation of their ecological environment. Different climates determine the availability of construction materials, and hence determine the form of architecture and built environment. Some residential spaces formed within these architectural forms are

¹ Simon J. Bronner. "Building tradition: Control and authority in vernacular architecture". Vernacular Architecture in the 21st Century: Theory, Education, and Practice. Taylor & Francis, London, 2005: 23.

unique to the region and the ethnic groups that reside here.

Approximately a few thousand years ago, the initial style of Xinjiang's "wooden frame dense beam flat roof structure (木构架密梁平屋顶结构)" was constructed by weaving local materials such as red willow, euphrates poplar, reed and other vitex materials commonly found in swamp areas. The migrants who first settled at the foot of Kunlun Mountains (昆仑山) in the Hotan Keriya River Basin (和田克里雅河盆地) in southern Xinjiang used red willow branches to weave lattices, then coated them with grass mud to block wind and sand. Early wood structures consisted mainly of stilts and hanging shacks. In the grasslands, yurts formed nomadic floating villages in the grassland. Traces of integration of Buddhist and Islamic cultures can be found in these architectural complexes. After years of aggregation and transformation, Xinjiang's unique architecture styles become more defined.²

Xinjiang's natural resources are limited due to its geographic and climate circumstances: water resources are scarce; vegetation is sparse, desertification is severe; the ecological environment is fragile; natural resources are unevenly distributed in the region. Especially in the desert areas – where not only large and good-quality wood is lacking, other building materials such as small wood and stones are also hard to find – only earth is readily available. This condition provided a rich material foundation for the birth of raw-earth adobe architecture, a commonly seen traditional architecture type in Xinjiang. For example, early native dwellings in Uyghur-inhabited regions were commonly raw-earth buildings. Hundreds of raw-earth buildings have been discovered in the ancient settlement of Niya (尼雅) in the Tarim Basin.³ Archeological evidence found in the Niya ruins shows that people used wheat straw, sheep dung and mud to lay the ground; however there is no evidence of baking or ramming. This is because the soil in Xinjiang is very dry and does not need moisture-proof treatment.

Given the simplicity of its construction, the availability of its construction materials, namely earth, the reliability of its structure, and its good thermal insulation properties, the production and application of raw-earth architectural form gradually expanded. Raw soil can be sun dried to form adobe masonry, which can be stacked to build walls; raw soil can fill gaps between branches to provide the walls more insulation and barrier against wind and sand; raw soil can be wetted and mixed with yellow grass to form grass mud, which, after dried, becomes more durable.⁴ Similar construction method is still commonly used in today's vernacular houses in Xinjiang. Raw earth construction is representational of Uyghur vernacular houses. It is also adopted by many communities of other ethnic groups, such as Kazakhs and Mongolians.⁵

Although many traditional settlements in Xinjiang incorporate raw-earth to varying degrees, the method with which they treat the material differs from region to region. Residents in Tuyugou (吐峪沟) in Turpan layer the floor with local materials or even waste materials, and sometimes ram it in order to prevent water seepage. In Yuermen Village (玉尔门村) in Turpan, river sand is commonly used to lay the floor. Small stones, sand, lime, water, and tree sap are mixed together and compacted layer by layer with logs. Then it is coated with ash mortar, to have it pressed together more tightly. For larger gaps, red willow, *Populus euphratica* are used as reinforcement

² Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 49-50.

³ Ibid, 10.

⁴ Ibid, 49.

⁵ Ibid, 51.

materials, that are filled with sand and plastered with mortar. In Kashgar in southern Xinjiang, the soil is calcareous, which gives it relatively high plasticity and strength, making soil treatment very simple. Wealthy families would use adobe floor tiles to lay the floor. In Tacheng (塔城), residents make a cement-like mixture that consists of fine loess, cow or horse manure, fibrous wheat straws and water, which is then spread uniformly on the floor with a thickness of about 3cm. They then use a heavy board to pat it to make it smooth. After it is fully dried, it forms a hard shell with a smooth surface and a little plasticity. It is very durable, high in heat absorption, and surprisingly effective in deterring insects.⁶

However, raw-earth dwelling is not the only vernacular house type in Xinjiang. Deserts account for 48% of land; mountains account for 40%; and oases account for less than a-tenth of the land. The ethnic groups who have lived in Xinjiang for generations have overcome difficulties that arise from scarce natural resources and harsh climate.⁷ From desolate desert, river valley grasslands, to plateau mountains, and plain oases, they can build their own living spaces and create suitable living environments based on their local conditions. From architectural forms to construction materials, their residential architecture is closely connected to their modes of production, lifestyles, and most importantly the land they live on.

Vernacular Houses in Mountains

In the mountainous areas of Xinjiang, there are many residents scattered around rivers flowing through jungle or meadow. They are primarily farmers or herdsman and live nomadically, relying on natural grazing. Some of them live relatively concentrated; while other are scattered on slopes or terraces along valleys. Vegetation growth in mountainous area vary widely. Some have dense forests near the grasslands, where residents can cut down trees to build wooden houses; and some are rocky areas with few or no trees, where residents can only use a small amount of wood transported from far away to build houses. They mostly use rocks collected on site. Thus there are mainly two types of dwellings: wood houses and stone houses.⁸

In the Kanas Lake Tourist Scenic Area (喀纳斯湖旅游风景区) in the Altay (阿尔泰) region of the northern Xinjiang, which is close to the Sino-Russian border, a dense and expansive Siberian forest covers the land. The mixed spruce forest includes a variety of tall trees such as birch, larch and snowy spruce. In the winter, it is covered in snow. At the end of May and early June, spring starts and the forest starts to turn green. In July, it is incredibly lush. When fall arrives, white birch trees' leaves form a beautiful sea of gold. This is home to Tuva people (图瓦人), a group of Mongolian descent (Fig.3-1-1~2⁹).¹⁰

In the Yili area, near the Sailimu Lake (赛里木湖) and Gongnaisi River (巩乃斯河), on the Tianshan Mountains on the banks of the Kashgar River, there are wild fruit forests and spruce forests everywhere. Nearby are the wooden houses. Along the Tianshan Mountains, near Gongliu County (巩留县) and Tekes County (特克斯县), there are large areas of beautiful grasslands and magnificent pines and fir

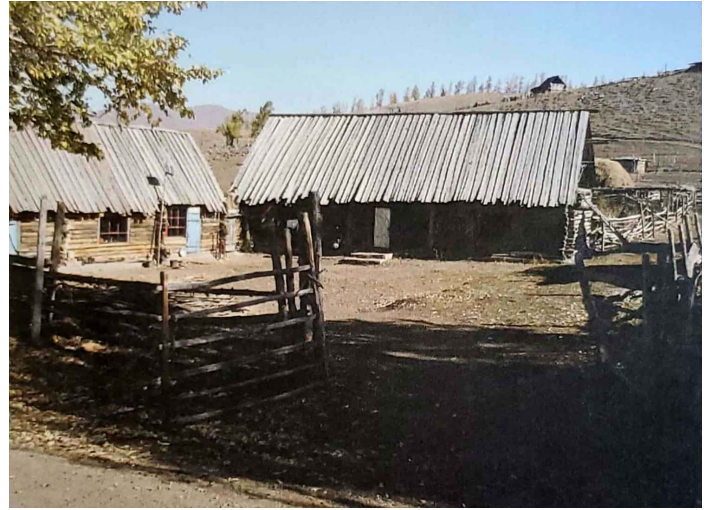
6 Ibid, 51.

7 Chen, Zhendong. *Xinjiang Houses*. 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 23.

8 Ibid, 29.

9 Ibid, 29.

10 Ibid, 29.



forests. Several Kazakh and Mongolian villages of wooden houses are located there. In mountainous areas with trees or forests with abundant timber sources, the local residents choose tall and tough pine and fir trees to use as straight poles for building materials. These trees are cut down, dried, peeled, tenoned, grooved, and assembled to create stable shelters.¹¹

In mountainous areas with few or no trees, residents can only collect rocks and stones in the rivers to build houses. This kind of houses, named “Dongwozi (冬窝子, which means winter shelter)”, are commonly seen in villages of Tajik and Kazakh people. When the pastures in winter are covered in heavy snow, the local herdsmen cannot carry yurts for long-distance grazing. So they choose valleys to built shelters to shield from cold wind. Due to the shortage of other building materials, all sorts of stones have become the main selection.¹² At the foot of the Pamir Mountains, along the intermountain valley of the Gaihe River, city walls of an ancient kingdom still stand; remnants of stone houses can be found within the city. This form of living still remains on this plateau, as the Tajik people built villages of stone houses next the ancient city to this day (Fig.3-1-3~4¹³).¹⁴

Fig.3-1-1 (top left) Wooden house village of Tuva people near Kanas Lake in Altay region. Photograph by Chen Lin.¹³

Fig.3-1-2 (top right) Wood house courtyard of a Tuva household. Photograph by Chen Lin.¹³

Fig.3-1-3 (bottom left) Stone houses of the Tajik people in Pamir Mountains.¹³

Fig.3-1-4 (bottom right) In front of the house in a stone house village.¹³

11 Ibid, 30.

12 Ibid, 30.

13 Ibid, 30.

14 Ibid, 31.

Vernacular Houses in Deserts

Rivers in the desert originate from melted snow in the mountains. Because of fluctuations in temperature, the amount of snowmelt water varies from time to time. The water in unstable riverbeds might be turbulent in one day and may dry up in another. As the wind blows the sand dunes, the location of the river is prone to shift, such as the tail of Keriya River (克里雅河). At the heartland of the desert, although water flowed through it once and trees such as populus euphratica, haloxylon, and tamarisk grew once, soil there today is very sandy, and soil cohesion is poor due to lack of water.¹⁵

Given the extremely limited building materials, the shelters we can see today are built with the few available tree trunks, branches, stems, leaves, and sand. Locals use thicker tree trunks for posts and beams, and use branches or planks to form a frame to form a horizontal structure for reinforcement. The enclosure part of walls is filled with reed stalks, willow branches or red wicker woven into fences and tied between the columns and frames, forming a partition between the inside and outside of the house. This is known as a fence wall (篱笆墙). The roof is also covered with similar structures of branches and reeds, tightened with a roped and pressed down with soil. The interior of the fence wall is sometimes flattened with sand and mud to make it appear smooth and clean. It can also block the cold wind in winter. But the exterior often has no mud coverage, exposing the fence. The space division and furniture is very simple. A rectangle dug in the middle of the outer room can be used as a firepit; and dead branches and dry grasses are used as fuel to meet the needs of cooking and heating in winter. It is inevitable to be smoky with an open fire; but the house is well ventilated. The firepit is surrounded by blankets, and people sit on them and enjoy meals together.¹⁶

On the southern edge of the Tarim Basin (塔里木盆地), on both sides of the

¹⁵ Ibid, 24.

¹⁶ Ibid, 24.



Fig.3-1-5 Appearance of residential walls in Hotan Area. Photographs by Chen Lin.¹⁷

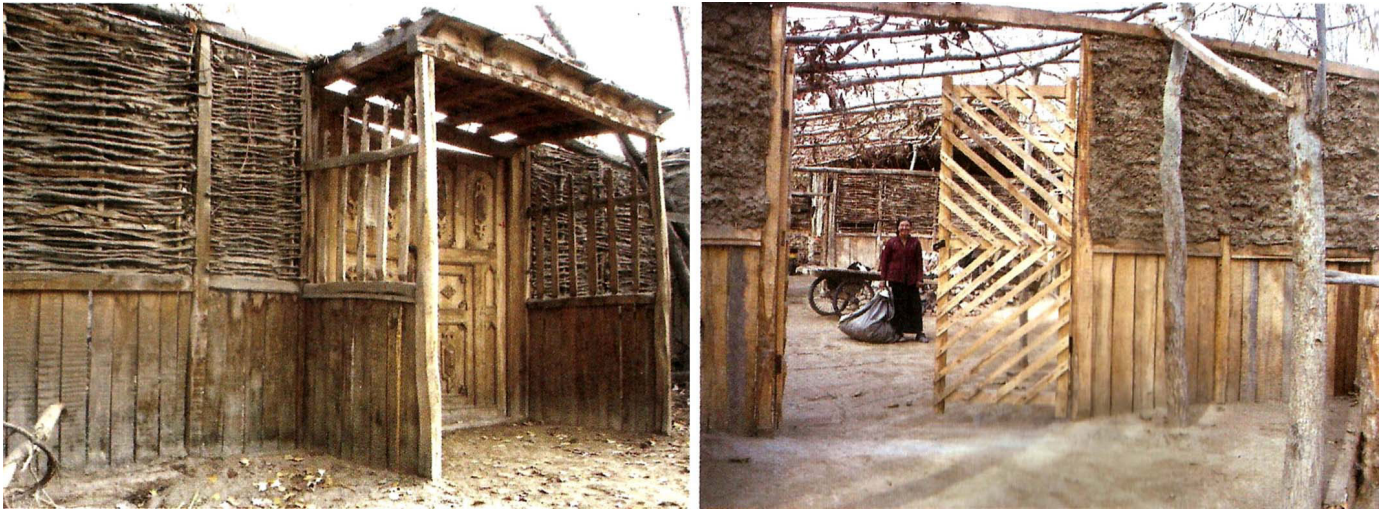


Fig.3-1-6 Entrances of residential walls in Hotan Area. Photographs by Chen Lin.¹⁸

Keriya River (克里雅河), the Cele River (策勒河), and the Yulongkashi River (玉龙喀什河) and the Karakashi River (喀拉喀什河) in the middle reaches of the Hotan River (和田河), although there are still continuous sand dunes, the soil quality is relatively good, and there are also more cultivatable land and oases. Although most of the dwellings here still use wooden columns as the structure for walls and sub-walls, but because the soil cohesion is relatively good, there are more variety of wall designs and construction methods, such as adobe-sandwiched-by-fences-wall (芭子夹土胚墙), wooden-framed-filled-with-adobe-walls (木框架填土胚墙) and etc. (Fig.3-1-5¹⁷) Some households also use a relatively large amount of wood to carve or stitch patterns on the frame structure, gates, entrances, railings and other parts to make their houses appear more rich and beautiful. (Fig.3-1-6¹⁸) Some families that engage in animal husbandry will also livestock pens near their houses.¹⁹

Surprisingly, there are fishermen and fishing villages in the desert. Located 300 km southeast of Korla City in the eastern part of southern Xinjiang, a body of water can be found. It is named Lop Nur, meaning “multiple waters gather” in Mongolian. (Fig.3-1-7²⁰) It is at the lower reaches of the Tarim River (塔里木河), the Kongque River (孔雀河) and the Cheerchen River (车尔臣河). There, the desert has gradually transformed into an oasis that became a commercial hub on the ancient Silk Road. However, as the rivers divert and the desert advances, the region is now covered by countless small lakes and ponds that can only be connected during the rain season. The number of local residents, called Luobu (罗布人), are decreasing. Houses surround popular trees, using the tree crown as canopy, and woven branches as walls. Beside the trees, sheds are built with piled logs and mud between the gaps. The Luobu people live scattered. It is common to find groups of only three to five households on an island, that is surrounded by water and connected by trestle bridges to other islands. Each household owns a boat.²¹

¹⁷ Ibid, 24-25.

¹⁸ Ibid, 25.

¹⁹ Ibid, 24-25.

²⁰ Ibid, 27.

²¹ Ibid, 27.

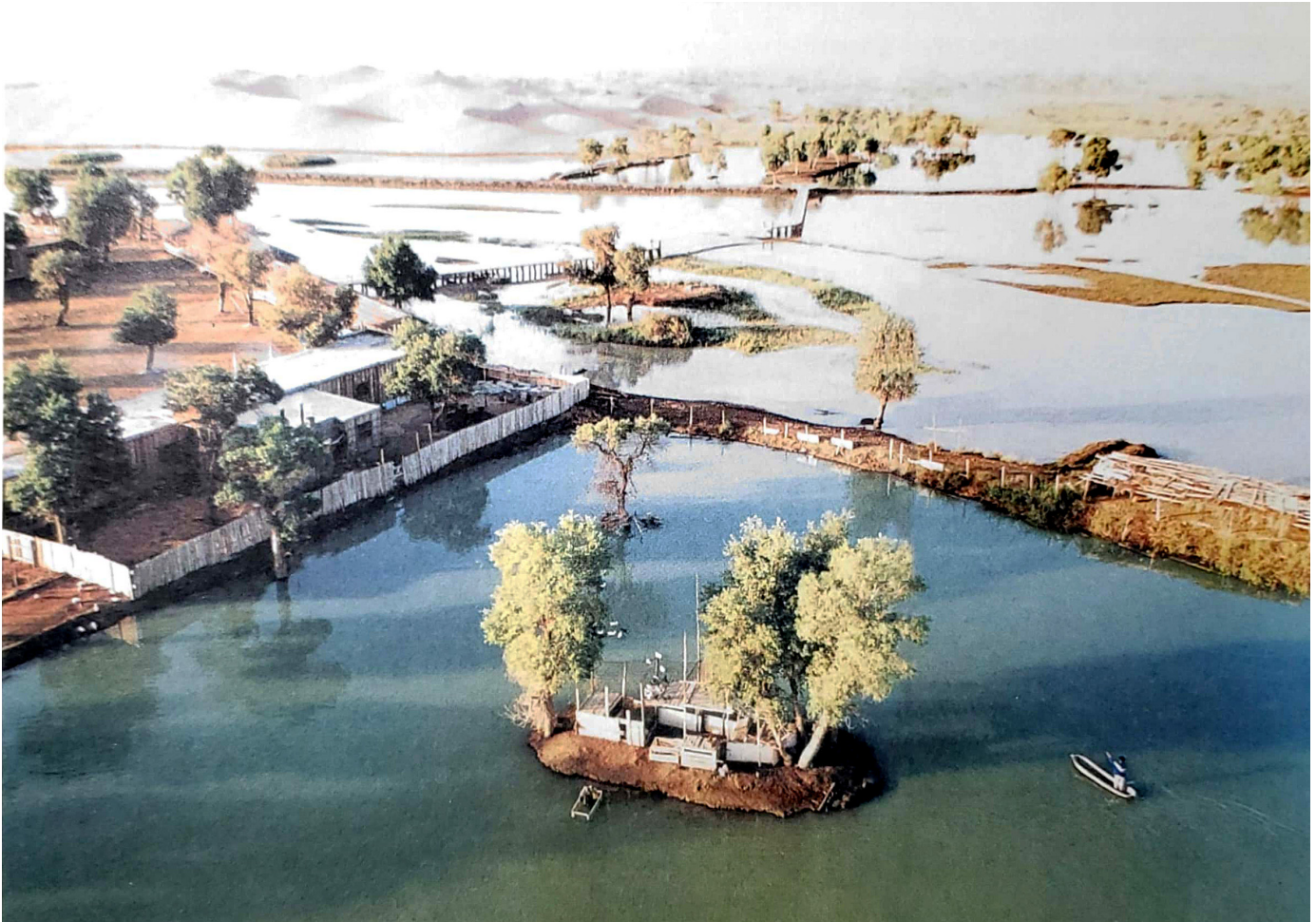


Fig.3-1-7 Scenery of Luobu Village, a water town located in the Lop Nur area in the eastern part of southern Xinjiang. Photograph by Wang Han Bing.²⁰

Vernacular Houses in Hot and Arid Areas

The Turpan Basin is the lowest basin in China with an average of 155m below sea level. Because the Basin is surrounded by tall mountains, it is mostly desert with sporadic oases. Its terrain and geological conditions cause sunlight heat absorption a lot faster than heat dissipation. Thus the temperature here can exceed 40°C from May to August; and the highest temperature can reach 48°C and even 70°C under direct sunlight. In April, the temperature can reach above 30°C. In September and October, it is still hovering between 30°C to 38°C. Summer is extremely long, but the transition to winter is extremely short. After November, the temperature can drop sharply to -28°C at the lowest point; and it does not start thawing until March the following year. Because there is no vegetation cover in the desert, temperature difference between day and night is also large.²²

In this region, the amount of water evaporation can be 110 to 180 times the amount of precipitation. This makes the region very arid. The basin is also located at the center of the continent. Thus in spring and autumn, when the cold and warm air flow in the northern hemisphere clash every year, wind is strong and frequent, filling the air with sand. In such an area of extreme heat, wind, drought and sandy soil, the houses developed to have a unique form that is fully adapted to the local environment.²³

²² Ibid, 34.

²³ Ibid, 34.

Residents use local materials and keep the architectural form relatively simple. Due to scarcity of vegetation, they make full use of few trees and large amount of sandy soil to build houses. They use many construction methods and take full advantage of the shape and size of trees they can find. If they have access to larger timber, they can make the bays of the house larger. Some cut tree trunks into columns and beams, and cut thin branches to use as a ceiling covering material between beams. The branches are supplemented with reed mats as insulation, and then covered with thick grass mud (a mixture of soil, wheatgrass and water) to make the roof ventilated, dry and durable. When this type of house is carefully constructed, maintained, it can last more than 100 years.²⁴

Heat insulation is important for selection of construction materials in this region. In order to insulate buildings from external heat sources, materials with high heat storage such as raw-earth are used. Field studies show that traditional buildings built with raw-earth are warm in winter and cool in summer when compared to other building materials, due to its good air permeability, strong plasticity, low thermal conductivity, and a strong effect of reducing heat penetration of building envelopes. Thus raw-earth adobe architecture and adobe-wood architecture have become the most commonly used style in the hot and dry regions of Xinjiang.²⁵

Courtyards of these houses are usually covered by tall pergolas. They function as an extension of the interior spaces to exterior spaces, and as a protection against the scorching sun by creating a large outdoor shaded area. There are two types of pergolas. The first type is supported by the building itself and is set up adjacent to the front or the side of the house. The pergola is typically large enough to cover the entirety of the courtyard in front of the house. It is built a few meters taller than the house's roof, to make the space feel more open. For extra security, the exterior walls of the house are extended upwards in the form of perforated masonry walls and connected to the pergola. Temperature is effectively lowered under the shaded pergola. There is also good air circulation due to the temperature difference. In the hot season that lasts for more than half a year, most of the residents' daily activities, such as cooking, dining, chatting, woodworking, festival celebrating and etc., are all carried out in the space. Sometimes, residents even sleep under the pergola at night. So the corresponding furniture, such as cabinets, tables, chairs, workbenches and even

Fig.3-1-8 (left) In order to obtain a cool space under the shade, the raised pergolas are built by local residents.²⁶

Fig.3-1-9 (right) Covered roof terrace.³⁰

24 Ibid, 34.

25 Li, Qun, Dazhen An, and Mei Liang. Xinjiang Raw Earth Houses. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 10.



bed, are moved from indoors to outdoors under the shade (Fig.3-1-8²⁶). The second type of pergola stands independently as they are set up in an open space in front of the house but not connected physically with the house. Comparing to the first type, this type of pergola is less tall, usually around three to four meters. If the structure is specifically built for livestock, it can be lower. Generally, the usage of both types of pergolas is the same.²⁷

Most of the local residents build walls with adobe, which is made with locally available microporous and collapsible soil. When there is little moisture in the soil, its cohesion is poor. Over time, its strength decreases as the raw-earth masonry peels off layer by layer. Therefore, pebbles are used for foundation, which is elevated to reduce water infiltration. Some also remove soil around the house to make adobe for the masonry wall, which in turn lowers the original ground level. Given the extreme temperature difference between summer and winter, between day and night, and given the frequent sandy wind in the region, the wall facing the exterior courtyard is thicker and has few to no windows. This preserves more heat in the winter and insulates better in the summer. Furthermore, because there is little to rain or snow, there is no need for roofs to unload the weight of water or snow. Roofs are thus flat and are simply covered by grass mud.²⁸

Residents in the basin prefer ventilated/perforated walls when constructing their houses. In order to prevent stale indoor air and encourage air flow, they deliberately leave designed holes when building the walls, which can create interesting brick patterns. Perforated walls do not only appear in the upper part of the raised pergolas, but also on short walls, small partitions and low guardrails.²⁹

Since the local houses are flat-roofed, this provides an opportunity to the residents to use the roof space for activities. They build drying rooms (which is discussed later) to the side and leave space for roof terraces, which also functions as their second courtyard. Like their courtyard, the residents build pergolas here to provide shade (Fig.3-1-9³⁰).³¹

House Caves (窑洞) and Basements (地下室)

Translation note: “窑 (pronounced ‘yao’)” is commonly translated to “cellar” or “kiln”. These terms suggest their function is either food storage or production processes that require temperature and chemical changes. That is not the case here. When “窑” is combined with “洞 (pronounced ‘dong’, meaning hole)”, “窑洞 (pronounced ‘yao dong’)” is commonly translated to “cave”, which may suggest it is naturally formed, which is not correct. At the end, “house cave” is chosen as the translation for “窑洞”. Here it refers to an ancient form of raw-earth residential architecture commonly found in northern China, and the construction method depends heavily on the landscape on which it is built.

In the long-lasting heat, in order to preserve food and have a relatively cool place to do housework, residents decide to create underground spaces in the form of

26 Chen, Zhendong. *Xinjiang Houses*. 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 37.

27 Ibid, 35.

28 Ibid, 37.

29 Ibid, 37.

30 Ibid, 40.

31 Ibid, 38-39.



Fig.3-1-10 (top left) Basement/cellar in the Turpan Basin.³²

Fig.3-1-11 (top right) Semi-basement/cellar.³³

Fig.3-1-12 (bottom left) Entrance to underground cave.³⁵

Fig.3-1-13 (bottom right) Stairs in Household no.134 in YinXia Village (英夏村).³⁷

basements (Fig.3-1-10³²). Digging underground to build basements takes advantage of the good heat insulation quality of raw soil. This creates a good place to stay warm in the winter and cool in the summer, making it very popular in arid areas. However in order to have a practical raw-earth basement that does not collapse, the hardness of the soil needs to be suitable. Basements that allow access to daylight are semi-basements, that are half underground and have windows above ground (Fig.3-1-11³³).³⁴

Some houses adopt a style called “cave-below house-above (下窖上屋)”, combining above-ground and half-underground spaces (Fig.3-1-12³⁵). The one-storey house above ground typically has a square skylight on the roof. Below it is a house cave, evolved from the house’s original 3-4m tall foundation. To counter gravity and prevent collapse, the cave is vaulted and built from raw soil, red bricks and sometimes logs.³⁶

32 Ibid, 36.

33 Ibid, 36.

34 Ibid, 35.

35 Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 53.

36 Ibid, 51.

Some even paint their basements' walls white to reflect light to increase the interior brightness. Additionally, at the entrance to the basement are stairs built from earth (Fig.3-1-13³⁷). Storage space under the stairs can be used ingeniously depending on the residents' needs.³⁸

Drying Rooms (晾房)

In arid regions with sufficient wind energy and solar radiation, such as in Turpan area, the annual sunny days are as long as 300 to 310 days; and sunshine time can reach a total of more than 3000 hours. The hot climate and sandy soil provide favourable conditions for growing grapes and melons. However because ripe grapes should not be exposed to direct sunlight, and long-time storage can make it moldy, there must be a suitable place to air-dry them. Thus drying rooms are born from this need, while taking advantage of the sufficient wind energy and solar radiation in the region. Thus they are simple and economical raw-earth buildings.³⁹

In Turpan, most of the local grape drying rooms are chosen by farmers independently without a unified plan: some are built on top of their houses' flat roof; some on split-level balconies. They are generally built on flat, high-temperature and ventilated non-cultivated land the side of mountains or road (Fig.3-1-14⁴⁰). In order to make raisins, wealthy families will choose to build large-scale independent drying houses on barren hills. The footprint of these houses can reach 100 to 200 sqm, in contrast to typical small raisin drying rooms that are about 20 to 30 sqm in ordinary villagers' homes. Besides drying fruits, drying rooms can also used to dry firewood, livestock feed, and sometimes raise pigeons.⁴¹

Drying rooms are typically built above the main entrance or storage room on the roofs (Fig.3-1-15⁴²). Yellow clay and grass are combined to make adobe bricks, which are stacked on top of a 60cm-thick rammed-earth base to make perforated lattice

37 Ibid, 53.

38 Ibid, 52-53.

39 Ibid, 55.

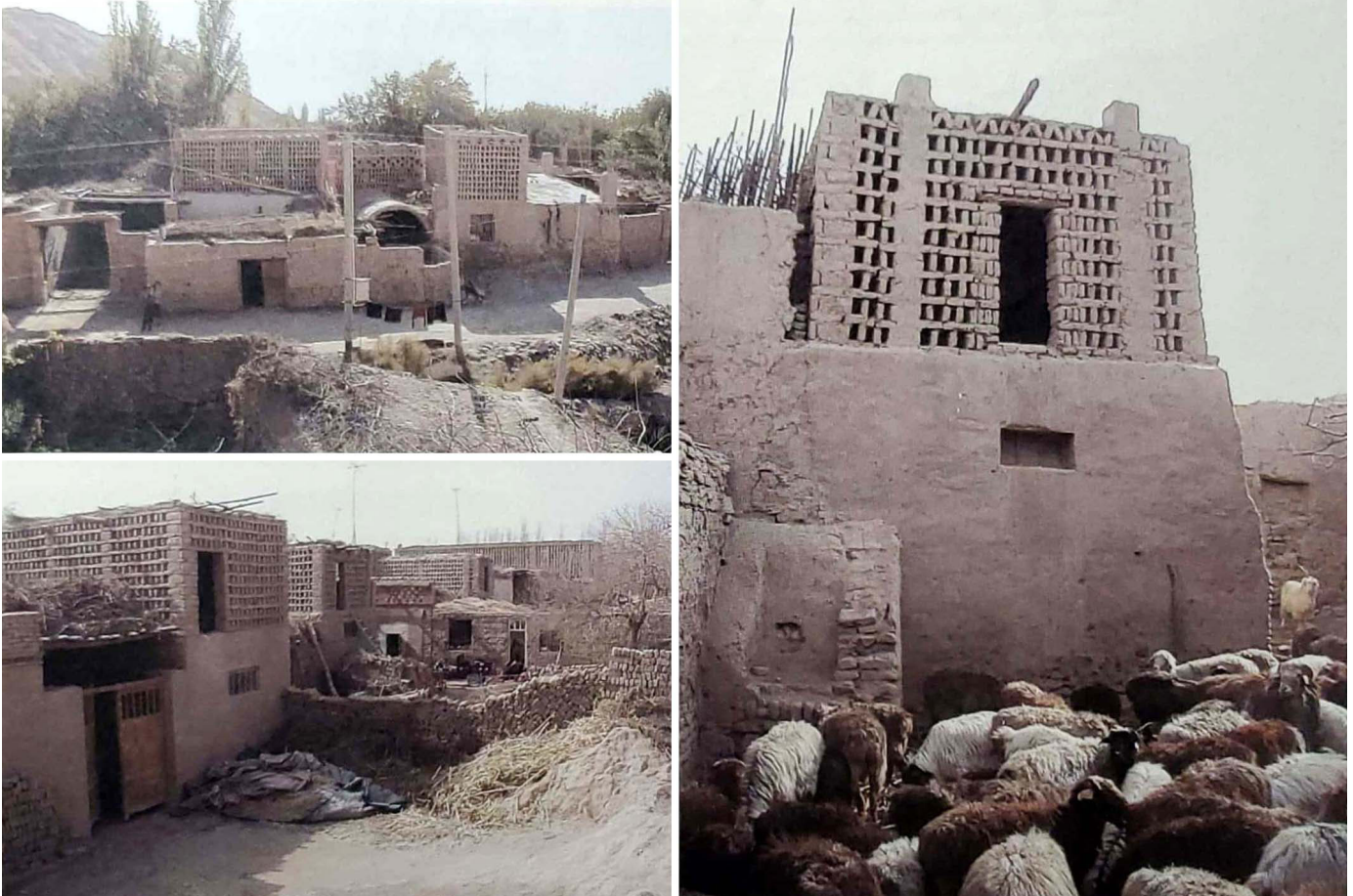
40 Ibid, 55.

41 Ibid, 55.

42 Chen, Zhendong. *Xinjiang Houses*. 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 39.



Fig.3-1-14 Exterior of a drying room on the hill.⁴⁰



walls. The four walls of the grape drying room are all perforated for air circulation. The roof is built with wooden frames as support; reed mats, wheat straws and soil as insulation; then grass mud as the top cover layer.⁴³

Fig.3-1-15 Drying rooms built on the roofs.⁴²

The adobe bricks used for drying houses are about 30cm long, 15cm wide, and 7cm thick. During construction, several solid layers of adobe bricks are laid at the base and the corners. For relatively longer drying room, a solid adobe column is built every 3 to 5m in the wall to strengthen the structure. The rest of the walls are built as perforated lattice walls with holes, designed to allow air circulation. Most of these holes are rectangular, 8.5 to 10cm wide and 15cm tall. There are also cross-shaped holes. Drying rooms built directly on the house's roof are under 3m (Fig.3-1-16⁴⁴). Some stand-alone drying rooms can be accessed by footstools or ladders; and their height can reach 4m. Since the logs or branches used for roof structure of the drying room rest directly on top of the adobe bricks, the depth of drying room typically do not exceed 4 to 5m. Since the drying rooms' depth is limited, their capacity is mainly determined by their length. Their area can go up to hundreds of sqm, producing 5 to 5.5 tons of raisins per 100 sqm every year.⁴⁵

There are no windows on the wall – only a single ventilation door. The room is usually empty and is only full during fall when grapes are picked and raisins need to be dried. Then, poles with branches of grapes are vertically placed in the room. The top of these poles are connected to the roof slat to ensure they can always maintain

43 Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 55.

44 Ibid, 55.

45 Ibid, 55.

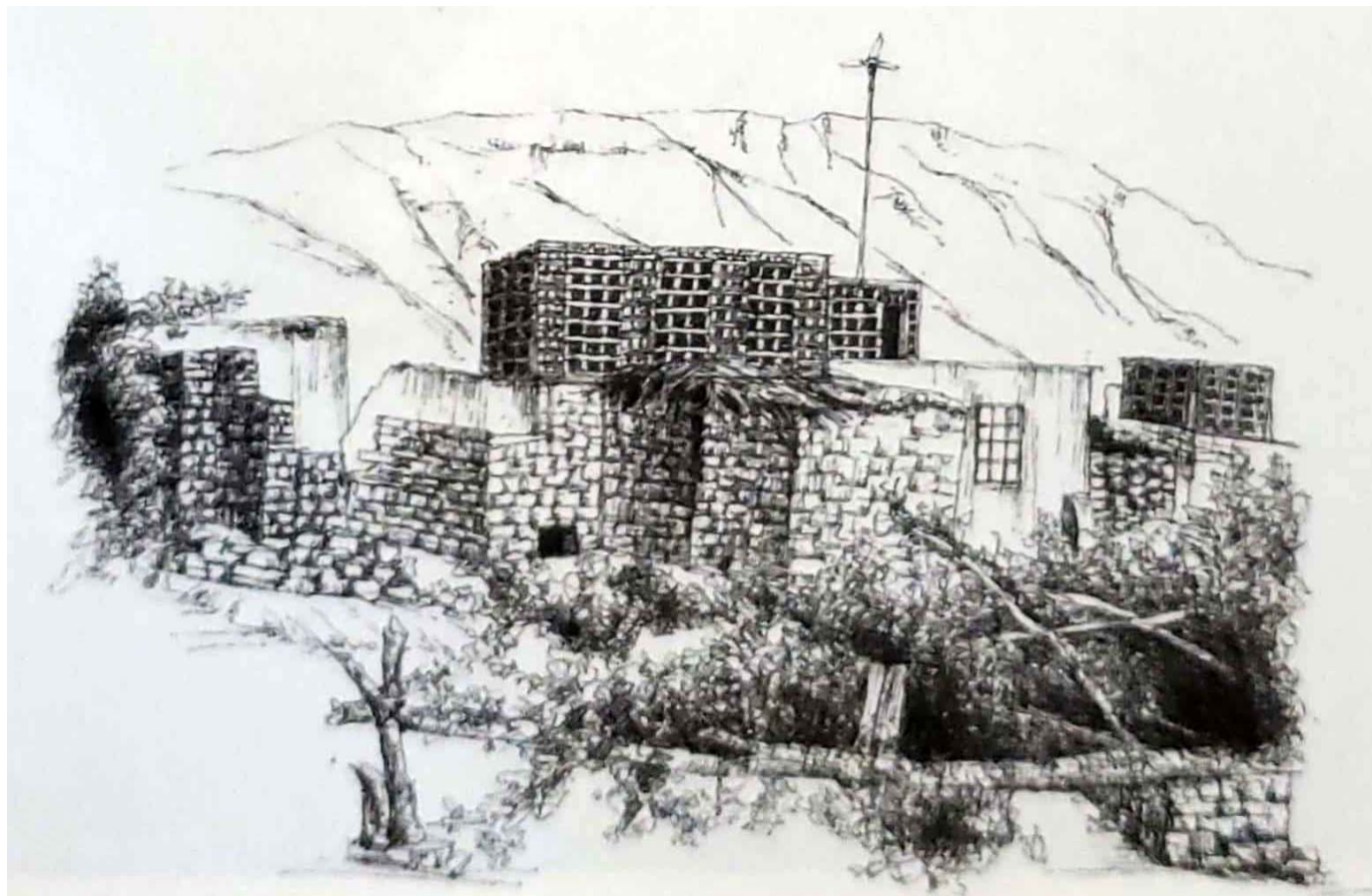


Fig.3-1-16 (top) Sketch of the exterior of a drying room on roof.⁴⁴

Fig.3-1-17 (bottom) Inside a drying room during raising drying season. Photograph by 924特刊.⁴⁶



vertical balance when loaded. Grapes are then hung on the branches of the vertical poles to be dried (Fig.3-1-17⁴⁶).⁴⁷

Vernacular Houses in Oases

Xinjiang is vast, and there are large differences between the north and the south, between the east and west, in terms of topography, climates and ecology. Many communities of all ethnic backgrounds choose oases as to reside in. They adapt to different regions and climates while maintaining the living habits of their own ethnic groups. Some houses and courtyards have forms that are distinct from each other, reflecting the differences in their residents' ethnic background; while some share similar forms despite coming from different ethnic groups, because of their residents engage in the same production.⁴⁸

People from the same ethnic group can also adopt a variety of architectural forms. Hotan region in the southernmost part of Xinjiang, at the southwest edge of the Taklimakan Desert, is rainless, windy and sandy. The Uyghurs there build their residences in closed courtyard form. The outer wall has few to no windows, with one door for entry and exit. The interior courtyard is small, usually square-shaped, and covered. Protruding skylights are installed on flat roofs to allow sunlight penetration. This architectural style is called "Aywan (阿以旺)", which refers to a central atrium or a shared space (Fig.3-1-18⁴⁹).⁵⁰

On the other hand, Uyghur houses in the Kashgar region are different. Because the climate conditions are better there, residences do not have to as closed. So typically, one side of the courtyard is open to allow sunlight penetration and vegetation

46 Ibid, 55.

47 Ibid, 55.

48 Chen, Zhendong. *Xinjiang Houses*. 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 40.

49 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018, 82.

50 Chen, Zhendong. *Xinjiang Houses*. 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 40-41.

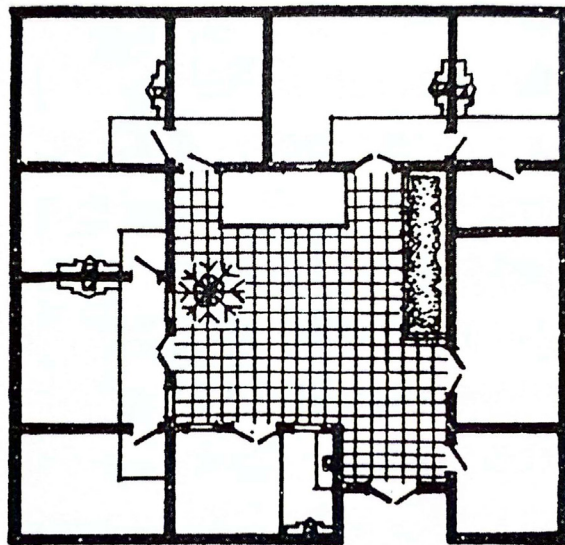


Fig.3-1-18 Sample Uyghur house in Hotan region layout plan.⁴⁹

Fig.3-1-19 Sample Uyghur house in Kashgar region layout plan.⁵¹ Translated by author.

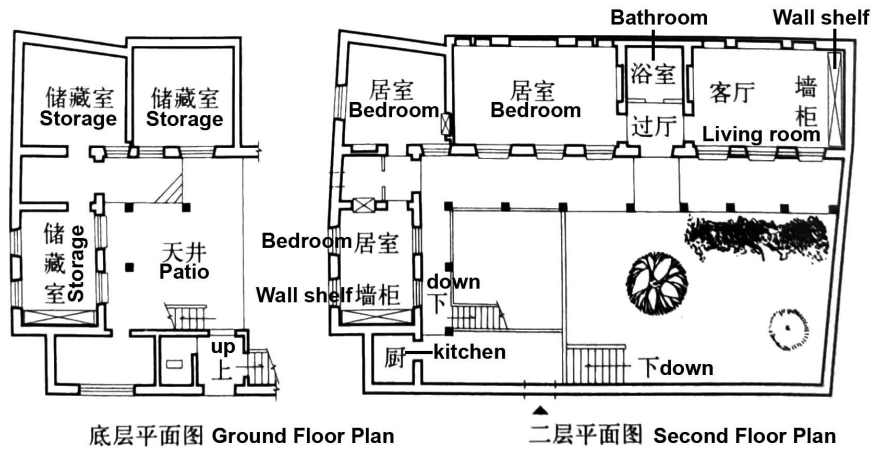


Fig.3-1-20 Sample Uyghur house in Turpan region layout plan.⁵³ Translated by author.

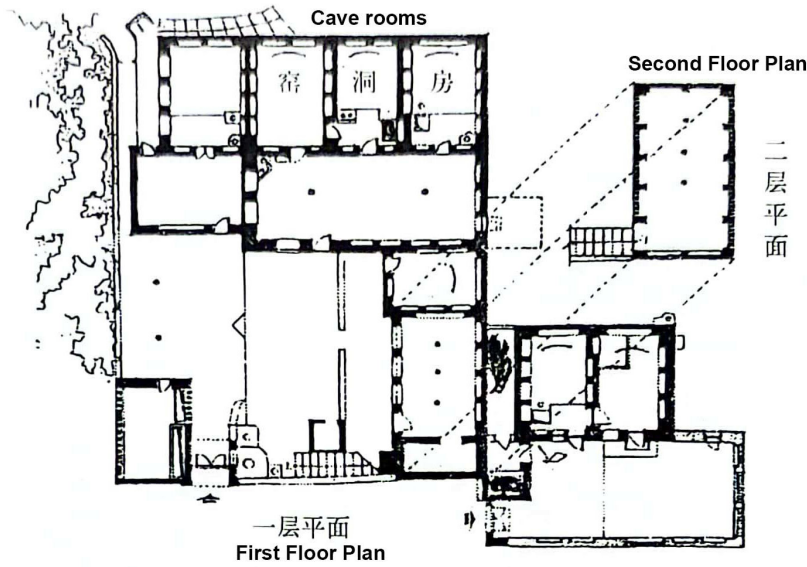


Fig.3-1-21 Sample Uyghur house in Yili region layout plan.⁵⁵ Translated by author.

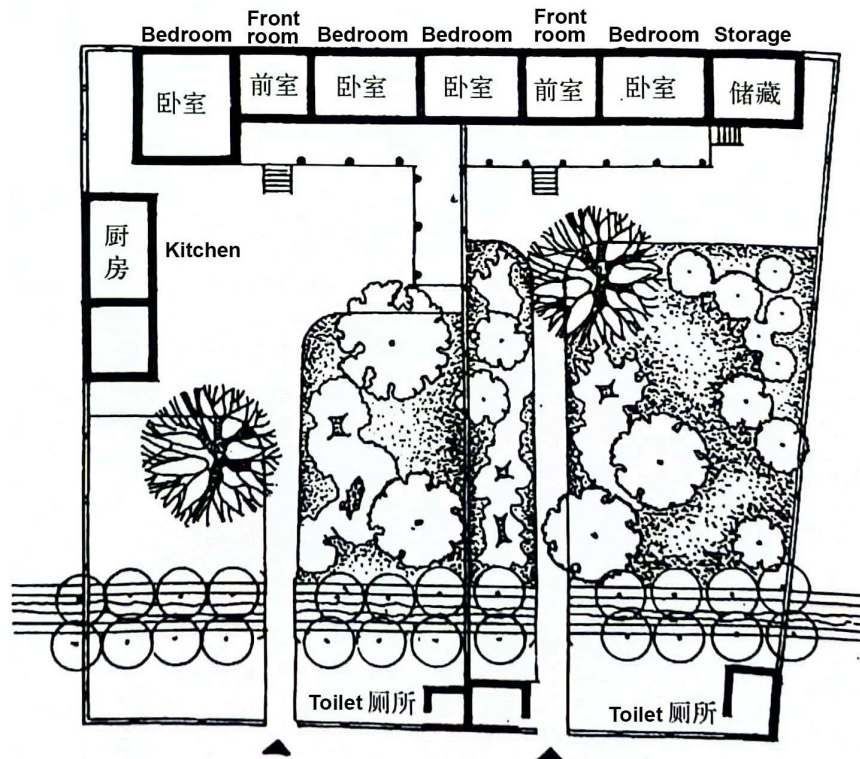




Fig.3-1-22 Due to the narrow river valley in Mazha Village, Shanshan County, tiered housing layout was formed to make full use of the sloped land.⁵⁷

growth. Courtyard does not have to be square-shaped either (Fig.3-1-19⁵¹).⁵²

Further east into the Turpan area, due to the hot climate, the architectural layouts all pay great attention to providing shade and unobstructed air flow. Residents also construct basements or semi-basements. Most of their courtyards are shaded under pergolas and closed or semi-closed to the outside (Fig.3-1-20⁵³).⁵⁴

Across the Tianshan Mountains, the Yili area in northern Xinjiang enjoys a more comfortable climate, as it has more precipitation and abundant river water. Courtyard layouts thus have more freedom and be more open. The canal next to the house brings water to the household as well as surrounding trees and other greenery (Fig.3-1-21⁵⁵).⁵⁶

In densely populated urban areas with more people than there is land available, local residents often layer their living spaces. They cleverly use and plan every space available. One case for this situation is in the river valleys, where there is little flat land suitable for building houses, and where local materials (mainly raw-earth) are not good for building high. In order to save cultivatable land to farming, single-storey houses are built on the slopes (Fig.3-1-22⁵⁷).⁵⁸

51 Ibid, 41.

52 Ibid, 41.

53 Ibid, 42.

54 Ibid, 41.

55 Ibid, 42.

56 Ibid, 41-42.

57 Ibid, 43.

58 Ibid, 43.

Kangs/Bed-stoves (火炕), Supas and Stoves

Traditional vernacular houses are heated by iron stoves (铁皮炉), flue walls (盘火墙), and heated kang/bed-stoves. There are two types of kang: fire-kang (火炕) and earth-kang (土炕). Kangs have a column grid structure and occupy about half of the room space. Their outer edge is made of horizontal wooden boards, providing a flat surface for many daily activities. Fire-kangs and flue walls have hollow spaces within in which cooking smoke circulates through. The chimney is built as a part of the flue wall, allowing smoke to escape the house. The heat from cooking is used to increase the temperature of the kang, reducing the loss of heat. Flue wall uses the iron stove in front of the kang as its fire source and its structural support.⁵⁹

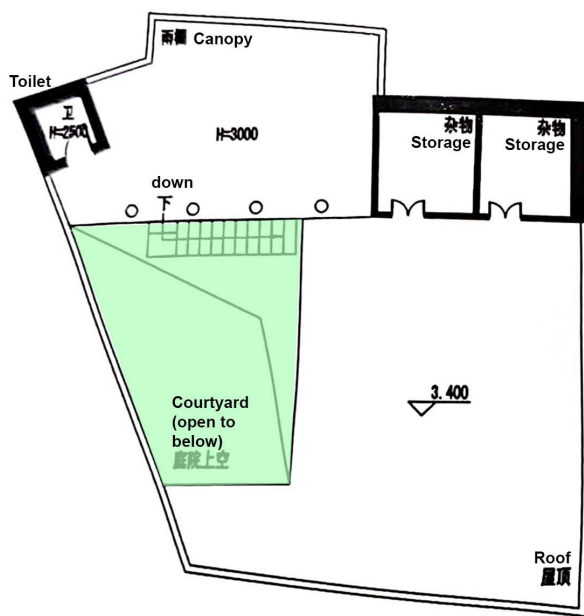
Translation note: “盘火墙”, also known as “火 (fire) 墙 (wall)”, can be translated to “flue wall” or “bag wall”. It is an architectural feature and a passive energy-saving method found in Xinjiang vernacular houses. It uses smoke generated from cooking that passes through the hollow space within the wall to heat up the interior space. This term needs to be distinguished from “防 (prevent) 火 (fire) 墙 (wall)”, which translates to “fire wall”, that refers to non-combustible wall that has a high fire resistance and prevents fire from spreading to adjacent areas.

There are generally kang in bedrooms. In Hotan, almost every family has kang. Kang serves multiple functions in daily life. During winter, residents take off their shoes and climb onto the kang to warm themselves up. However, it is not only the place to sleep and rest, but also a place to eat and entertain guests. When a kang is placed at one end of the kitchen, it is a cooking table; when in the bedroom, then it is a bed;

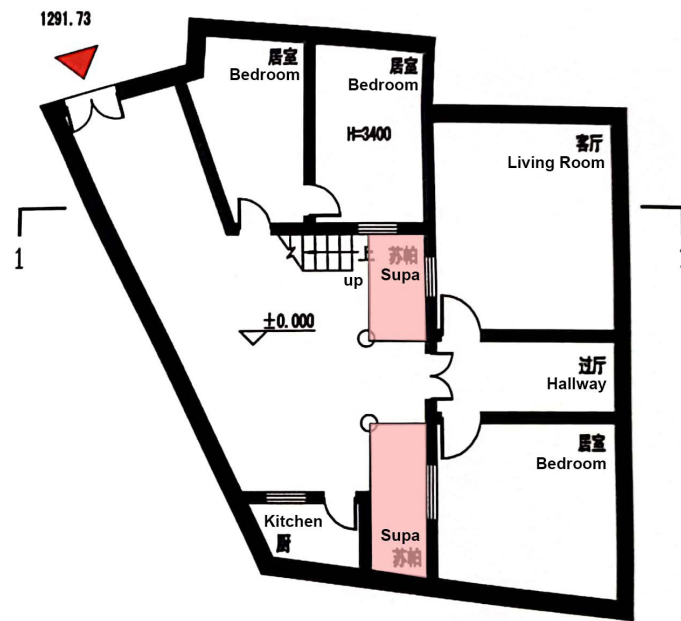
59 Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 51-52.



Fig.3-1-23 A Uyghur family eats breakfast, naan and milk, on the carpeted kang, before school, while a boy executes his morning prayers.⁶⁰



Second Floor Plan
二层平面图



First Floor Plan
一层平面图

when entertaining guests, it becomes a couch with a coffee table (Fig.3-1-23⁶⁰).⁶¹

Earth kang used outdoors are called “supa” in Uyghur. They are the center of Uyghur domestic life and hospitality. Almost every family has a supa in Dikal Village, Tuyugou. Residents in the old city of Kashgar also like to build supa on their front porch; some families even have a basement under the supa platform.⁶² Supa is about 40-50cm elevated from the ground, built out of earth or wood. It is the center of traditional Uyghur houses, serving as an important space where family members and guests lounge, eat and perform ceremonies or religious rituals.⁶³ People usually lay felts, carpets and small tables on the platform. Given its frequent use and crucial function, residents often have to designate the location of their supa before constructing their houses (Fig.3-1-24⁶⁴).⁶⁵

Fig.3-1-24 Floor plans of Household no.38 in Gaotai, Kashgar. The house is under the name of Maimaiti Ali Ablimiti, and inhabited by a family of 4. Translated and labelled by author. Red indicates supa. Green shows courtyard space open to the sky.⁶⁴

Translation note: “Supa (苏帕)” is a Uyghur word that is equivalent to the Chinese term “kang (炕)”. While kang always have interior cavities underneath that can be heated, with one side attached to the stove and the other side leading to the chimney, “supas” are best translated to “raised earthen platforms” that are the centre of Uyghur domestic life and hospitality. Some supas, just like the kangs, have interior cavities used for heating.

The stove is an indispensable living facility for every household. Residents eat around the stove during the day; and sleep around the stove at night. In the ancient city of Jiaohe (交河), such stoves have been discovered in the corners of many houses. There are summer stoves and winter stoves: because of the unbearable heat

60 ‘Who Are the Uighurs?’, PBS NewsHour, 12 October 2013, <https://www.pbs.org/newshour/nation/who-are-the-uighurs>.

61 Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 51-52.

62 Ibid, 52.

63 Introvigne, Massimo. “Uyghur Traditional Houses Destroyed by the Chinese Communist Party”. Bitter Winter. July 11, 2020. <https://bitterwinter.org/uyghur-traditional-houses-destroyed-by-the-ccp/>.

64 Wang, Xiao Dong, Hui Song, Jin Liu, and Yi Ding Ni. *Terraced Household Kashgar (Gaotai)*. Nanjing: Dong Nan University Publishing, 2014: 63.

65 Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 52.

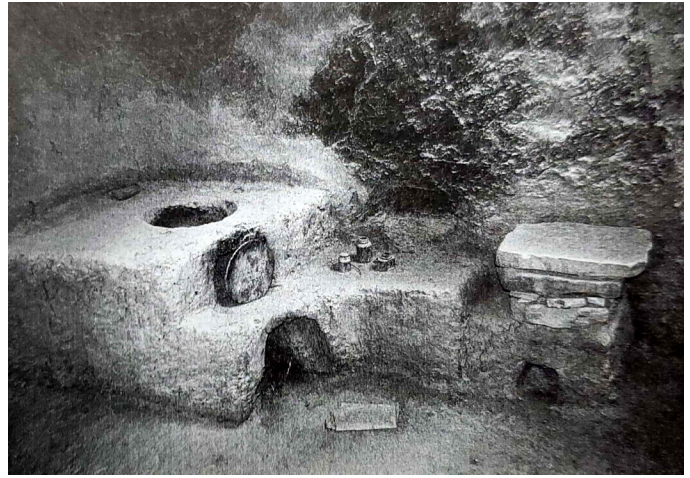
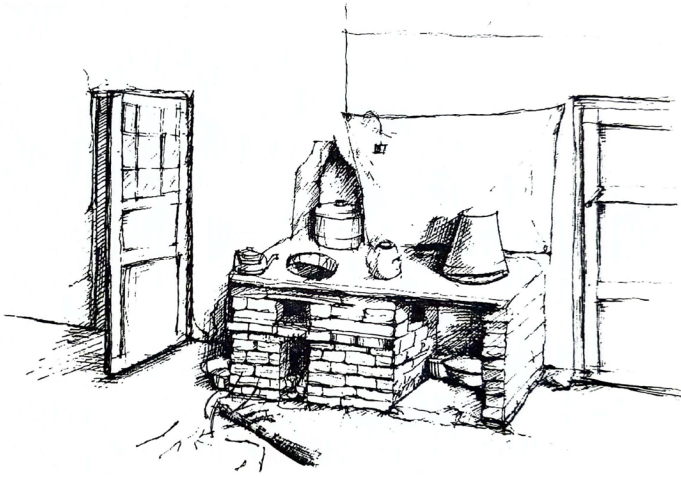


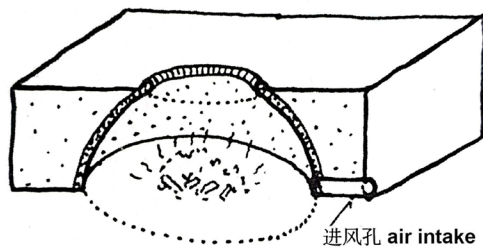
Fig.3-1-25 (top left) Sketch of a corner in the interior of a house.⁶⁶

Fig.3-1-26 (top right) Stove.⁶⁷

Fig.3-1-27 (bottom) Xinjiang naan, a traditional food made in a traditional tona.⁶⁹



Fig.3-1-28 Section of a tona.⁷⁰ Translated by author.



in the summer, cooking has to be done outside. Therefore, vestibules sometimes function as kitchens, with the stove located behind the door (Fig.3-1-25⁶⁶). Some residents place their stove under the stairs, cleverly saving space in their small house. In most cases, stoves sit against the west wall facing east, adjacent to the bed. This makes it convenient to prepare cooking ingredients while chatting with neighbours. Thus, stoves are undeniably crucial in daily life and adherent to traditional customs

⁶⁶ Ibid, 52.

(Fig.3-1-26⁶⁷). When leaving their old house for a new one, residents will not destroy the stove, or, according to their belief, they can bring chaos and bad luck to their new house.⁶⁸

Naan is one of the main foods for Uyghurs. The pit for cooking naan is called “tona” in Uyghur. It is like an earth oven, and is essential for every household (Fig.3-1-27⁶⁹). Most semi-open house layouts have a tona located to the left of the door. It occupies about a fourth of the room area. The hearth (the stomach of the pit) is cone-shaped at the top, like a large upside-down bowl. The mouth of the hearth at the top is about 30cm in diameter; the bottom 70cm in diameter; the height 40cm; the raw-earth wall 5.5cm thick. At the bottom, a small vent is left on the side (Fig.3-1-28⁷⁰). Raw earth has high resistance to heat; and with the proper adhesive materials, it can be more durable. When the tona is heated, naan can be pasted on the inner wall for baking.⁷¹

Dry Toilets (旱厕) and Showers (浴室)

According to Islamic traditions, toilets cannot have a west-east orientation, because Mecca is in the west, and toilets are places of filth. Thus dry toilets can only have a north-south orientation. Its location is typically at more concealed places in the backyard, usually 14m away from the bedroom. It is usually located at a higher place to allow for air flow to quickly dissipate odor. It is a common practice in Uyghur houses to install dry toilets on their roof. It is actually environmentally friendly. Feces would be covered by raw soil, which can effectively prevent spread of odor and reduce pollution of pathogens. It can then be converted to organic manure to be used as fertilizer. In Kashgar, dry toilets are cleaned with raw earth transported by donkeys (Fig.3-1-29⁷²).⁷³

67 Ibid, 52.

68 Ibid, 52.

69 Zhao, Jing. “This is Xinjiang | Xinjiang’s Traditional Food – Baked Naan”. www.ts.cn. May 30, 2021. <http://news.ts.cn/system/2021/05/30/036638870.shtml>.

70 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018, 82.

71 Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 52.

72 Ibid, 54.

73 Ibid, 54.



Fig.3-1-29 Dry toilet on roof.⁷²

In Xinjiang, especially where water is scarce, residents pay great attention to the cleanliness of their water source. In places without water canals, almost every household builds a well in their courtyard and protects it from pollution. Bathing is important to Uyghurs. The bathroom is also a cleaning room, and is typically connected to the utility room adjacent to the bedroom; but richer households can have it separately.⁷⁴

3.1.2. Vernacular Oasis Settlements in Kashgar Area

I learned about the history of Musuma Village (木苏玛村) from my grandfather. When Islam was introduced to Kashgar in the middle of the 10th century, there was a man named Ibrain Awupla who had 18 children, 12 boys and 6 girls. "Awupla" means reproduction, because he had many children. It is said that he was the first local believer in Islam. "Musuma" means Muslim, so [the village] is called Musuma. Since most of the residents in this village are descendants of Ibrain, the name of the village was passed down. Before that, the village did not have a name, but rather a number was added before "beikerik", like No. X Beikerik, and the beikeriks were equivalent to townships. The name "Musuma" has been used for thousands of years.

There was an interesting story at the time. When the leader of the local regime began jihad (Holy War) after accepting Islam, they recruited troops here. There were regulations on recruitment. If a family had only one son, they would not be recruited. If there was more than one son, they would participate in jihad. Ibrain was very smart, and he took the initiative to send his two sons to participate in jihad before he started recruiting soldiers, which satisfied the leader. Among his two sons, one died in the Battle of Shache (莎车). According to the rules of jihad, those who died in battle should be buried on the spot, no matter what. But because his son was voluntarily sent to join the jihad, his body was sent back to the village for burial. At this time, Ibrain did another wise thing. It was the April season of the year, when the yellow flowers were blooming. Facing his son's corpse, he didn't have a very sad look, but instead put two yellow flowers on his son's temples, and said to his son: "You died with honour in participating in the holy war, and you will walk on the road leading to heaven." This matter was again appreciated by the jihad leaders. Ibrain buried his son on a private property, and donated five acres of Wahefu (瓦合甫) property as a cemetery. "Wahefu" refers to the mosque estate. His approach was rewarded by the jihad leaders.

When Ibrain buried his son, the practice of putting yellow flowers on the temples of his head gradually became a funeral custom in the village. When a Muslim dies, they usually wash the body and wrap it in a white cloth for burial. When Muslims in this village dies, they wash their bodies first, then sprinkle yellow flowers and roses on the dead, and then wrap them in white cloth for burial. This practice is unique to the local people, so people in the village have the habit of saving dried flowers in case their loved ones pass away.

74 Ibid, 54.

Because the people in the village were all buried on the property of Ibrain Awupla after his death, and he himself was also buried here after his death. Later generations called his cemetery the Awupla Cemetery, and it is still there today.

--- *Rexiti Aikemu* (热西提·艾克木), in *The Uyghurs: Investigation on Musuma Village, Shufu County, Kashgar*⁷⁵

Translation note: The term “Musuma (木苏玛), “Shache (莎车), “Wahefu (瓦合甫)” and “Rexiti Aikemu (热西提·艾克木)” are the pinyin of the Mandarin phonetic translation of the original Uyghur term, whose English phonetic translation cannot be found.

The above passage is translated from an interview on the origin of Musuma Village in Shufu County (疏附县) in the Kashgar area, conducted by local government officials. The interviewee is Rexiti Aikemu (热西提·艾克木), whose family has lived in the village for generations. This is his detailed description of the sayings handed down from his ancestors.⁷⁶ According to the local’s oral history, the name of the village has a millennium of history, and carries with it significant historical, cultural and religious memories of the residents in the village. The village is passed down for centuries, not only through the living, but also through the dead, as the residents’ final resting place is also within the village. Special burial customs unique to the village are still being followed today, and passed down from older generation to younger generation, unbroken for a millennium. Evidently, Xinjiang’s traditional settlements are not simply the agglomeration or spatial organization of vernacular architecture, but also the physical documentation of local history and the physical manifestation of cultural, social and religious identities of the residents throughout generations.

Given Xinjiang’s mostly hot and arid climate, water, the basic condition for survival and abundance of building materials, is the most critical limiting factor for the development of human settlements in this region. Along rivers and within oases are favoured locations for settlements since Neolithic ages, according to archeological evidence. For example, oases in the Hotan River Basin in the southern Xinjiang have housed up to 17 ethnic groups, such as the Huns, the Turks, the Jurchens, the Uyghurs, and etc., since over 2000 years ago. Historical evidences show that multiple ethnic groups have evolved to live together, gradually forming the prototype of the typical settlement pattern of “large mixed dwellings and small settlements (大杂居, 小聚居)”.⁷⁷ In the Tarim Basin, due to widespread deserts, traditional settlements usually surround the basin along the front of the Tianshan Mountains, adjacent to each other as connected nodes strung together like beads. In the alluvial plains in the middle and lower reaches of the river, these settlements extend into strips. Thus oasis ecological resources have become the deciding factor of human relationship, heavily influencing the social, economic and cultural development of these areas.⁷⁸

This section specifically examines one well-studied Xinjiang’s vernacular oasis settlement example, the Gaotai residential area in Kashgar – one of the few remaining vernacular urban settlements in the region – that has evolved as the result of centuries-long ecological, historical, cultural, and social processes. Due to its value in tourism, conservation efforts have been made to preserve the its vernacular buildings and community. However, this is a precarious project, as discussed in later chapters.

⁷⁵ Ying Xiao and Tu’erxun Baihetiya’er, eds. *The Uyghurs: Investigation on Musuma Village, Shufu County, Kashgar*, 1st ed. Chinese Ethnic Village Survey Series. City of Kunming: University of YunNan Publishing, 2004: 7-8.

⁷⁶ Ibid, 7-8.

⁷⁷ Dan Jiang, *Xinjiang Hotan River Area: A Study on The Evolution of Traditional Village Settlements*. Beijing: Chinese Construction Industry Publishing, 2016, 30.

⁷⁸ Ibid, 33.

Fig.3-1-30 Kashgar's Old City in the foreground. Kashgar's New City is being developed in the background.⁸¹



Gaotai Residential Area

The majority of the houses in Kashgar, in China's northwest Xinjiang Uyghur Autonomous Region, have been renovated, but in the Gaotai ancient residential area, the Uyghur style still dominates.

26-year-old Rustam Abudueni lives with his parents. His home is one of the nearly 500 households that have withstood the changing times.

"This is where we have lived in generations. I hope the houses will be reinforced, so that we can continue to stay here forever," said Abudueni.

The old sections of Kashgar are the best example of a traditional Islamic city in Central Asia. To walk through the narrow lanes of the old city is to walk through living history, and to walk in the tiny alleys is to walk straight into people's lives.

--- CGTN, "Kashgar's Urban Renewal Yields Mixed Results"⁷⁹

Kashgar was once the capital of Shule Kingdom, that was founded around 200 BCE. For thousands of years, it has always been the famous political economic, military and cultural center south of Tianshan Mountain. "Kash" means "jade" in Turkic, and "gar" means "city" or "concentration" in Sogdian. Thus "Kashgar" means "a city built with jade", a name fitted for a prosperous and long-standing commercial city on the ancient Silk Road.⁸⁰

Kashgar is known for its organically formed vernacular settlement constructed out of raw-earth. Although recent urban planning projects have made a distinction between the old city of Kashgar and the new city of Kashgar which has been given

79 "Kashgar's Urban Renewal Yields Mixed Results". CGTN. 28 June 2018. <http://news.cgtn.com/news/3d-41544f33517a6333566d54/index.html>.

80 Xiao Dong Wang et al., *Terraced Household Kashgar (Gaotai)*. Nanjing: Dong Nan University Publishing, 2014: 6.



Fig.3-1-31 Overhung structures built over street, known as “cross-street-houses” in the Old City of Kashgar.⁸²

development priority. The traditional vernacular settlements left in Kashgar are now more commonly known as the “old city of Kashgar” (Fig.3-1-30⁸¹). Given its long history of cultural and economic complexity, Kashgar has always been densely populated, especially in the urban areas. There are more people than land available, causing the residents to layer their houses. Hence “cross-street-houses (过街楼)”, that are overhung structures built over public streets, are commonly seen in the old city of Kashgar (Fig.3-1-31⁸²).

On a high loess cliff at the southeast end of the old city of Kashgar that is more than 30m high and more than 400m long,⁸³ an ancient residential area called “Gaotai (高台, which means ‘high plateau’)” remains one of the few vernacular settlements in the city of Kashgar that have not been demolished today. A large preservation and renovation project for Gaotai has been undertaken since June of 2009, resulting in an incredibly thorough report on the existing conditions of the settlement, which includes detailed floor plans, models, and even the identities of the property owners (Fig.3-1-32⁸⁴).⁸⁵

Gaotai has 2000 years of history. Uyghur ancestors lived here as early as 1000 years ago. They found on the cliff soil suitable for making pottery, leading to many pottery artisans setting up pottery workshops here. Gaotai thus got its Uyghur name

81 “Kashgar’s Old City | Traveler’s Guide to an Evolving City.” Far West China: Exploring Xinjiang and the Silk Road. Accessed November 11, 2021. <https://www.farwestchina.com/travel/kashgar/old-city/>.

82 Ibid.

83 Xiao Dong Wang et al., *Terraced Household Kashgar (Gaotai)*. Nanjing: Dong Nan University Publishing, 2014: 7.

84 Ibid, 45.

85 Ibid, 1.



Fig.3-1-32 (top)
Digital model of the
existing conditions
of Gaotai residential
area (southwest
perspective).⁸⁴

Fig.3-1-33 (bottom)
Ground floor plan of the
existing conditions of
Gaotai.⁸⁹





Fig.3-1-34 West elevation of measured digital model of Gaotai.⁸⁷

– “Kozichi Yarbeshi (Mandarin phonetic translation is 阔孜其亚贝希)” – which means “clay pottery on the cliff”. During the Kashgar Khan Dynasty in the middle of the 9th century CE, the palace was built on the north side of the high cliff. The south side and the north side of the cliff were originally connected together. But hundreds of years ago – according to oral history recalled by Maimaiti Aximu, a 94-year-old pottery artist who lived in Gaotai – a sudden large mountain flood from the Pamirs Plateau created a big gap in the high cliff area, which divided the cliff into north and south two independent high slopes. Now the residential houses are built on the south slope. After thousands of years of development, today’s Uyghur residential community has formed, with more than 400 households living in it. Century-old houses, some of which were built four or five hundred years ago, can be seen everywhere. Many houses and courtyards have been handed down for six or seven generations.⁸⁶

Due to the needs of the increasing population for centuries, the residential buildings are developed upwards. Most of them are two to four-storey raw-earth buildings; a few of them are even seven-storey high-rise buildings built along the steep slope of the cliff (Fig.3-1-34⁸⁷).⁸⁸ Architectural space is constructed by making full use of terrain, despite limited space (Fig.3-1-33⁸⁹). For example, one residential building has two floors on the cliff and four below the cliff, which can be accessed from both the top and bottom of the cliff.⁹⁰

There are more than forty alleys in it, criss-crossing and winding through the houses (Fig.3-1-35⁹¹). Visitors often get lost in them. Since the early days, these alleys were all used as drainage channels, they were not planned, but rather they followed the natural terrain and extended freely, gradually forming the current organic layout of this residential community built along the slope of the cliff. As the terrain changes, alleys transform into stairs or gentle ramps (Fig.3-1-36⁹²).⁹³ This layout also creates unique architectural forms such as “cross-street-houses” (mentioned previously), “half-cross-street-houses”, and the rare “suspended buildings”.⁹⁴ As the topography changes greatly, the courtyard also changes accordingly, forming living spaces of various sizes, heights and shapes. Adjacent to the courtyard, railings, adornments, greenery and a semi-outdoor supa also come in a variety of sizes, further adding vibrancy to the resident’s living space. Roofs at different levels and elevations that are

⁸⁶ Ibid, 7.

⁸⁷ Ibid, 43.

⁸⁸ Ibid, 8.

⁸⁹ Ibid, 51.

⁹⁰ Ibid, 2.

⁹¹ Ibid, 8.

⁹² Ibid, 8.

⁹³ Ibid, 2.

⁹⁴ Ibid, 8.

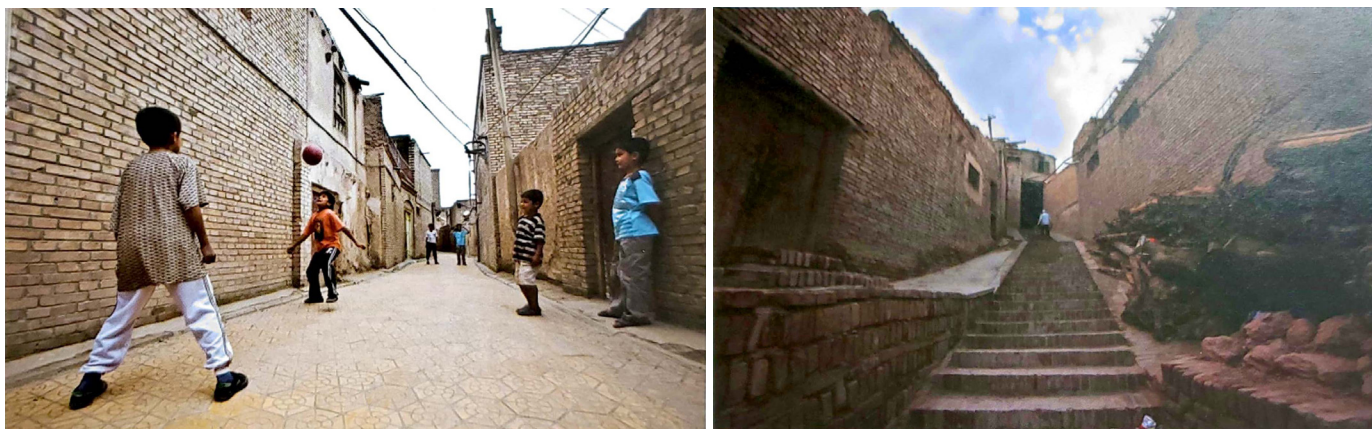


Fig.3-1-35 (left) Children playing in the alleys of Gaotai.⁹¹ formed by the sloping land are also characteristically Gaotai.⁹⁵

Fig.3-1-36 (right) Alleys transform into stairs as the terrain changes.⁹²

In the excerpt in the beginning of this section, Rustam Abudueni, a 26-year-old whose family has lived in the Gaotai residential area for generations, has expressed his desire to continue living in this neighbourhood forever. His strong attachment to this centuries-old vernacular settlement and ancestral home is perhaps impossible to be expressed in words. Like him, the hundreds of households that still live in Gaotai also hope to preserve the vernacular architectural form and materiality that has been tested and accepted as a part of their cultural tradition. They cherish their ancestors' ingenuity in finding opportunities in their ecological environment and establishing a long-lasting community that continues to blossom to this day. Indigenous knowledge of the land has been passed down from generation to generation, gradually forming a regional architectural dialect that its people speak. The terrain has shaped the buildings and the neighbourhood, but ultimately it is the people who live here that have given its profound cultural importance.

⁹⁵ Ibid, 9.

3.2. Vernacular Architecture as Cultural Representations

Within the context of vernacular architecture, it embraces what is known and what is inherited about the dwelling, building, or settlement. It includes the collective wisdom and experience of a society, and the norms that have become accepted by the group as being appropriate to its built environment.

--- Paul Oliver, "Conserving the vernacular in developing countries (1986)"¹

Simon Bronner's linguistic analogy between vernacular architecture and regional dialect (in the opening passage of subchapter 3.1) does not only refer to the entwined relationship between the land and the buildings built on it using its natural resources, but also alludes to how being vernacular means it is shared within a community or region. Simon Bronner further elaborates: "Vernacular identifies buildings as social representations and links them to coherent cultural systems of values and beliefs."² Specifically, he states that considering buildings in the context of "tradition" can allow us to "answer not only textual questions of why buildings look the way they do and why they came into being and how they changed along the way."³ Vernacular architecture is not only representations of cultural identities, but also historical records of collective memories. The continuity of a community is embodied in the construction, adjustment, and replacement of its buildings. As the community upholds its vernacular customs and tradition, they are actively bearing their cultural identity and collective experience on their shoulders and passing them down to future generations.

This subchapter investigates the architectural forms and living environments of six different ethnic groups in Xinjiang, namely the Kazakhs, the Kyrgyz, the Mongolians, the Uyghurs, the Huis and the Tajiks, who all have lived on this land for generations if not centuries. Each ethnic group has their unique set of beliefs, customs, production modes, and lifestyles that are inherited from their ancestors and that have evolved throughout their history due to environmental, political, or social changes. Their built environments greatly reflect their modes of production and ways of living. Nomadic groups, such as the Kazakhs, the Kyrgyz, and the Mongolians, who traditionally live as herdsmen on Xinjiang's grasslands, live in yurts that follow them as they move along the seasonal grazing routes of their animals. However, this is quickly changing in recent decades as the government has been encouraging them to move out of their yurts and into settled villages, which are often a consolidation of architectural ideas from nearby ethnic groups or from government-appointed architects and planners. Thus when studying the vernacular architecture in Xinjiang, an important distinction needs to be made between vernacular and semi- or neo-vernacular. However in some of the cases shown in the subchapter 3.2.2, I argue the architecture in these new villages established by the government is far from vernacular. Not only are the residents' involvement in planning and designing their built environments limiting, their needs that are seemingly met by the construction of new architectural spaces are also, to some degree, imposed on them. Their architecture no longer represents them, but instead represents the political achievements of authorities who make architectural decisions for them.

1 Paul Oliver. "Conserving the Vernacular in Developing Countries (1986)". *Built to Meet Needs: Cultural Issues in Vernacular Architecture*. Routledge, 2006, 113.

2 Simon J. Bronner. "Building tradition: Control and authority in vernacular architecture". *Vernacular Architecture in the 21st Century: Theory, Education, and Practice*. Taylor & Francis, London, 2005: 23.

3 *Ibid*, 23.

3.2.1. Settled Groups and Their Vernacular Houses

Hundreds of years ago, some ethnic groups had transitioned from nomadic economy that relies on animal pastoralism to agricultural economy that relies on food production. Judging from the archaeological excavations in Hotan River Basin, the region has witnessed a co-existence of nomadic economy and agricultural economy. Large clan yurt groups became the first “moving villages”. Due to the extremely arid climate in southern Xinjiang, sometimes the regional vegetation cannot meet the needs of large-scale nomadic economy. Hence some nomadic clans gradually moved along the middle and upper reaches of the river. They started to organize the construction of the original wooden structure houses, thus the architectural form gradually developed from yurts to shacks.⁴ As opposed to yurts that required frequent assembling and disassembling, residents living in more permanent wooden structures had sufficient time to repair and manage their living environment and internal spaces, establishing the early oasis agricultural settlement pattern.

Throughout generations, these settled ethnic groups, including the Uyghurs, the Huis and the Tajiks, have developed and refined their vernacular architecture. Relying on ancestral knowledge of construction and spatial arrangement, their houses are built by residents themselves or craftsmen with locally available materials. Designed by the residents themselves, their houses closely adhere to their lifestyle and their needs. Their customs, familial and social structures are thus reflected in their living environments. Withstanding the test of time, they not only act as physical records of cultural history and construction knowledge, but also as representation and expression of the residents’ cultural and religious identities.

The Uyghurs (维吾尔族)

The Uyghurs are a Turkic ethnic group with a long historical presence in Xinjiang. Their official language is Uyghur, which comes from the Turkic language family. They primarily live in resource-rich oases regions in southern Xinjiang.⁵

On holidays, the space in the front yard of Uyghur houses and under their grape vine arbours is their main venue for gatherings and activities. Due to the harsh arid environment in Xinjiang, greenery is deeply appreciated by the Uyghurs. Motifs of flowers, plants and trees reflect their love of life and the discovery and creation of beauty, and can be found in all aspects of life, such as clothing, furniture, buildings, carpets, etc. Beautiful decorative arts with strong contrasting colours and rich patterns are features of the Uyghur’s aesthetic culture.⁶

The Uyghurs converted to Islam from the 10th century and their politics, culture and economy are greatly influenced by Islam. Islam prohibits the appearance of representational figures and animal images, which is adopted by the Uyghurs in their aesthetic culture. Uyghur aesthetic culture is also reflected on the aesthetics of doors

4 Dan Jiang, *Xinjiang Hotan River Area: A Study on The Evolution of Traditional Village Settlements*. Beijing: Chinese Construction Industry Publishing, 2016, 33.

5 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018, 23.

6 Li, Wen Hao. *Traditional Houses: Decorative Art of Doors and Windows of Traditional Uyghur Houses in Xinjiang*. Beijing: Chinese Construction Industry Publishing: 14-15.



Fig.3-2-1 Painted gates of residential houses in Turpan. Photograph by Li Wen Hao.⁷

and windows of their traditional residential buildings (Fig.3-2-17).⁸

Handcrafted carpets have a long history in Uyghur culture as in most Islamic societies (Fig.3-2-2⁹) and most are bright in colour, fine in material quality, and durable in use. They are rich in visual variety and patterns, that reflect their appreciation of nature motifs. Most of the patterns are neat and symmetrical, with rough lines and

⁷ Ibid, 57.

⁸ Ibid, 14.

⁹ 'Studio Lisa Ross'. Accessed 4 March 2022. <http://studiolisaross.com/>.



Fig.3-2-2 (top) Uyghur girls working on a large carpet. The craftsmanship of carpet making is handed down by their ancestors. Photographs by Lisa Ross.⁹

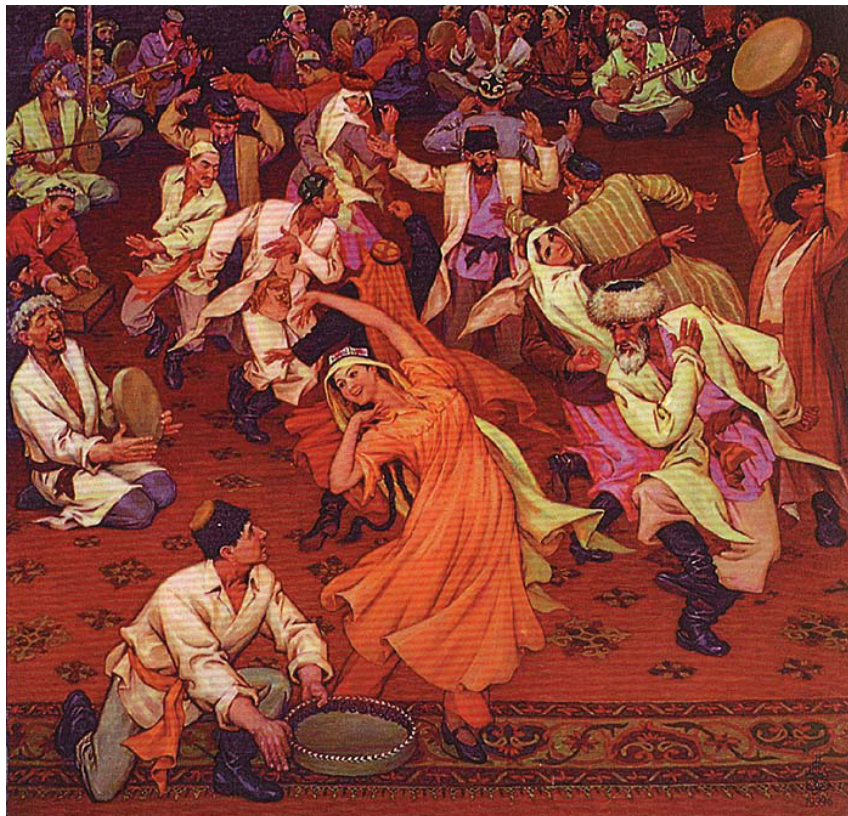


Fig.3-2-3 (bottom) "Meshrep 1977" by Ghazi Ehmet, a famous painter born in Kashgar, and a standing committee member of the Uyghur History and Culture Research Academy.¹⁰

strong colour contrast. Some are spread in interior corridors and some are hung on the walls of halls, and can fill the room with brilliant vibrancy (Fig.3-2-3¹⁰). The use is not just limited to carpets on the floor. They can also be used as tapestries, cushion blankets, mattress blankets and so on.¹¹

Despite [the dalan's] sparse décor, many of the household's daily activities take place here. For much of the year, meals are prepared here and eaten around the low table, with family and casual visitors seated on thin cotton pads placed directly on the supa. Sleeping takes place on the supa on bedding (more cotton pads, sheets, and blankets) that is stowed every day. In this room women mix dough in wooden troughs for the staple nan flatbread, mend and sew clothing, and rock infants tightly into wooden cradles.

--- Jay Dautcher, "The Blessed Home: Residence and Identity in a Uyghur Neighbourhood" in *Down a Narrow Road*¹²

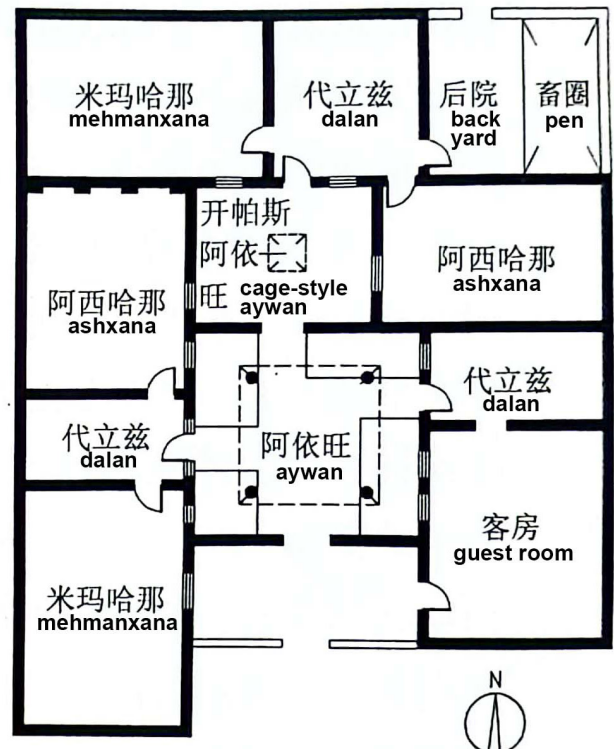
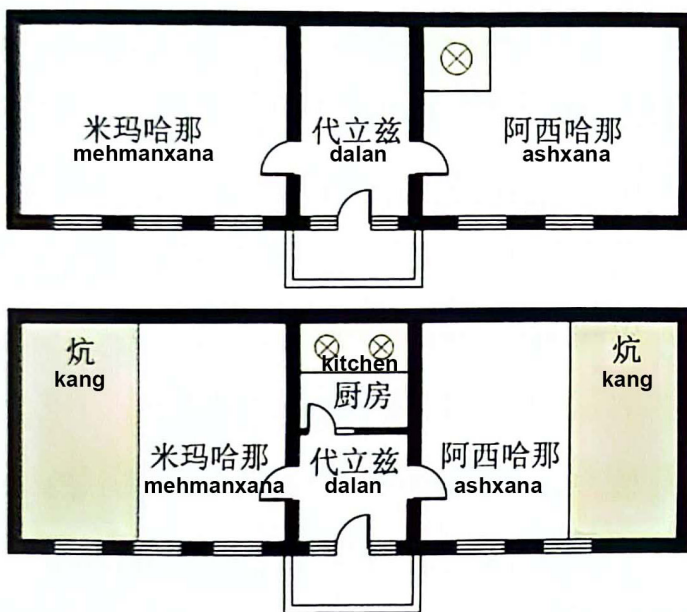
Traditional Uyghur houses typically have three rooms, one small in the middle and two large on both sides, forming a living unit called "saray (沙拉依)" in Uyghur. The middle room, called "dalan (代立兹)" is generally 3-4m wide and 4-6m deep. Sometimes due to daily needs, it can be divided into front and back rooms: the front room is used as a corridor that leads to the left and right sides. The room on the left side is called "mehmanxana (米玛哈那)" in Uyghur, and is mostly used as a bedroom, but can function as a living room when guests visit. The room on the right side is typically the same size as the one on the left, or slightly smaller. It is called "ashxana (阿西哈那)", and can be a secondary bedroom when there are children or the elderly

Fig.3-2-4 (left) Saray (沙拉依), typical Uyghur living unit. (right) Aywan (阿以旺, which means courtyard) house layout that is a combination of 3 sarays.¹³ Translated by author.

10 Uyghur Academy. 'Understanding Uyghur Culture and Cuisine'. Accessed 4 March 2022. <https://akademiye.org/en/?p=604>.

11 Fan, Chuan Geng. *Xinjiang Cultural Heritage Protection and Utilization*. 1st ed. Beijing: Minzu University of China Press, 2006: 73.

12 Jay Dautcher, *Down a Narrow Road: Identity and Masculinity in a Uyghur Community in Xinjiang China*, Harvard East Asian Monographs 312. Cambridge, Mass: Harvard University Asia Center, 2009: 13.



living in the house. There is also a stove in the corner of this room for cooking. Small families can generally meet their living needs in this one living unit (Fig.3-2-4¹³ left).¹⁴

When families grow bigger and their financial situation allows, some households will increase the number of living units, usually 2 to 3 units in a house. They build auxiliary rooms such as storage, guest rooms, and half-open summer kitchens next to a living unit.¹⁵ The *dalan* in this case is used for storage, cooking, or other miscellaneous purposes. Its left side leads to the larger room – the *mehmanxana* – which is the main living room or bedroom. The depth of this room is the same as *dalan*, but the width is generally 6-9m, or even larger (Fig.3-2-4 right).¹⁶

Translation note: Translated Uyghur terms including “*saray* (沙拉依)”, “*dalan* (代立兹)”, “*mehmanxana* (米玛哈那)”, “*ashxana* (阿西哈那)” and “*aywan* (阿以旺)” are borrowed from Timothy Grose’s article in *Ethnic and Racial Studies* – “If you don’t know how, just learn: Chinese housing and the transformation of Uyghur domestic space”.

Due to the different geographical and climatic conditions in southern and northern Xinjiang, the rooms have different styles, sizes and combinations. Southern Xinjiang dwellings are divided into the front and rear sections. The rear section is further divided into left and right two small rooms – one room for bathing, the other for storage. The front section serves to buffer sandy wind and extreme temperatures. It is also a place for changing clothes and shoes before entering the living room. *ashxana* is not just a kitchen, but also serves as a secondary living room and storage room; in some cases, kitchen is a designated room. In southern Xinjiang, it is generally used as a bedroom or kitchen. On the other hand, due to the cold climate in northern Xinjiang, every room in the dwelling must have heating; and summer kitchen is set up separately from the winter kitchen. The *ashxana*, located on the right side of the *dalan*, usually has a double door.¹⁷

Some wealthy households have a small mosque allocated in their layout plan, which respects the direction of the Holy Place in the west. Alcoves, called “*mehrab*”, are placed on the west-facing wall for families to pray towards. The main sleeping *kang* is oriented in such a way to avoid the residents’ feet pointing towards the west. A small cleaning room for religious practice is placed in the main living room. However, because there is no strict restrictions or etiquettes based on the seniority of family members (in contrast to some traditional Chinese families), there is a considerable amount of flexibility and freedom in their spatial layout.¹⁸

The layouts of Uyghur residential buildings are very diverse due to different climate conditions, buildings materials, traditional lifestyles and outside cultural influences. Within the same ethnic group that shares the same roots, communities in different regions can speak slightly different architectural dialects, with each of them having unique architectural spaces, spatial arrangements, and material traditions, that derive from their ecological and anthropological contexts.

13 Aisikaer, Molake. *Uyghur Traditional Houses Construction Techniques*, Chinese Traditional Architecture Construction Techniques Series (AnHui Science and Technology Publishing, 2021): 50.

14 Ibid, 48-49.

15 Chen, Zhendong. *Xinjiang Houses*. 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 40.

16 Aisikaer, Molake. *Uyghur Traditional Houses Construction Techniques*, Chinese Traditional Architecture Construction Techniques Series (AnHui Science and Technology Publishing, 2021): 48-49.

17 Ibid, 48-49.

18 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018, 26.

“Aywan” Style Houses (阿以旺式民居)

Represented by Uyghur houses in Yutian (于田) in southern Xinjiang, this is an architectural form that has a history of at least 2,000 years in Xinjiang – it prevailed first at the north foot of Kunlun Mountains.¹⁹ “Aywan” means “bright place” in Uyghur language, and refers to a central atrium or courtyard here. It is open-air space surrounded by raised roof with side skylights, which not only allows light penetration and ventilation, but also creates unique and interesting architectural spaces. The courtyard is the center of the house, and is shared by family members or multiple families to lounge, receive guests, celebrate events and house singing and dancing gatherings. Other residential spaces with other functions are arranged around this center. Some aywans are more closed – they have a small raised roof above them. This is a bird-cage-style aywan called “kaipansi aywan (开攀斯阿以旺)”. These aywans are less of an outdoor activity space, but more of a skylight for lighting and ventilation (Fig.3-2-5~6²⁰).²¹

Translation note: While the translated Uyghur term “aywan (阿以旺)” is borrowed from Timothy Grose’s article, the term “kaipansi (开攀斯)” is the pinyin of the Mandarin phonetic translation of the original Uyghur term, whose English phonetic translation cannot be found.

19 Ibid, 27.

20 Ibid, 86.

21 Ibid, 86.

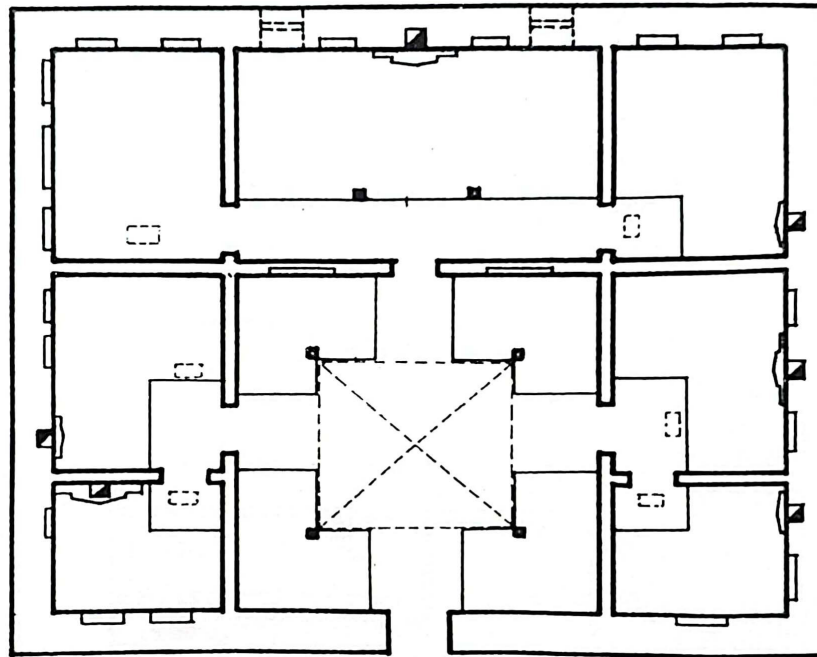
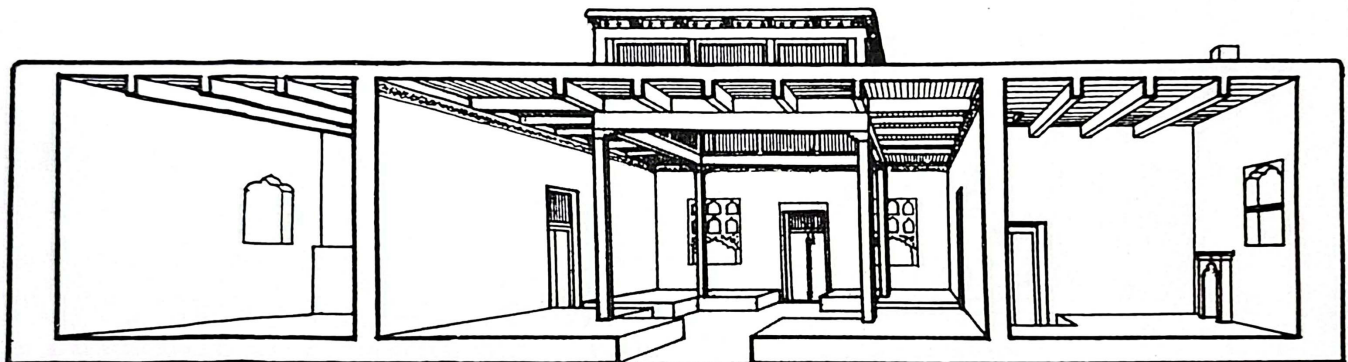


Fig.3-2-5 (top) Layout plan of a typical “aywan” style house.²⁰

Fig.3-2-6 (bottom) Sectional perspective of a typical house with an “aywan” centered layout.²⁰



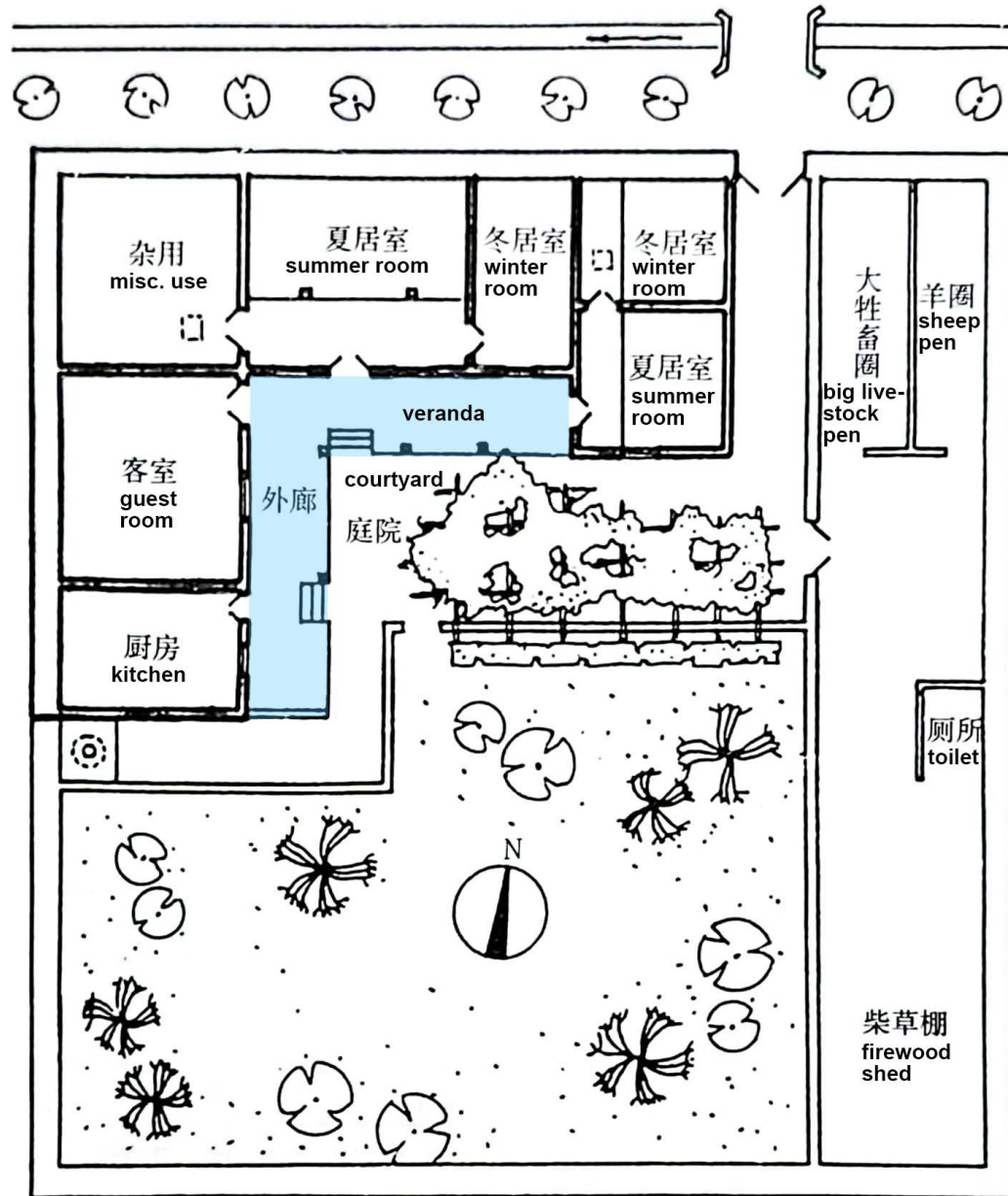
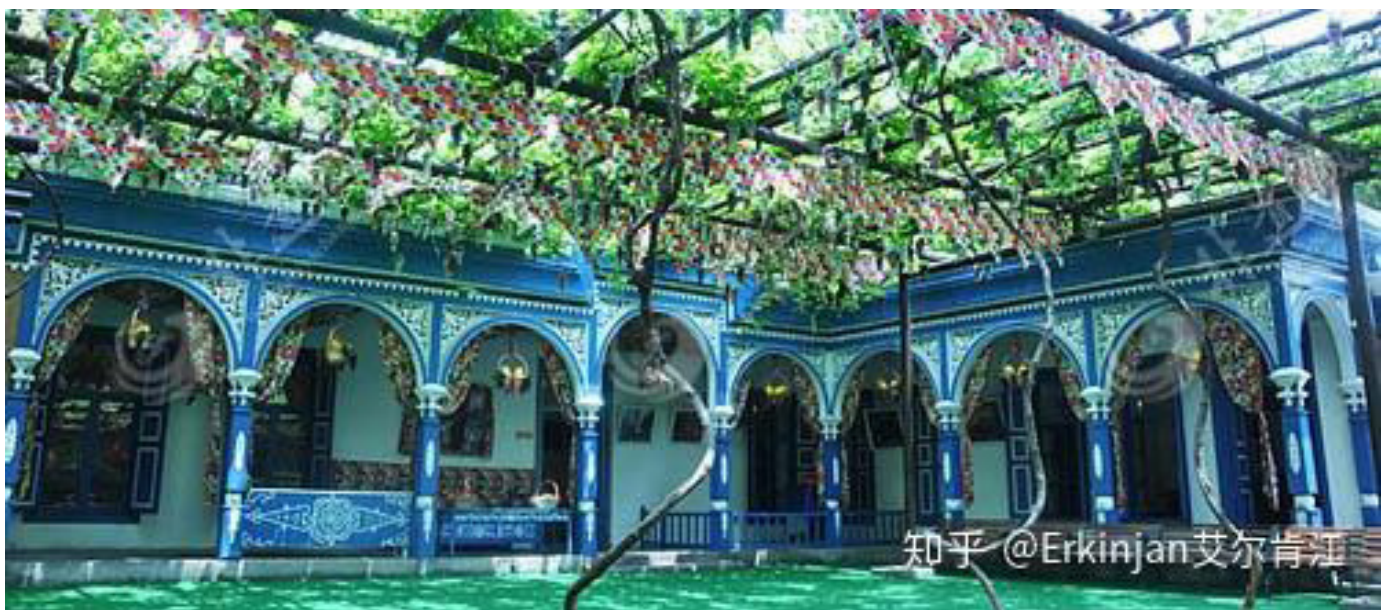


Fig.3-2-7 (top) Layout plan of an example veranda style house.²²
Translated by author.

Fig.3-2-8 (bottom) The veranda provides an opportunity to decorative arts on columns, capitals and cornices. Photograph by Erkinjan.²³



Veranda Style Houses (外廊式民居)

This is a Uyghur architectural form typically found in Kashgar and Hotan areas. In Uyghur, the veranda, or outdoor corridor, is called “pixi aywan (辟希阿以旺)”. It is usually more than 2m wide, equipped with kang or stoves. It does not function as regular corridor; but instead is an important outdoor space for lounging, doing chores, cooking, dining, and even sleeping during summer nights. The veranda also serves as a decorative feature to the building entrance (Fig.3-2-7²²). Columns, capitals, and cornices in various colours and shapes are the essence of Uyghur wood decorative arts, which give the house a unique appearance (Fig.3-2-8²³). In the winter, the veranda is an ideal space for bask in sunlight; while in the summer, it provides a shaded and cool place to relax.²⁴

Translation note: While the translated Uyghur term “aywan (阿以旺)” is borrowed from Timothy Grose’s article, the term “pixi (辟希)” is the pinyin of the Mandarin phonetic translation of the original Uyghur term, whose English phonetic translation cannot be found.

The size of the rooms behind the veranda is dependent on the size of the family. As the family expands, these spaces become deeper. Many of these residential houses are developed into cloister style houses (回廊式民居).²⁵ In some cases, the house can have double verandas, one on each side, parallel to the bedrooms and guest rooms, serving as an outdoor extension of the rooms (Fig.3-2-9²⁶).²⁷

Translation note: “Veranda (外廊)” stands for “outdoor corridor”; “cloister (回廊)” stands for “loop corridor”.

22 Ibid, 84.

23 Kan Xi Zhong (看戏中). “Hotan style traditional houses.” Zhihu.com. April 19, 2020. <https://zhuanlan.zhihu.com/p/46526673>.

24 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018, 83.

25 Ibid, 28.

26 Ibid, 85.

27 Ibid, 84.

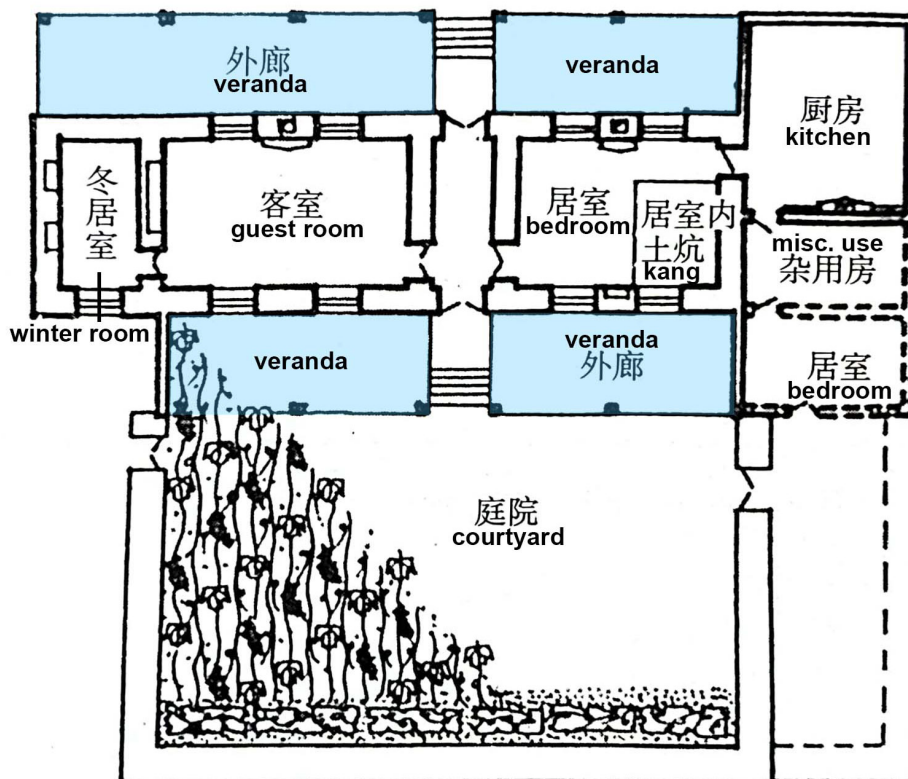


Fig.3-2-9 Plan of a double-sided veranda style house. Translated by author. Veranda space shaded blue.²⁶

Closed Small Courtyard Houses (封闭式小庭院式住宅)

This is a highly desirable Uyghur architectural form in the Kashgar region. The ingenious small buildings, characterized by their winding corridors, lush courtyards, and yellow-brick stairs, provide closed, introverted and private living environment for their residents. The small courtyard is connected to and integrated with both interior and exterior living spaces. Due to the limited available land, residents increase their living space in all ways possible. For example, semi-basement in the courtyard provides opportunity for storage; the roof platform is cleverly used; overhanging “cross-street-houses” mentioned previously even extend living space above public pathways (Fig.3-2-10²⁸, 11~13²⁹).³⁰

These houses have good heat and moisture preservation properties. The

28 “Kashgar’s urban renewal yields mixed results.” CGTN. October 4, 2016. Updated June 28, 2018. Access December 1, 2021. <https://news.cgtn.com/news/3d41544f33517a6333566d54/index.html>. (Reference for painting).

29 Ibid, 62.

30 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018, 29.

Fig.3-2-10 Painting of an interior courtyard of a vernacular Uyghur house in Kashgar. The interior space is full of elaborate ornamentations and colours, enlivening the living experience of the communities inside. Round arches frame the second level; while pointed cinquefoil arches divide the space on the first level. Textured walls and columns add to the vibrancy of the interior courtyard. Local residents living in the complex are inspired and do not shy away from using colourful draperies and window frames to decorate their units. Reference photograph by CGTN.²⁸ Painting by author.



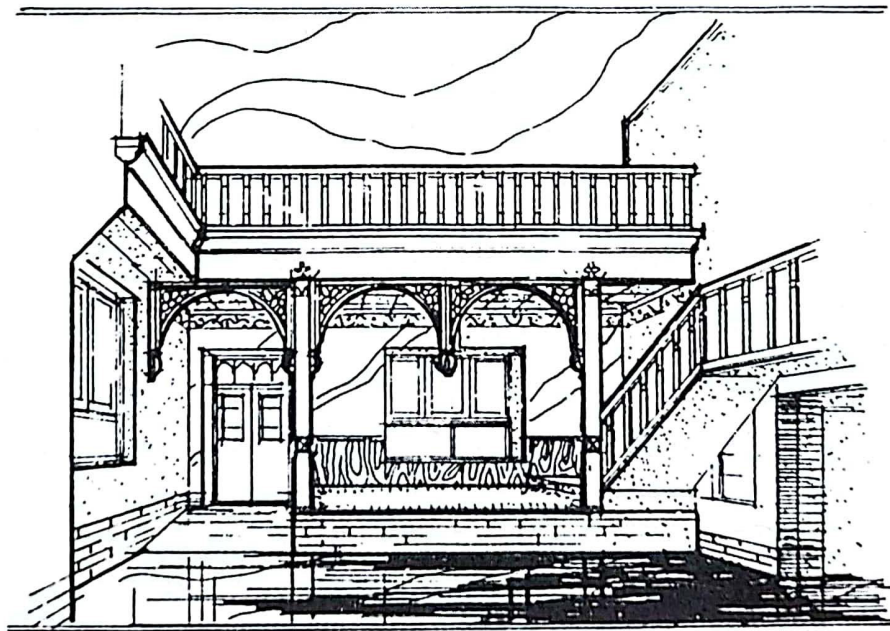


Fig.3-2-11 Perspective view of the courtyard of a house in Buyibaheqi, Ustang (乌斯塘布依巴合齐). The courtyard is small but cheerful, with flexible layout and beautiful ornamentation. Potted flowers and trees are planted in the courtyard, making the live environment beautiful and comfortable.²⁹

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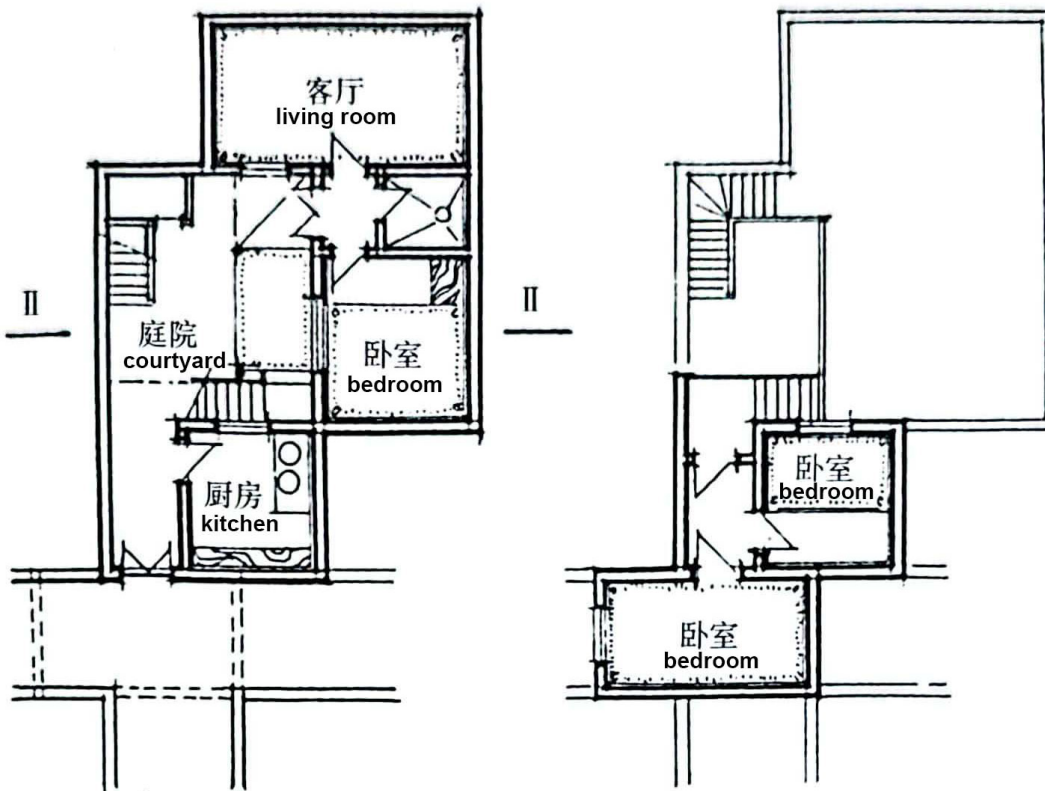


Fig.3-2-12 (left) Floor plans of the same house in Buyibaheqi, Ustang: ground floor and courtyard; (right) second floor and rooftop garden. On the second floor, a bedroom is built overhanging above the public pathway to increase living space.²⁹ Translated by author.

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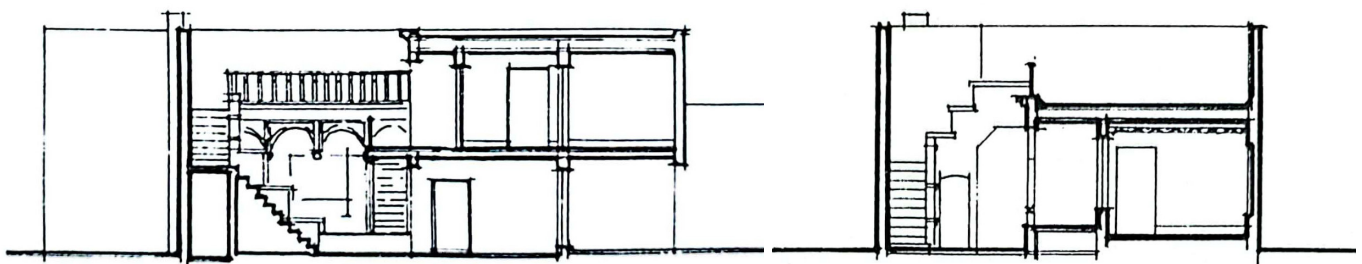


Fig.3-2-13 (left) Sections of the same house in Buyibaheqi, Ustang: I-I section; (right) II-II section.²⁹

closed layout not only gives great protection against wind and sand, but also reduce evaporation, allowing a more suitable living environment in the arid and windy climate. Within the closed thick outer walls, the houses form a comfortable microclimate that is adapted to large temperature difference between day and night. In the summer, the courtyards are shaded by trees and protected against the hot sun; in the evening, hot air is replaced by cool and fresh breezes.³¹

Garden Style Houses (花园式住宅)

Represented by the houses in Yili (伊犁), this type of Uyghur houses is dominated by gardens/orchards, which are spaces of high importance for the families. The overall residential area is about 200 sqm; while the orchard can exceed 600 to 1400 sqm. Water is directed into the garden, where various fruits, vegetable and flowers are planted. There are livestock pens, chicken coops and sundry sheds in the garden. Most of the interior spaces of the house are stringed together. They are buffered by the front room (or vestibule/hall), and flanked by the veranda and the garden (Fig.3-2-14³²).³³

The house layout can be linear, bent or in cluster. The linear layout is based on the living unit, saray, mentioned previously (Fig.3-2-15³⁴). The entrance room, located in the middle, can be a transitional room, guest reception room or dining room. The

31 Ibid, 56.

32 Ibid, 226.

33 Ibid, 30.

34 Ibid. 215.

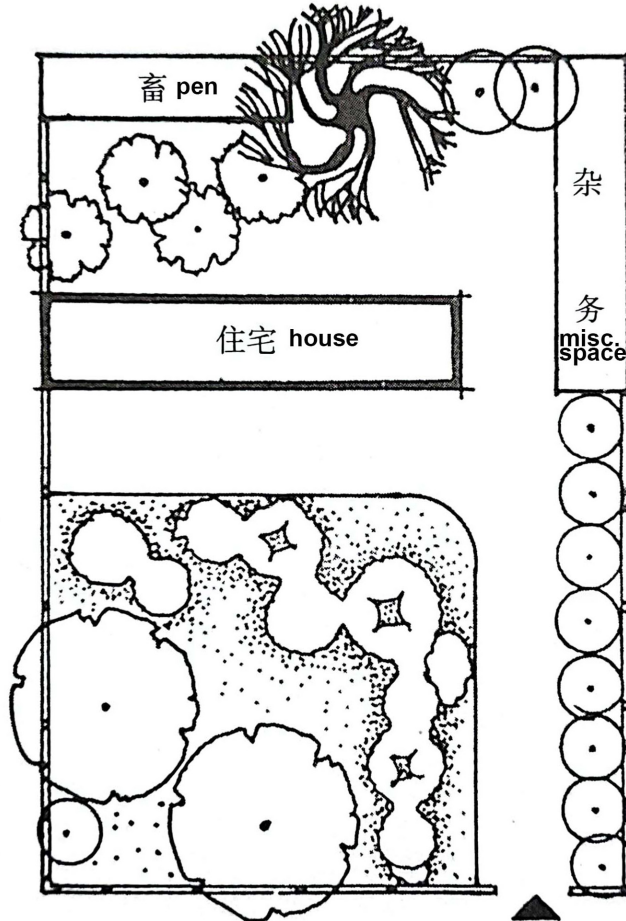


Fig.3-2-14 Example of garden layout.³²
Translated by author.

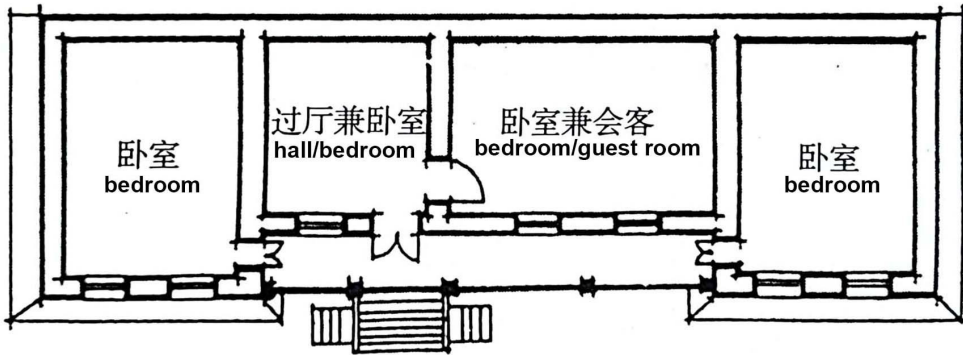


Fig.3-2-15 Floor plan of an example linear-style house.³⁴ Translated by author.

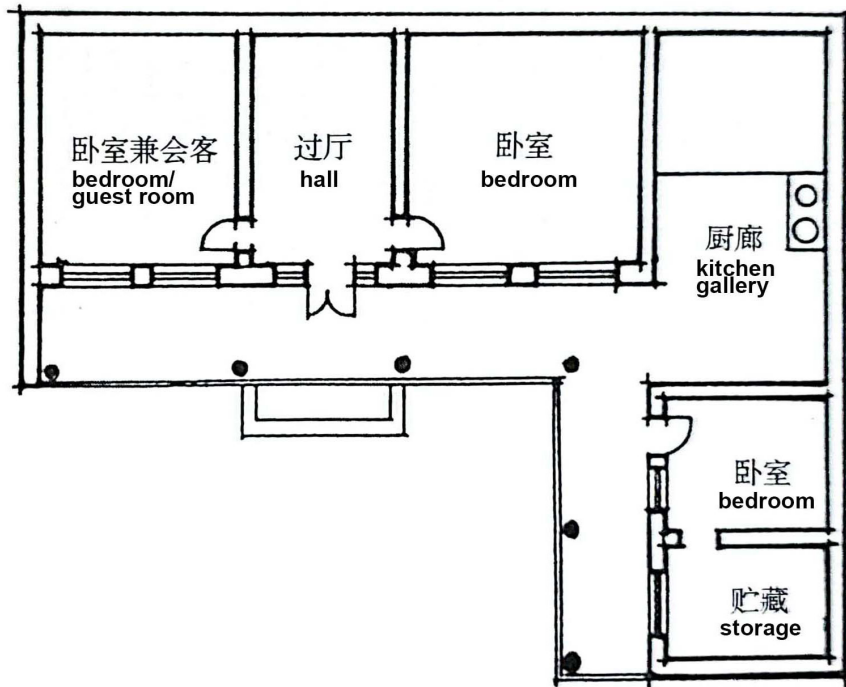


Fig.3-2-16 Floor plan of an example bent-style (“L” shape) house.³⁶ Translated by author.

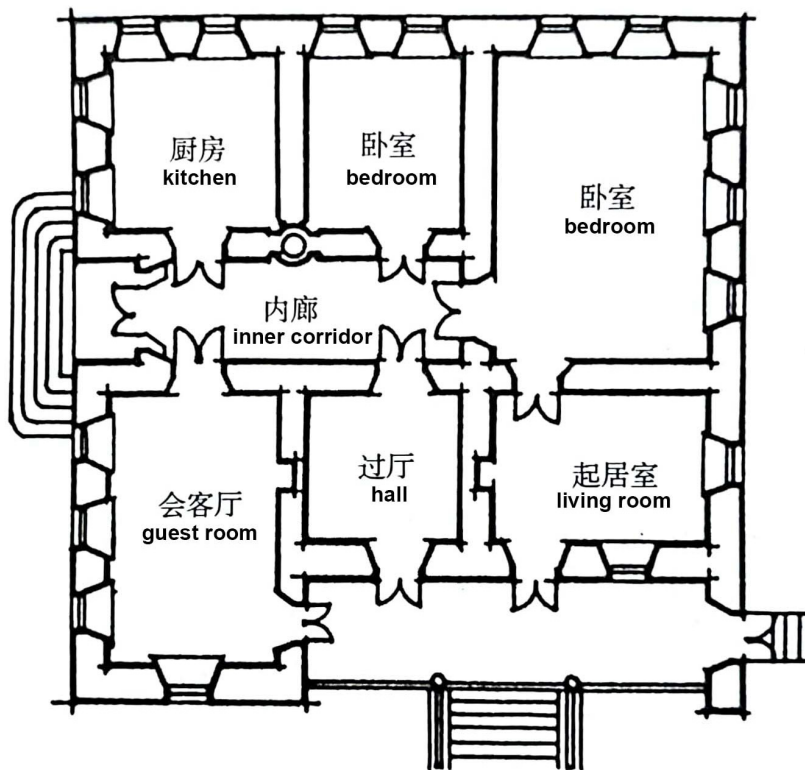


Fig.3-2-17 Floor plan of an example cluster-style house.³⁸ Translated by author.

Chapter 3 Tradition and Contextualization of Vernacular Architecture

room (or suite) on the left is the main bedroom and living room when receiving guests. The room (or suite) on the right is the secondary bedroom, and a kitchen in the winter. In addition to the three rooms, a storeroom and kitchen gallery are built, forming a series of five rooms connected via the corridor, which is typical in Yili.³⁵ Sometimes, based on personal preference or the size of building foundation, a bent (“ γ ”) layout is adopted. The room combination is roughly similar to that of the linear layout (Fig.3-2-16³⁶).³⁷ Some houses are deeper and have more rooms, which are laid out in two rows – in the front and back; a hallway is positioned in a way to keep out and cold and wind. This type of cluster layout is very tight and closed (Fig.3-2-17³⁸).³⁹

Given the cold weather, there are less outdoor activities, the “veranda” (外廊, outdoor corridor) hence becomes a “walking corridor” (走廊) with simpler architectural function despite maintaining the same architectural form. This veranda, distinct from that in the veranda-style houses, has a raised platform, protective fence; it is also narrower, and has become a supplementary space for indoor functions.⁴⁰

35 Ibid, 215.

36 Ibid, 217.

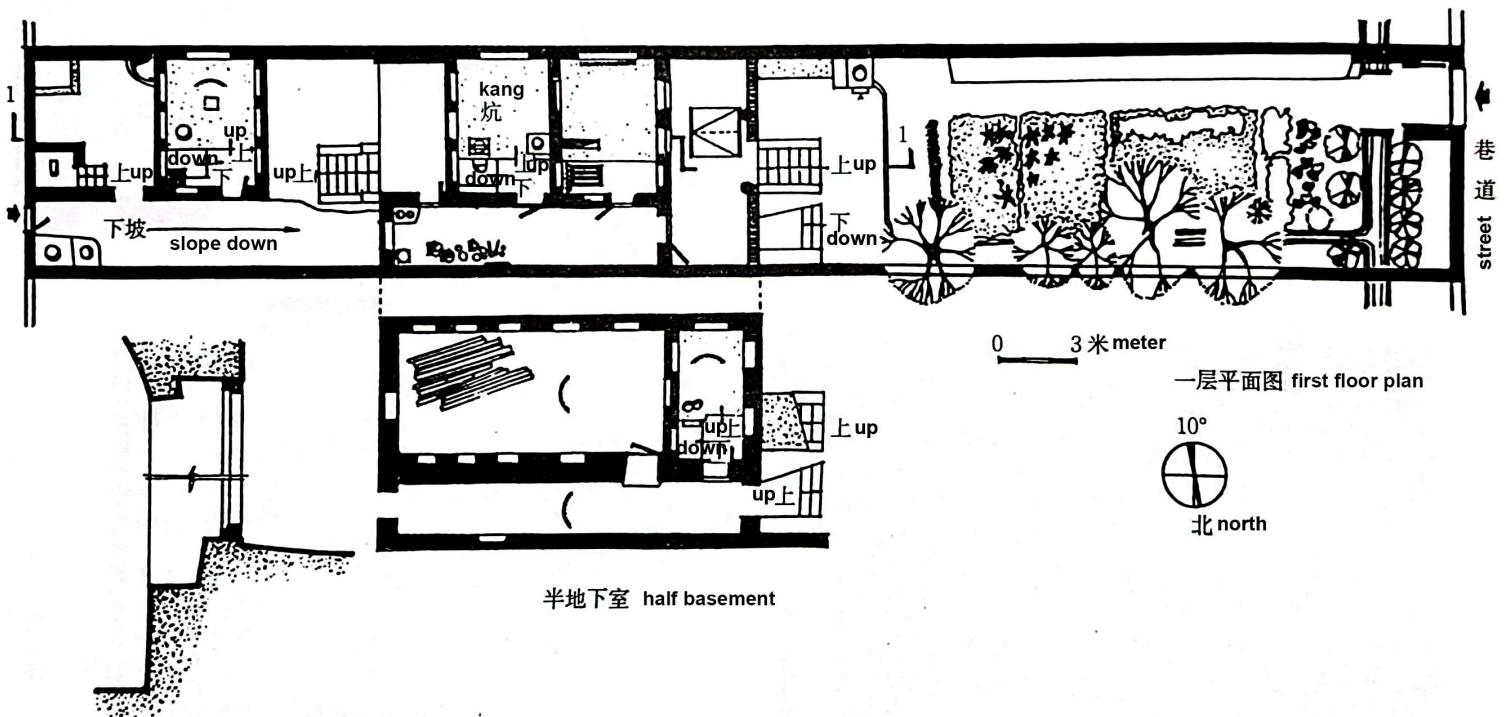
37 Ibid, 217.

38 Ibid, 219.

39 Ibid, 219.

40 Ibid, 30.

Fig.3-2-18 Floor plan of House no.7 north on the 2nd Lane, in Huicheng, Turpan (吐鲁番回城). The house is located on a 5.5m x 36m narrow lot. A canal passes through its front yard, watering the fruit trees and flowers planted there. The main house is located in the middle, in the form of a rectilinear group of arched semi-basements, that are built in accordance with the surrounding terrain. A long and narrow arched passageway leads to the summer lounge and storeroom on the first floor, as well as the narrow backyard. It is also the winter kitchen given its thermal insulating and wind-blocking properties. It is connected to living spaces at the back, which are connected by a wider corridor, that is the center of activities.⁴¹ Translated by author.



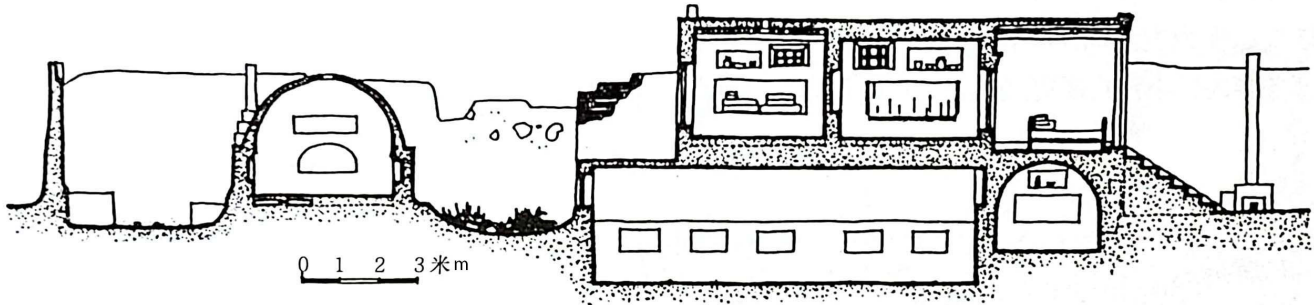


Fig.3-2-19 Section 1-1 of the same house.⁴¹

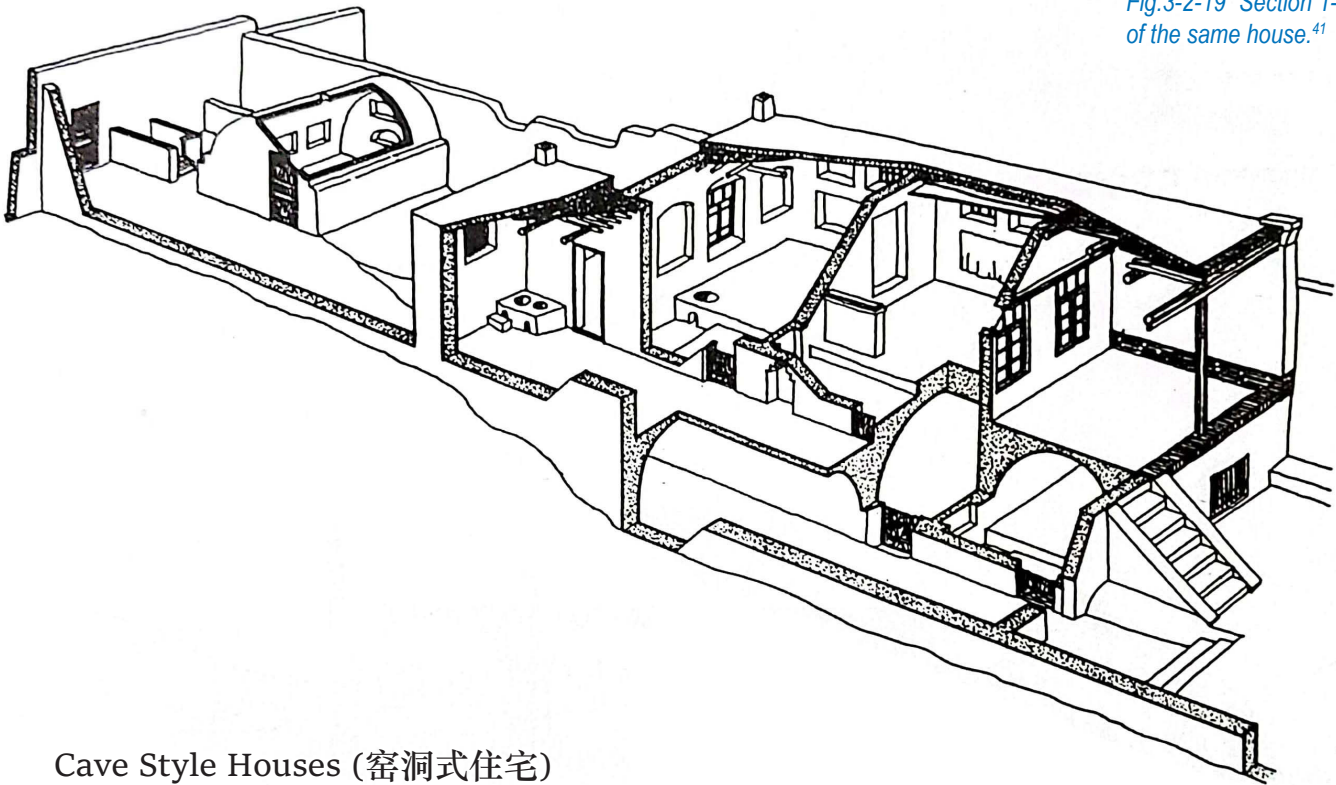


Fig.3-2-20 Dissected perspective of the same house.⁴¹

Cave Style Houses (窑洞式住宅)

Represented by the Uyghur houses in Turpan, the residential buildings in this architectural style are typically adjacent to greenery-filled courtyards. Most of the courtyards are divided into front and rear courtyards; and the functionality of the spaces are quite flexible. The front courtyard is used mainly for lounging, entertaining guests, and housing decorations; the rear courtyard is a place for chores and raising livestock. To adapt to the dry and hot climate, the houses are generally built as a two-storey building with a lower cellar/cave and an upper house. The bottom space is half underground, with very thick walls and windows in the front wall. The floors are supported by multi-span adobe arches, which effectively moderates indoor temperature throughout the seasons. The upper house has an earth-and-timber structure. The rooms are arranged side-by-side, with smaller attached spaces at the back. A set of adobe or earth stairs are located outdoors to allow movement between floors. Turpan is known for its grapes; so every family dries raisins and builds air-drying rooms on the roof (Fig.3-2-18~20⁴¹).⁴²

41 Ibid, 148-149.

42 Ibid, 31.

The Huis (回族)

The Huis are an Islamic ethnic group of East Asian and Central Asian origin. They are descendants of Han Chinese and Silk Road immigrants. Because they have lived with the Hans together since 13th century, their main language is Mandarin Chinese (Fig.3-2-21⁴³). Given their faith, they also learn Arabic in Islamic scripture schools. The Huis residing in Xinjiang today are primarily descendants of Qing-government-orchestrated migrants from central China during the 18th century.⁴⁴

Living in accordance to their religious teachings, the Huis pay great attention to cleanliness of their water source. If there is no running water supply in their courtyard, there is almost always a well, which is covered and carefully maintained. Additionally, they do not have any human portraits or animal paintings; they adorn their architecture with stylized plant or floral patterns (Fig.3-2-22⁴⁵); they also hang tapestries with Arabic calligraphy of Koran scriptures or images of holy places.⁴⁶

Similar to other ethnic groups in Xinjiang, Hui houses need to fulfill the requirements of insulating for extreme temperatures, sheltering from sand and wind, and providing a beautiful and comfortable environment for living and production. Courtyard is an indispensable living space in Hui houses. It is not only a place to build storage buildings, toilets and summer kitchens, but also a place to plant fruit trees and vegetable, to raise livestock, and to lounge under the shade. Veranda is another important outdoor space. It is typically located in the south, a place for enjoying cool air in the summer and basking in the sun in the winter. It is also a place for family outdoor activities, linking interior spaces and the courtyard together.⁴⁷

Hui houses are primarily built with raw-earth and wood, which are locally available, economical and easy to use. Interior rooms have specific functional characteristics. For example, the vestibule, upper room, living room and kitchen are well defined and partitioned. Within the rooms, areas are further divided by function with heated kangs, wooden lattice screens and furniture. Tapestries and banners of Arabic calligraphy and plants adorn the interior spaces. The upper room is a place of

Fig.3-2-21 (left) Several elderly Hui people from Xinjiang in front of Tiananmen Square on July 1st, 2011, on the 90th anniversary of the founding of the Communist Party of China.⁴³

Fig.3-2-22 (right) Colourful painted pattern on corridor eaves.⁴⁵

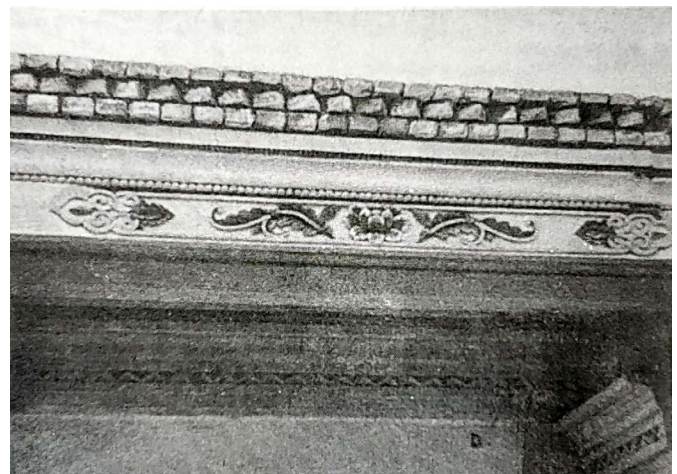
43 Su, Dan. "Elderly Hui people from Xinjiang Touring Tiananmen Square". Chinanews.com. July 1, 2011. <https://www.chinanews.com.cn/tp/hd2011/2011/07-01/53718.shtml>.

44 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018: 247-248.

45 Ibid, 249.

46 Ibid, 249.

47 Ibid, 252-253.



worship and a place to receive guests; therefore its layout is particularly thought out. It generally has a large long kang covered with carpet, on which stacked quilts and furniture such as kang table and cabinet are placed.⁴⁸

Vernacular Hui houses can differ due to different regions and customs. Here are four layouts that are similar in spatial arrangement, but are different in size and shape, accommodating families of different sizes.

“Tiger-hugs-the-head” Style Houses (“虎抱头”)

This layout resembles a bracket shape (“[”], where two ends of the house protrude outwards and are connected by a colonnaded corridor in between. It is typically built by households with a large building area and many rooms (Fig.3-2-23⁴⁹). It is very suitable for families with two generations living in separate ends of the house. The spaces can be easily separated or connected, depending on the residents’ needs.⁵⁰

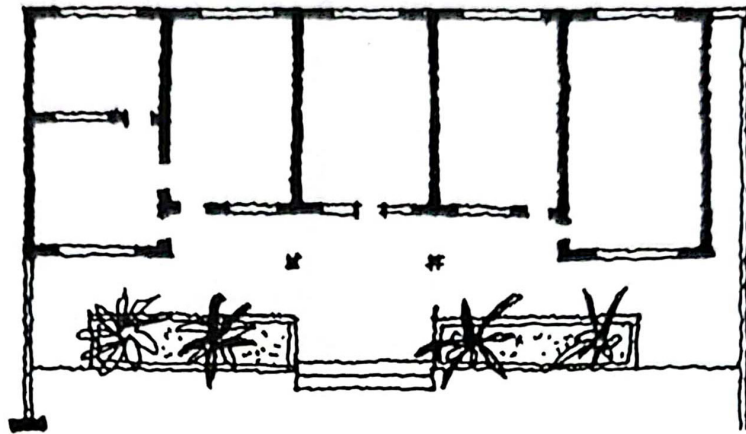


Fig.3-2-23 Floor plan of an example “Tiger-hugs-the-head” style house.⁴⁹

“Key-head” Style Houses (“钥匙头”)

This layout resembles a “-” shape, where one end protrudes outward. It is flexible and compact, with many spatial composition possibilities and strong adaptability (Fig.3-2-24⁵¹). It can be adopted by large or small households.⁵²

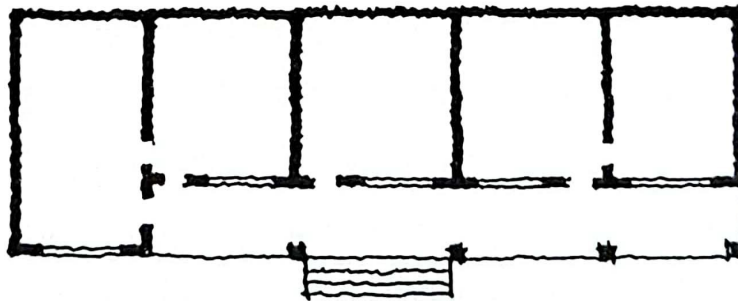


Fig.3-2-24 Floor plan of an example “Key-head” style house.⁵¹

48 Ibid, 253-254.

49 Ibid, 253.

50 Ibid, 253.

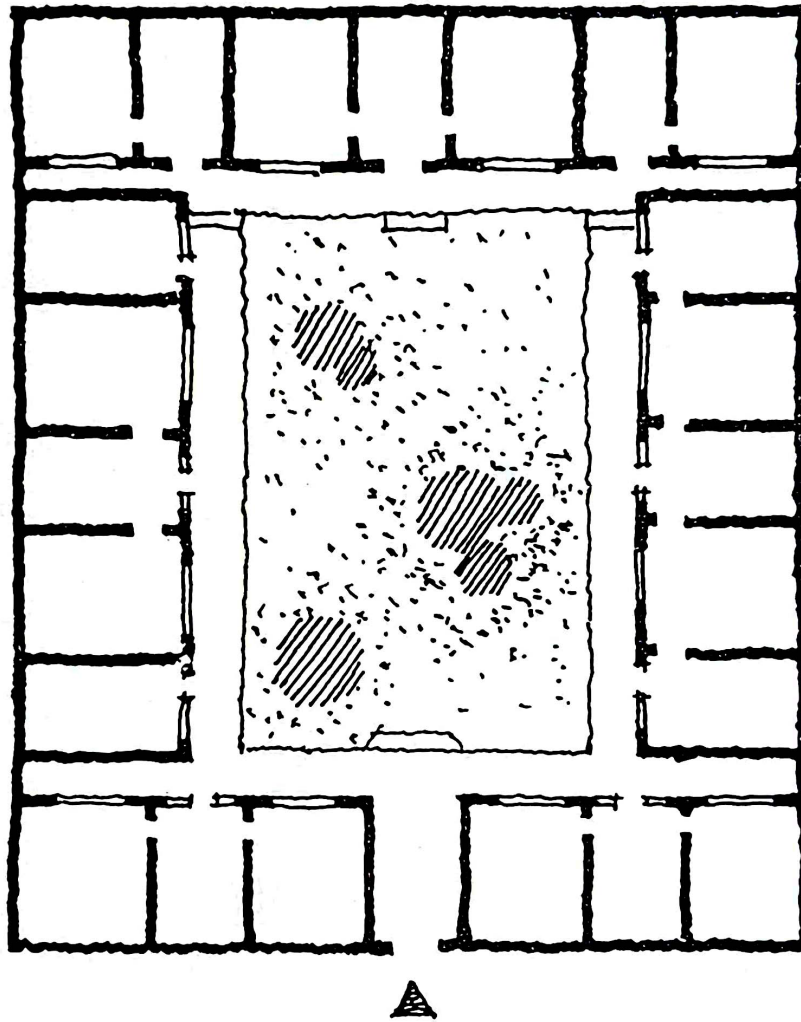
51 Ibid, 253.

52 Ibid, 253.

“One-seal” Style Houses (“一颗印”)

This layout resembles a box shape (“□”), where the house is built around the inner courtyard that is open to sky. All the doors and windows of the house open towards the courtyard, creating a closed, quiet, and private living environment (Fig.3-2-25⁵³). It occupies a large area and is suitable for a large family with several generations living under the same roof.⁵⁴

Fig.3-2-25 Floor plan of Bai's house in Xiaodongliang (小东梁白宅) in the city of Urumqi built before 1949. It is an example “One-seal” style house, that is like “Siheyuan (四合院)” style.. The inner courtyard is connected with loop corridors/cloister (回廊). All drainage from the roof is collected in the inner courtyard. There is no exterior opening except the main entrance.⁵³



“One-bright-two-dark”/ “One-bright-three-dark” Style Houses (“一明二暗”/ “一明三暗”)

This layout are linear (“—”), with one bright room in the middle, which is a living room that is used for entertaining guests and celebrating special occasions, and two or three dark rooms on the ends that are used as bedrooms or studies. This style can also be found in China’s northwest provinces such as Xizang, Qinghai, Henai. It is simple and easy to construct. It is suitable for ordinary families (Fig.3-2-26⁵⁵).⁵⁶

53 Ibid, 258.

54 Ibid, 253.

55 Ibid, 261.

56 Ibid, 261.

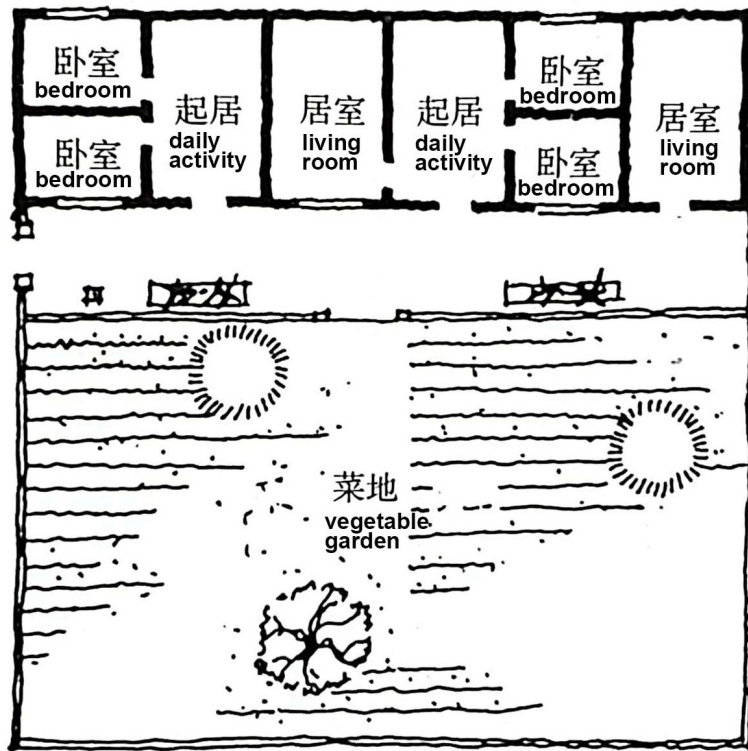


Fig.3-2-26 Floor plan of Ma's house in Yuergou Township, Fukang City. The courtyard is divided by flower walls, forming a courtyard within a courtyard.⁵⁵ Translated by author.

The Tajiks (塔吉克族)

The Tajiks are mainly inhabited in the Tashkurgan (which means "stone city") Tajik Autonomous County in the east of the Pamir Mountains. There, many peaks are above 5,000m above sea level; and the valleys in between are generally about 3,000m above sea level. Snowmelt from the mountain peaks form rivers flowing through the valleys, creating lush pastures and arable land for the Tajiks to herd animals and farm. They live in a semi-settled life. In the winter, the Tajik herdsmen

Fig.3-2-27 Sketch of a dissected perspective of a Tajik residence.⁵⁸

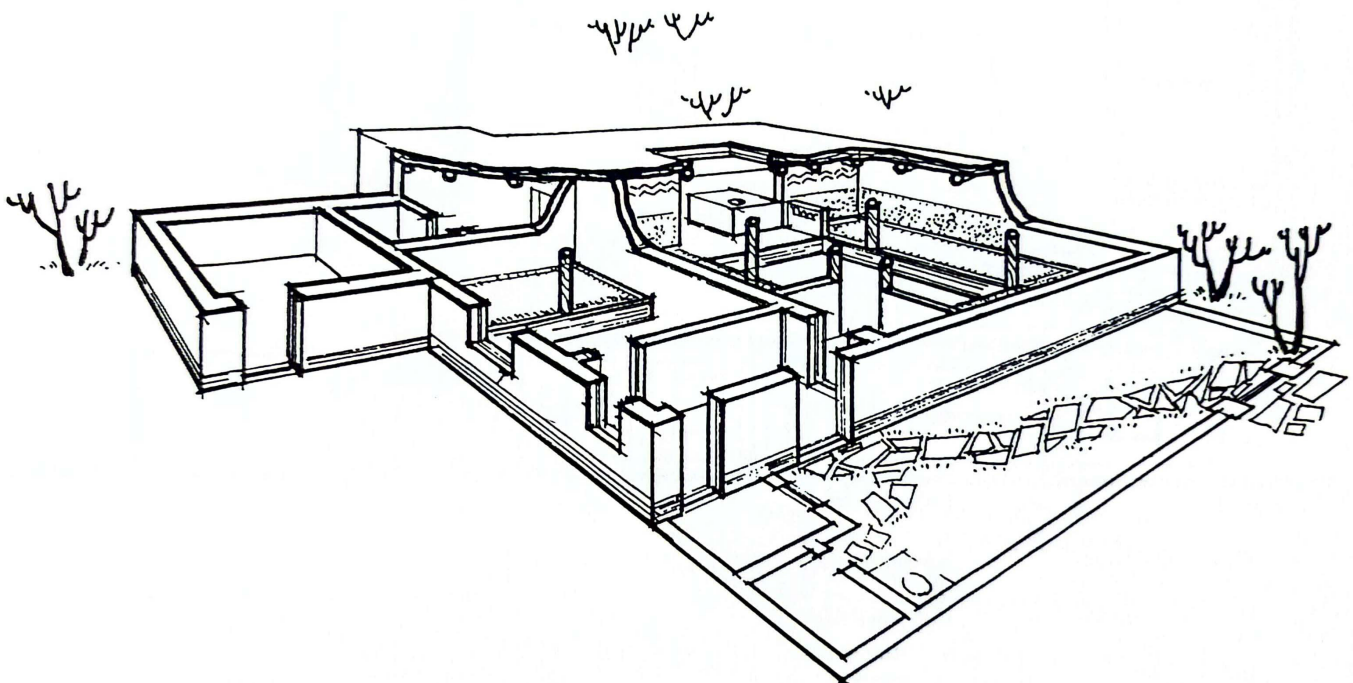


Fig.3-2-28 Elevation of a Tajik house located at the foot of snow-capped mountains.⁶⁰

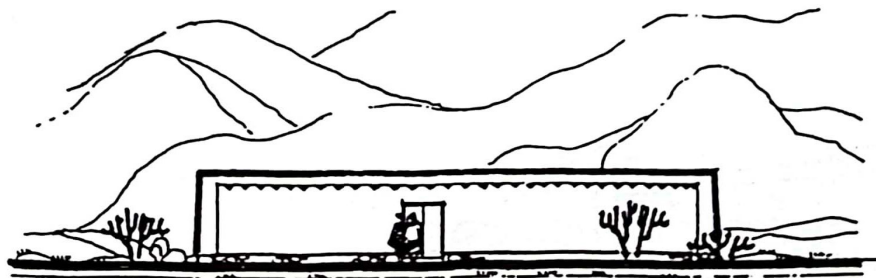


Fig.3-2-29 Floor plan of the same house. The east front yard and smaller; and the south yard is larger, with polars and willows planted. The layout of the house is compact and appears very closed. The guest rooms are connected to Puyi Pavilion by the hallway; they have south-facing windows.⁶⁰ Translated by author.

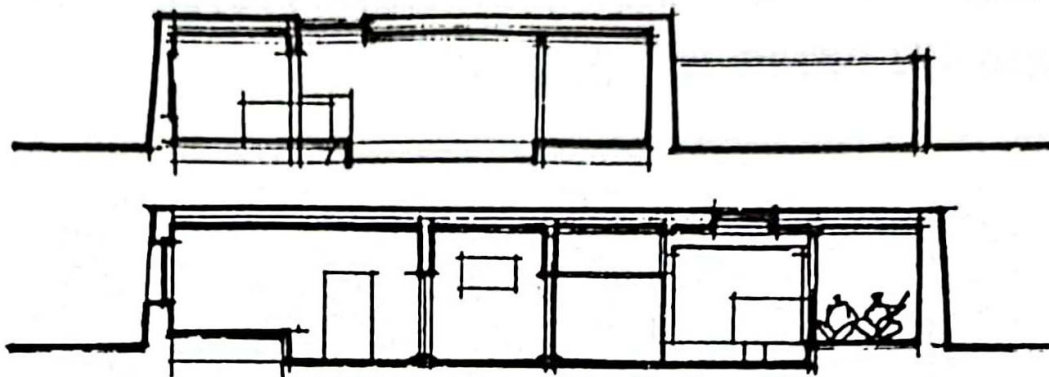
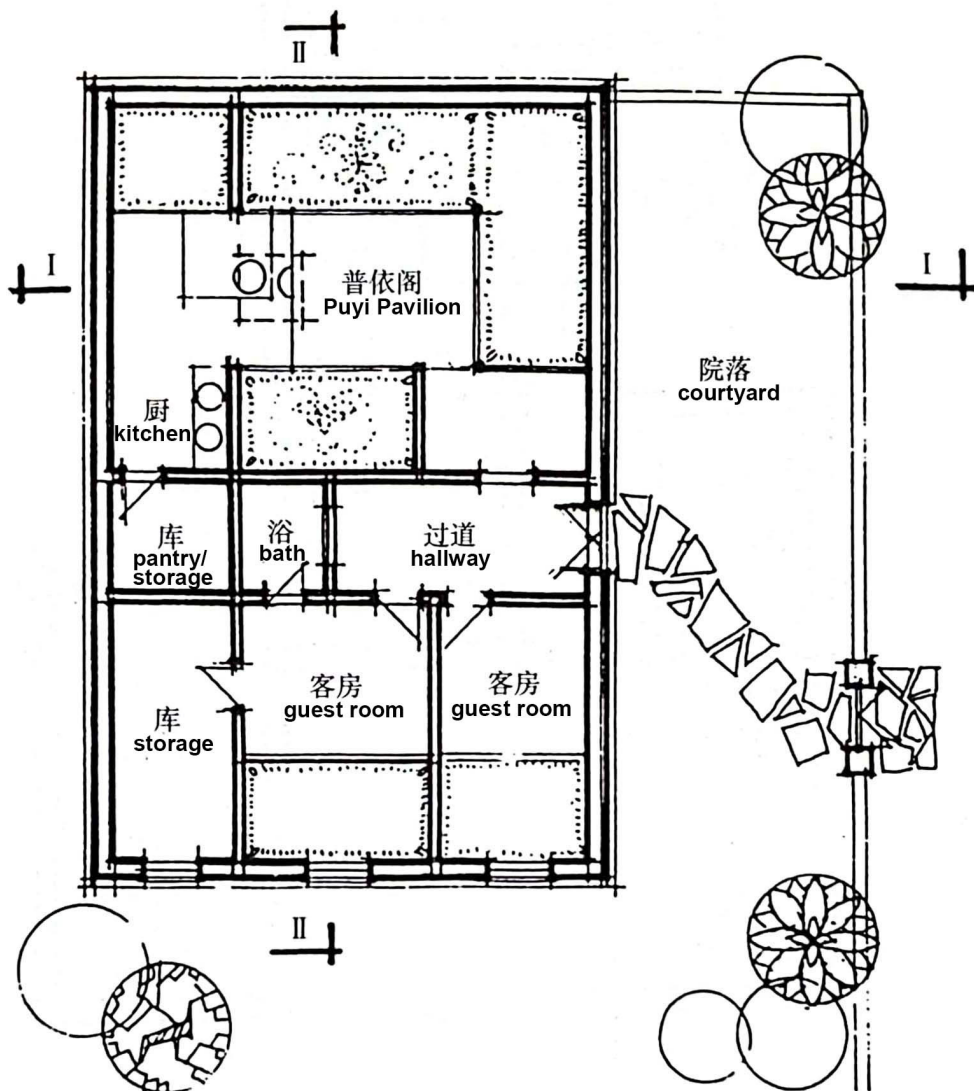
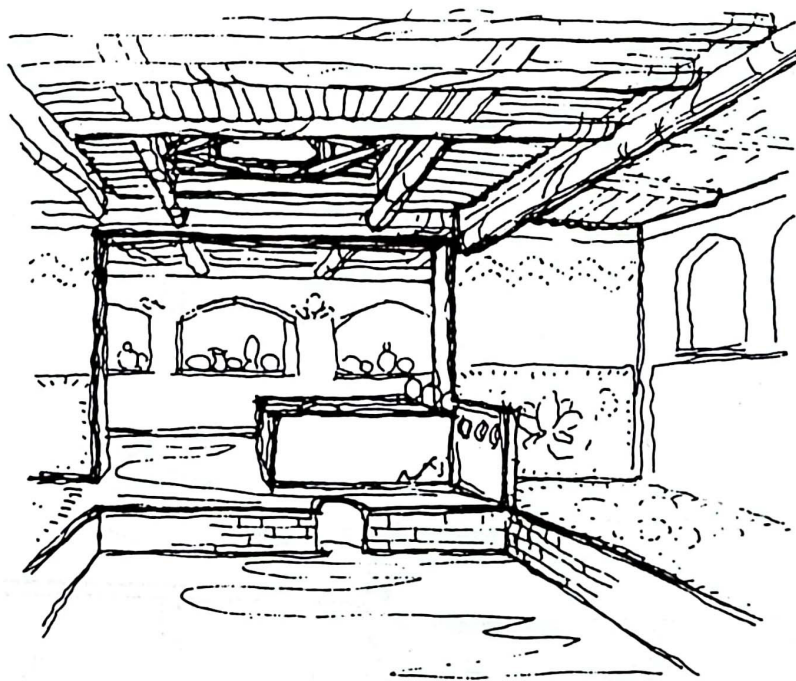


Fig.3-2-30 (top) Section I-I of the same house. (bottom) Section II-II.⁶⁰

Fig.3-2-31 Interior perspective of the same house's Puyi Pavilion.⁶⁰



live in houses. During their grazing season, they use yurts or build low houses out of stones or grass-mud-bricks.⁵⁷

Tajik houses are typically raw-earth structures with rectangular flat roofs, the middle of which is slightly higher than the four sides, so that rain and snow can be drained. Due to the cold and windy conditions on the plateau, there are no windows on the outer walls except some small high windows and roof skylights, most of which are located at the east and south-facing corners (Fig.3-2-27⁵⁸). They function as lighting, ventilation and smoke exhaust.⁵⁹

Tajik families are big – it is common to have three or four generations, comprised of a dozen or dozens of people living under the same roof. Thus their houses are relatively spacious. Their main living room is called the “Puyi Pavilion (普依阁)”, which is a large space for gathering all family members, receiving guests, holding weddings and funerals, celebrating festivals and hosting entertainments. Puyi Pavilion typically has a width of 7m and a length of 9m, with one door in one corner. In the center, a 3m by 3m space of flooring is reserved for dancing during celebrations. Three sides of the room are earth kang covered with felt. During the day, bedding is stacked against the wall, and a large pot stove is set in the middle of one of the kangs. A pantry is set up adjacent to the stove to store food such as grain, meat and dried fruits. The whole family lives in the Puyi Pavilion – their sleeping locations are arranged according to seniority from the left hand side of the entrance. A few guest rooms are located beside the Puyi Pavilion, and within those, tables, chairs, beds, wardrobes and other furniture are placed (Fig.3-2-28~31⁶⁰).⁶¹

Translation note: “Puyi” is the pinyin of the Mandarin term for the space.

57 Ibid, 300-301.

58 Ibid, 303.

59 Ibid, 301.

60 Ibid, 305.

61 Ibid, 301.

3.2.2. Nomadic Groups and Their Disappearing Yurts

Along the Silk Road before entering the mountainous regions are green lush grasslands, on which groups of white yurts, white sheep and their shepherds can be spotted everywhere. Local residents are herdsmen whose lifestyle is inseparable from the grasslands. They spend most time of the year in the pasture with flocks of sheep. Based on weather and availability of forage, they often move their place of residence. Yurt thus becomes the most convenient architectural form in terms of relocation and construction. It is simple in shape, but provides effective shading and insulation. As long as there is relatively flat land, it can be quickly assembled without building a foundation.⁶²

Although different ethnic groups may have different shapes for yurts, their building materials are the same, mostly consisting of branches from locally grown plants and by-products of livestock. The frame of yurts, consisting of stress-bearing poles and lattices, is assembled with hinges. The yurt cover is made from unskimmed wool rolls. The ropes used for binding are cut from the skins of cattle and sheep or rolled from their wool. Nails are hardly required in the construction of yurts; instead, techniques such as mortise and tenon, binding, covering and pressing are used. All components are flexible, easy to produce, light in weight, and very easy to carry and assemble. Assembly and disassembly can be completed by two people within a day (Fig.3-2-32⁶³).⁶⁴

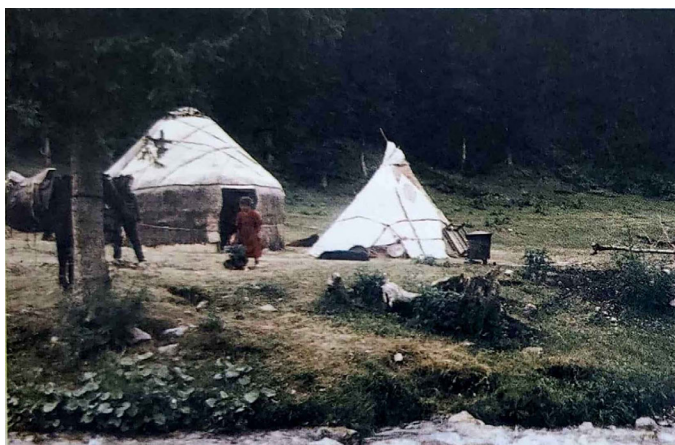
However, the tradition of yurts is quickly transforming – or, to some degree, disappearing – in recent years, as these traditionally nomadic groups are gradually moving into villages and adopting a more settled lifestyle. The Chinese government has taken credit for the planning and construction of these villages and towns, and for promoting a more “prosperous”, “civil” and modern way of living for these groups. Groups of yurts are disappearing as the families give up their nomadic customs for a more settled lifestyle relying on agricultural production. The government plays a significant role in establishing the architectural forms and materiality of these villages, and the scholars do not shy away from praising the government for its contribution to the community’s improved quality of life. Because these village and towns are for the most part planned and designed by government-organized experts, and they feature largely borrowed architectural ideas and a few interior elements from the ethnic

62 Chen, Zhendong. *Xinjiang Houses*. 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 33.

63 Ibid, 33.

64 Ibid, 33.

Fig.3-2-32 (left) Kazakh yurts. (right) Mongolian yurts.⁶³



group's aesthetic culture, it is clear that they are less than vernacular. It requires further investigation on whether, and to what extent, these villages express cultural beliefs and values and represent the community's identity and collective memory.

The Mongolians (蒙古族)

The Mongolians in Xinjiang primarily live in mountainous areas with abundant water and sunshine, such as along the Tianshan Mountains, Altay Mountains, and Yanqi Basin, mostly in Bayinguobang Mongolian Autonomous Prefecture (巴音郭楞蒙古自治州), Boertala Mongolian Autonomous Prefecture (博尔塔拉蒙古自治州), Tacheng (塔城) area, Bukser Mongolian Autonomous County (布克赛尔蒙古自治县) and Altay (阿勒泰).⁶⁵

The Mongolians can trace their roots to the 13th century, when Genghis Khan conquered massive regions across Eurasia and established the Mongolian Khanate. Those currently living in Xinjiang are mainly from the Tuoerhut tribe, Heshuote tribe, Chahar tribe and Junggar tribe. They believe in the Gulag Sect of Lamaism (also called the Yellow Sect), which has greatly influenced their culture.⁶⁶

Nomadic Mongolians live in yurts, typically in small groups of three to five (Fig.3-2-33⁶⁷). The walls of the yurt are made of wicker about 2.5m long, and are secured with leather or rope to form oblique angles with each other. The walls can be folded. The top of the yurt consists of a circular piece of wood with small holes, in which small wooden poles are inserted and then fastened to the wall with a rope. A skylight, called "Erku" in Mongolian, opens up at the top of the yurt. It can be adjusted by opening and closing movable felts.⁶⁸

Here is a herdsmen's yurt in the Baoertu Ranch (包尔图牧场) in Heshuo County

65 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018: 275-276.

66 Ibid, 276-277.

67 Jensen Liu. "Mongolian Yurt: 'EASY' Portable House of Nomads." ChinaBlog.cc. March 30, 2009. <https://chinablog.cc/mongolian-yurt-easy-portable-house-of-nomads/>

68 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018: 281.



Fig.3-2-33 Mongolian yurt.⁶⁷

(和硕县). A table with Buddha statues is placed in the middle of the wall opposite to the door. The floor is carpeted. The left side is the bed for the elderly; and the right side is the sleeping place for the children. There is a tin stove in the middle of the yurt, which is used for cooking and heating. On both sides of the door are places to put cabinets and cooking utensils (Fig.3-2-34~37⁶⁹).⁷⁰

The Mongolian people have lived nomadically in Xinjiang's mountainous areas with abundant natural resources for a very long time. They are dependant on the land and have established a close relationship with its water and plants. However in recent decades, they are experiencing a change in lifestyle, thanks to the government. Yan Da Chun, a Chinese expert on traditional houses in Xinjiang, writes the following in *Xinjiang Houses*:

*After the founding of New China, the party and the government chose some better areas for faster development of herdsmen's economy, established some new settlements of farmers and herdsmen, and formed a relatively complete system of villages and towns.*⁷¹

The Mongolian people have become their own masters, and their living conditions have been greatly improved. Especially since the 3rd Plenary Session of the 11th Central Committee of the Communist Party of China (in 1978), their living standards have been greatly improved. Under the new historical conditions, the Mongolian people's requirements for culture, life and other aspects are also increasing day by day. With the assistance of relevant departments, local governments have established settlements of herdsmen. The new residential houses, schools, hospitals, commercial outlets, and production and management sites built in the settlements have brought broad prospects for farmers and herdsmen's children's education, elderly care, product processing and distribution, etc.

*In architectural activities, the Mongolian people have absorbed the successful experience of their brother ethnic groups, and at the same time used the architectural arts of the brother ethnic groups in their own architectural activities to serve their lives.*⁷²

Yan Da Chun credits the government for the Mongolian's improvement of living conditions, for designating areas of economic development and agricultural production, and establishing a near-complete system of villages and towns, in which the once-nomadic herdsmen can settle in. The government is also responsible for the construction of new houses, public buildings, and infrastructure that allegedly improves countless aspects in the Mongolian people's life.

Regarding the planning and construction of the new villages, Yan Da Chun lays out a few characteristics they follow. First, there is a unified construction plan. The residential land is uniformly divided; and the pasture resources and land resources are rationally distributed. Second, there are unified regulations. Reference drawings are given during construction to make sure that buildings do not exceed property lines, ensuring the overall beauty of the environment. Third, there are sufficient facilities planned in the villages. Residential buildings radiate around the trade center; and are connected to various parts of economic development, such as education, health,

69 Ibid, 290.

70 Ibid, 290.

71 Ibid, 278.

72 Ibid, 250-252.

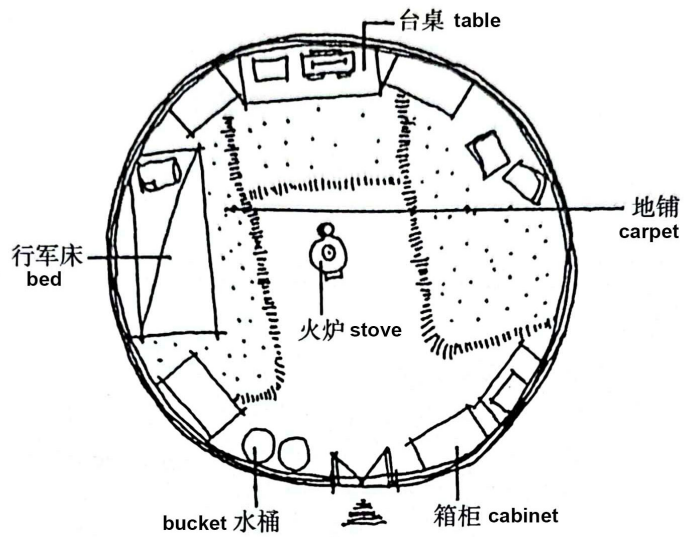


Fig.3-2-34 Floor plan of a herdsman's yurt in the Baoertu Ranch in Heshuo County.⁶⁹ Translated by author.

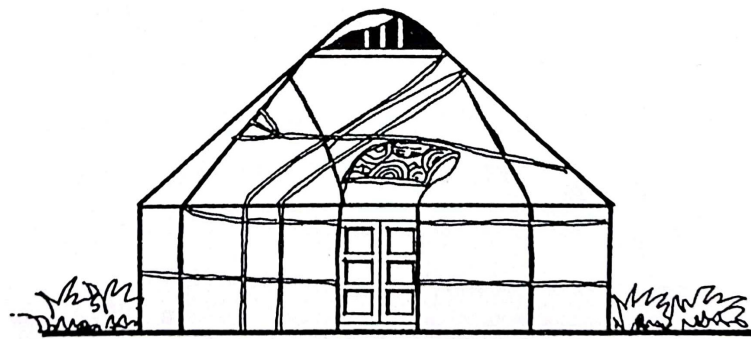


Fig.3-2-35 Elevation.⁶⁹

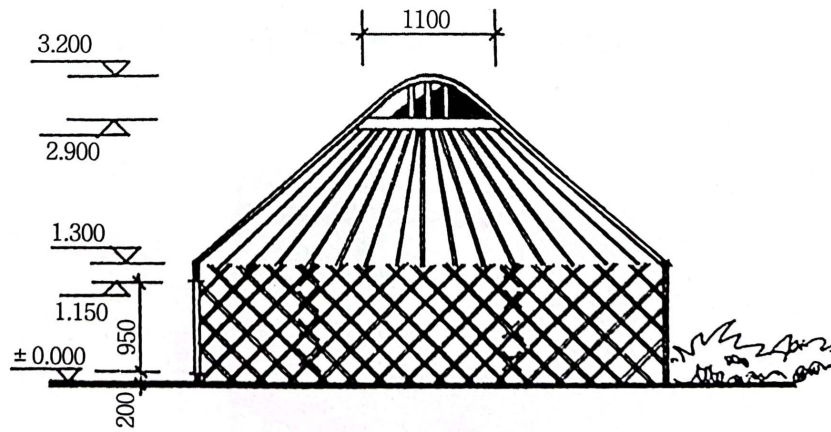


Fig.3-2-36 Section.⁶⁹

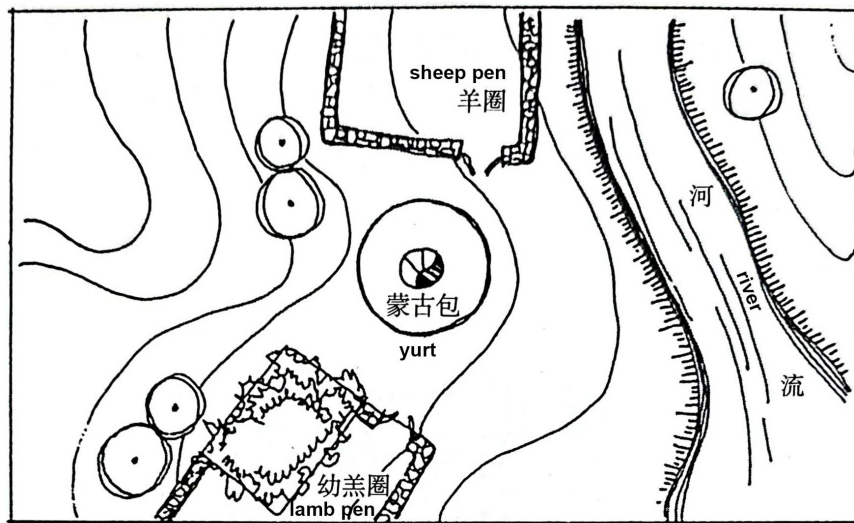


Fig.3-2-37 Site Plan.⁶⁹ Translated by author.

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transportation, production, and etc. (Fig.3-2-38~39⁷³)⁷⁴

Most interestingly, the architectural style of these new Mongolian settlements is borrowed from other nearby ethnic groups, that Yan Da Chun calls “brother ethnic groups”, a term that fits in China’s official narrative of “numerous ethnic groups in one big family under the Communist Party of China”. Other ethnic groups, that have settled earlier and that have more established architectural traditions and wisdom,

73 Ibid, 280.

74 Ibid, 279-280.

Fig.3-2-38 Exterior view of Suduli New Village, Beilinhamedun Township, Bole City (博乐市贝林哈日莫墩乡苏度理新村).⁷³

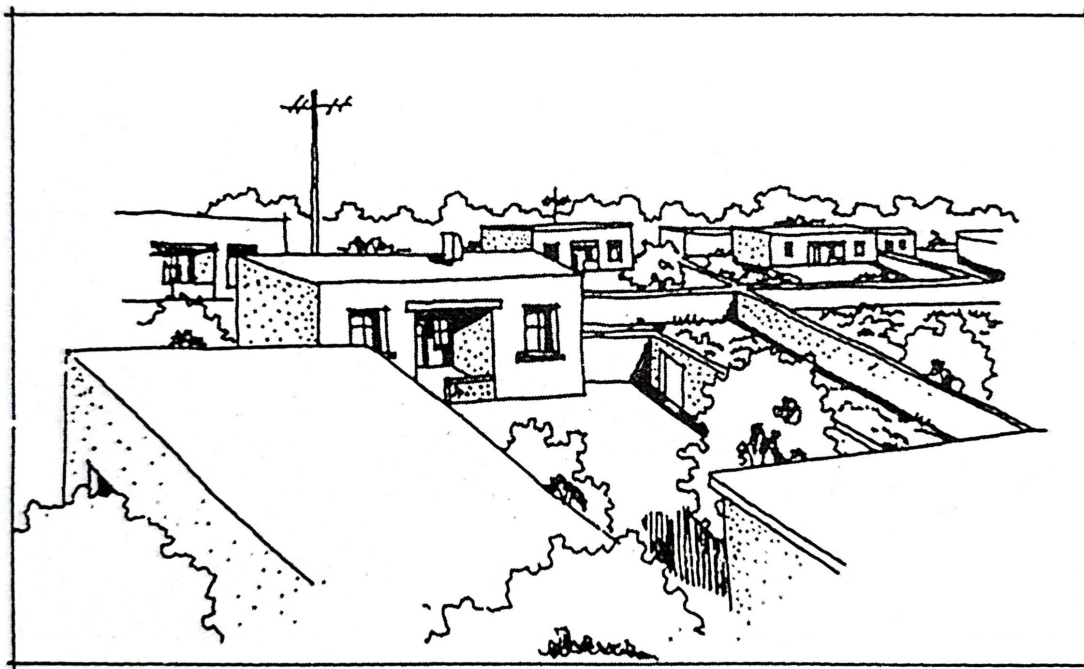


Fig.3-2-39 Planning of Suduli New Village, Beilinhamedun Township, Bole City (博乐市贝林哈日莫墩乡苏度里新村).⁷³
Translated by author.

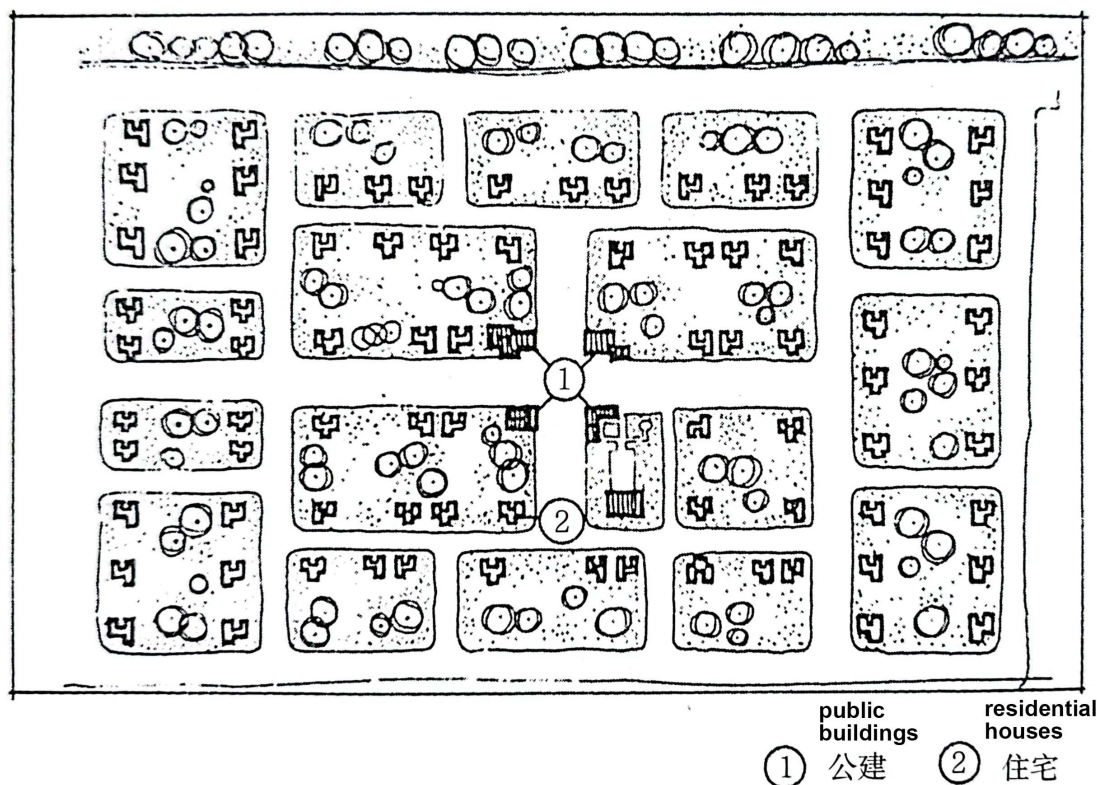




Fig.3-2-40 Hejing County (和静县), Bayingoleng Mongolian Autonomous Prefecture, Xinjiang: Balantai Lama (Yellow) Temple (巴伦台黄庙).⁷⁵



Fig.3-2-41 Elevation of a residence in Nanharamodun Township, Hejing County (和静县南哈拉莫墩乡).⁷⁶

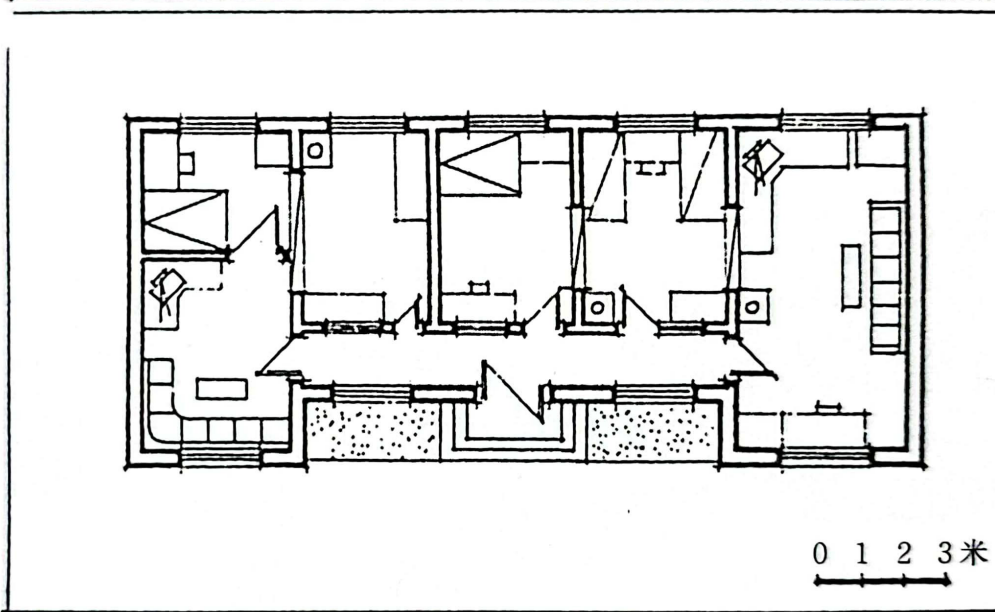


Fig.3-2-42 Floor plan of the same residence.⁷⁶

serve as models for the newly settled Mongolian communities to imitate. The government department responsible for urban construction has also put out some finalized design drawings for the houses in the villages. According to Yan Da Chun, another model is the Lama residences that Han craftsmen from central China have built “based on the intentions of Lamaism” (Fig.3-2-40⁷⁵, 41~42⁷⁶).⁷⁷

The government has used the argument of economic prosperity and social advancement for the systematic settling of nomadic Mongolians in the recent decades. They claim that public amenities and infrastructure they are providing are essential improvement to the Mongolian communities, who have then become more suited to live in the modern era. However, as the government selecting land for the nomads to settle in, they are severing the ties between the people and the land. Their ancestral knowledge of the plants and the water that stems from their dependency on the land becomes less relevant to their new lifestyle. Furthermore, this systematic settling of the Mongolian nomads has significantly changed their ways of living, modes of production, and built environments. When their architectural form derives from a mixture of borrowed styles and traditions, whether it is Han interpretations of their culture or from neighbouring ethnic groups, their ability to express cultural identity and record collective experience in their built environment is greatly jeopardized. It is certainly ironic that Yan Da Chun thinks that the Mongolians “have become their own masters”, when they have lost the authority over their own architectural decisions, thanks to the government. They can no longer decide how they want to live and produce, where they want to live and build shelter, and how they want to construct their homes. With more of Mongolian vernacular homes disappears, and more government-influenced buildings become their new living environments, it is unknown what will become of their architecture in the future. Will it represent them, or something entirely alien?

The Kyrgyz (柯尔克孜族)

The Kyrgyz are a Turkic ethnic group native to Central Asia. They are mainly found in Kyrgyzstan, Uzbekistan, Pakistan, Afghanistan and Kizilsu Kyrgyz Autonomous Prefecture (克孜勒苏柯尔克孜自治州) in southern Xinjiang, within which they are mainly distributed in Artush City (阿图什市), Wuqia County (乌恰县), Aheqi County (阿合奇县) and Akto County (阿克陶县). Their language is Kyrgyz, of Turkic language family. They converted to Islam in the 15th to 16th century, although some of them in Emin County (额敏县) still believe in Lamaism, a branch of Tibetan Buddhism.⁷⁸ Traditionally, the Kyrgyz herdsmen live a nomadic life in mobile yurts (Fig.3-2-43⁷⁹).⁸⁰

The interior is adorned with vibrant wall hangings and colourful tapestries (Fig.3-

75 “Xinjiang, Bayinguoleng Mongolian Autonomous Prefecture, Hejing County: Baluntai Yellow Temple.” Chinese Encyclopedia. April 22, 2016. <https://www.zwbk2009.com/index.php?title=%E6%96%87%E4%BB%B6:992937.jpg>.

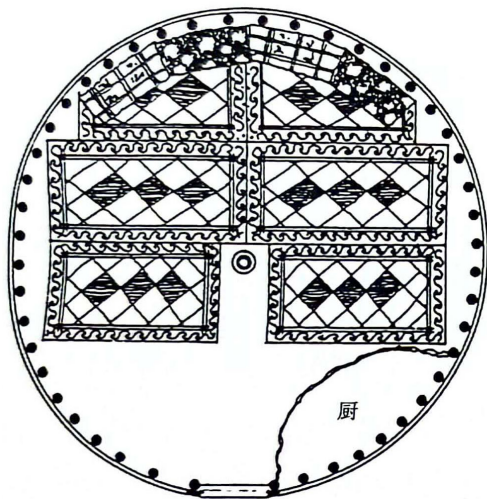
76 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018: 280.

77 Ibid, 280.

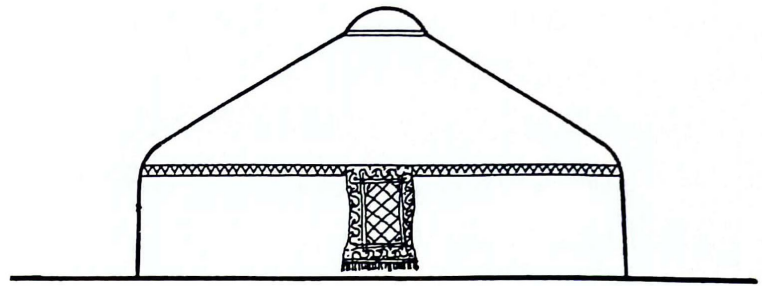
78 Ibid, 265-266.

79 Ibid, 268.

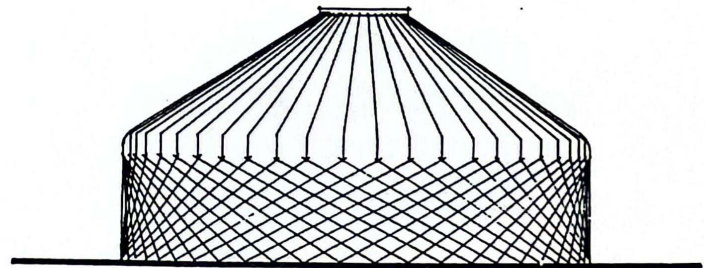
80 Ibid, 267-268.



平面图 Floor Plan



立面图 Elevation



“勃孜吾” 骨架 Structural Framework

2-44⁸¹). The wall hangings are called “Kushiduk” in Kyrgyz, which means hanging beautiful artworks. They are generally 6m long and 2m wide. They use red, purple, yellow, green cloth or gold velvet as the fabric, with 15-20cm black and yellow-red border on the top and left and right sides, and embroider plants, birds, beasts, mountains and rivers with threads of various colours and gold threads on the borders. There are 3 to 4 black, green and blue triangles with a drooping top of 30 to 40 cm. The triangles are mostly embroidered with patterns of red, yellow, black, and white water waves and clouds, and the sides are decorated with 3 to 4cm yellow and red ears. The Kyrgyz tapestry, called “Hildak” in Kyrgyz, is made of felts of various colours with various patterns, sets of cuts and pastes, and hand-sewn. The central part uses patterns of ancient weapons such as knives, spears, halberds, and daggers.⁸²

Fig.3-2-43 Diagrams of Kyrgyz yurts.⁷⁹
Translated by author.

Like the Mongolians, some Kyrgyz communities have also transitioned to a more settled life thanks to the government. Yan Da Chun describes:

After the founding of New China, with the development of production and the improvement of living standards, more and more Kyrgyz farmers and herdsmen settled down, and more and more farmers and herdsmen started to live in houses with earth-wood structure and brick-wood structure.

But because the Kyrgyz people settled later, and their residential buildings have no unique pattern. Generally, at the front entrance is the living room, on the left is the guest room, and on the right is one to two master bedrooms; according to needs, son and daughter-in-law's rooms, kitchens, storage rooms and other rooms are arranged on the side, connected by open corridors. Most of the main entrances face south or east, and the

81 Matteo Colombo. “Inside a Kyrgyz traditional yurt, Xinjiang, China.” Flickr. November 25, 2013. <https://flic.kr/p/hQuLJR>.

82 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018: 269-272.

Fig.3-2-44 Inside a Kyrgyz traditional yurt, Xinjiang, China. Photograph by Matteo Colombo.⁸¹



rooms have windows on the front and no windows on the back. Layout combinations are mostly in the shape of rectangle, “L”, or “C”. Individual rooms are all connected through corridors or verandas (outdoor corridors). The inner corridors are used to keep warm in winter, and the verandas are used to sleep outdoors in summer, which can meet the needs of living habits; however, the inner corridors are dark and the area of the verandas is too large, which is not too economical (Fig.3-2-45~47⁸³).

With the improvement of living standards and the impact of the environment, the Kyrgyz people living in the city also have Chinese and Western furniture, and install local heating, solar showers and electric water heaters. As time goes by, living standards continue to improve. Regardless of cities or farming and pastoral areas, the life the Kyrgyz people will be sweeter and more beautiful!⁸⁴

The translated excerpt above is edited for length. The original passage discusses at length the materiality and construction technologies applied in these Kyrgyz houses, and illustrates in depth the cultural characteristics and beauty of their

⁸³ Ibid, 270.

⁸⁴ Ibid, 270.

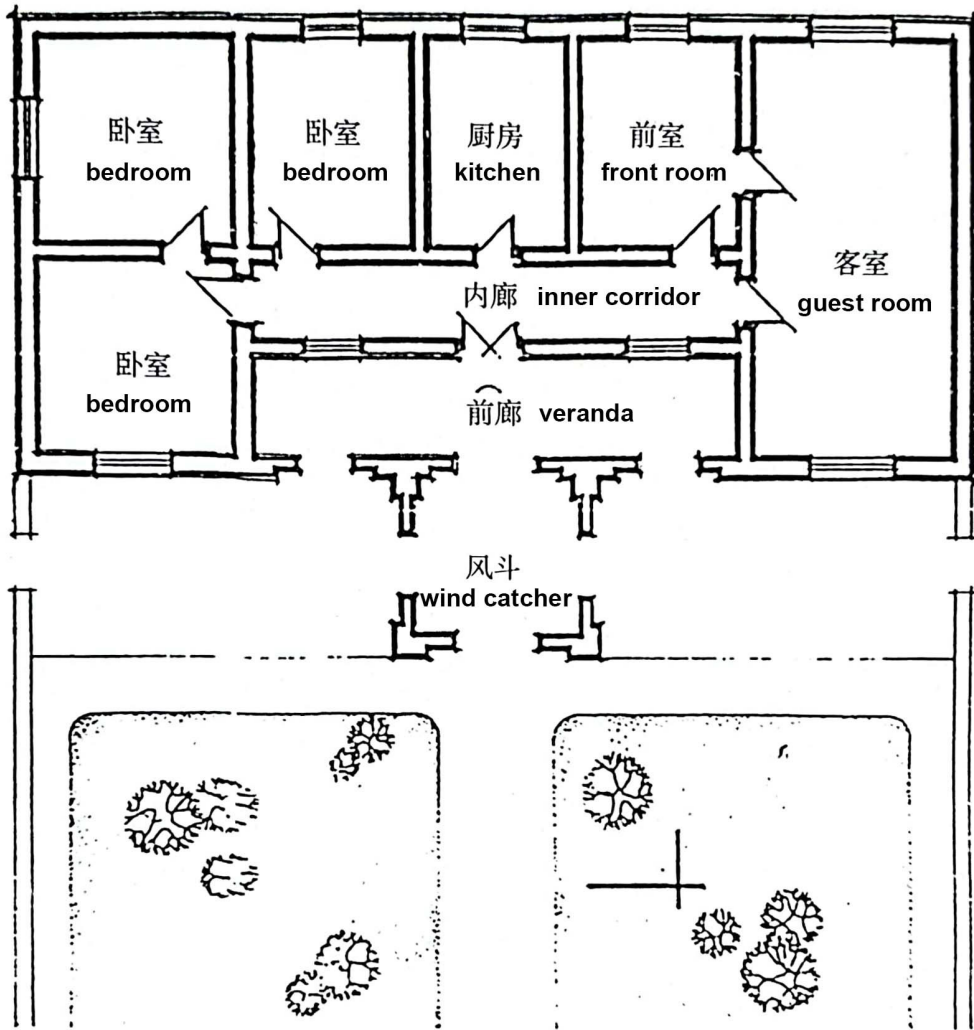


Fig.3-2-45 Floor plan of Kyrgyz house and courtyard.⁸³ Translated by author.

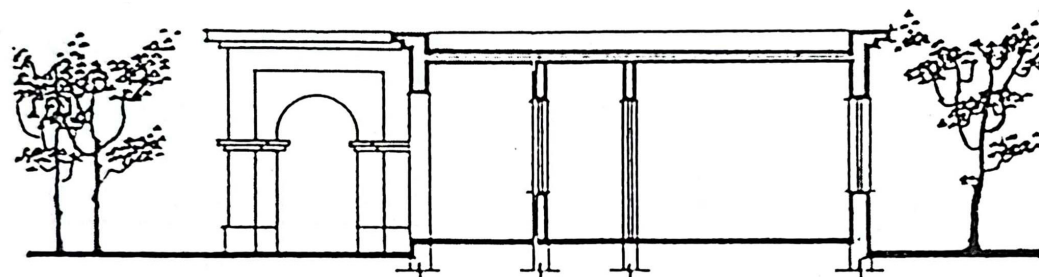


Fig.3-2-46 (top) Section.⁸³

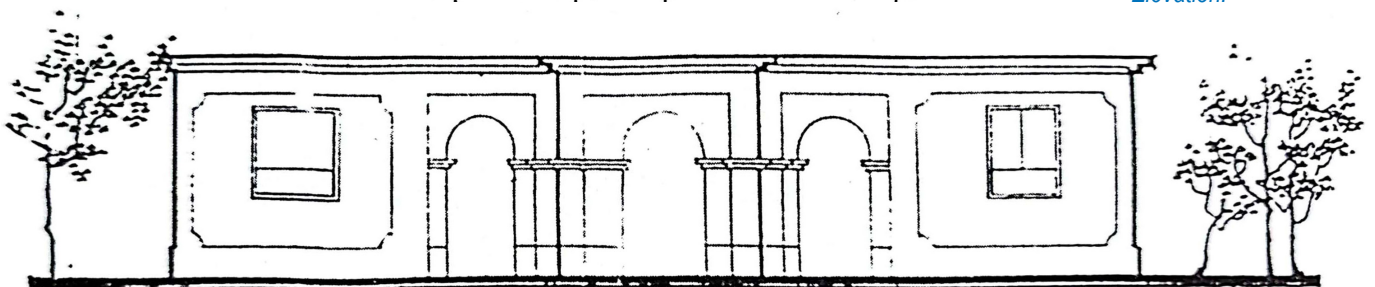
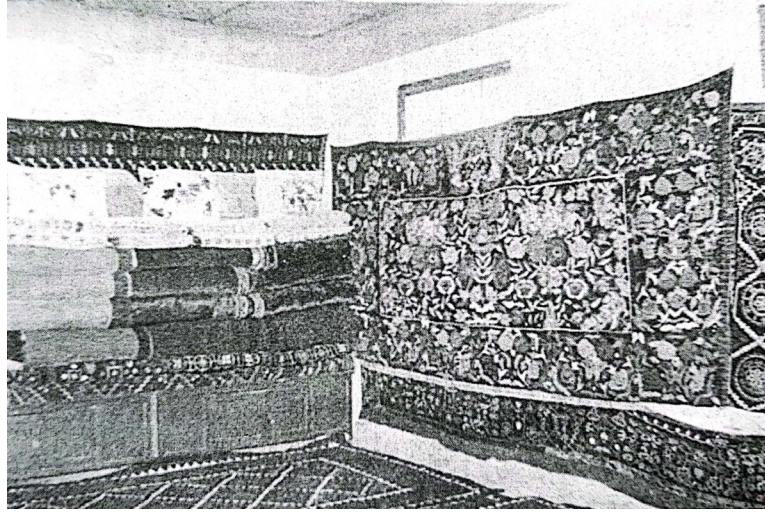


Fig.3-2-47 (bottom) Elevation.⁸³

Fig.3-2-48 The corner of a room is covered by tapestries and hanging wall artworks.⁸⁵



residential spaces brought by their tapestries and hanging wall artworks (Fig.3-2-48⁸⁵). Evidently, the Kyrgyz's material culture of colourful tapestries is carried over from their yurts to their new houses.

Interestingly, Yan Da Chun does not hesitate to offer his critical opinion on the rather unestablished architectural style of the recently settled Kyrgyz communities as he comments on how spatially inefficient the corridors are by being too large for their needs. It is needless to say, these buildings are far from vernacular, and the amount of collective wisdom and cultural identity they express and represent is yet to be investigated. Although Yan Da Chun does not offer much information on the degree of government involvement in the Kyrgyz's change in lifestyle, he does give credit to the government for improving their living standards for moving them out of yurts into houses and for providing them the opportunity to "have Chinese and Western furniture, and install local heating, solar showers and electric water heaters".

The introduction of modern furniture and equipment to vernacular architecture is one of the government's main tactics to alter the indigenous people's domestic spaces and lifestyles. It also provides evidence to their claim of improving their quality of life, hence supporting policies to "modernize" the rural ethnic communities such as the Kyrgyz. This concept is further discussed in later chapters.

The Kazakhs (哈萨克族)

The Kazakhs are a Turkic group native to Central Asia and Eastern Europe. Within the borders of China, there are over 1.6 million Kazakhs living in Ili Kazakh Autonomous Prefecture, Barkol Kazakh Autonomous County, Mori Kazakh Autonomous County and Aksay Kazakh Autonomous County in northern Xinjiang.⁸⁶ Their language is Kazakh or Qazaq, belonging to the Turkic language family. Like the Uyghurs, the Kazakhs have also converted to Islam in the 10th century. However in remote nomadic communities, many still maintain their ancient customs and beliefs in ancestral deities and tribal heroes.⁸⁷

⁸⁵ Ibid, 271.

⁸⁶ Ibid, 175.

⁸⁷ Ibid, 179.

The nomadic herdsmen live primarily in mobile yurts all year round in the mountainous regions of Xinjiang. They usually live together with a few families of the same ancestor, each family occupying a yurt. ⁸⁸ The yurts have a simple construction and appearance. Their load-bearing elements are made of local materials with high tensile strength, giving them a strong resistance against wind (Fig.3-2-49⁸⁹). ⁹⁰

Colours carry special meanings for the Kazakhs. Their aesthetic culture is embodied with rich symbolism. For example, blue represents nobility, cheerfulness, and generosity; red represents the sun, light, flame, and enthusiasm; white represents purity, truth, and joy; yellow represents wisdom and depression; black represents the earth and sorrow; green represents youth, spring, prosperity, and life. The Kazakhs choose their colours carefully in their architecture. They decorate their yurts with vibrant tapestries and hanging curtains with a large variety of shapes and patterns (Fig.3-2-50⁹¹). ⁹²

88 Ibid, 182.

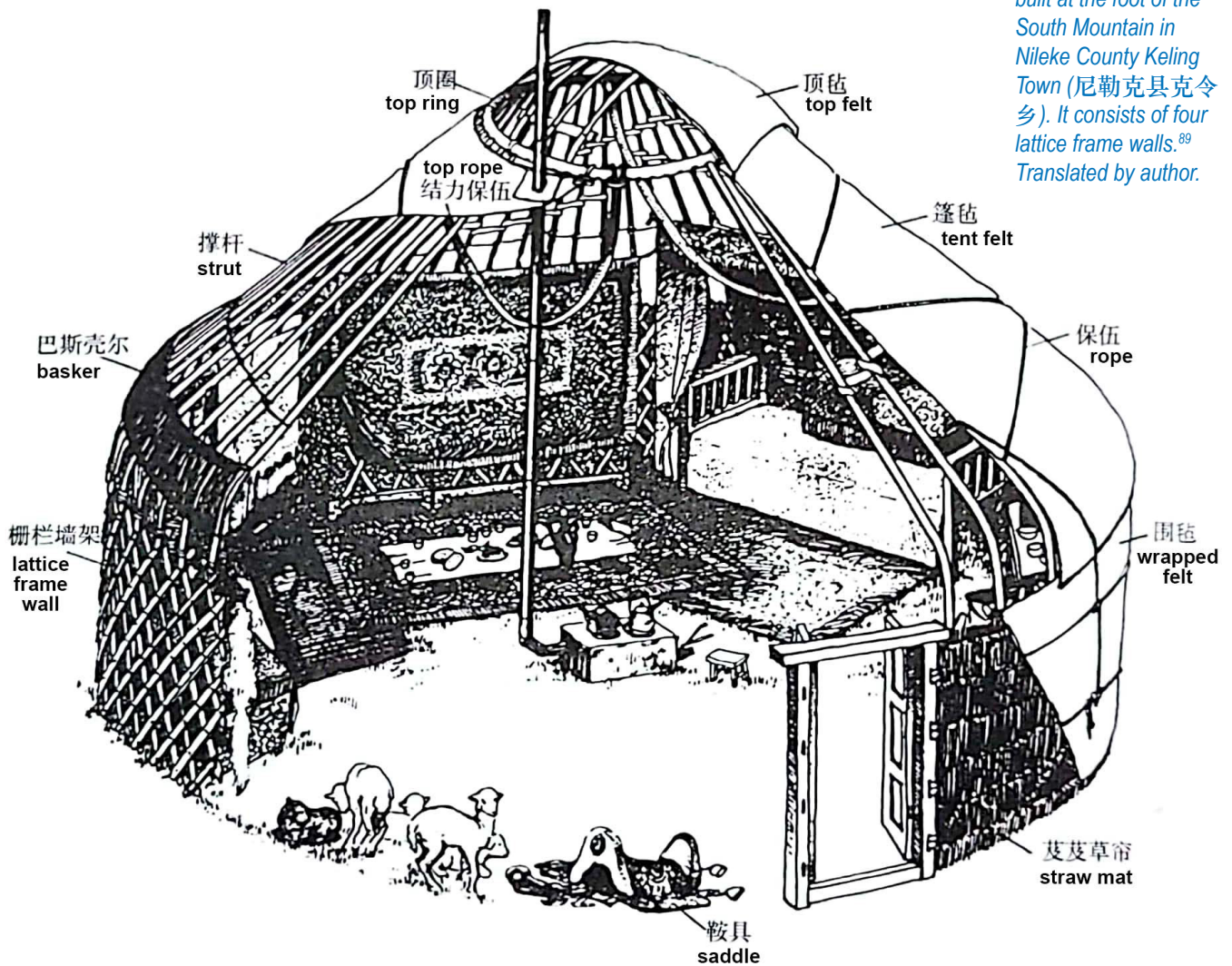
89 Ibid, 196.

90 Ibid, 184.

91 Feng Wei. "Kazakh Yurt, Zhaosu, Xinjiang China." Flickr. November 1, 2015. <https://www.flickr.com/photos/fengwei888/22490389570>

92 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018: 182.

Fig.3-2-49 Dissected perspective of a yurt built at the foot of the South Mountain in Nileke County Keling Town (尼勒克县克令乡). It consists of four lattice frame walls. ⁸⁹ Translated by author.



Chapter 3 Tradition and Contextualization of Vernacular Architecture

Fig.3-2-50 Yurts of Kazakh people on grassland, in Zhaosu County, Yili Kazakh Autonomous Prefecture. Photograph by Feng Wei.⁹¹



However, their nomadic lifestyle is quickly transforming under government influence in recent decades, as Yan Da Chun states:

Before the founding of New China, the Kazakhs had no villages or towns. Most of the very small number of people who were engaged in agriculture and other occupation part-time or less were mixed with other ethnic groups, and there were no settlements that reflected their own ethnic characteristics. After the founding New China, animal husbandry engaged by the Kazakh people has greatly developed, and the productivity has gradually increased, making it possible for the Kazakh people to gradually change their nomadic lifestyle and start having a settled and semi-settled lifestyle. Funded by the state, the government sent people to organize the design and establishment of Kazakh pastoral villages and agricultural villages.

From then on, the elderly do not have to follow the yurt and face the wind and rain, and travel long distances to and from, and the children can go the horseback primary school without travel struggles. In the construction of settlements in recent years, through the joint efforts of the Kazakh people and technical personnel of various ethnic groups, the residential atmosphere and architecture forms with Kazakh cultural connotations have emerged in its buildings and in the residential areas composed of buildings. But this is just the beginning. The prospect of exploring and creating the local architectural style of the Kazakh people is broad and beautiful, and there is a long way to go.⁹³

The government has encouraged the Kazakhs to transition from nomadic to settled lifestyle, establishing villages composed of buildings that feature their “ethnic characteristics” in their architectural style. Perhaps they can argue that the introduction of modern way of living and production modes have prompted the traditionally nomadic communities to settle in agricultural villages, or they can point out the improvement of economic productivity and living conditions, it would be difficult to claim these new “Kazakh pastoral villages and agricultural villages” are truly vernacular, if vernacular at all, since those who have organized their design and establishment are deployed by the government. It begs the questions: do these government-organized and government-funded villages represent the Kazakh’s cultural systems of values and beliefs? If so, to what degree? Whose collective wisdoms and experiences do they actually demonstrate? The answer to these

93 Ibid, 184.

questions can perhaps be found in how the villages came to be. Yan Da Chun states:

Since the 1970s, the government systematically selected suitable sites to build settlements for Kazakh herdsmen. Today most of the herdsmen have their own villages. The family members of the settled herdsmen may also carry out a small amount of agricultural production near the house.

In the past, the Kazakh people spent most of the year living nomadically near their yurts, and only lived in their “Dongwozi (冬窝子, meaning winter residences)” for four or five months. Once they drove their flocks to the spring and autumn and summer pastures, no one would take care of these houses, which prevented these Kazakhs’ primary residences from being complete and good. So they did not pay much attention to the skills of building houses and the production of fixed furniture in the houses. Therefore, in the current settlements, the construction and interior furnishings of various houses still maintain the layout of a large number of yurts and the simple housing form of Dongwozi. But it is precisely because they have just started in residential architecture, they have few outdated rules and restraints, and their architectural ideas are emancipated. So it is easy to absorb the strengths of other ethnic groups, so most of their new buildings incorporate the style of the Uyghurs who live with them in the local area. Some architectural vocabulary of the Hui and Han ethnicities formed the initial characteristics of modern Kazakh settlements.⁹⁴

This passage offers two key information: first, great efforts have been made by the government to systematically change the Kazakhs’ nomadic livestock-herding lifestyle to settled agricultural-production lifestyle; second, the Kazakh’s residential architecture today is, in a sense, the consolidation of borrowed ideas from nearby ethnic groups, such as the Uyghurs, the Huis and the Hans. Yan Da Chun is especially keen on framing the Kazakh’s apparent lack of construction experience and established architectural forms as a positive, as it allows the integration of other

94 Ibid, 192.

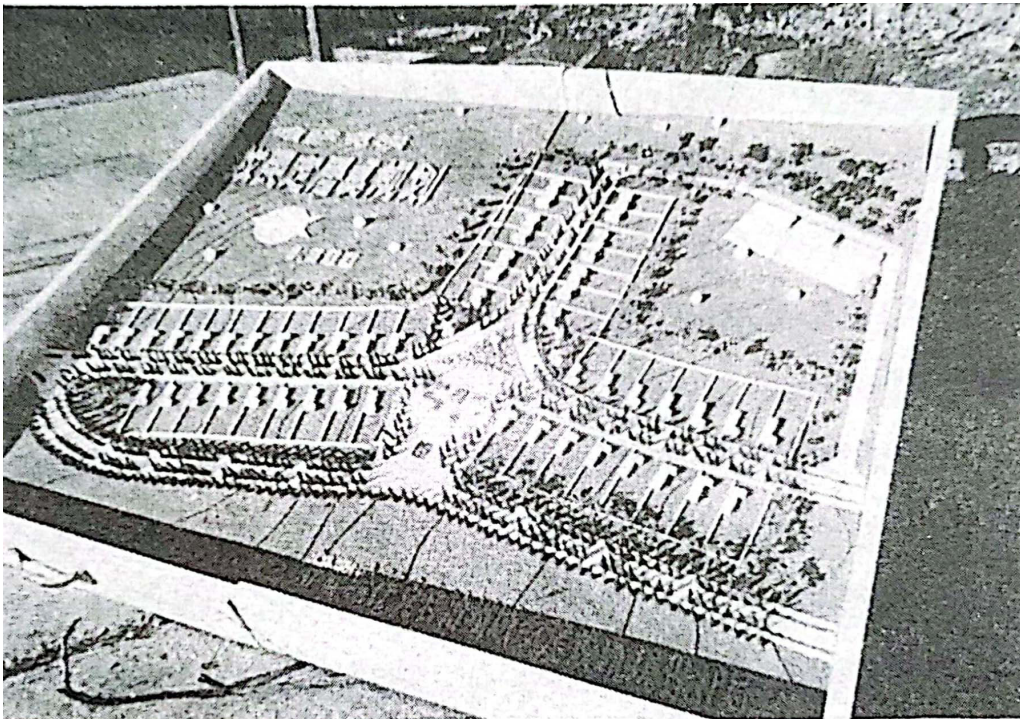


Fig.3-2-51 Planning of a herdsmen settlement in Wuzeng Township, Nileke County.⁹⁵

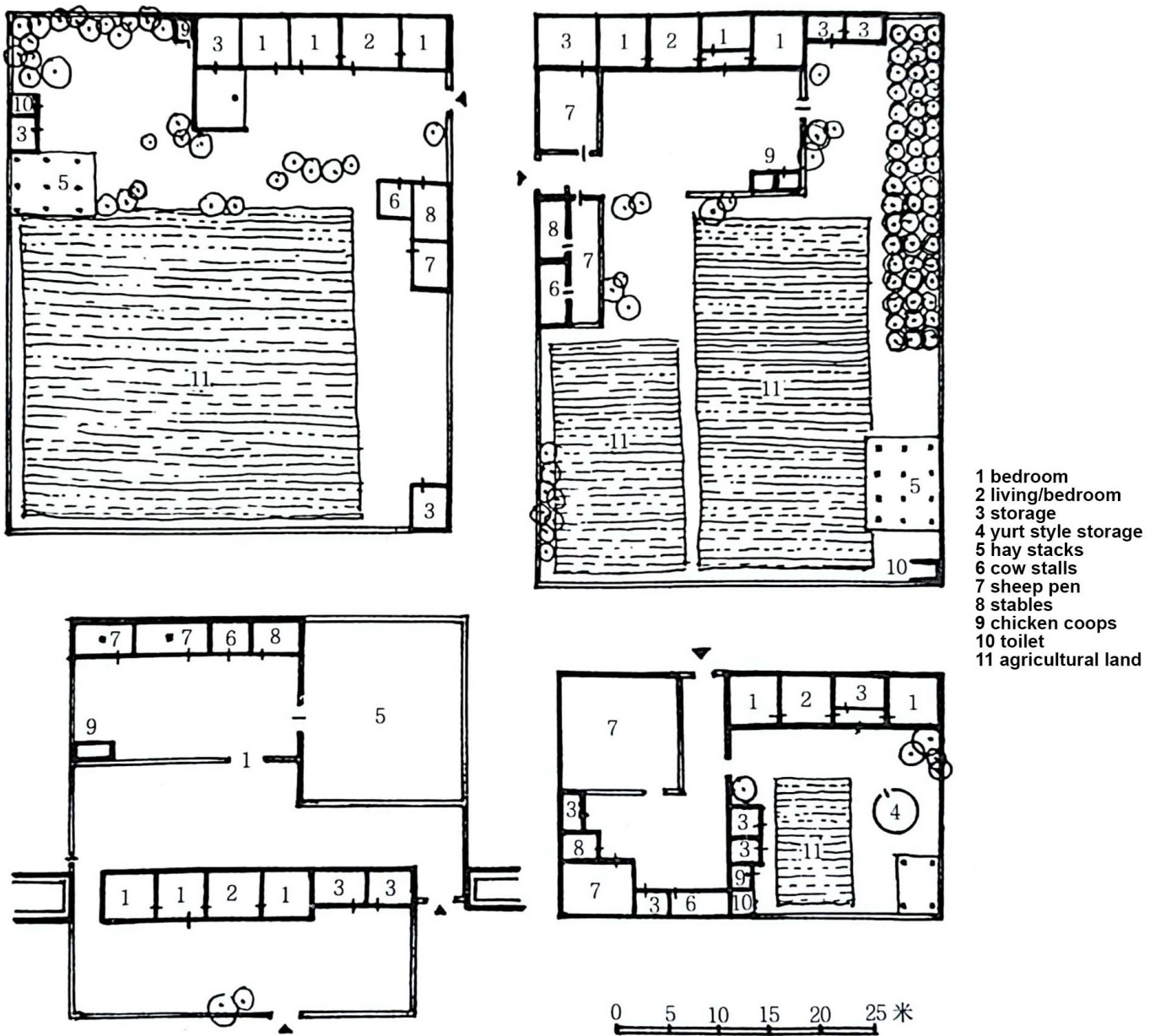


Fig.3-2-52 Plans of four typical courtyard layout.⁹⁷ Translated by author.

more settled ethnicities' architectural styles in their new settlements. Later, Yan Da Chun elaborates further, that except for a very small number of original settlements, most of the settlements today were built in the past 30 years, and most of them were planned and designed by local authorities and leaders. All courtyards are neat and clean, of the same size, and lined up linearly along the road (Fig.3-2-51⁹⁵). Most of the households have the same orientation. In settlements with more households, the roads are laid out in a chessboard pattern. Within each square of land, around 10 households can be arranged.⁹⁶ He also provides four typical courtyard layouts in Kazakh settlements (Fig.3-2-52⁹⁷) that take on the rectilinear shape of the allotted land.

I do find it somewhat ironic that on one hand, the Kazakhs' apparently under-established architectural tradition is considered constraint-less and emancipated, and

95 Ibid, 192.

96 Ibid, 192-193.

97 Ibid, 193.

on the other hand, the government is encouraging them to move from Xinjiang's vast pastoral landscape to rectilinear boxes lined up in rows. It does make me wonder whether it is what the Kazakh communities want, and whether they are happy with the change. Unfortunately, uncensored opinions directly from the Kazakhs are difficult to find. One small detail I find particularly interesting in the four typical layouts above is the existence of (4) yurt-style storage in the floor plan at bottom right. Even with a settled lifestyle, some still seem to continue the habit of building yurts for extra living spaces.

Undeniably, the government's systematic project of planning and building villages and towns for the nomadic people has drastically altered their lifestyle and production modes. Although the community might have some say in how they arrange and decorate their living interiors, they are bound within the boxes drawn by local authorities. To an extent, some of them have lost the architectural dialect they have spoken for generations, and – with the help of the government – have created another dialect derived from multiple local dialects. Cultural customs and material traditions have been scrambled and selectively reassembled. Perhaps within a few generations, the community has the tenacity to redefine their identity and re-establish their traditions in their architecture, but what will it look like?

CHAPTER 4. GOVERNMENT-LED INTERVENTIONS ON VERNACULAR ARCHITECTURE

“Feelings of personal identity and group membership are often grounded in metaphors of rootedness to land. The individual’s attachment to place is reinforced through shared cognitive maps and embodied social practices that make place meaningful for a community. This aspect of identity, in which group members experience solidarity simultaneously with a social collective and with a physical place, may be called chthonic identity. Personal and collective attachments to place are critical basis of identity in general, since claims to political entitlement are often understood and advanced through them. If a state can undermine the cognitive and material bases supporting this feeling of belonging, the ability of groups to advance claims to political entitlement is weakened.”

--- Jay Dautcher, *“Desettling the Land: The Destruction of Uyghur Chthonic Identity” in Down a Narrow Road*¹

This chapter argues that the Chinese government and Xinjiang’s local authorities are the masterminds and administrators of architectural renewal projects that are responsible for the rapid transformations and disappearance of vernacular architecture. They recognize the storytelling, placemaking and identity-shaping functions of architecture as powerful tools they can use to minister and assimilate the ethnic minorities’ behaviours, thoughts, and lifestyles. The authorities proactively alter and redefine Xinjiang’s indigenous residents’ domestic spaces and settlements in accordance with government policies and goals, dismissing their personal and collective attachment to their homes and places, and consequently imposing ruling power over the communities.

In 2017, Xi Jinping announced his “Beautiful China” Initiative. Although it was originally pitched as a campaign to combat climate change and clean up China’s polluted cities, it was also interpreted as an opportunity to improve basic sanitation practices across the country. Xinjiang’s government officials have cited Xi’s call to “build a beautiful China” to justify the “beautification” programmes that they have implemented in ethnic minority communities across Xinjiang. As a part of the “Three News” campaign, the “Establishing a New Atmosphere” initiative has inspired the launch of “Beautiful Home (美化家庭)” project in Xinjiang in 2018. The project first prioritized individuals with disabilities or extreme difficulties and low-income families,

¹ Jay Dautcher, *Down a Narrow Road: Identity and Masculinity in a Uyghur Community in Xinjiang China*, Harvard East Asian Monographs 312. Cambridge, Mass: Harvard University Asia Center, 2009: 50.

and later extended its scope to more than just the poverty-stricken counties in southern Xinjiang. Officials believe through their architectural “improvement” projects, they will be able to “refine mental outlooks, improve sanitation, cultivate good habits, and eliminate outdated habits and vulgar customs”² of these rural impoverished families.

Specifically, this chapter examines the implementation and implications of the “Three News” Lifestyle campaign introduced by Xinjiang government in 2017 (see section 2.2.3). In the guideline for the campaign, “resolve issues of dirt, disorder and destitution” and “advance the construction the construction of beautiful villages” are some of the main goals under “establishing a new atmosphere”. This is based on the perception that Xinjiang’s old vernacular architecture and villages are harbors of “dirt, disorder and destitution” due to the residents’ “outdated habits and vulgar customs”. They are considered as hindrance to cultural and economic progress and thus require resolution, hence justifying the radical modification of Xinjiang’s traditional domestic spaces and settlements of, which aim to alter the residents’ lifestyle to fit within the principles of modern life laid out by the government, to adopt the customs, practices, and values defined by Chinese Communist-style secularism, and to contribute to the economic production model in tune with government policies and goals as a part of the “Belt and Road” Initiative. Additionally, the “Three News” Lifestyle also advocates for the development of Chinese-style socialism’s core values, the spiritual and emotional improvement towards modernism, the participation of patriotic and cultural activities that deny religious extremism, and the assertion of the rule of laws. This chapter studies how the government aims to achieve these objectives through the modification of domestic orders, the establishment of planned modern villages, demolition and reconstruction of old cities and towns; and analyzes the social, cultural, and economic impacts of these architectural projects on the local residents.

At the same time, the government is using architecture – through selective preservation, demolition, renovation, and construction – as a powerful tool to manipulate the locals’ movements, thoughts, and lifestyles, reinforcing the state’s propaganda of ethnic unity and economic prosperity, and thus asserting its ruling authority through the newly established architectural and social order. Many indigenous communities are displaced from their ancestral homes and relocated to newly built concrete high-rises or homogenous farmhouses in the process of government-directed demolition, renovation and construction. As Jay Dautcher states in the opening passage of this chapter, their feelings of personal identity and community belonging are thus undermined, weakening their claims to political entitlement. If we examine the recent transformations of vernacular architecture through the lens of current political climate in Xinjiang, it is plausible to connect them to methods of population control, assimilation, and colonization.

In Timothy Grose’s article “If You Don’t Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space”, he relates the Chinese government’s architectural renovation and reconstruction projects to Timothy Mitchell’s theory of colonial “enframing”, which is a process of transforming housing units and rebuilding villages that conform daily life to the social and political structures that mould and groom good citizens in the colonial state. It is very common for colonizers to reprimand indigenous living spaces as unsafe and unhygienic, and introduce and enforce new rules and standards in attempt to assimilate the local population. They establish public buildings and infrastructure, such as schools, government buildings, roads, etc. to impose a new social colonial configuration and inscribe symbols of state

2 Timothy A. Grose. “If You Don’t Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space”. *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 2052–2073. <https://doi.org/10.1080/01419870.2020.1789686>.

Chapter 4 Government-led Interventions on Vernacular Architecture

authority, legitimizing the colonizer's ruling power over the indigenous communities. According to Timothy Mitchell, "enframing" instills order through two steps:

1. "Imposing microphysical power or regulation of behaviour brought about from the reordering of space"; and
2. "Creating metaphysical power or instilling the deeply-held belief that this order is natural and eternal".³

In Xinjiang, the government's reconfiguration of social order through the transformation of domestic spaces and the reconstruction of rural and urban fabric is not dissimilar to "enframing" strategies commonly adopted by colonial settlers. Changes in domestic functions and spatial arrangements can regulate and condition the residents' behaviours, thoughts, and lifestyles. Documented evidence also suggests that the government does attempt to impose their new architectural and social order onto the indigenous communities by arguing for the natural replacement of the old with the new or the natural evolution of the old to the new.

The parallel between Xinjiang and other colonized regions can also be drawn if we compare the Chinese government's architectural projects to those of colonizing power stated by Lawrence J. Vale in *Architecture, Power, and National Identity*:

*In places where a previously existing indigenous settlement is found, there is a similar range of social attitudes implicit (or explicit) in the various options for transforming urban space. The colonizing power may choose to (1) occupy what is already there, (2) modify or extend what is already there, (3) tear down the existing settlement and build anew, (4) incorporate the existing system into a larger planned development, (5) building a new settlement adjacent to the old but separate from it, or (6) building a new settlement at considerable distance from the old.*⁴

Breaking these options down in the case of Xinjiang, there is evidence showing that the Chinese government has chosen to execute many of these options in their large-scale architectural projects in Xinjiang. The authorities have (2) modified what is already there by introducing modern furniture into vernacular architecture, eliminating traditional residential functions, and altering their spatial arrangement. They have (3) torn down existing settlements and build anew, such as the Old City of Kashgar and Urumqi, most of which were demolished to make room for new residential and commercial developments. They have (4) incorporated the existing system into a larger planned development. One example is Gaotai Residential Area, whose vernacular architecture and urban texture are incorporated into Kashgar's tourism development. They have (5) built new settlements adjacent to the old but separate from it. In regions near the Old City of Kashgar, new development projects such as high-rise condominiums and planned urban-rural towns have been emerging at a considerable scale and pace. They have also (6) built new settlements at considerable distance from the old. In recent years, many new planned homogenous villages appear in nodes along major highways, away from the old vernacular settlements. Thus a compelling argument for the correlation between these government-directed architectural projects and colonization can be made.

Focusing on government-led interventions on Xinjiang's vernacular architecture, this chapter is organized based on spatial scale, starting from domestic spaces, courtyards, villages and finally cities. However it is important to keep in mind that all these architectural "improvement" projects are happening at a comparable scale

³ Timothy Mitchell. *Colonising Egypt*. Berkeley: University of California Press, 1991.

⁴ Lawrence J. Vale. *Architecture, Power, and National Identity*. 2nd ed. London; New York: Routledge, 2008, 76.

throughout the entire province; and their level of intrusiveness and impacts on indigenous architectural traditions are also arguably comparable. This chapter first studies the government's solutions to "resolve issues of dirt, disorder and destitution" it finds problematic in Xinjiang's vernacular architecture, by enforcing modification of vernacular domestic spaces and functions. It then examines how the government "advances the construction of beautiful villages", by pushing for the reordering of courtyard spaces in newly constructed homogenous towns. Furthermore, these policies on demolitions and reconstructions of old towns and cities – focusing specifically on the Old City of Kashgar, most of which have been demolished without input from or discussion of alternatives with the local residents – have caused the discontinuation of centuries-old architectural traditions, consequently erasing and redefining the local communities' personal identities and feelings of community belonging. These altered and new built environments redefine the residents' lifestyles, cultural and collective identities, actively and passively enabling and reinforcing the government's political agenda.

4.1. Modification of Domestic Spaces and Functions

As mentioned in subchapter 2.2, to ensure thorough policing of Xinjiang's ethnic minorities and eliminate all potential threats to social stability, the government has adopted notoriously intrusive tactics such as mandated house visits, nicknamed “fanghuiju (访惠聚)”, to collect personal information from household to household.¹ However, I speculate that these house visits may serve other purposes than detecting suspicious and undesirable behaviours. They are also opportunities for the government officials to meddle with the residents' private lives and modify their domestic spaces and functions.

In an online article published in 2017 by the Communist Youth League of Xinjiang, a photo essay documents Uyghur domestic “backwardness” and highlights the government's efforts to “improve” their lifestyles and “correct” their behaviours. The title of the article is “Family Love: Just with A Kang Table and A Lamp! -- Side Notes on the Jieqin Week of the Youth League Committee of the Autonomous Region”. The “Jieqin (结亲)” Campaign can be translated to the “Pair Up and Become Family” Campaign, because the concept of “jieqin” comes from Xi Jinping's phrase “民族团结一家亲 (minqu tuanjie yijiaqin)” he mentioned on April 27th, 2014 when he was visiting a district in Kashgar, referring to the idea that people from different ethnic groups should be united as a family.² The author starts the article with a corny introduction:

Just like the suona (唢呐, a wind instrument used during celebrations and funerals) connects the joys and sorrows of the rural people in southern Xinjiang, a kang connects the family life of the rural people in southern Xinjiang. During the “Jieqin Week” activity of ethnic unity of the Youth League Committee of the Autonomous Region, the first batch of party members and cadres ate, chatted, studied and rested on the kang with their relatives. Everyone knew what was missing on the kang and what their relatives wanted. Kang table and desk lamp, just like suona and the warm kang, connect the love between party members and cadres and relatives, forming a song of the new era.³

Here, the party members' “relatives” refer to the rural indigenous people of ethnic minority, establishing that the bond between them is equivalent to love between family members. As a “Jieqin Week” activity, government officials conducted mandated house visits that are phrased as casual visits to their relatives. The rural families hosted the officials; and in return, the officials decided they knew what the rural families need and want on their kang – raised earth platforms that are usually covered in carpets and serve as the hospitality and activity center of a household (see 3.1.1 under heading “Vernacular Houses in Oases”) – and provided them a kang

1 “Apartheid with Chinese characteristics: China has turned Xinjiang into a police state like no other.” The Economist. May 31, 2018. Published June 2, 2018. Accessed February 3, 2021. <https://www.economist.com/briefing/2018/05/31/china-has-turned-xinjiang-into-a-police-state-like-no-other>.

2 The University of British Columbia, ‘The “Jieqin” Campaign: Ethnic Integration, Surveillance, and Grassroots Governance’, Xinjiang Documentation Project, accessed 19 July 2023, <https://xinjiang.sppga.ubc.ca/chinese-sources/chinese-academic-dis-course/jieqin-结亲/>.

3 Xinjiang Communist Youth League. “Family Love: Just with A Kang Table and A Lamp! -- Side Notes on the Family Uniting Week of the Youth League Committee of the Autonomous Region (2)”. Weixin Official Accounts Platform. 16 December 2017. http://mp.weixin.qq.com/s?__biz=MzA4NjEyMDE0Mw==&mid=2650278776&idx=1&sn=7956f862333c2cd0aff0a020f3e6472a&ksm=87c128d8b0b6a1ce3951386c2b986840d3389aa43fa2cb79ef70f08e3c62c8090dd1ec3a177a#rd.

table and a desk lamp, the necessary daily objects that would significantly improve their life... and not before critiquing their inconvenient living conditions. The author writes, "The practice of life is our eyes to discover problems, and the 'Jieqin Week' is our opportunity to discover problems. This time, we stayed at a relative's house, and the inconvenience of their life gave us a new discovery." Followed by this is a series of images, accompanied by captions pointing out problematic situations that need modifications (Fig.4-1-1~5⁴), that include:

- "Eating like this on the kang? Not convenient."
- "Studying like this on the kang? Not convenient."
- "Washing face in the dark beside the stove? Not safe."
- "Cooking like this on the kang? Not convenient."
- "Letting kids do homework like this? Not healthy."⁵

4 Ibid.

5 Ibid.



Fig.4-1-1 Caption reads: "Eating like this on the kang? Not convenient."⁴

在炕上这样吃饭? 不方便

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Fig.4-1-2 Caption reads: "Studying like this on the kang? Not convenient."⁴ The man in the center seems to be a government official.



在炕上这样学习？不方便

Fig.4-1-3 Caption reads: "Washing face in the dark beside the stove? Not safe."⁴



在炉边摸黑洗脸？不安全

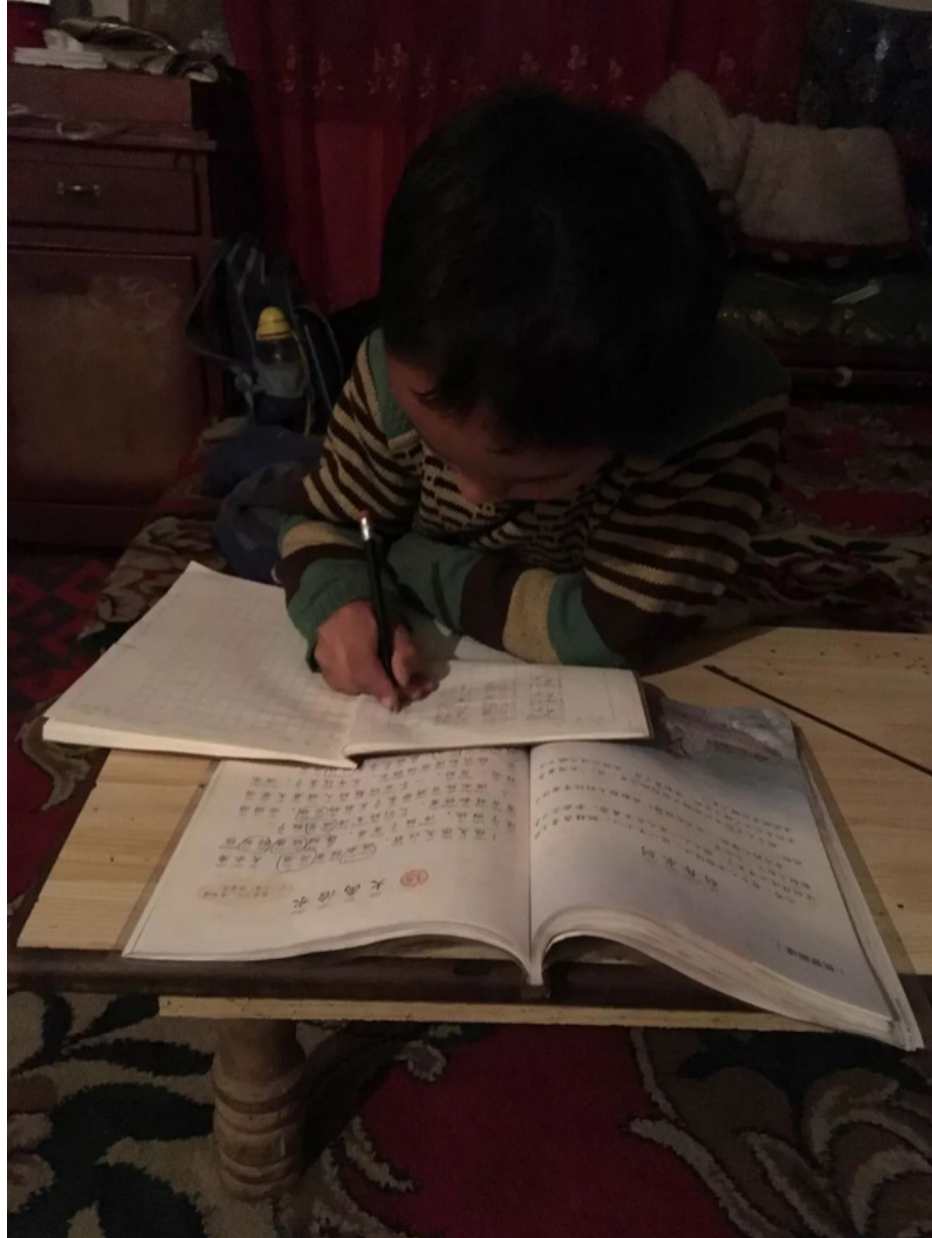


Fig.4-1-4 Caption reads: "Cooking like this on the kang? Not convenient."⁴

在炕上这样做饭？不方便

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Fig.4-1-5 Caption reads: "Washing face in the dark beside the stove? Not safe."⁴



让孩子这样写作业？不健康

Captured in these images, the rural family members are doing various daily activities in their home, while the captions below the images – all of them have the same sentence structure of “Doing X like this? Not good” – convey a very straightforward message: these old living habits are detrimental to their quality of life. The culprit is determined to be a lack of modern furniture and technology in their domestic spaces. The author writes:

Although we had purchased televisions and rice flour oil for some relatives before, we still insisted on buying kang tables and lamps for them at our own expense during the few days we lived with them. Our team leader, Comrade Yang Qian, deputy secretary of the Youth League Committee of the Autonomous Region, quickly contacted the resident work team to coordinate vehicles, and purchased good-quality handmade wooden kang tables for 18 relatives and lamps for 20 relatives.⁶

⁶ Ibid.

This is followed by another series of images showing the difference these kang tables and lamps have made in the rural families' life (Fig.4-1-6~10⁷). The captions below the images are phrased in direct contrast with the previous captions:

- “With a new kang table, gathering is warmer.”
- “With a new kang table, eating is more convenient.”
- “With a new kang table, doing homework is more efficient.”
- “With a new desk lamp, [kids] pay more attention when learning.”
- “With a new desk lamp, handwriting is neater.”⁸

7 Ibid.

8 Ibid.



Fig.4-1-6 The caption reads: “With a new kang table, gathering is warmer.”⁷

有了新炕桌，相聚更温馨



Fig.4-1-7 The caption reads: “With the new kang table, eating is more convenient.” The man on the right seems to a government official.

有了新炕桌，吃饭更方便

Fig.4-1-8 The caption reads: "With a new kang table, doing homework is more efficient."⁷⁷ The woman on the left seems to be a government official.



有了新炕桌，作业更有效



Fig.4-1-9 The caption reads: "With a new desk lamp, [kids] pay more attention when learning." The man on the right seems to be a government official.

有了新台灯，听课更认真



Fig.4-1-10 The caption reads: "With a new desk lamp, handwriting is neater."

有了新台灯，字迹更工整

This series of images captures the family members doing the same daily activities but with the addition of a kang table and a desk lamp. Their captions share the same sentence structure of "With a new kang table/desk lamp, doing X is better", directly correlating the improved living situation and increased convenience to the gifts of modern furniture and appliance. In many of these images, the government officials appear to be sitting and interacting with the rural families, positioning themselves as caring and knowledgeable elders who are teaching their less wise relatives, as selfless benefactors who provide light and hope to their less fortunate relatives. This mentality is especially apparent in the passionate poem, with which the article concludes:

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*The kang table is not big,
But it can place the relatives' meal,
It can place a stack of books for the children,
It can bring convenience to the relatives' lives,
It can bring fun to the children's learning.
The desk lamp seems inconspicuous,
But it can illuminate children's books,
It can illuminate our smiling faces,
It can even illuminate the hope our lives.
[...]
Happy life and smiling faces of the relatives
Is our original intention.⁹*

The Communist Youth League Committee's introduction of a kang table and desk lamp into vernacular houses is only the tip of the iceberg of a much larger political campaign of modifying and modernizing the living quarters of Xinjiang's indigenous ethnic groups. The local authorities intend to not only change their furniture and configuration of their domestic spaces, but also alter their movements and living habits. A quote from 2018 from Liang Bin, Local Party Secretary of Qaghiliq County in Kashgar, suggests his disdain for Xinjiang's ethnic minorities' "outdated" lifestyle:

In the past, the situation of rural households was relatively poor: they didn't cultivate good living habits, most houses lacked beds, not to mention any other furniture. Families just slept on the floors or on mats on their kang(supa); some didn't even wash them regularly. These habits are unhygienic, unhealthy, and contrary to a modern, civilized lifestyle.¹⁰

Liang Bin conveys three opinions that are shared among local government officials: first, the poor rural households lacked proper understanding of hygiene and healthy lifestyle. He clearly establishes a social hierarchical difference between the urban rich (Han population) and the rural poor (ethnic minorities); second, their choice of furniture at home – such as the lack of bed, placing unwashed mats on kang – is a major reason why they currently have lived in such a poor situation; and third, their lifestyle was in opposition to the preferred "modern, civilized lifestyle", and thus was in need of guidance and correction. Aside from the obvious discriminatory tone, it is telling of the government's motive to reconfigure the rural households' domestic spaces to the standards of "civilized" and "modern" China, as an indicator of social progress. As a necessary step to fix the "backwardness" of Xinjiang's rural families of ethnic minorities and advance towards modernity, authorities' intervention in their domestic life and spaces is thus justified.

As a part of "Beautiful Homes" project, government officials have mandated a series of architectural updates in traditional domestic homes. One example of these updates is the demolishing of supas (Uyghur outdoor kang). Some officials have demanded the supas to be removed, deeming them unsanitary, inconvenient, and detrimental to the resident's physical and mental health. In 2018, the Maralbeshi County government has put up a post written in Uyghur language that demanded the residents to "smash up" their supas and rid of their habit of laying out mats and

9 Ibid.

10 Timothy A. Grose. "If You Don't Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space". *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 6. <https://doi.org/10.1080/01419870.2020.1789686>.



Fig.4-1-11 (top) CCP “friends” help to destroy a supa in a Uyghur home (from Twitter).¹¹



Fig.4-1-12 (bottom) Uyghur family destroys their supa.¹²

rugs in the space (Fig.4-1-11¹¹, 12¹²). Government officials in Kona Shärä have even proclaimed that “civilization begins at a dinner table”, in other words, at the lack of supa.¹³

In addition to supa, mehrabs – important symbolic markers that orient the Uyghur Muslims towards Mecca – are also ordered to be destroyed. Mehrabs – carved into interior walls in the form of arches or niches – inform the family members the orientation of prayer, and provide a convenient space for the storage of Qur’an and sometimes beddings (Fig.4-1-13¹⁴). In 2019, Radio Free Asia reports that mehrabs have been considered as “extremist” by officials and the residents in Ili, Kashgar and Hotan prefectures have to either destroy them or fill them in. If the mehrab is a part of a load-bearing wall and cannot be removed, then the house itself would be destroyed.¹⁵

11 Massimo Introvigne, ‘Uyghur Traditional Houses Destroyed by the Chinese Communist Party’, 11 July 2020, <https://bitterwinter.org/uyghur-traditional-houses-destroyed-by-the-ccp/>.

12 Ibid.

13 Timothy A. Grose. “If You Don’t Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space”. *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 11. <https://doi.org/10.1080/01419870.2020.1789686>.

14 Ibid, 6.

15 Ibid, 11.

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Fig.4-1-13 Mehrab with family's Qur'an and doppa (Uyghur square/round skull cap) behind supa.¹⁴



After these “outdated” or “extremist” architectural spaces and functions are gone, furniture such as tables, coffee tables, sofas, and beds enter the homes to acquaint the residents to a new “scientific, civilized, and healthy” life. Grose reports that the government has sent nearly 1.1 million “big brothers and sisters” to rural Xinjiang to live among Uyghur families in their “Four Commons, Four Gifts” campaign. “Four Commons” asks the cadres to eat, live, work, and study in common with the rural families; “Four Gifts” refer to their “gifts” of kindness and knowledge about policy, law, and culture to the families. During their 24 million house visits and 33 million interviews with local residents, the cadres also introduce new furniture into their domestic spaces, aiming to guide them towards a “healthy civilization”.¹⁶ An article from Hotan reports on the impact of these changes, stating: “Currently, people have tables for eating, children have desks for studying, and adults can even use their bookshelves to understand the Party’s preferential policies and transform their thinking from ‘benefitting from the country’s subsidies’ to ‘I’m going to throw off poverty’s shabby hat.’”¹⁷ This quote not only reveals that the government is proud of its accomplishments and is expecting gratitude from the residents, but also hints at the underlying political intention behind their “gifts” – the government is seeking to increase public approval among the rural minorities of Xinjiang for their policies that would alter the residents’ traditional domestic sensibilities.

Grose argues that the new furniture is not meant to merely update aesthetics, but rather, is the material object that is able to manipulate the residents and make their behaviours predictable. The government believes that the furniture can create a “civilized” environment that can improve the indigenous Uyghur’s living habits.¹⁸ Their interaction with the tangible world around them can condition them into altering their daily activities, customs, thoughts, and even social order, and introduce them to new desires and expectations of space. New modern furniture also became an reward itself, doled out by government officials. A woman from Yäkän expresses her

¹⁶ Ibid, 11.

¹⁷ Ibid, 15.

¹⁸ Ibid, 14.

excitement on the new changes in her homes:

I went to my neighbour's house and saw that their newly bought sofa and coffee table were so beautiful and comfortable. Our local cadre's relative has always been telling us that we need to live a modern life ... with her help, I bought a new sofa and teapot. When my family saw how modern these changes made our home, we were very happy.¹⁹

Although her words sound like performative political speech, it is evident that the government has effectively composed the narrative that they are entering the homes of the impoverished rural families as more affluent and educated relatives; and like visiting relatives from big cities, they bring thoughtful gifts of modern equipment and furniture, hoping to create a better living environment for their family members. Having received these gifts is then a subject of ostentatious display; and the gifts of furniture themselves become objects of desire and envy among the rural families. Through subconscious conditioning, competition among the residents to obtain the new furniture and to adopt the “modern” lifestyle reinforces the government’s implementation of new domestic orders, rapidly replacing the indigenous ones.

Furthermore, the new remodelled and re-ordered homes planned and built by the government – which are further elaborated in the next subchapter – lack the residential spaces and functions found in vernacular houses. Kang, supa, mehrab and etc., objects that tie the indigenous residents to their traditional religious and cultural practices in their homes are all absent in their newly built and renovated living spaces.²⁰ Articles that praise the government’s “architectural improvement” projects often show images of modern furniture filling the residents’ new concrete homes, in which the residents themselves are pictured either approved of their living conditions or grateful towards the Party and its leaders (Fig.4-1-14~16²¹).

I notice that the colourful carpets that traditionally cover the kang and supa are still present – albeit used as flooring – in some images while absent in others. In the

19 Ibid, 16.

20 Ibid, 11.

21 Timothy A. Grose. “Transforming Uyghur domestic space”. The Xinjiang Data Project. July 6, 2020. Accessed October 14, 2021. <https://xjdp.aspi.org.au/explainers/transforming-uyghur-domestic-space/>.



Fig.4-1-14 Domestic space transformed after government’s “beautifying” project, featuring modern furniture in new concrete homes. On the wall, a poster full of Xi Jinping’s photos says “happiness comes from struggle”.²¹

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Fig.4-1-15 Domestic space transformed after government's "beautifying" project, featuring modern furniture in new concrete homes. On the wall, a Chinese flag is hung.²¹



Fig.4-1-16 Domestic space transformed after government's "beautifying" project, featuring modern furniture in new concrete homes. White marble tiles line the floor.²¹



latter, in place of the vibrant carpets, white marble tiles line the floor, perhaps selected specifically to adhere more closely to the new sanitation standards, or to signal their complete departure from their traditional “backward” lifestyle. Despite the absence of government officials in these images, their influence can be clearly felt through the presence of the Chinese flag and the poster of the Party leader Xi Jinping that adorn the living spaces. The seemingly staged nature of these images suggests that these “gifts” of “modernity” and “cultural advancement” from the government are not to be refused by the residents.

In fact, evidence does show that the “gifts” are imposed and enforced on the receiving families. Those that conform to government-imposed standards of four separate zones are to be rewarded; and those that fail are to be punished. Government officials use awarding and public shaming tactics to teach the villagers that “poverty is graceful, wealth is honourable, laziness is shameful, and diligence is glorified”.²² Cadres in the Tagerairike Village in Hotan are reported to conduct random weekly inspections to determine the complaint households – who are given red banners – and deviant households – who are given black banners. These inspections evaluate the families’ commitment to the “five beauties”, which are

1. “An environment that is clean is hygienic”;
2. “Possessions that are placed neatly”;
3. “A living space that is laid out beautifully”;
4. “A green space that is pleasing”; and
5. “A family that is civilized and harmonious”.²³

All households in Airike Village in Hotan are inspected by officials from Toqsu County’s Women’s Federation and Party Committee, and are given “Beautiful Spaces” door plaques if they pass the inspections. Especially outstanding families are awarded with a red flag to serve as a model for other families. Alimjan, a resident of Duolaitebage County in Kashgar, expresses his proudness to have received the officials’ special recognition: “This is the first honour [certificate] awarded to my family. We will continue to work vigorously to beautify our home and will compete hard to retain this award.”²⁴ On the other hand, those who fail to pass inspections are subjected to parading and public shaming. During weekly village meetings in Maralbeshi County, the officials announce blacklisted households and give them a deadline to correct violations. Those who are blacklisted more than three times are made to stand on stage and promise to amend their faults.²⁵ Grose argues that the imposed modernity purposely partitions society, stating that in a colonized state, “state-mandated ‘civilizing projects’ impose a materially defined apartheid based on, one end, the state’s envisioned ‘order’ and its embrace by the periphery, and, on the other end, those who preserve indigenous norms”.²⁶ In other words, those who follow the government’s new orders are purposely distinguished from those who still uphold the traditional norms to compel all the colonized citizens to conform to the government-imposed new standards of living.

Above all this is the undeniable steady disappearance of traditional residential

22 Timothy A. Grose. “If You Don’t Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space”. *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 17. <https://doi.org/10.1080/01419870.2020.1789686>.

23 *Ibid.*, 16.

24 *Ibid.*, 16.

25 *Ibid.*, 17.

26 *Ibid.*, 17.

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spaces and functions and the loss of vernacular architectural and material traditions, either as the result of direct government interventions in indigenous homes, or of indirect subconscious conditioning through positive and negative reinforcements that manipulate the residents into accepting and wanting the newly-imposed domestic order. The residents' physical connection with their vernacular homes are severed and redefined by authorities who lack understanding and appreciation of their domestic customs and sensibilities. As the government brands the architectural tradition of Xinjiang's indigenous groups as "dirt, disorder, and destitution", they are dismissing the collective identity and inherited customs that are embodied in the residents' vernacular domestic sensitivity as hinderance of cultural and economic advancement. The supposedly unhygienic and unhealthy living habits on the kang/supa or beside the stove are "dirt"; the supposedly inefficient spatial layout with a multiplicity of pathways and rooms of unspecified functions are "disorder"; and the supposedly "backward" religious and cultural practices that are enabled by their domestic functions such as the mehrab are "destitution". Based on these reasonings, the plan for modifying or replacing their domestic sensitivity is justified and thus enforced, consequently indoctrinating them with a government-defined rationality of space and order. Connecting this to Mitchell's concept of colonial "enframing" – the process of elimination and replacement of domestic orders – it can be argued that through the re-ordering of domestic spaces, the government is regulating the rural minorities' behaviours, imposing regulating power over them, and instilling ideological belief in them that the domestic renovation projects are done by the government on their behalf – to bring them out of poverty and improve their living conditions.

4.2. Emergence of Homogenous Houses and Villages

Xi Jinping emphasized that the issue of agriculture, rural areas and farmers is a fundamental issue related to the national economy and the people's livelihood; and we must always take the solution of the "Three Rural" issues as the top priority of the work of the whole party. We must adhere to the priority development of agriculture and rural areas, and in accordance with the general requirements of prosperous industries, livable ecology, civilized rural customs, effective governance, and affluent life, establish and improve institutional mechanisms and policy systems for urban-rural integrated development, and accelerate the modernization of agriculture and rural area.

In recent years, Shufu County (疏附县) has vigorously carried out the "Three New" activities with the theme of "advocating new trends, establishing a new atmosphere, and establishing a new order" while vigorously implementing projects to benefit the people such as housing and enriching the people and transferring surplus labour to effectively improve the living environment of the villagers. Many villagers bid farewell to the traditional farm life; and their living environments and ways of living are gradually catching up with urban residents, living the life of urban residents.

Walking into Yingerike Village, Blakesu Township (布拉克苏乡英艾日克村), you can see neat rows of well-off houses and a clean and flat asphalt road. The roads are hardened, the living environment is cleaner, and this small village is undergoing a beautiful transformation.

Now 90 villagers have moved into the spacious and bright An Ju Fu Min (安居富民, which means to live peacefully and in prosperity) houses. The layout of the houses was changed from a layout consisted of carpets and kang to modern furniture such as sofas and tea tables. The interiors have a new look. Villagers are starting a new life (Fig.4-2-1').

Maimaitijiang Aishan (麦麦提江·艾山) was the first villager to put modern furniture in the village. After moving into the new An Ju Fu Min house, he bought sofas, coffee tables, wardrobes, and wooden beds to decorate the new house according to the way people in the city arranged it.

Talking about the happy life now, Maimaitijiang Aishan was so happy that he couldn't close his mouth from ear to ear. He said excitedly: "I have only seen such a beautiful house on TV before. To be honest, I have never thought that I can live in such a good house. We have also lived the life of city people. In the past, the floor used to be paved. Carpets are very difficult to take care of due to the large soil in the countryside. Now that we have bought new furniture at home, we can sit on a comfortable and soft sofa for meals. The children learn to sit on tables and chairs. Life has improved a lot. Thanks to the party and the government for letting us Have a good time."²

This excerpt is translated from a Chinese article written in 2018 discussing the

¹ JianGong Hou/侯剑供. "[Three New Life] Changing Ideas and Concepts, Villagers Realize Their Dreams and Live A Happy Life." 【三新生活】转变思想观念 村民圆梦幸福生活. FreeWeChat.自由微信. 29 January 2018. <https://freewechat.com/a/MzAwNzA5NDUyOQ==/2651774801/4>. Accessed March 24, 2022.

² Ibid.

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Fig.4-2-1 “The layout of the houses was changed from a layout consisted of carpets and kang to modern furniture such as sofas and tea tables. The interiors have a new look. Villagers are starting a new life.”¹



architectural changes brought to rural residents in Xinjiang given the wise guidance of China's leader Xi Jinping and the vigorous implementation by local authorities. Many online articles on the same topic typically follow the same format: praising Xi Jinping for his foresight, acknowledging local governments' efforts on following his policies and guidelines, providing numerical statistics on the progress of improving residents' living conditions by moving them into newly built modern houses and villages, and demonstrating the rural residents' gratitude in the form of direct quotations.

To understand the implications of this article, it is necessary to dissect the key terms first. “Three Rural” Issues (section 2.2.2) stand for agricultural issues, rural issues, and peasant issues. Xi Jinping has put heavy emphasis on solving these issues in recent years, urging the government to accelerate the construction of rural industries, deepen rural reform, promote the integrated development of urban and rural areas, and strengthen rural governance, thus advancing the modernization of rural areas.³ “Three News” Lifestyle (section 2.2.3) is a campaign introduced by the Xinjiang government in response to Xi Jinping's “Beautiful China” Initiative, and refers to “advocating a new lifestyle”, “establishing a new atmosphere”, and “constructing a new order”, which aims to eliminate traditional customs, modernize the rural poor, and implement a new ideological culture where the government and its laws determine the architectural and social structure.⁴

The vagueness of these political goals begs the question: what exactly are the old that needs to be “improved” or replaced by the “Three News”? Chen Zhengdong

³ Xi Jinping. “Persist in Solving the ‘Three Rural’ Issues as The Top Priority of The Work of the Entire Party | Bring the Power of the Entire Party and The Entire Society to Promote Rural Revitalization 坚持把解决好“三农”问题作为全党工作重中之重 举全党全社会之力推动乡村振兴”. The Government of The People's Republic of China 中国政府., 31 March 2022. https://www.gov.cn/xinwen/2022-03/31/content_5682705.htm.

⁴ Timothy A. Grose. “If You Don't Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space”. *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 8-9. <https://doi.org/10.1080/01419870.2020.1789686>.

states in *Xinjiang Houses* that many poor farmers and herdsmen living in rural areas with poor social and economic conditions lack adequate understanding of building materials, design and construction processes, and “refinement of physical beauty”. As a result, their architectural functions and technical processes of construction are still “crude and random”.⁵ He then lists the shortcomings of vernacular houses in terms of their forms, functions, spatial arrangements, materials, and disaster prevention. His main points – backed with photographs – are summarized as follows:

- 1. They have unreasonable layouts and confusing functions; their sizes are too uneconomically large to be efficient.** Because the poor locals lack financial resources and the overall comprehensive planning of their entire house, they often add more rooms to the back of the existing house when more space is needed, causing the spatial functions to be intertwined and disorderly. Their increased area cannot be fully used as the rooms lack a reasonable relationship with their living behaviours, resulting in a house that is not economically reasonable (Fig.4-2-2⁶).
- 2. They have poor indoor ventilation and lighting due to thick walls and small windows.** Due to local conditions, in order to avoid wind, sand invasion, sunlight exposure, and to regulate indoor temperature during extreme conditions – summer and winter, day and night – most of the houses have no to tiny openings on the exterior walls, which allows little ventilation and natural light penetration. This can cause bad indoor air quality; cooking and heating with coal-stoves can even create smoky indoor air, impacting the residents’ comfort and health (Fig.4-2-3⁷).
- 3. There is a lack of clear distinction between clean and dirty spaces, and between spaces of movement and spaces of stillness; thus sanitary conditions are poor.** Due to lack of overall consideration in the layout of the room and of the courtyard, some household faucets are improperly next to the door; and some livestock pens are poorly separated and full of foul smells, which increases the chance of disease transmission, and decreases agriculture production because trees, fruits, and vegetables are gnawed by the animals. Many internal functions and their corresponding furniture are moved to the outside, disregarding the difference between movement and stillness, and reducing privacy (Fig.4-2-4⁸).
- 4. There lacks adequate analysis on wood’s loadbearing capacity and requirements for its use in house construction.** Due to limited financial resources, material resources, and construction technology, using excessive materials can cause waste; using unsuitable materials can lead to bending, cracking, breaking; making poor construction mistakes can result in overlapping components, unbalanced joints, which are potential safety hazards (Fig.4-2-5⁹).
- 5. Their foundation and damp-proof treatment are often neglected.** Some houses are built without foundations or any damp-proof layer. In saline-alkali areas, brickwork can peel off layer by layer, reducing their loadbearing

5 Zhendong Chen. *Xinjiang Houses*, 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 263.

6 Ibid, 264.

7 Ibid, 264.

8 Ibid, 264.

9 Ibid, 264.



Fig.4-2-2 (top left) Disorderly space.⁶

Fig.4-2-3 (top right) Poor ventilation.⁷

Fig.4-2-4 (middle left) Sheep pen faces the door and window of living space.⁸

Fig.4-2-5 (middle right) Roof construction with untreated wood.⁹

Fig.4-2-6 (bottom) Examples of simple foundation and damp-proof treatment.¹⁰

capacity, and impacting their appearance and safety (Fig.4-2-6¹⁰).

- 6. There is a lack of overall consideration of earthquake prevention and fire prevention.** The houses' beams are made of untreated wood from native trees; and the roof is laid with boards, small branches and loose plant stems. There is a high risk for fire in winter when firewood and straw are burnt on the stove for heating.¹¹

Many local vernacular architectural traditions and living customs criticized by Chen Zhengdong are mentioned in Chapter 3. Their rationale are explained and some existing vernacular solutions to some of the issues he raises are also introduced. For example, due to local climate in Xinjiang – large temperature difference, high evaporation rate, no vegetation cover, etc. – residential exterior walls tend to have tiny or no openings in order to block wind, sand, direct sunlight, and to delay heat transfer between interior and exterior of the house. Most residents use raw-earth and adobe as building envelopes due to their decent insulation properties. To encourage ventilation, many would create perforated walls with interesting brickwork on short walls, small partitions, low guardrails, and the upper part of the raised pergolas (section 3.1.1 under “Vernacular Houses in Hot and Arid Areas”), strategic locations that would not counter the effect of temperature regulation and natural element barrier. Residents often build a shaded exterior space such as pergola as an extension to their interior space. Most of their daily activities in the hot season – which lasts for more than half a year – are all carried out in that space. Instead of worrying about privacy or the “distinction between movement and stillness”, the residents see this as an opportunity to chat with their neighbours, entertain their guests, and celebrate festivals and special occasions (section 3.1.1 under “Vernacular Houses in Hot and Arid Areas”). In the winter, heating is provided by the stoves and kang – on which most of the daily activities are carried out. In many houses, flue walls that direct smoke from stoves and kang to the outside are connected to the chimney and built as an integral part of the wall. As smoke flows within the hollow space in the wall, the heat is transferred to the house's interior, reducing loss of heat (section 3.1.1 under “Kangs, Supas and Stoves”). Nonetheless, despite the subtle discriminatory undertone in Chen Zhengdong's reasoning on the flaws of vernacular architecture, it is difficult to deny that some of his concerns do sound reasonable and persuasive.

Many Chinese architects and government officials also share Chen Zhengdong's perspective on Xinjiang's vernacular architecture. Their approach to resolving the issues listed is a complete redesign of residential spatial arrangement and courtyard layout. In addition to the removal of indigenous residential functions and the introduction of new furniture, the government's modification of domestic sensibilities also extend to the redesign of traditional floor plans and courtyard plans. They aim to make the household layout more efficient and economically reasonable, to create a clear distinction between clean and dirty spaces, and between places of movement and places of stillness, and to increase earthquake resistance and fire protection that they deem are lacking in vernacular architecture.

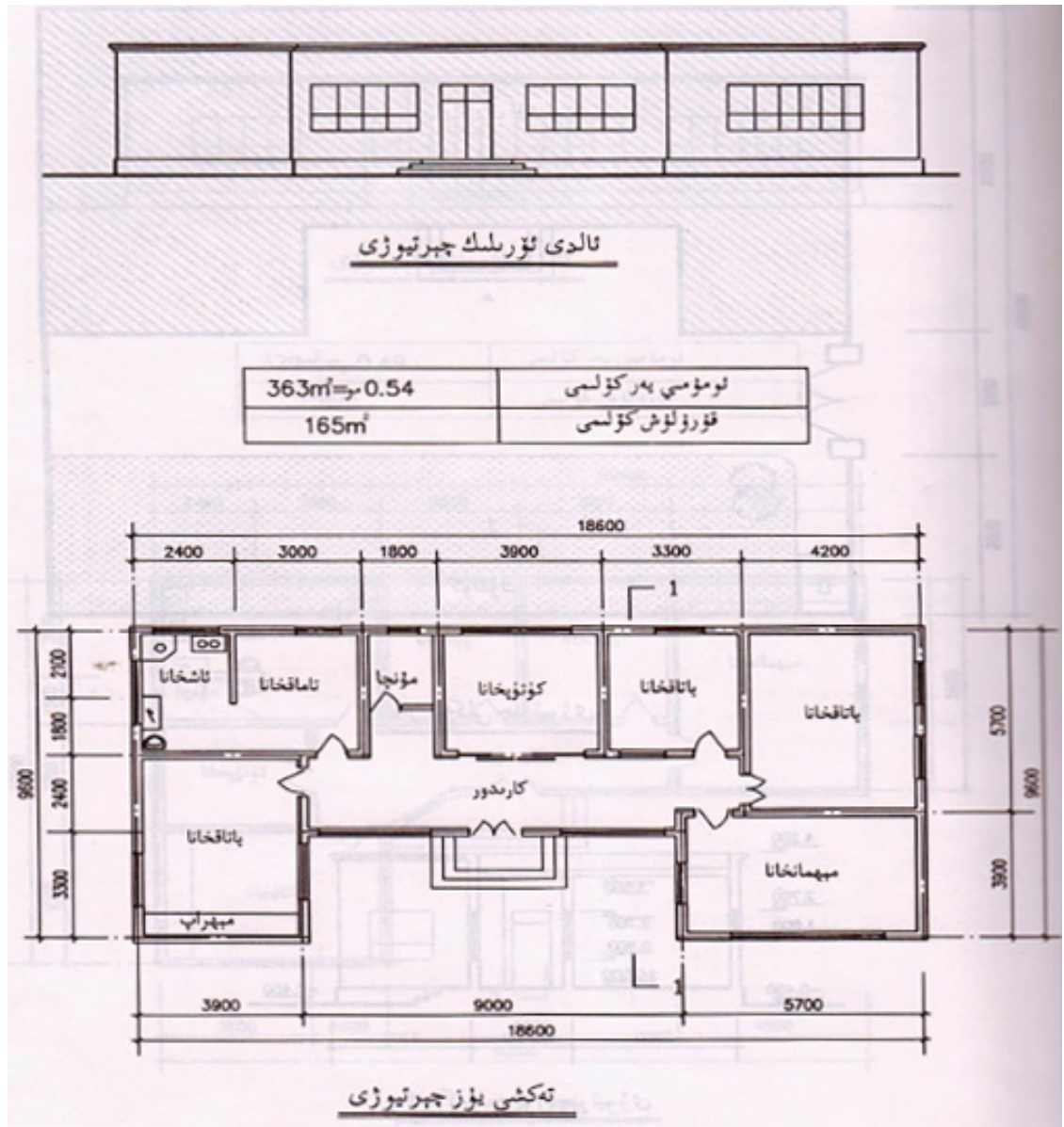
Local authorities have planned and implemented new templates of domestic spatial organization to replace Uyghur vernacular domesticity with “a Han-dominated government-defined rationality of space and movement”, argues Timothy Grose.¹² The new layouts conform to a more linear plan. Defined by Kim Dovey in her

¹⁰ Ibid, 264.

¹¹ Ibid, 264.

¹² Timothy A. Grose. “If You Don't Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space”. *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 12-13. <https://doi.org/10.1080/01419870.2020.1789686>.

Fig.4-2-7 Remodelled Uyghur house blueprint that show a linear plan.¹³



Framing Places: Mediating Power in Built Form, this plan features a strung-together sequence of spaces with no choice of pathway in between, which not only limit social interactions – especially guest reception – to a few designated spaces, but also control movements at high levels by removing the presence of multiple pathways (Fig.4-2-7¹³).¹⁴ Needless to say, this is drastically different from traditional Uyghur domestic sensibilities, where the personal and spatial interconnectedness are made possible by the abundance of interior and exterior corridors, and where guest reception and entertainment are key functions to be considered and designed into their homes. Instead, in the name of increasing domestic efficiency, new remodelled and re-ordered homes clearly delineate areas for living, farming, rearing, storing, garbage disposal and etc., which isolate specific activities and objects within specialized spaces. They are nicknamed the “Ten-haves Colourful Courtyard” or “Four

¹³ Ibid, 14.

¹⁴ Ibid, 12.

农村牧区多彩庭院“十有”平面图 Colourful Courtyard “Ten-have” Plan in Rural Pastoral Area

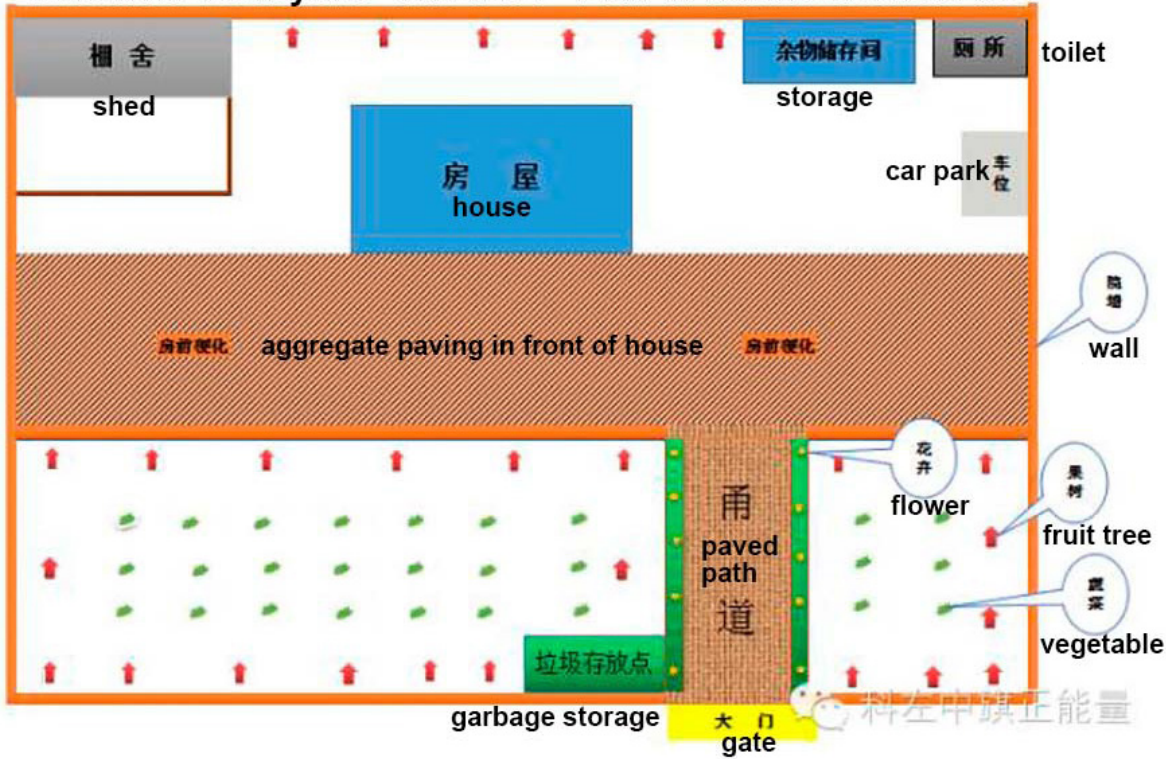


Fig.4-2-8 Government-planned “Ten-haves” layout of rural pastoral households. Drawing by “Kezuozhongqi Positive Energy”. (WeChat account of the county government of Kezuozhongqi, 科左中旗).¹⁵ Translated by author.

农村牧区多彩庭院“四区分离”平面图 Colourful Courtyard “Four Zones Separated” Plan

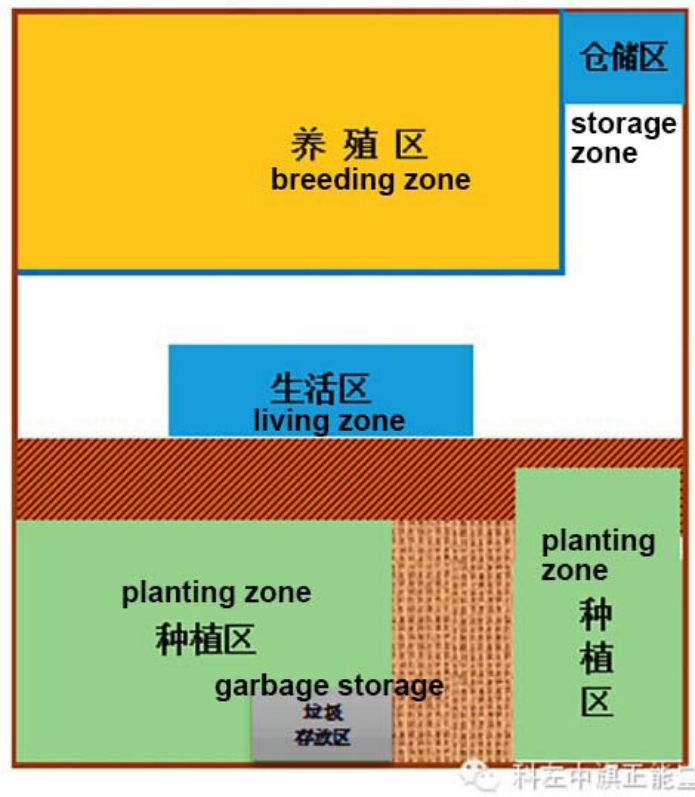


Fig.4-2-9 Government-planned “Four Zone Separated” layout of rural pastoral households. Drawing by “Kezuozongqi Positive Energy”.¹⁵ Translated by author.

Zones Separated Courtyard” by the government. (Fig.4-2-8~9¹⁵).¹⁶

“Four Zones Separated” is in fact more commonly known as “Three Zones Separated” in Xinjiang rural areas. The three zones refer to living zone, planting zone, and rearing zone. In an article on Xinjiang•Minsheng (民生, meaning people’s livelihood).com, Yan Xinming, a member of the “fangjuhui” (house visits) task force in the Tikan Kuruk Village in Wensu County, Aksu Prefecture (阿克苏地区温宿县提坎库如克村 “访惠聚” 工作队), emphasizes on how the team gains public approval on the Separation of Three Zones project by intensifying propaganda efforts through household visits, village gatherings and field explanations. By first pointing out the disorder in the courtyards of “some villagers who did not know how to plan”, then communicating with the villagers, giving them ideas and solutions, and finally organizing volunteer service teams to help the poor households to plan their courtyards, the task force ensures the smooth development of the project.¹⁷

The Separation of Zones project comes from the “Three News” campaign, specifically from the section on “vigorously developing courtyard economies”, which aims to “promote the renovation and transformation of old courtyards and living spaces” and to “increase the proportion of courtyard economy income to relieve poverty”.¹⁸ This is backed by an article by Xinhua News – a ministerial-level public institution directly under the State Council of China – that presents the positive impact the separation of zones has on the residents. It claims that thanks to the project, the courtyard appears more organized now, in stark contrast with the past, when “the walls of the adobe houses were crooked; the roof would leak when it rained; the yard was full of potholes, branches, grass, sundries, garbage, and even livestock manure”.¹⁹ It further claims that due to the separation of humans and livestock, some infectious diseases have no transmission channels; and due to the more efficient use of courtyard space, livestock production has doubled, significantly increasing the residents’ income.²⁰

If we read this article by Xinhua News alone, we would think that these justifications for the Separation of Zones project are all very reasonable, because the outcome is a more organized, healthier, more prosperous and more beautiful courtyard for the residents. However if we examine the rest of goals on “vigorously developing courtyard economies” that intends to “contain extremism”, and to “guide each ethnic collectivity to rely on scientific skills to become prosperous”,²¹ we would come to the realization that there might be more than just livestock or vegetable that are separated from the residents by the Separation of Zones project – culture, religion and their architectural tradition are also separated from them.

Mentioned in the previous subchapter, kangs, supas, mehrab, and etc. – domestic spaces and objects that tie the residents to their traditional religious and cultural practices in their homes – are all absent in their newly remodelled and

¹⁵ Ibid, 13.

¹⁶ Ibid, 12.

¹⁷ Yan Xinming. “Three Measures to Ensure the Entry of ‘Three Zones Separation’ into People’s Hearts”. XinjiangMinsheng.com. 4 November 2018, <http://www.xjmsw.cn/xxzl/20180411/2018041145125.html>.

¹⁸ Timothy A. Grose. “If You Don’t Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space”. *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 8-9. <https://doi.org/10.1080/01419870.2020.1789686>.

¹⁹ Xinhua.com. “Xinjiang’s ‘Separation of Three Zones’ Becomes the Rural Courtyard ‘Increasing Income Spring’”. Sina News. 14 May 2020. <http://xj.sina.cn/news/2020-05-14/detail-iirczymk1545409.d.html>.

²⁰ Ibid,

²¹ Timothy A. Grose. “If You Don’t Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space”. *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 8-9. <https://doi.org/10.1080/01419870.2020.1789686>.



Fig.4-2-10 A “clean” village in Yusktalek Village, Baishirik Town, Awati County. Photograph by Jiang Zhao.²²

built homes. New homes for traditionally nomadic communities designed by the government in new villages planned by the government (discussed in section 3.2.2) also seem to lack meaningful consideration to embody the communities’ culture, religion and architectural practices in their domestic spaces. Additionally, An Ju Fu Min (安居富民) housing project – the physical implementation of the government-backed residential layouts that feature the concept of separated zones introduced in this subchapter’s opening passage – has also led to the demolition of old vernacular houses and the construction of homogenous houses that feature modern interior furniture (Fig.4-2-1) and homogenous exterior walls and gates (Fig.4-2-10²²). Although some of the original sketches of the project show subtle differences between facades of individual houses (Fig.4-2-11²³).

An Ju Fu Min means “to live peacefully and in prosperity”; it can also be translated to “housing and enriching residents”. The architectural project is remarkably enormous in scale. Geng Cong reports in his article:

By the end of 2014, Xinjiang had accumulatively invested 98.632 billion yuan in [An Ju Fu Min] project construction, started construction of 1.2623 million affordable housing and completed 1.2327 million households. The start rate and completion rate accounted for 105.19% and 102.72% of the planned tasks, respectively. In the past four years, more than 4.8 million farmers and herdsmen of various ethnic groups have moved to new homes.²⁴

Reports on the project praises it for having achieved the following goals:

- 1. Earthquake prevention.** An article titled “Xinjiang An Ju Fu Min Project Has Benefited 4.8 Million People in 4 Years” written by Geng Cong claims that since 2011, more than 20 destructive earthquakes of magnitude 5 or above

22 Dong Hai Cai. “Proposal for Awatian County in Xinjiang: Rural An Ju Houses Warm The Hearts of The People”. China Daily, 22 October 2021, <https://xj.chinadaily.com.cn/a/202110/22/WS6172153fa3107be4979f40f9.html>.

23 Wang, Xiao Dong. *Illustration and Analysis of Traditional Village Landscape in Xinjiang*. Beijing: Chinese Construction Industry Publishing, 2021: 144.

24 Cong Geng. “Xinjiang Anju Fumin Project Has Benefited 4.8 Million People in 4 Years”. People’s Daily. 6 July 2015. <http://politics.people.com.cn/n/2015/0706/c1001-27256911.html>.



Fig.4-2-11 Akeyi Township, Moyu County, Hotan Prefecture. Fu Min An Ju Project Sketch. Illustration by Yan Jingjing.²³

have occurred in Xinjiang. While many adobe houses have collapsed, none of the newly built An Ju Fu Min houses were damaged.²⁵

- 2. Improved living conditions and infrastructure.** Journalist Yang Zhe reports in “An Ju Fu Min Housing Project Allows The Residents of Moyu County to Live and Work in Peace”:

With magnificent carved wooden doors, a spacious and bright yard, and exquisite decoration, we came to the home of Bakr Aisha, a villager in Bazaboyi Village, Moyu County. The house has water, electricity, bathroom and kitchen equipment. Bakr Aisha and his wife told the reporter that they used to live in a raw-earth house. The old house was very short and dark. Tall people would bump their heads when they came into the house, and the roof would leak when it rained. With the help of the government, Bakr Aisha moved into the An Ju Fu Min house in 2019. The family live and work in peace and contentment.²⁶

- 3. More vehicle-friendly.** The newly constructed houses also have garages which were lacking in old houses (Fig.4-2-11), in order to adapt to the acceleration of urbanization and changes in travel patterns.²⁷ The pedestrian-

²⁵ Ibid.

²⁶ Zhe Yang. “(Foreign Journalists Traveling to Xinjiang) An Ju Fu Min Housing Project Allows The Residents of Moyu County to Live and Work in Peace”. Sohu.com. 4 June 2021. https://www.sohu.com/a/www.sohu.com/a/470478368_115239.

²⁷ Ibid, 141-143.

focused narrow alleyways are now replaced with wider roads.

4. **Efficient courtyard organization that increases production.** Cai Shu describes the newly completed An Ju Fu Min houses in Bozi Village, Alahag Town, Kuqa County (库车县阿拉哈格镇博孜村) in article “Kuqa Promotes The Construction of An Ju Housing”: “Each suite is set with separated residential area, breeding area, and planting area, which not only meets the housing needs of the masses, but also facilitates the development of courtyard economy.”²⁸
5. **Poverty eradication.** On May 22, 2020, the People’s Government of the Xinjiang Uyghur Autonomous Region issued an announcement that, as evidence for the success of An Ju Fu Min housing project in Shache County, it has finally met all the criteria and conditions for being withdrawn from the list of poverty-stricken counties. Authorities promptly declared they have resolved the problem of absolute poverty in all counties in Xinjiang, marking the day historical.²⁹

The government also claims it provides local residents with large amounts of financial support and high level of autonomy over their housing selection. Ma Chenzhong reports on the Communist Party’s website that in 2018, Yongku Tuanjie Village (甬库团结村) built a contiguous community of An Ju Fu Min houses, that not only resettle the poor households, but also are available to other villagers to buy and move in. They can also choose their preferred housing type and size, as well as enjoy a subsidy of more than 30,000 yuan allowed by government policies.³⁰ However, what strikes me the most in these reports on An Ju Fu Min housing projects is not

28 Shu Cai. “Kuqa Promotes The Construction of An Ju Housing”. Xinjiang Daily News. 4 July 2018. <http://news.ts.cn/system/2018/07/04/035283347.shtml>.

29 Peng Li. “All Poverty-Stricken Counties in Xinjiang Have Been Lifted.” Xinhua News. 15 November 2020. http://m.cyol.com/content/2020-11/15/content_18851341_2.htm.

30 Chenzhong Ma. “Maimaiti’s Three Moves”. cpcnews.cn. People.cn. 20 April 2019. <http://cpc.people.com.cn/n1/2019/0420/c64387-31040483.html>.



Fig.4-2-12 Fu Min An Ju Housing in Kuotandun Village, Ishkuli Township, Shache County (莎车县伊什库力乡阔坦墩村), Xinjiang. Drone photograph by Wang Fei on May 22, 2020.³¹

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Fig.4-2-13 On July 3, 80 An Ju Fu Min houses in Bozi Village, Alahag Town, Kuqa County were completed and delivered. In 2018, Kuqa County plans to build 7840 households of rural An Ju Fu Min houses. As of now, 2430 households have been completed. Photograph by Cai Shu.³²



Fig.4-2-14 Neat rows of houses in Yetaigeremu Village, Uluqele Town, Awati County are aligned to the roads, which are lined with greenery. Photograph by Jiang Zhao.³³



the unbelievable generosity the government claims to offer to the impoverished rural families, but rather the homogeneity of houses and villages displayed in their images (Fig.4-2-12,³¹ 13,³² 14³³).

Clear delineation of courtyard functions and spaces, advocated by the Separation of Zones project, is visible in every photo. Every household – including the appearance and spatial arrangement of house, courtyard, and farm – is an exact copy

31 Peng Li. "All Poverty-Stricken Counties in Xinjiang Have Been Lifted." Xinhua News. 15 November 2020. http://m.cyol.com/content/2020-11/15/content_18851341_2.htm.

32 Shu Cai. "Kuqa Promotes The Construction of An Ju Housing". Xinjiang Daily News. 4 July 2018. <http://news.ts.cn/system/2018/07/04/035283347.shtml>.

33 Dong Hai Cai. "Proposal for Awatian County in Xinjiang: Rural An Ju Houses Warm The Hearts of The People". China Daily, 22 October 2021, <https://xj.chinadaily.com.cn/a/202110/22/WS6172153fa3107be4979f40f9.html>.

as their neighbours', with orthogonal white walls marking the property boundaries. All properties of identical size are neatly aligned against straight asphalt roads of identical width, which are lined with the same narrow strips of greenery. Yan Da Chun has drawn a similar village plan in *Xinjiang Houses*, illustrating a clear space and function delineation within each household, and an even land distribution and spatial organization in the new villages (Fig.4-2-15~18³⁴). He describes the village layout as follows:

*The village is planned and laid out in groups of neighbourhoods, with courtyards for each household along the periphery and orchards in the middle. The layout is mostly arranged along the field road, and the orchard is inside. Many market towns have a layout in which cross roads are formed along the transit roads as trunk roads and secondary roads as neighbourhoods. There are fruit trees on both sides of the roads in villages and market towns, and poplar trees are planted on both sides of the fruit trees.*³⁵

34 Yan, Da Chun. *Xinjiang Houses*. Edited by Xinjiang Society of Civil Engineering and Architecture. Beijing: Chinese Construction Industry Publishing, 2018: 42-43.

35 Ibid, 42.

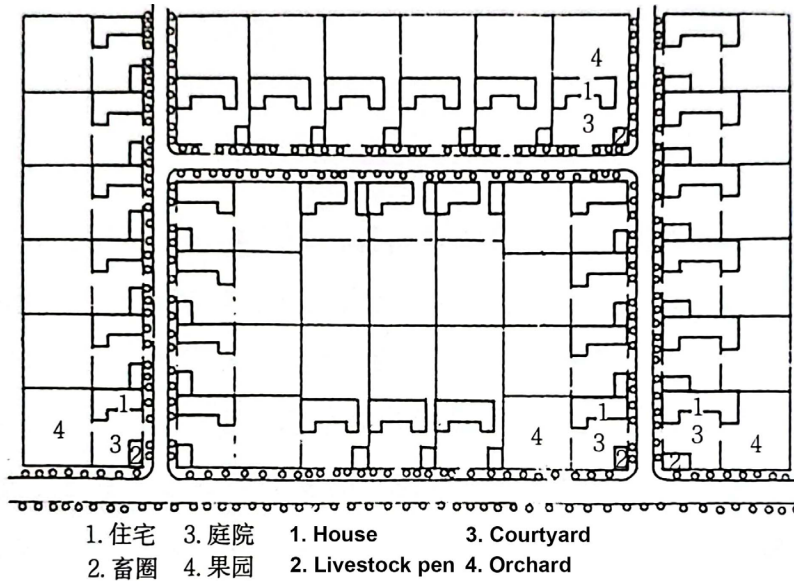


Fig.4-2-15 Layout of a village in Xiamalibake Town (夏马力巴克乡).³⁴ Translated by author.



Fig.4-2-16 Alleyway at the west entrance of a village in Xiamalibake Town, featuring trees on both sides of the road.³⁴

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Fig.4-2-17 Schematic diagram of Yangdaman Township (洋大曼乡) Center.³⁴

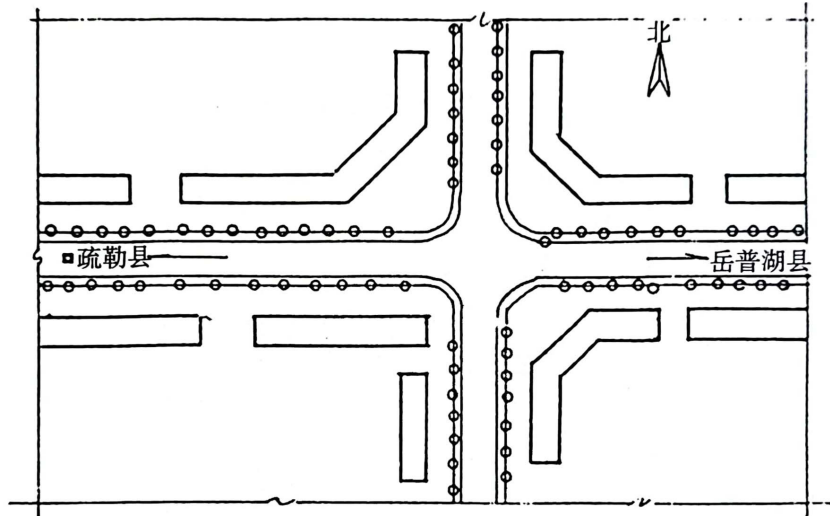


Fig.4-2-18 Streetview of Yangdaman Township, featuring widened vehicular roads and uniformly aligned trees.³⁴



Many Chinese scholars have expressed support for the construction of these modern planned villages. Some even offers thorough economic and social analyses to justify it. Yan Da Chun – a scholar who has spent decades studying Xinjiang’s vernacular architecture – states that since the corporatization of household businesses and the construction of the “Five Good” rural areas, the government merged villages, built new rural areas, carried out strip field construction and irrigation projects, in order to “facilitate agricultural production” and “make life easier”.³⁶

In *Illustration and Analysis of Traditional Village Landscape in Xinjiang*, Wang Xiao Dong – a scholar who lived in Xinjiang for over a decade – describes the current trajectory of Xinjiang’s villages as “a transitional stage towards urbanization” and “modernization of agricultural production”. He explains that old rural settlements in Xinjiang had an “acquaintance society” which is based on close networks of personal connections; and the old land tenure system was a feudal private land system. The self-sufficient small-scaled peasant economy that results from this system has very low productivity levels. After the founding of New China, the political, administrative, economic, and ideological centers of society were integrated into one, and resources were consolidated. The rural population was organized into social organizations,

³⁶ Ibid, 42.

replacing the old kinship-based village community. The land tenure system has changed from “land to the tiller” to cooperative, and then to today’s household contract responsibility system. Furthermore, he believes that that urbanization is the main way to facilitate agricultural development and increase farmer’s income. As the traditional rural agricultural economy is replaced by the modern commodity economy – which relies on modern science and technology – production efficiency can be increased, quality of life in rural areas can catch up to that in urban areas, and the industrialization and modernization of rural production can be realized.³⁷ From this perspective, the transition from rural vernacular settlements to planned modern villages is the evolution from the backwards “acquaintance society” with inefficient feudal land system to the more productive modern communist society in which the rural population is organized into contract production units, each of them allocated a piece of land from the authorities. Therefore according to Wang Xiao Dong’s argument, the emergence of new organized villages with clear delineation of space in each household as a result of the mass-scale An Ju Fu Min housing project is a step towards urbanization and modernization, with the ultimate goal of promoting cultural and social development.

In *Xinjiang Hotan River Area: A Study on The Evolution of Traditional Village Settlements*, Jiang Dan outlines the government-guided transformations of Xinjiang’s vernacular villages (section 2.2.1), stating that under the premise of “Road and Belt” Initiative, there has been an emergence of “urban villages” and urban-rural fringe areas, which are rural areas in the process of transitioning into urban areas. Some vernacular villages have been merged and reconstructed to increase land use efficiency. In addition to adjustments to the original spatial structures and internal road networks that are deemed decentralized and inefficient, there are also proposals for apartment-style farmhouses to reduce land use per capita. He states that these new urban and structural system transformations are to satisfy the new rural construction policy of “production development, affluent living, civilized customs, clean and tidy village appearance, and democratic management”.³⁸

Although all the scholars’ justifications for the government-led construction of new rural villages which replaces vernacular settlements cannot be easily dismissed, they do provide some insight into the overarching political framework of Xinjiang’s rural development, within which the scholars formulate their perspectives. I deduce this framework is supported by four pillars: modernization, urbanization, development, and management. Modernization is not only the replacement of old furniture, houses, and villages with the new, but also the abolition of old kinship-based culture and religion-based ideologies, and the establishment of Communist state-party-based Han-style sensibilities. Urbanization is the consolidation and reorganization of rural spaces, which prioritizes on increasing land use efficiency and land productivity, thus theoretically reducing income disparity between urban and rural residents. Development is multi-layered. Architectural development is the demolition of problematic vernacular architecture and disorderly settlements and the construction of professionally planned and designed houses and villages that allow transportation and infrastructural improvements. Cultural development is the conversion from “uncivilized” behaviours, “outdated” customs, and religious “extremist” ideologies to civilized, hygienic, and healthy behaviours that respects and obeys the state-enforced laws. Economic development is the replacement of rural agriculture-based economy

37 Xiao Dong Wang. *Illustration and Analysis of Traditional Village Landscape in Xinjiang*. Beijing: Chinese Construction Industry Publishing, 2021: 141-143.

38 Dan Jiang, *Xinjiang Hotan River Area: A Study on The Evolution of Traditional Village Settlements*. Beijing: Chinese Construction Industry Publishing, 2016, 100-102.

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with modern commodity-based economy based on modern science and technology, to increase resource production and capital flow. Social development is the systematic and structural transformation from feudal “acquaintance society” to Communist society consisting of organized production units with contract responsibility to the government. Management is the consolidation and redistribution of resources – including land, capital, labour, provisions, and etc. – by the state, therefore asserting the government’s power and control over Xinjiang’s rural population.

Despite the scholars’ arguments for the government, it is still difficult to fathom how its decision of applying the same house and courtyard design uniformly across millions of households, and using the same layout indiscriminately across all villages in Xinjiang is an appropriate solution – or the only solution – to the issues on vernacular architecture raised by the scholars. However it is certainly the easiest and quickest solution for the government to implement. I suspect that local authorities also consider it as the most cost-effective way to meet state-determined criteria on “civilized” and “modern” living standards. In addition to being able to declare that they have successfully eradicated “poverty” in Xinjiang, they can also demonstrate to the central government that they have “contained extremism” by removing “harbours of terrorist activities” in their newly constructed, orderly, and lawful villages. Needless to say, these homogenous households and villages not only restrict architectural flexibility and ingenuity reflected in the uniqueness of every vernacular house and settlement whom they are replacing, but also eliminate architectural forms of cultural symbolism and representation.

Interestingly, Chen Zhengdong, in *Xinjiang Houses*, has openly criticized the emergence of these homogenous houses and villages, listing it under one of the key considerations during development. He points out:

When building new settlement villages on new sites or renovating old villages, we often only pursue the “rational” aspect of the “new look” and the rapid manifestation of “new” achievements. The residential area must have straight roads, straight lanes, straight canals, and straight greenbelt. The houses are laid out neatly and uniformly, with each building facing forward and to the left; each house is drawn in a standard drawing in a style and “cloned” in batches; even the trees must be arranged neatly and varieties along the roadside. It is simple, even following examples of city layout, with a checkerboard road network, a large central square in front of the office, and not many residential courtyards lined up on both sides;. It is a “rational” model of renovating old villages and demolishing them in large numbers. When you walk into the village, you can see at a glance that there are hundreds of buildings with the same look and feel. There is a lack of public space for cordial communication and the loss of a recognizable sense of belonging for each household, making the newly built area regular, serious, dull and monotonous, lack of interest and life.³⁹

Xinjiang Houses was published in 2009; and most of the homogenous villages I have found in newspaper reports were completed between 2018 and 2023. It is safe to assume that local authorities did not consider Chen Zhengdong’s advice when they carried out mass-scale demolition of vernacular settlements and construction of homogenous villages.

I believe that the emergence of these highly-organized, homogenous villages is in fact a form of social and spatial reorganization of Xinjiang’s rural ethnic minority

39 Zhendong Chen. *Xinjiang Houses*, 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 266-267.

population. These state-centric, government-imposed solutions to the issues of vernacular houses and villages are not only part of government-led processes of urbanization and modernization, but also effective methods of population control and resource management. Rural areas that were once governed by village collective outside the bounds of direct state discipline are now within the government's administration. The top-down design of uniform houses and villages leaves little room for grassroots efforts by local community members to structure their built environment and define their livelihood. Residents moving into these new villages have thus lost their power they once had in their vernacular homes of shaping their homes to cater to their needs and to express their cultural identity. Additionally, by maintaining that the new villages improve their living conditions and increase their income, and by promising to provide financial aid to those who move in, they are in debt to the government and are more likely to be obedient patriotic citizens. Because households in these villages are essentially contract production units that are responsible to their assigned patch of land, they function like employees in a large state-owned business corporation. Opportunities and resources within the villages are thus concentrated and distributed by the employer – the government – and the managers – the officials – to their employees. The employer have the full power to decide on where and how they are distributed. They could be delivered to supply nearby urban residents, or to another city or province in China. I also suspect rewards and punishments can also be carried out through deliberately unfair distribution of these opportunities and resources within the village, such as by varying their quality and quantity. The residents' behaviours and thoughts can hence be easily manipulated and conditioned. Therefore, through the construction of homogenous houses and villages that limit the residents' autonomy in their built environment, the government has effectively restructured the social order and revised the economic systems of rural ethnic minority communities, to be in tune with the political agenda of ethnic unity, cultural advancement, and economic development.

4.3. Disappearance of Vernacular Urban Settlements

In an alley bathed in the perpetual shadow of vaulted archways, we fell into conversation with a man whom I'll call Abdullah. A handsome figure with an embroidered cap, gray mustache and piercing green eyes, he was standing outside the bright green door to his home, chatting with two neighbors. Abdullah sells mattresses and clothing near the Id-Kah Mosque, the city's grandest. During the past few years, he told us, he had watched the Chinese government chip away at the Old City—knocking down the ancient 35-foot-high earthen berm that surrounded it, creating wide boulevards through dense warrens of homes, putting up an asphalt plaza in place of a colorful bazaar in front of the mosque. Abdullah's neighborhood was next. Two months before, officials told residents that they would be relocated in March or April. "The government says the walls are weak, it will not survive an earthquake, but it is absolutely strong enough," Abdullah told us. "We don't want to leave, it is history—ancient tradition. But we can't stop it."

He led us through the courtyard of his home, filled with drying laundry and potted roses, and up a rickety flight of stairs to a balustraded second-floor landing. I could reach out and practically touch the mottled tan house across the alley. I stood on the wooden balcony and took in the scene: head-scarfed women in a lushly carpeted salon on the ground floor; a group of men huddled behind a half-closed curtain just across the balcony. The men were Abdullah's neighbors who had gathered to discuss the eviction. "We don't know where we're going to be moved to, we have no idea," one of them told me. "Nobody here wants to move."

Another man weighed in: "They say they are going to rebuild the place better. Who designs it? Nothing is clear."

Abdullah said he was told that homeowners would be able to redesign their own dwellings and the government would pay 40 percent. But one of his neighbors shook his head. "It has never happened before in China," he said.

--- Joshua Hammer, "Demolishing Kashgar's History"¹

As a part of the "Three News" Lifestyle, the government has been demolishing large sections of Xinjiang's vernacular houses and settlements in recent years in the name of "economic modernization". With large influx of Han workers and migrants into the province, housing demand has soared. The government seizes this opportunity to replace the "outdated", "unsafe" and "unsanitary" vernacular houses of indigenous groups with newly built "modern" and "civilized" apartments. Under the political context of "resolving issues of dirt, disorder, and destitution", and enabled by the Han-dominated architecture and construction industry, urban landscape in Xinjiang is rapidly transforming from horizontality of old vernacular town structures to verticality of eastern-China-style skyscrapers.

Initially, the government had a more gradual approach to move Uyghur out of their vernacular homes and into "modern" and "civilized" ones. Grose reports that by the late 1990s, state-employed Uyghurs in Ghujia (Yining, 伊宁) voluntarily moved into newly built high-rise apartment buildings provided by state-own enterprises,

¹ Joshua Hammer. "Demolishing Kashgar's History". *Smithsonian Magazine*. March 2010. <https://www.smithsonianmag.com/history/demolishing-kashgars-history-7324895/>.

which were symbols of socio-economic success in China.² The gradual “civilizing” of Uyghurs has sped up significantly around and after the protest in Urumqi in 2009 and the ensued violence, when racial conflict between Xinjiang’s Han population and Uyghur population rose to the surface and brought international attention. Joshua Hammer reports in his article “Demolishing Kashgar’s History”, that the government announced a \$500 million “Kashgar Dangerous House Reform” program in early 2009 that would demolish 85% of the Old City of Kashgar, including mosques, markets, and centuries-old houses. He states:

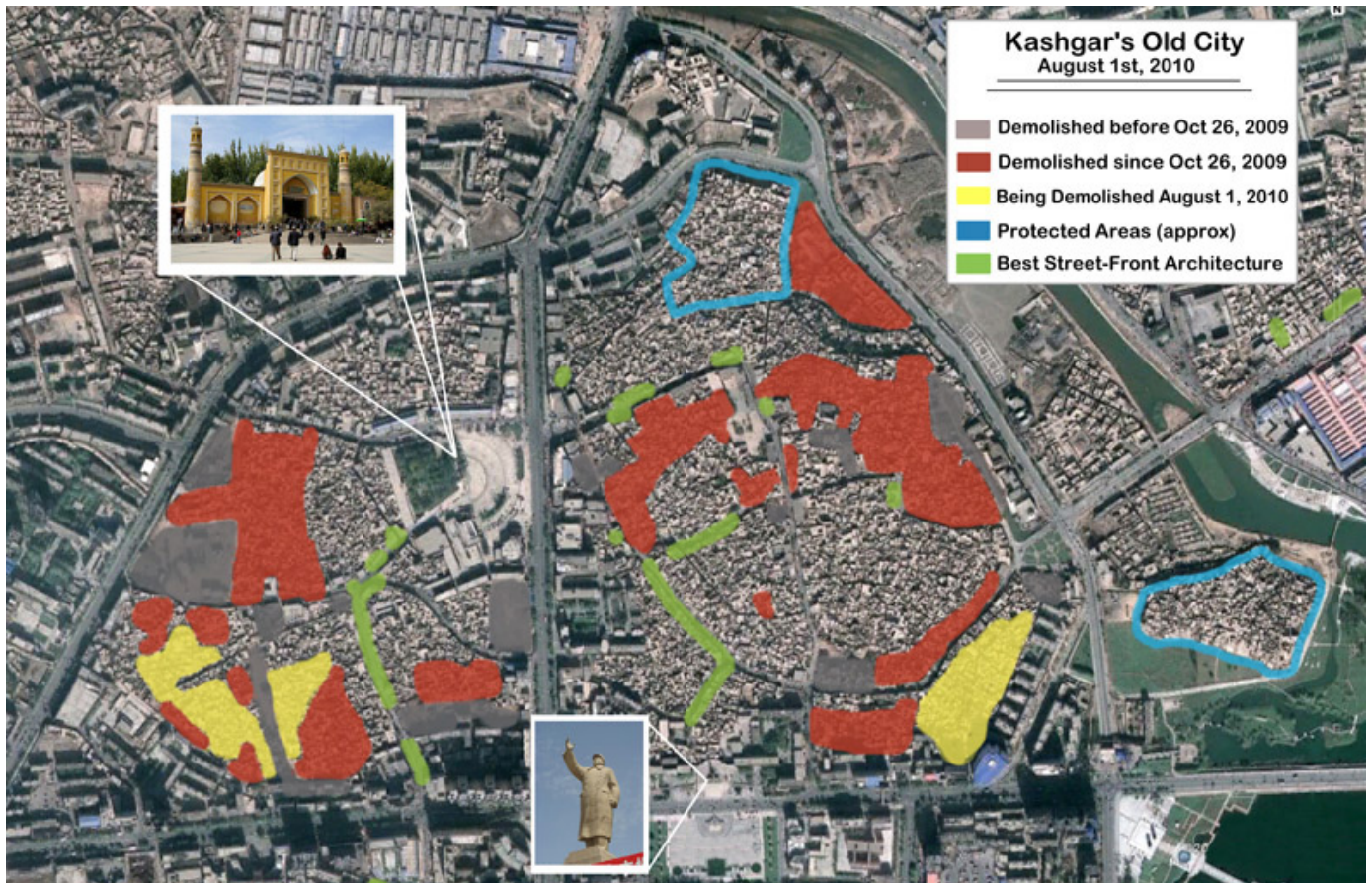
Residents will be compensated, then moved – some temporarily, others permanently – to the new cookie cutter, concrete-block buildings now rising elsewhere in the city. In place of the ancient mud-brick houses will come modern apartment blocks and office complexes, some adorned with Islamic-style domes, arches and other flourishes meant to conjure up Kashgar’s glory days. The government plans to keep a small section of the Old City intact, to preserve “a museumized version of a living culture”, says Dru Gladney, director of the Pacific Basin Institute at Pomona College and one of the world’s foremost scholars of Xinjiang and the Uyghurs.³

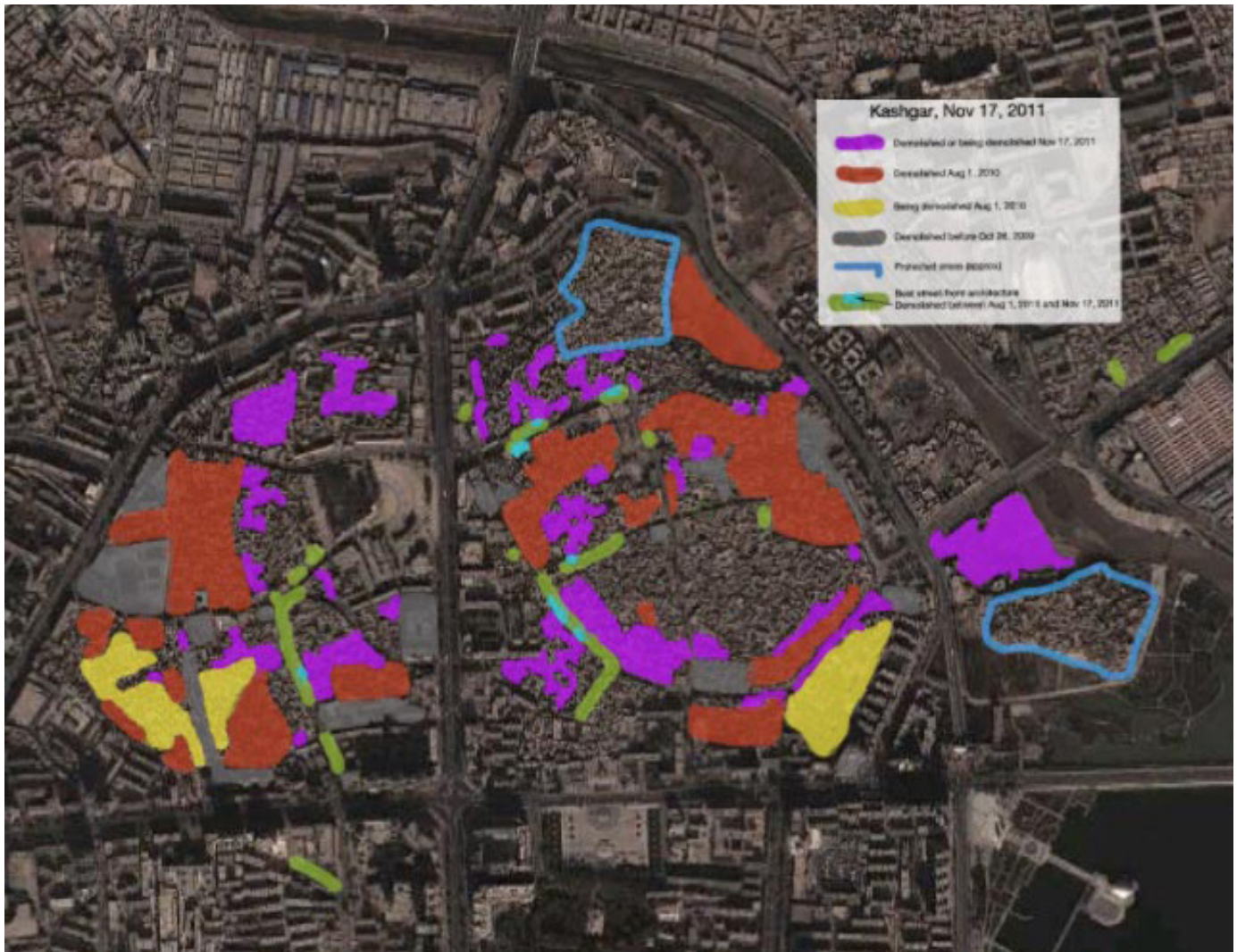
On a side note, the incident in Urumqi happened in early July of 2009, just a few months after the announcement of the program. It is unclear whether the large-scale demolition of old Uyghur homes and displacement of Uyghur communities in Kashgar

Fig.4-3-1 Demolition of Kashgar’s Old City in August of 2010, documented by comparing Google Earth imagery.⁴

2 Timothy A. Grose. “If You Don’t Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space”. *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 7. <https://doi.org/10.1080/01419870.2020.1789686>.

3 Joshua Hammer. “Demolishing Kashgar’s History”. *Smithsonian Magazine*. March 2010. <https://www.smithsonianmag.com/history/demolishing-kashgars-history-7324895/>.





*Fig.4-3-2 Update on demolition in November of 2011.*⁴ in the months prior could have partially caused the pent-up frustration and anger from the Uyghur towards the Hans, which led to the protest and violence in Urumqi in July of 2009. However it is a theory worth considering.

Evidence shows that the house reform program has been carried out diligently by authorities. Stefan Geens, a visitor to Kashgar, documented and mapped the process of dismantling Kashgar's old towns in August of 2010. When a new imagery of Kashgar that was taken in November of 2011 appeared on Google Earth, he compared it to his notes and maps. He makes observations on his blog that "around two thirds of the city has now been demolished, up from almost half 18 months ago." He also points out that some of the street-facing architecture such as verandas and traditional workshop fronts appeared to have been demolished (Fig.4-3-1~2,⁴ 3~4⁵). Regarding these changes, Geens expresses his concern: "I was hoping these parts of town would be left alone, or restored, rather than demolished, as they were especially worth saving."⁶

4 Stefan Geens. "THE LAST DAYS OF OLD KASHGAR – AN UPDATE." Ogle Earth. February 24, 2012. Accessed December 1, 2021. <https://ogleearth.com/2012/02/the-last-days-of-old-kashgar-an-update/>.

5 "Kashgar Coerced: Forced Reconstruction, Exploitation, and Surveillance in the Cradle of Uyghur Culture". Uyghur Human Rights Project. 3 June 2020. <https://uhrp.org/report/kashgar-coerced/>.

6 Stefan Geens. "THE LAST DAYS OF OLD KASHGAR – AN UPDATE." Ogle Earth. February 24, 2012. Accessed December 1, 2021. <https://ogleearth.com/2012/02/the-last-days-of-old-kashgar-an-update/>.



Left: 10/25/2009, right: 8/21/2012 (Google Earth)



Left: 3/6/2005 | Right: 8/21/2012 (Google Earth)

Fig.4-3-3 (top)⁵

Fig.4-3-4 (bottom)
Satellite data showing that even one of the two areas listed as "protected" in 2011 experienced significant demolition in 2012.⁶

Far West China, a travel blog, also shows a few photographs that document the demolishing of the Old City of Kashgar in their travel guide titled "Kashgar's Old City | Traveler's Guide to an Evolving City" (Fig.4-3-5~8⁷). They offer their thoughts on the issue:

Initially, China claimed that the demolition was for the safety of the city residents whose mud-brick homes were considered dangerous in the earthquake prone Kashgar area. While it is true that Kashgar is prone to earthquakes, the idea that buildings which had stood for centuries had all-the-sudden became "unsafe" didn't seem right. There were other factors at play, and although I don't believe that China was purposefully trying to squelch the Uyghur culture (the true heart of Kashgar's Old City), there was still plenty of outcry from the Uyghur diaspora.⁸

7 "Kashgar's Old City | Traveler's Guide to an Evolving City." Far West China: Exploring Xinjiang and the Silk Road. Accessed November 11, 2021. <https://www.farwestchina.com/travel/kashgar/old-city/>.

8 Ibid.

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*Fig.4-3-5 Old City of Kashgar under demolition in 2014.
Photograph by Far West China.⁷*



*Fig.4-3-6 Old City of Kashgar under demolition in 2014.
Photograph by Far West China.⁷*





Fig.4-3-7 Old City of Kashgar under demolition in 2014. A woman sits on the rubbles. Photograph by Far West China.⁷



Fig.4-3-8 Old City of Kashgar under demolition in 2014. In the distance, concrete high-rises are under construction. Photograph by Far West China.⁷

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On a travel blog called “Architecture on the Road” by Silvia, an Italian architect based in China, she dedicates an entire page to a large collection of photographs taken by her in the summer of 2014 that documents the architectural memories in the Old City of Kashgar (Fig.4-3-9~12⁹). She writes:

While I was walking through the semi-destroyed alleys of the city center, I felt I was exploring something that soon would be gone; massive portions of the old, decadent houses were being torn down in that very moment. Right next to them, a pretty, refurbished neighbourhood was standing neatly, freshly painted and plastered, keeping the local (exotic to me) central Asian look.

In the background, enclosing the old part like an island, the “new”, Chinese developed city was growing, spreading a patchwork of modern high rise residential buildings, creating one of those landscapes that resemble the majority of the recently built Chinese cities. I felt certain that if I decided to go back in a few years, I would find something totally different from the Kashgar I visited.¹⁰

9 Silvia. “Memories of Kasghar”. *Architecture on the Road*. October 2, 2021. Accessed December 1, 2021. <https://architecture-ontheroad.com/memories-of-kashgar-xinjiang-silk-road/>.

10 Ibid.



Fig.4-3-9 The Old City of Kashgar in various stages of demolition in summer of 2014. Photograph by Silvia.⁹

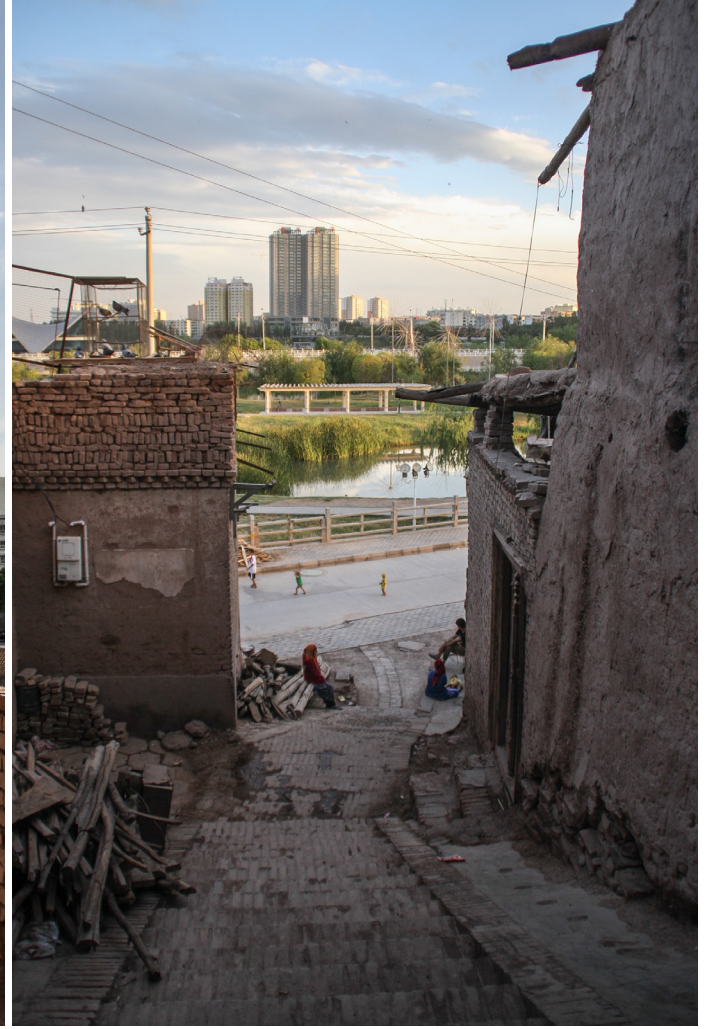


Fig.4-3-10 (top left)⁹
Fig.4-3-11 (top right)⁹
Fig.4-3-12 (bottom)
Photos of the Old City of Kashgar in various stages of demolition in summer of 2014. Beside it are rising concrete buildings. Photograph by Silvia.⁹

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The photographs and narratives on the demolition of vernacular neighbourhoods in Kashgar mentioned above are all provided by foreign tourists. To the visiting outsiders, the rapid disappearance of Kashgar's Old City means the loss of Uyghur histories and cultural memories. It is a disheartening sight for them to see as they realize it might be their last chance to see the beautiful patterns of local architecture and fabrics.

On the other hand, the government tells a different story. An article on government website titled "Kashgar Old City Renovation Project Progressing Smoothly" states:

The reconstruction project of the old city of Kashgar, Xinjiang, with a total investment of 3 billion yuan, was launched in February this year, and the project is currently progressing smoothly. The Old City of Kashgar has a long history, and more than 51,000 households and nearly 200,000 residents live in the criss-crossing streets and alleys. The building density in the old urban area exceeds 70%, and nearly 60% of the residential building are raw earth buildings, many of which are dilapidated and prone to collapse. At the same time, the laneways in the old urban area are narrow, and the construction of infrastructure such as water supply, drainage, telecommunication, fire protection, and heating is seriously lagging behind, which restricts the improvement of living quality of residents. In order to protect the style of Kashgar, a famous historical and cultural city, the state and the autonomous region have invested funds to renovate and relocate the dwellings in the Old City within five years.¹¹

In this passage, the government offers several reasons for the demolition of Old City fabric of Kashgar, which the author carefully calls "reconstruction" or "renovation" and avoids using the word "demolition". These reasons are:

1. Its building density is too high to support the great amount of households that reside there;

¹¹ Xinhua News Agency. "Kashgar Old City City Renovation Project Progressing Smoothly". Central Governmental Portal. 5 June 2009. https://www.gov.cn/govweb/jrzg/2009-06/05/content_1333042.htm.



Fig.4-3-13 On June 3, Uyghur residents in the Old City of Kashgar, Xinjiang, were demolishing old houses. Photograph by Shen Qiao, Xinhua News Agency reporter.¹²



Fig.4-3-14 On June 3, Uyghur residents in the Old City of Kashgar, Xinjiang, watched the progress of the project at the renovation site. Photograph by Shen Qiao, Xinhua News Agency reporter.¹²

2. Most of the houses have raw-earth construction, and many of them are dilapidated and prone to collapse; and
3. The alleys are winding and narrow, impeding the construction of infrastructure that can improve the residents' quality of life.

This article also reveals that the Uyghur residents themselves are participating in the demolition of their old houses, by showing images of them at demolition sites (Fig.4-3-13~14¹²).

In another Chinese article published by Xinhua News Agency, a ministerial-level public institution directly under the State Council of China, Chen Xuguang – secretary of the Kashgar Municipal Party Committee – claims that after fully soliciting opinions from all parties, the Kashgar Municipal Government has proposed three reconstruction plans for the residents to choose: rebuilding houses in the same location; and resettling in relocated buildings with two options: (1) the main building would be built by the government, interiors would be designed by the residents themselves; or (2) the house would be self-built by the residents, cost would be subsidized by the government. In the core area of the Old City, the authorities have assigned 30 to 40 cadres to each street to participate in the mass mobilization and service work.¹³ In late 2011, four members of Erken Abdu Aili's family chose to move out of the Old City

¹² Ibid.

¹³ Li Jieqiong, "Rebirth of An Ancient City - Documentary on The Transformation of An Old City in Kashgar, Xinjiang". Xinhua News. 26 September 2015. http://www.xinhuanet.com/politics/2015-09/26/c_1116687056.htm.

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and live in resettlement building built by the government. According to this article, they have benefited greatly from their move: “The old house collapsed several times, and there was no way to rebuild or repair it. For a long time, a day feels like a year. Thank to the Party and the government, we now live in a spacious and bright building, which is something I never dreamed of!”¹⁴ Similarly, in late 2012, Abdullah Ainiwa’s family chose to move into a newly renovated house the main body of which was built by the government and the interiors were designed by themselves at the end of 2012: “The area of the house is twice as large as before, and there is water, cable TV, natural gas and the Internet. The alley at the entrance has been transformed into street for tourism, and there are endless streams of Chinese and foreign tourists every day.”¹⁵ Additionally on the matter of financing the architectural project, government statistics is often referred to: “up until August of 2012, among the accumulated investment of 2.691 billion yuan in renovation projects, Kashgar residents raised only 272.32 million yuan”,¹⁶ a little over 10%. Although in my opinion, these numbers give no indication on how much the residents need to pay out of pocket for reconstruction and renovation, and how much the government has compensated them.

Clearly the narrative from the government is completely different from what Joshua Hammer presents in the opening passage of this subchapter, in which Abdullah and his neighbours are heard expressing their discontentment at the news of their imminent eviction and relocation. They refute the government’s claim that their walls are not strong enough to survive an earthquake. They have no idea where they will be moved to, or who will design and rebuild their neighbourhood after their old homes are demolished. They also cast doubts on the government’s promise to compensate the residents 40% of the bills that incur during renovation of their new dwellings. Above all, they do not want to leave. No one in their neighbourhood wants to leave, because “it is history – ancient tradition”; but they have no power to stop the course.

I have in fact found some data compiled by Chinese architects who conducted interviews with residents of Gaotai Residential Area in Kashgar prior to renovation project of the area, that reinforces the account that the majority of residents do not wish to leave their vernacular neighbourhood:

Among the original 454 households, 83 households who were willing to move out and 10 households who moved out after their houses collapsed were excluded. After investigation and adjustment, 412 households remained in Gaotai. Among these 412 households, 23 households had repeatedly requested that they did not want their houses demolished and rebuilt, and 322 households had their houses rebuilt on the original site.¹⁷

A story reported by Reuters about a Uyghur merchant in Kashgar who was punished for refusing to let his house get demolished and for seeking compensation for demolition suggests the government suppresses any voice or actions of resistance from local residents who are upset with the demolition policies. Obul Kasim, a Uyghur merchant who sells embroidered skullcaps near Kashgar’s Id Kah Mosque, was “handcuffed and taken to the local police station when refused to leave his home in Kashgar’s Old City in 2004”, and was “detained by Xinjiang officials in 2005 and 2007 when he attempted to seek redress in Beijing over inadequate compensation for his

14 Ibid.

15 Ibid.

16 21st Century Business Herald. “11 Year of Reconstruction of Kashgar Old City: Changing The Old Face and Retaining The Soul”. 27 December 2012. <https://finance.sina.cn/sa/2012-12-27/detail-ikftpnx7162968.d.html>.

17 Xiao Dong Wang et al., *Terraced Household Kashgar (Gaotai)*. Nanjing: Dong Nan University Publishing, 2014: 4.

home”.¹⁸ After he failed to save his 100-year-old mud-brick home from demolition, his father was so angry that he passed away of a heart attack; and the local government offered him compensation of 470 yuan per sqm for his 510 sqm home; while high-rise apartments are now worth 30,000 yuan per sqm.¹⁹ Obul Kasim’s protest against this pitiful non-negotiable amount of compensation has been continuously suppressed by the government; and there are many more Old City residents like him.

Scholars in China hold different – often opposing – opinions on Kashgar’s reconstruction. Liu Xuejie, a scholar on Xinjiang culture who has resided in Kashgar for over 50 years, is fully supportive of the program as he believes that protection of human life is above the protection of their culture: “for me, the soul of Kashgar is not these buildings, but the people who have lived on this land for two thousand years.”²⁰ On the other hand, some scholars do not believe in the government’s “old houses are vulnerable to earthquake” explanation, stating that officials carried out no investigation of the Old City’s traditional houses on their earthquake resistance, and that most of those that collapsed in recent earthquakes were newly constructed concrete dwellings instead of vernacular raw-earth dwellings. Hu Xinyu of Beijing Cultural Heritage Protection Center (BCHPC), says that these traditional houses were designed to withstand earthquakes and are used for many centuries, and suspects that the demolition is intended to “deprive the Uyghurs of their main symbol of cultural identity”, or even to punish the Uyghurs for their “extremist” actions.²¹

The most critical concern is regarding the issues of consultation with local residents and the exploration of alternative measures. In multiple Chinese government-affiliated sources, they claim the demolition and resettlement project is carried out after consultation with multiple stakeholders, including the local Uyghurs in the Old City. However, Uyghur Human Rights Project (UHRP) reports in “Living on the Margins: The Chinese State’s Demolition of Uyghur Communities” that “no evidence of any consultative process has been provided, and all independent indications point to the lack of a Uyghur voice throughout the planning process”.²² BCHPC also notes that the official plans for the reconstruction of the Old City have been “marked by a lack of transparency rather than a public, consultative process.”²³

Chinese-government-backed narratives differ greatly from narratives told from foreign journalists and tourist. However regardless of whether Kashgar’s architectural reform project is “demolition” or “renovation”, whether the raw earth structures can withstand earthquakes, whether the residents themselves are willing participants, and whether they are compensated, the rapid replacement of Uyghur vernacular houses and displacement of Uyghur residents in the Old City of Kashgar as a direct result of government policies is an undeniable fact.

The replacement of Uyghur vernacular architecture is an extension to the modification of their domestic spaces and functions, because after all, what better

18 Uyghur Human Rights Project. “Living on the Margins: The Chinese State’s Demolition of Uyghur Communities”. March 2012, 63-64. https://uhrp.org/wp-content/uploads/2022/07/Living_on_the_Margins_The_Chinese_States.pdf.

19 Uyghur Human Rights Project. “Living on the Margins: The Chinese State’s Demolition of Uyghur Communities”. March 2012, 63-64. https://uhrp.org/wp-content/uploads/2022/07/Living_on_the_Margins_The_Chinese_States.pdf.

20 21st Century Business Herald. “11 Year of Reconstruction of Kashgar Old City: Changing The Old Face and Retaining The Soul”. 27 December 2012. <https://finance.sina.cn/sa/2012-12-27/detail-ikftpnx7162968.d.html>.

21 Joshua Hammer. “Demolishing Kashgar’s History”. Smithsonian Magazine. March 2010. <https://www.smithsonianmag.com/history/demolishing-kashgars-history-7324895/>.

22 Uyghur Human Rights Project. “Living on the Margins: The Chinese State’s Demolition of Uyghur Communities”. March 2012, 17. https://uhrp.org/wp-content/uploads/2022/07/Living_on_the_Margins_The_Chinese_States.pdf.

23 Ibid, 17.

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way to redefine domestic sensibilities than destroying the residents' old houses and determining their new ones for them? Similar to traditional Uyghur domestic sensibilities, vernacular Uyghur architecture and settlements are also seen by the government as a hinderance to cultural, social and economic advancements in Xinjiang. By arguing that the old urban fabric of Kashgar cannot support further population growth, provide earthquake-proof shelters, or allow for the construction of modern infrastructure and measures of fire protection, the government legitimizes its endeavors to discontinue practices of Uyghur architectural tradition in Kashgar and replaces them with concrete high-rise buildings that are not unlike those found in other Han-dominated regions of China.

Despite the tangible reasons for demolition and reconstruction of vernacular Kashgar given by the government, I cannot help but contemplate on the underlying political intentions. Evidence seems to suggest a correlation between the rate of demolition and reconstruction and Xinjiang's political climate. In addition to Kashgar, Grose reports, Urumqi is also the target of similar government policies after the 2009 protest. The government has plans to "flatten and rebuild pre-dominantly Uyghur areas" in Urumqi, specifically two main districts, Hejiashan (柯家山) and Yamalikeshan (雅玛里克山).²⁴ He also states: "The CCP has acted with greater urgency since 2017 – the year in which mass incarcerations of Xinjiang's Turkic populations increased at alarming rates – and its top brass has set into motion a series of policies that have demolished and in some cases rebuilt Uyghur spaces."²⁵ Increase in demolition and reconstruction efforts of Uyghur vernacular houses seems to coincide with political events that compel the government to gain more control over the Uyghur population.

It is not baseless to suspect that the government may have seen Uyghur vernacular settlements – the architectural embodiment of Uyghur collective identity – as dangerous breeding grounds for Uyghur nationalism and insurrection, and the winding alleyways in the Old City of Kashgar as secret gathering places for terrorists, which could threaten stability and the government's ruling authority in Xinjiang. Removing Uyghurs from their vernacular setting and relocating them in government-built buildings could mean eliminating these threats, because the residents' cultural connections to their ancestral land and homes are severed, and their feelings of belonging and sense of collective identity are deleted along with the demolition of physical attachments to their community. By regulating the residents' built environments and governing where and how they can live, the government can regulate their behaviours, thoughts, and beliefs to reinforce their governance over the population. As Jay Dautcher states in the beginning passage of this chapter: "Personal and collective attachments to place are critical basis of identity in general, since claims to political entitlement are often understood and advanced through them. If a state can undermine the cognitive and material bases supporting this feeling of belonging, the ability of groups to advance claims to political entitlement is weakened."

24 Timothy A. Grose. "If You Don't Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space". *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 7. <https://doi.org/10.1080/01419870.2020.1789686>.

25 *Ibid.*, 7.

4.4. Reconstruction of Old Towns and Cities

Renovation seems inevitable. Building the new is a trend most Chinese cities are pursuing.

Rustam wants to stay in the old houses, though he doesn't know how long they can stand. He said moving to a modern building will be like putting his pigeons in cages, but living in the Old City gives his spirit freedom to soar.

--- CGTN, "Kashgar's Urban Renewal Yields Mixed Results"¹

Rustam in the passage above is Rustam Abudueni – a 26 year-old Gaotai resident – in the passage in section 3.1.2, when Gaotai Residential Area in the Old City of Kashgar is first introduced and its history and vernacular forms explained. The neighbourhood has 2000 years of history and is one of the very few vernacular settlements in Kashgar that still remains mostly intact. Instead of being demolished, it is being as “a museumized version of a living culture”, as phrased by Dru Gladney.²

Ever since Gaotai has been designated as a “protected style-preservation” area in Kashgar’s house reform project, many proposals for its reconstruction or renovation have surfaced. One of the earliest proposals by an unknown artist features an ambitious Parisian-style radial urban plan with all the major streets converging at the central plaza where a government building stands. All streets and the centre of every block are lined with single rows of homogenous trees (Fig.4-4-1³). It is needless to say that this proposal preserves neither the architectural style nor the urban texture of Gaotai. It also alludes to a desire for the re-organization of community space and

1 “Kashgar’s Urban Renewal Yields Mixed Results”. CGTN. 28 June 2018. <http://news.cgtn.com/news/3d-41544f33517a6333566d54/index.html>.

2 Joshua Hammer. “Demolishing Kashgar’s History”. Smithsonian Magazine. March 2010. <https://www.smithsonianmag.com/history/demolishing-kashgars-history-7324895/>.

3 “Kashgar’s Old City | Traveler’s Guide to an Evolving City.” Far West China: Exploring Xinjiang and the Silk Road. Accessed November 11, 2021. <https://www.farwestchina.com/travel/kashgar/old-city/>.



Fig.4-4-1 Rendering for one of the earliest proposals for renovation of Gaotai Residential Area.³

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social order in Gaotai to assert the governing power of the state.

One proposal for Gaotai is designed by two architecture students – Wang Jiaqi and Liu Jia – under the guidance of their teacher – Xing Cheng – from Xi'an Industrial University (located in central China). It was given the 2018 LA Pioneer Award in the National University Landscape Design Graduation Exhibition. Their design is based on the belief that Gaotai residents' living conditions are very poor and messy; most of their houses are dilapidated; and neglect of the dirty neighbourhood has further impeded its economic development potentials. Thus in order to “change the local living environment and protect the original features of the Gaotai dwellings”, they have proposed a modular and gradual design that will insert “self-repaired and self-built brick-concrete houses” in places where the old buildings have collapsed (Fig.4-4-2~6⁴). The continuous collapse of dangerous houses and the continuous construction of new houses in their place are inevitable “like the metabolism of cells”, declare the students in the project synopsis. The houses' interior design includes characteristic Uyghur architectural elements and is attached to the module, so that “the house type does not change and does not need to adapt to the new environment” (Fig.4-4-7~10⁵).⁶

In defence of their design, the students write:

*The design of the Gaotai folk houses in Kashgar will not rebuild the site at one time, not will it completely preserve the original relics, but endow them with a new function to reshape a new Gaotai. Not only can the past history be seen in the site, the city imprint will be preserved, but at the same time it will have a new mission, new urban functions, a new historical mission, and new connotations. The site will be rejuvenated, reawakening the sense of urban belonging and reintegrating into the city.*⁷

From the passage, the students' sentiment towards Gaotai can be detected: first, vernacular houses in Gaotai are relics of the past and are no longer relevant in today's Kashgar; and second, Gaotai needs to adopt a new design in order to have a new function and a new mission that are more appropriate in the present, so that Gaotai can rebuild a sense of “urban belonging” in the city.

The competition judges comment on the students design, giving validation to the Pioneer Award they received:

*Facing the problem of the decline of traditional dwellings, the proposal makes bold assumptions, presents novel and unique views, and breaks through some conventional practices in the protection of dwellings. There is no re-planning for quick success and instant results; instead it respects and balances context of the site, the natural evolution of the site and the needs of the residents.*⁸

I disagree with the judges. I think the students' proposal respects neither the materiality and cultural memory embodied in the vernacular architecture nor the needs of the residents. Although I understand the context of their proposal is a creative design competition, I do not believe this is an appropriate method to protect vernacular

4 “2018 LA先锋奖：物哀——新疆喀什高台民居的变化设想 (2018 LA Pioneer Award: Objects Sorrow - Conceives on the changes of high-level residential houses in Kashgar, Xinjiang).” 景观中国 (Landscape.cn). November 14, 2018. Accessed December 1, 2021. <http://www.landscape.cn/landscape/10090.html>.

5 Ibid.

6 Ibid.

7 Ibid.

8 Ibid.

原始场地平面 / Original site plane

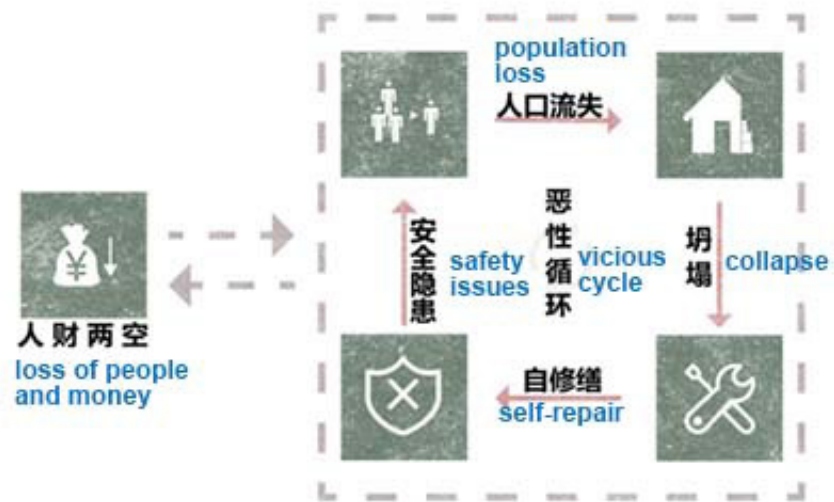
场地现状 Site problem



场地现状 Site situation



恶性循环 Vicious circle



场地原始平面 Original plan



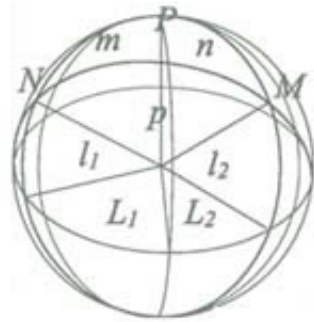
问题一：建筑的唯一性与无序性
problem 1: the uniqueness and disorder of buildings

Fig.4-4-2 An award-winning proposal of Gaotai by students from Xi'an Industrial University in 2018. The idea is to replace collapsed dwellings with versatile 3m by 3m concrete modular units.⁴ Black English translations from original images. Blue translations added by author.

高台民居进化设想 / The evolution of gaotai dwellings

答案一：在固定的场地，户型，道路的基础上，用3000mm×3000mm的像素方格模块化整个场地。使风格不变，户型不变，道路走向不变，整个高台不变。还保留了建筑无序性与唯一性！

Answer 1: On the basis of a fixed site, house type and road, use a 3m by 3m pixel grid to modularize the entire site. Keep the style unchanged, and the entire Gaotai unchanged. It also retains the disorder and uniqueness of the building.



全球穆斯林朝拜麦加方向算法与示意图
Algorithm and schematic diagram of Muslim pilgrimage to mecca around the world

进化后场地平面图
Evolving site plan



将场地用3m×3m的方格布满并几何化场地
使每家西南角朝向麦加
Cover and geometrize the site with 3m x 3m square
Each house faces mecca in the southwest corner



Fig.4-4-3 An award-winning proposal of Gaotai by students from Xi'an Industrial University in 2018. The idea is to replace collapsed dwellings with versatile 3m by 3m concrete modular units.⁴ Black English translations from original images. Blue translations added by author.

高台民居进化设想 / The evolution of gaotai dwellings

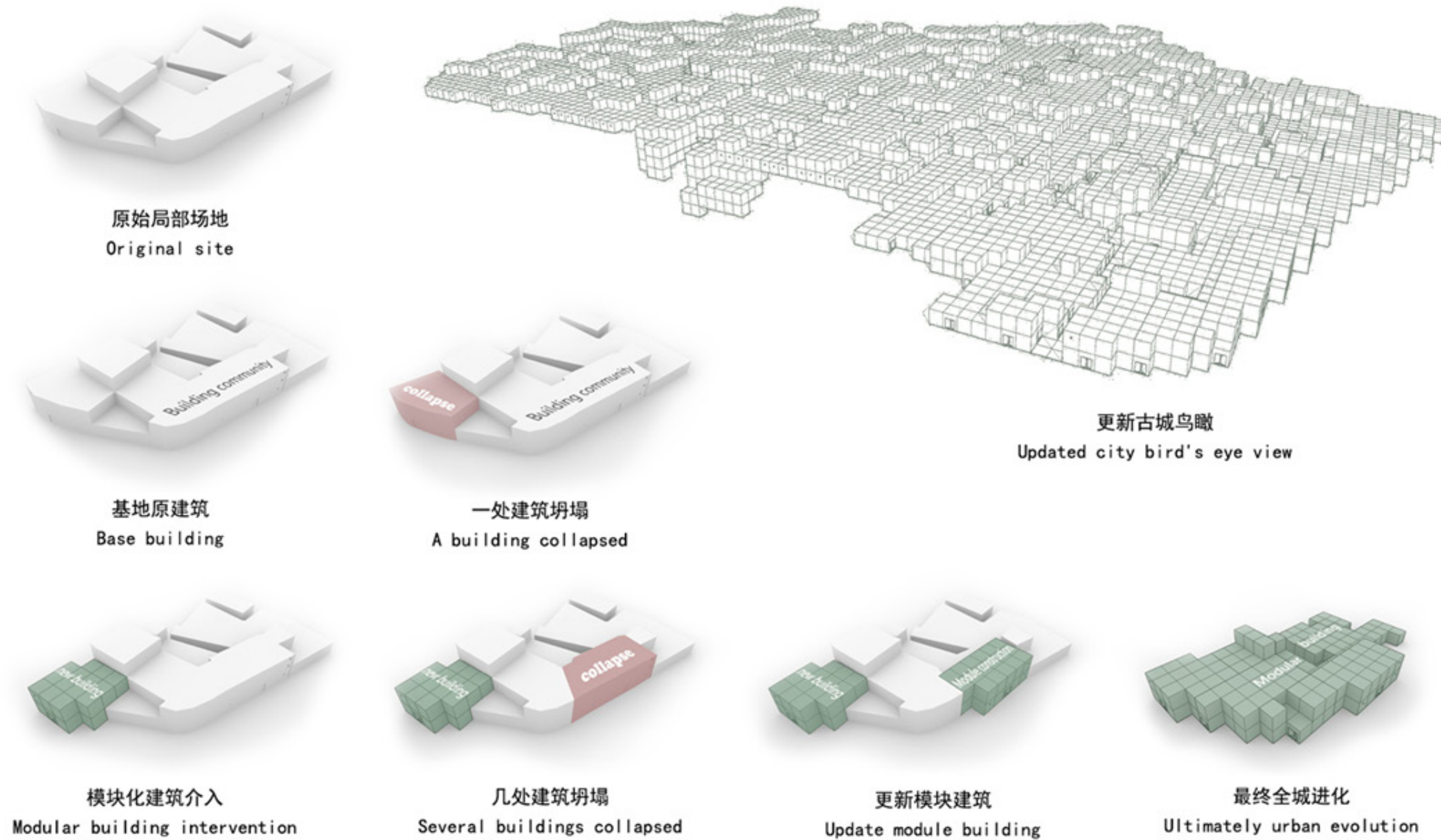
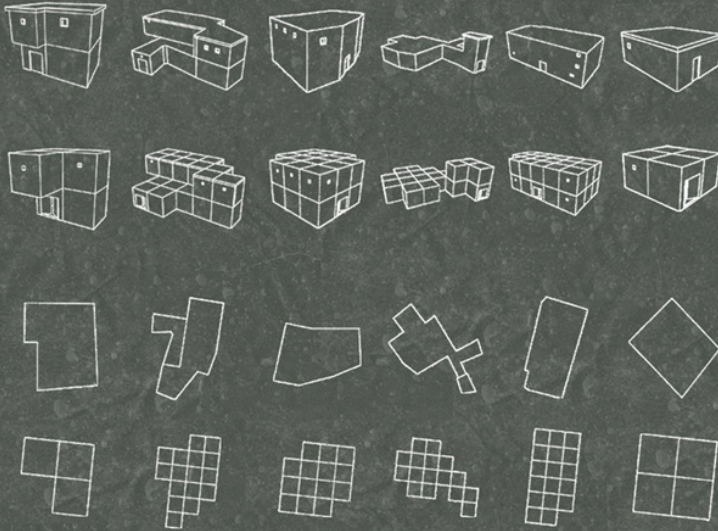


Fig.4-4-4 An award-winning proposal of Gaotai by students from Xi'an Industrial University in 2018. The idea is to replace collapsed dwellings with versatile 3m by 3m concrete modular units.⁴ Black English translations from original images.

高台民居进化设想（室内） / The evolution of gaotai dwellings

典型民居建筑变化形式
Typical residential building change form



典型民居内部形式
The internal form of a typical residential house

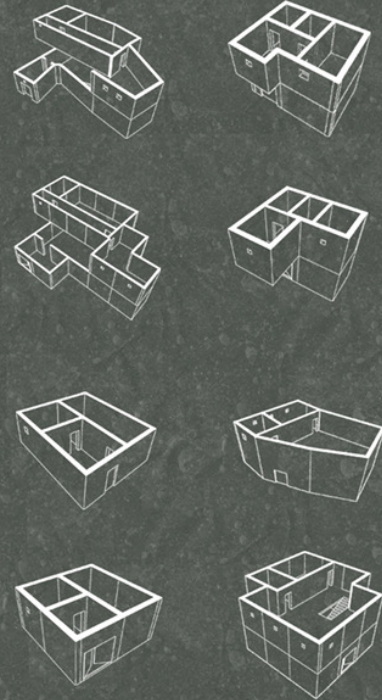


Fig.4-4-5 An award-winning proposal of Gaotai by students from Xi'an Industrial University in 2018. The idea is to replace collapsed dwellings with versatile 3m by 3m concrete modular units.⁴ White English translations from original images.

Fig.4-4-6 An award-winning proposal of Gaotai by students from Xi'an Industrial University in 2018. The idea is to replace collapsed dwellings with versatile 3m by 3m concrete modular units.⁴ White English translations from original images.

高台民居进化设想（室内）/ The evolution of gaotai dwellings

问题：原有房屋因环境因素开窗极小，导致采光差。

Problem, original house because environmental factor opens window very small, bring about daylighting difference.

答案：外小内大的窗户，既保证了气候条件因素，又加大了光的折射面与光通量。
Answer, outside small inside big window, guaranteed climate condition factor already, increased refractor face of light and luminous flux again.



问题：模块化怎么做到每户既统一，还保留室内的个性化及差异化。

Question: how does modularization achieve unity of each household while preserving indoor individuality and differentiation?

答案：从伊斯兰建筑中找到设计元素，最有代表的建筑屋顶，提取元素进行演变。

Answer: from the construction of eslan, we found the shemetsu, the most representative of the construction of the roof, to take the shemetsu into line change.

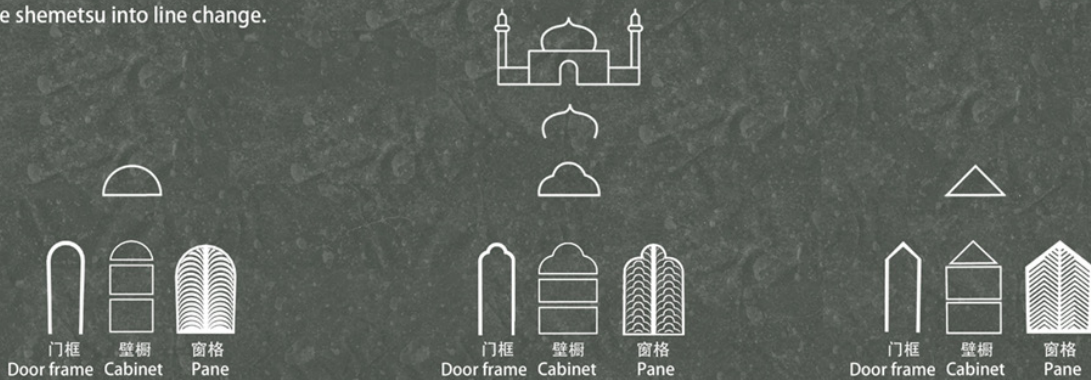


Fig.4-4-7 (top) Interior design rendering of the kitchen. The outline of the cabinet, window and door frames is apparently inspired by Islamic architectural elements, in order to create uniqueness in the domestic space.⁵

Fig.4-4-8 (bottom) Interior design rendering of the living room.⁵ Carpet hung on the wall and the bicycle seem out of place.





Fig.4-4-9 (top) Interior design rendering of the kang.⁵ The elderly Uyghur men appear to be wearing shoes on it.

Fig.4-4-10 (bottom) Interior design renderings of the mehrab, which the student calls the "pilgrimage corner".⁵ The black calligraphic plaque seems odd.



Gaotai. Despite the students' efforts to retain the uniqueness and "randomness" of each housing layout, the modularity in their new design restrains flexibility and ingenuity of organically developed spaces in vernacular Gaotai. Despite their attempts to incorporate Islamic architectural forms, the design's interior renderings show a lack of understanding on Uyghur vernacular architectural forms and functions in Kashgar, based on what we know about them in Chapter 3. For example, in the rendering of the living room, the carpet, which is traditionally laid on top of kangs and supas, is shown hung carelessly on the wall; the bike also seems out of place. In the rendering of the kang – a place for eating, entertaining guests, lounging, and sleeping – the residents are depicted wearing their shoes. Furthermore, in the rendering of the mehrab – which is traditionally an alcove on the wall that indicates the location of Mecca – the black calligraphic plaque seems out of place, since ornate calligraphic floral designs with Qu'ran scriptures would typically be integrated into the wall as mosaic tiles or painted carvings in large mosques, or mostly absent in ordinary households. I suspect the students took inspiration from the calligraphic plaque above the entrance of Id-Kah Mosque, the main mosque in Kashgar (Fig.4-4-11⁹). It also seems like the students are not aware that the government has taken measures to demolish kang/supas and to fill in mehrabs in Uyghur domestic spaces, in attempt to "civilize" the "culturally-backward" residents.

Although the student's proposal obviously has no real impact on the fate of Gaotai Residential Area, approval on their design from the competition judges does hint, to a certain degree, at China's architecture academic circle's general consensus on vernacular Gaotai – the neighbourhood is abandoned, dilapidated and in severe

Fig.4-4-11 Id-Kah Mosque in Kashgar in August 2001. Photograph by Ian Cowe.⁹

⁹ Ian Cowe. "Id Kah Mosque – Kashgar, Xinjiang Region, China, August 2001." Flickr. January 31, 2002. <https://www.flickr.com/photos/iancowe/1446453913>.



disrepair; and the replacement of its aging buildings by new buildings is inevitable.

At least in the academic circle of architecture in Xinjiang – which does not always agree with the government's actions – there is a shared desire to respect and preserve the architectural history of Gaotai, and to create economic development opportunities in the neighbourhood; but their proposed preservation/renovation plan and the degree to which the original architectural forms and materiality are retained vary largely. The two designs for Gaotai introduced previously are only proposed and discussed on a hypothetical level. The next one is closer to the actual plan endorsed and executed by the government.

A 500-page book, *Terraced Households Kashgar (Kashgar Gaotai Houses)* – written by Wang Xiao Dong, Song Hui, Liu Jin, Ni Yi Ding, and published by Dong Nan University Publishing in January of 2014 – documents the existing conditions of Gaotai in detail, and provides practical designs for a renovated Gaotai that is friendly to tourism. According to the book, the total investment in the project was estimated to be 7 billion yuan, including 2 billion yuan subsidized by the state, 1 billion yuan raised by the autonomous region, and others from local financial support. A team of more than ten architects and experts spent 4 months – starting from September of 2009 – took precise measurements and conducted interviews on the current situation of Gaotai's 454 residential houses, and completed a 3D digital model library of all the houses and structures in the entire residential area.¹⁰ The book lists 6 main objectives of the renovation project:

- 1. Guarantee the legality of residents' right of residence.** This means to protect the interests of the residents and respect their wish to move out or remain in Gaotai, and their wish on whether or not to have their houses demolished and rebuilt.
- 2. Ensure public participation.** Residents of each household participate in the design themselves while professionals provide technical guidance. The construction unit only completes the construction of the main body of the building and the construction of municipal supporting facilities. Doors, windows, railings and etc. are completed by the residents themselves.
- 3. Integrate spaces – check for leaks and fill in gaps.** In order to widen roads and increase the number of plazas, some houses are rebuilt, modified, or merged. The original spatial structure of each household and the entire settlement texture is maintained as much as possible.
- 4. Improve infrastructure while fully integrating the terrain in design.** In order to facilitate tourism and commerce, roads with dead ends are opened up; a road for fire trucks and pedestrian paths are defined. A few small plazas, hotels, and characteristic shopping spots are integrated; and infrastructure such as public toilets, telephone booths, mailboxes, taxi stands and etc. are added.
- 5. Reinforce slope stability.** Structural systems such as gravity retaining walls or sheet piles are embedded in the soil to ensure the stability of the slope without changing its original shape and slope.
- 6. Renovate fire protection and municipal facilities.** A ring-branch pipe network that connects to the municipal pipe network is introduced to Gaotai's underground, aiming to provide water supply and drainage systems, as well as a source for firefighting water. An electricity distribution station is set up outside

¹⁰ Xiao Dong Wang et al., *Terraced Household Kashgar (Gaotai)*. Nanjing: Dong Nan University Publishing, 2014: 1.



Fig.4-4-12 Gaotai Residential Area Renovation Plan.¹¹ Translated by author.

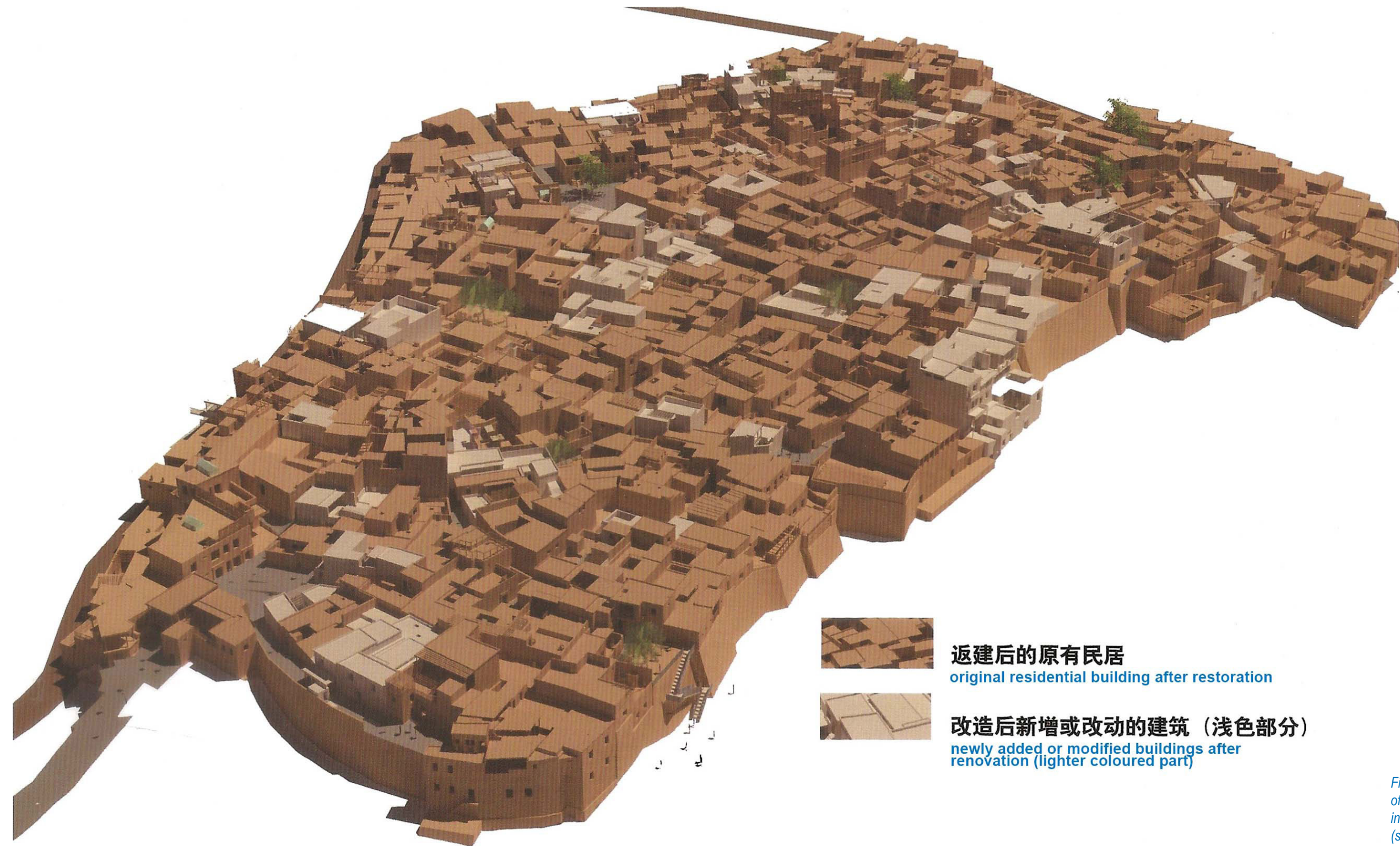


Fig.4-4-13 Digital model of proposed renovations in Gaotai residential area (southwest perspective).¹²

to Gaotai to supply power and heating to the residences. Telecommunication services are provided by connecting optical cables to a weak current room on the high platform in Gaotai (Fig.4-4-12, ¹¹13¹²).¹³

At the time the book was published, among the 412 households that still resided in Gaotai, 322 households had their houses rebuilt on the original site, and 23 households had insisted on not having their original houses demolished and rebuilt.¹⁴ Although Gaotai has been designated as a “protected area” where the original architectural style is largely preserved, most of its original buildings no longer exist; modern replicas of what they once were stand in their place today. It is also unclear to what extent the reconstructed houses respect the materiality, construction methods, and spatial functions of the original. On top of this, many buildings (highlighted by the lighter colour in Fig.4-4-13) are modified, adjusted or newly added. As an outsider, it is difficult for me to determine whether the reconstructed Gaotai can still be considered as an embodiment of the local residents’ inherited architectural tradition or a representation of their cultural heritage and community identity. Perhaps under the larger context of Kashgar where extensive demolition and reconstruction of Old City are proceeding at an astonishing speed, Gaotai residents have been fighting relentlessly for the preservation of their architectural history and culture, and this outcome is the best compromise they could reach within their ability.

While this book claims that it is a part of the “Kashgar Dangerous House Reform” project that started in 2009, another Chinese article written by 21st Century Business Herald in 2012 tells a different story. It states:

In 2006, Huang Nubo, a real estate businessman, persuaded the Kashgar local government that his Zhongkun Group could “protect” Gaotai residential buildings in the form of tourism real estate, so as to avoid the fate of being demolished, and make them one of the many tourist attractions in Kashgar. It would be open to tourists at the price of 30 yuan per person.

Today, it has become an abandoned tourist project. “It is not allowed to enter here, for fear of [the buildings] collapsing on you,” a Uyghur woman stopped me at the entrance of the alley, “the buildings here are too dangerous.”

However, the alleys in Kashgar extend in all directions, and I soon arrived at another entrance. I climbed up the steps where “tourists are prohibited from entering”, and the cross-street buildings were in front of me. The one-meter-wide alley was deserted, except for the occasional Uyghur children, I was the only tourist.¹⁵

The author of this article believes that a real estate businessman – Huang Nubo – was the first one to pitch in the idea of converting Gaotai to a tourist attraction. They also believe that the tourist project has since been abandoned, because visitors were forbidden to enter at the moment of their visit. However, one crucial detail in this account is that there were still local Uyghur residents living in Gaotai’s vernacular houses in 2012.

Recently I have learned that after 8 years of prohibiting tourist visits, the Gaotai

11 Ibid, 5.

12 Ibid, 471.

13 Ibid, 4-7.

14 Ibid, 4.

15 21st Century Business Herald. “11 Year of Reconstruction of Kashgar Old City: Changing The Old Face and Retaining The Soul”. 27 December 2012. <https://finance.sina.cn/sa/2012-12-27/detail-ikftpnrx7162968.d.html>.

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Residential Scenic Spot in Kashgar is now in the phase of trial operation. Written by the business manager of Xinjiang Zhongbei Time International Travel Agency Co., Ltd., the article titled “Kashgar Gaotai residence reopens after eight years of closure”, announces that starting from June 6 of 2023, during trial operation, 500 free tickets would be distributed to visitors every day. The advertisement reads:

Fig.4-4-14 (top)¹⁷

There are currently no residents in the scenic area, there are remodeled shops, ruins viewing areas, and a large area that has not yet been remodeled. Some of the remodeled shops have been open to the public.

Fig.4-4-15 (bottom)
Renderings of tourists
visiting Gaotai
Residential Scenic
Spot.¹⁷

There are more shops related to intangible cultural heritage, including brick



*carvings, cradle making, Edellais silk workshop, etc.*¹⁶

Today, Uyghur residents who have lived in Gaotai for centuries have been driven out of their indigenous homes and neighbourhood, to make room for the construction of “Gaotai Residential Scenic Spot (Fig.4-4-14~15¹⁷)”, which is endearingly called “The Living Folk Museum of Uyghurs” by the business manager. This scenic area is now open to tourists from 10:00 to 22:00; and tickets can be picked up from its main entrance.¹⁸

Certainly, the first two objectives listed by authors of *Terraced Households Kashgar (Kashgar Gaotai Houses)* that aim to “guarantee the legality of residents’ right of residence” and “ensure public participation in design of their rebuilt homes” were not achieved. Perhaps they were not meant to be achieved since the beginning, and were just words of temporary compromise to the residents. Perhaps they could not be achieved in the broader political framework. It is safe to assume that previous Gaotai residents have been relocated into concrete high-rise apartment buildings like other Uyghur residents in Kashgar. Rustam, who has compared moving into modern buildings to putting his pigeons in cages, has perhaps now lost his free spirit to soar in Gaotai, his ancestral land. It is disheartening to see the architectural and material culture that is still practiced today to be forcibly classified as relics of the past; to witness an entire community evicted from their ancestral residences which are now presented as “intangible cultural heritage” attractions in a “scenic spot”; and to realize the century-old evolution and inheritance of this community’s architectural tradition and customs might have ended here and now.

Furthermore, the business manager – author of the promotional article – elevates the importance of the conversion from “Gaotai Residential Area” to “Gaotai Residential Scenic Area” by writing: “Gaotai Residential Scenic Area is the epitome of tourism development of the entire Kashgar and the city’s historical and cultural changes. From another perspective, Gaotai folk houses are the soul of Kashgar’s folk customs, condensing the memories of a generation of people traveling in Kashgar.”¹⁹ They emphasize on the value of Gaotai for Kashgar’s tourism development, and the memories Gaotai can bring to the visitors to Kashgar, while completely dismissing Gaotai’s indigenous Uyghur residents and what the vernacular houses and settlement mean to them – or in reality – what giving away their vernacular houses and settlement to Kashgar’s tourism development means to them.

I do wonder what hit the final nail in the coffin for the government to decide Gaotai’s indigenous residents need to move out of their homes, especially when there exist detailed plans drawn by professionals to adjust or rebuild some of the “problematic” houses, and when – suggested by the promotional article – there still seems to be plans for remodelling large areas of Gaotai – albeit mainly for tourism? I could not find any official narratives to answer this question; so I can only speculate. My guess is that the presence of indigenous Uyghur residents in Gaotai was somehow impeding tourism development; or that moving them out has always been the goal, and the promises to protect their rights are just a delaying tactic. Perhaps maintaining the daily functionality of the residents’ houses while operating a scenic area with shops and attractions is not financially viable. Perhaps, the authorities perceive the tourism development in Gaotai as an investment with foreseeable returns, and

¹⁶ Xinjiang Tourism Season. “Kashgar Gaotai Residence Reopens After Eight Years of Closure”. Zhihu Column. 6 June 2023. <https://zhuanlan.zhihu.com/p/635145461>.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

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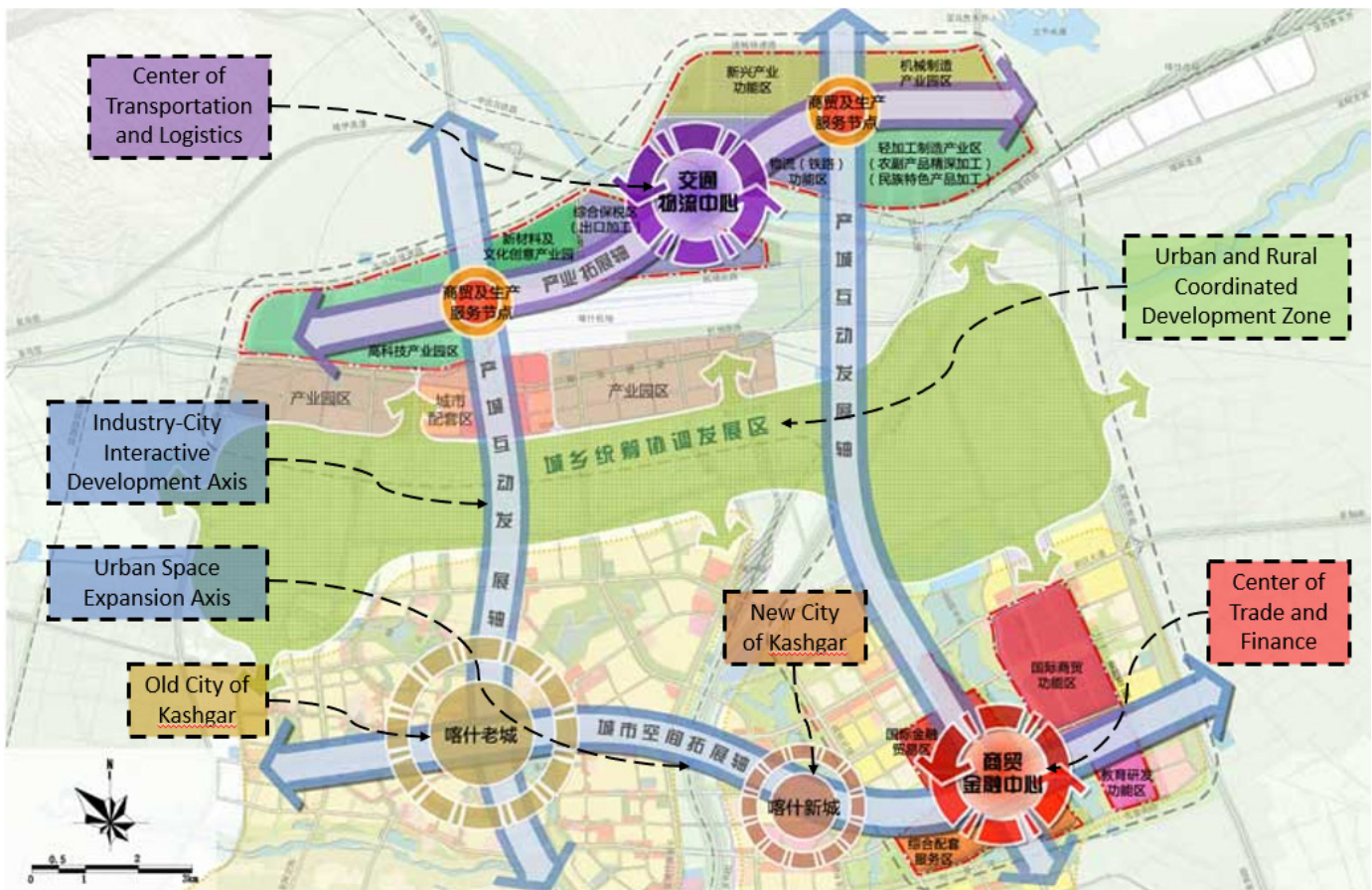
cultural preservation for the indigenous residents as one with little returns. Perhaps the residents were opposed to their houses being converted to tourist attractions, and themselves becoming moving displays in a museum; and the authorities and developers could not reach an agreement with them. Perhaps, the government sees the need to relocate all Uyghurs into government-built apartment buildings to fully eradicate their unwanted behaviours and outdated customs. Perhaps, the authorities have more to worry about in the overall economic development strategy of Kashgar (Fig.4-4-16~17²⁰) than the feelings of a small Uyghur indigenous community; and in their opinion, a sweeping eviction and relocation approach is the quickest and most cost-effective method to accelerate their economic plan for Kashgar. Perhaps during the pandemic, the residents' daily activities and movements within Gaotai's "disorderly" alleyways were difficult to monitor and control. Or perhaps, suspected by Uyghurs Humans Rights Project (UHRP), "at a time when whole neighbourhoods have been known to disappear into detention camps, the sudden and unreported desertion of the historic neighbourhood suggests a likely forced removal into the camps".²¹ However since getting reliable information out of Kashgar is challenging at a time of high political sensitivity, it is hard to say for certain.

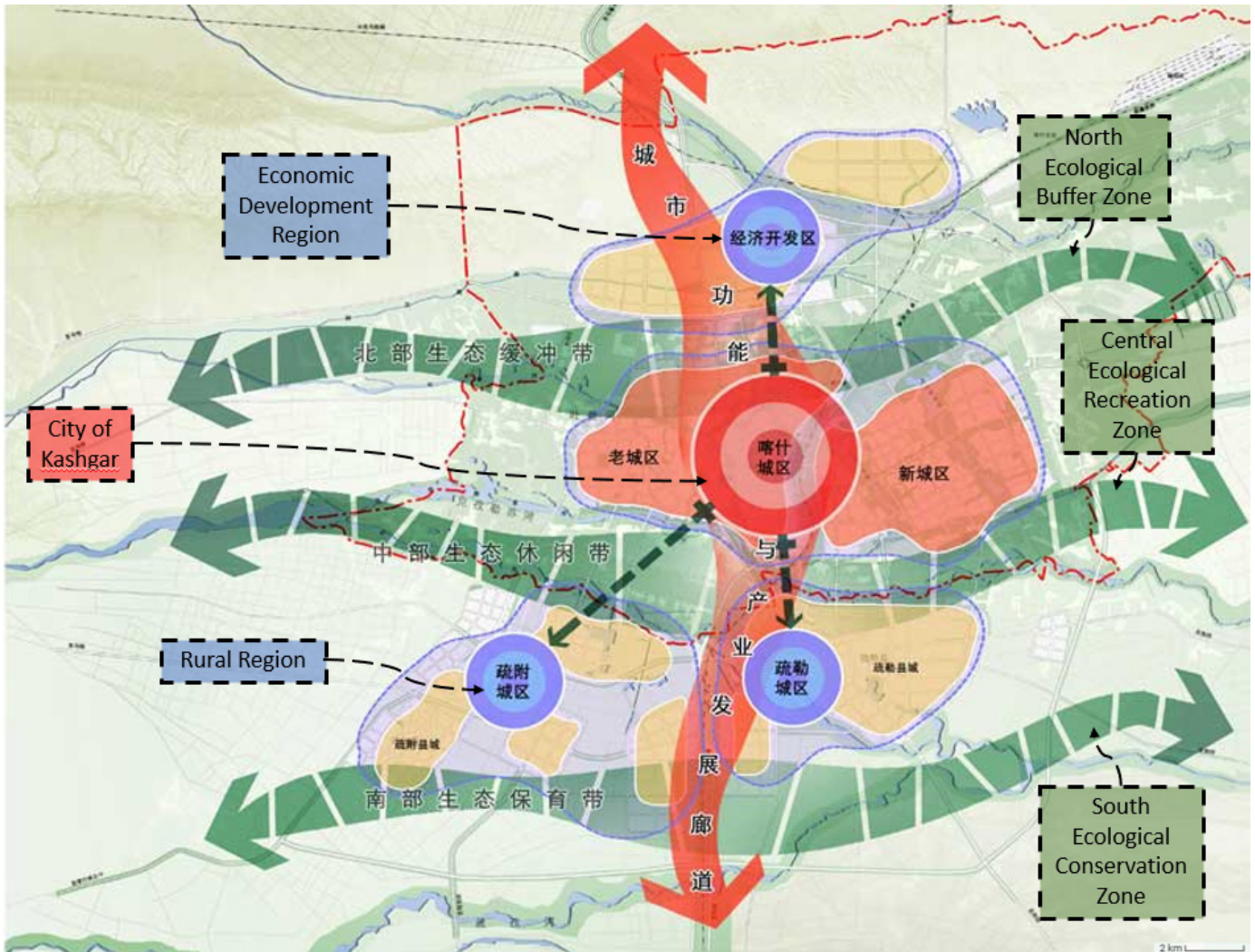
Fig.4-4-16 Economic Development Strategy of Kashgar (2011-2020) drawn by Urban Planning & Design Institute of Shenzhen (in central China), approved by the government in 2012.²⁰ Translated by author.

It is certainly regrettable that Gaotai Residential Area, a vernacular settlement with 2000 years of history and over 400 households, has been renovated as a museum of architectural and cultural artifacts; and many of the buildings have been

20 "喀什市城市总体规划 (2011-2030) (City of Kashgar Overall Urban Strategy)." 深圳市城市规划研究所 (Urban Planning & Design Institute of Shenzhen). May 18, 2016. Accessed December 1, 2021. https://www.upr.cn/product-available-product-i_13736.htm.

21 "Kashgar Coerced: Forced Reconstruction, Exploitation, and Surveillance in the Cradle of Uyghur Culture". Uyghur Human Rights Project. 3 June 2020. <https://uhrp.org/report/kashgar-coerced/>.





adjusted or rebuilt. However considering the original fabric of over four-fifth the Old City of Kashgar has been demolished and replaced rapidly in the past decade, Gaotai might still be one of the luckiest – its urban texture and a small portion of its original buildings have been spared from the bulldozer for the longest in Kashgar; although, UHRP claims this is because Gaotai’s “housing stalwarts of Uyghur culture” resisted the reconstruction of Old City “with notable fervor”.²² As for the rest of Kashgar, in the place of old towns that were deemed unsafe and unsanitary by the authorities – as soon as they were bulldozed – new “old towns” were quickly built to resemble the original old town. One example of a newly built “old town” is North Jiefang Road (解放北路) (Fig.4-4-18~23²³), the name of which – “Jiefang (解放)” is a Communist term that means liberation – liberation from tradition, capitalism and the control of bourgeoisie. North Jiefang Road is now a popular tourist attraction. At night, food vendors, boutiques fill the street and transform the road into a lively night market (Fig.4-4-24~25²⁴).²⁵

Fig.4-4-17 Strategy for surrounding areas of Kashgar (2011-2030) drawn by Urban Planning & Design Institute of Shenzhen (in central China).²⁰ Translated by author.

22 Ibid.

23 “North Jiefang Road Night Market”. Tripadvisor. https://cn.tripadvisor.com/Attraction_Review-g1152622-d5062031-Reviews-North_Jiefang_Road_Market-Kashgar_Xinjiang_Uyghur.html.

24 Ibid.

25 Ibid.

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Fig.4-4-18 (top)²³

Fig.4-4-19 (bottom)
North Jiefang Road
in November of 2019.
Photograph by Alip Silk
Road Private Tours.²³





Fig.4-4-20 (left)²³

*Fig.4-4-21 (right)
North Jiefang Road
in November of 2019.
Photograph by Alip Silk
Road Private Tours.²³*

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Fig.4-4-22 (left)²³

Fig.4-4-23 (right)
North Jiefang Road
in November of 2019.
Photograph by Alip Silk
Road Private Tours.²³



Fig.4-4-24 North Jiefang Road Night Market in July of 2017. Photograph by Lars O.²⁴



Fig.4-4-25 North Jiefang Road Night Market in July of 2019. Photograph by Kaori2424.²⁴



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At first glance, these photos of the newly constructed “old town” taken by tourists look unalarming, or perhaps even appealing. They give the illusion that the end – the clean, charming, and economically-blooming tourist attractions – could somehow justify the means – which is the coerced eviction of Uyghur communities from their homes. However, evaluating the government’s reconstruction of Kashgar’s Old City based on its aesthetic “upgrade” or economic returns alone is dismissing the multitude of political, social, cultural issues hidden behind its beautiful façade. For example, in the new “old towns” of Kashgar – including the North Jiefang Road – with the absence of cross-street buildings and winding alleyways, the police can now install enough surveillance cameras to cover every corner and to better monitor people’s behaviours and prevent “terrorism” (Fig.4-4-26²⁶).²⁷

More importantly, Uyghur Human Rights Project (UHRP) reports that the reconstruction process unfolded “without any meaningful consultation with the locals affected”; and it “effectively amounted to a significant government-induced gentrification of the Old City, such that many Uyghurs could not afford to move back to their homes”; those who can tend to be wealthier ones “whose economic well-being depends on their cooperation with the Han-dominated authorities”.²⁸ Those could not afford to return are forced into apartments on the outskirts of Kashgar. Additionally, this coincides with the acceleration of economic transformation of Kashgar. In May 2010, the state introduced a slew of tax breaks, investment incentives, and lighter regulations to start businesses, to attract capital and settlers to Kashgar, which has furthered gentrification – “prices for Kashgar apartments jumped by as much as 30% and commercial properties by 40% in just a couple months after the announcement”.²⁹ Interviews with locals indicate that “those who were moved out of the Old City were

26 Tara Francis Chan. “How a Chinese Region That Accounts for Just 1.5% of the Population Became One of the Most Intrusive Police States in the World”. Business Insider. 21 July 2018. <https://www.businessinsider.com/xianjiang-province-china-police-state-surveillance-2018-7>.

27 Ibid.

28 “Kashgar Coerced: Forced Reconstruction, Exploitation, and Surveillance in the Cradle of Uyghur Culture”. Uyghur Human Rights Project. 3 June 2020. <https://uhrp.org/report/kashgar-coerced/>.

29 Ibid.

Fig.4-4-26 Men install a CCTV camera in North Jiefang Road Market in the old town of Kashgar, March 23, 2017.²⁶



also moved far away from their means of economic livelihood, creating a dependency on government benefits”, which can only be obtained by demonstrating “submission to state policies of assimilation and community reporting”.³⁰ UHRP argues that the reconstruction policies go hand in hand with governmental economic coercion, meaning that while reshaping the cultural center of Kashgar, the government is also reinforcing methods of state economic control.³¹ Perhaps like the government has continuously touted about the reconstructed Old City, the old towns have benefited from the improved plumbing and electricity, the more structurally-sound buildings, or the wider and more standardized roads that can accommodate fire trucks; and perhaps a small minority of Uyghur residents did prefer their new relocation apartments,³² the primary beneficiaries at the end are definitely not the resettled Uyghurs, most of whom could not even afford to return to enjoy these improvements on their ancestral houses and land.

Instead, the beneficiaries are the Party and the Han corporations that reap profits from them. UHRP reports that “immediately following the reconstruction of Kashgar, the neighbourhood Communist Party committee of the Old City leased the reassembled heart of Uyghur culture to the Beijing Zhongkun Investment Group, a Han company which began marketing the area as a ‘living Uyghur folk museum’”, and established a “nearmonopoly” over Kashgar’s tourism.³³ Essentially, after the local Uyghurs have been driven out of their homes and land where their means of livelihood were depended on, a Han corporation came in and started extracting wealth from commodified Uyghur culture that is embodied in the Old City’s architecture and urban fabric – albeit they are reconstructed to resemble the original style. UHRP states it well:

*Uyghur culture is a resource to be commodified and extracted, for profit and for social control. Kashgar’s Old City today has become a menagerie of performative Uyghur cultural traditions largely in the service of Han wealth production and state social control—from its synthetic ‘Islamic lego’ architecture, to its cultural performances, to its ownership.*³⁴

In areas where tourist and commercial activities are not prevalent, the reconstructed neighbourhoods adopt layouts that re-organize local communities and establish a new social order. In 2016, Kashgar’s “Mosque Rectification” campaign demolished nearly 70% of mosques in just three months and closed the remaining 30% - one was even converted to a bar for tourists named “The Dream of Kashgar”. Police stations have replaced the demolished mosques geographically and functionally as “spatial representation of community order” – UHRP reports – “rather than neighbourhoods radiating out from organically dispersed mosques, Kashgar’s neighbourhoods now radiate out from systematically planned ‘convenience police stations’, parts of the ‘grid-management system’ that divides each city into squares of 500 people to be monitored by these hubs of surveillance and social control”.³⁵ This urban layout is similar to one of the earliest proposals for the reconstruction of Gaotai, in which all major roads converge at a government building in the center of the radial plan, as presented in the image in the beginning of this subchapter (Fig.4-4-1). The reconstruction of Kashgar’s “dilapidated” Old City and the resettlement of its

30 Ibid.

31 Ibid.

32 Ibid.

33 Ibid.

34 Ibid.

35 Ibid.

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Uyghur residents have provided the government an opportunity to remove symbols of community religion and tradition, to restructure the built environment around principles of state compliance, and to impose a new social order that strengthens the state's control over the residents' movements and thoughts.

On top of this, much of what was demolished was not reconstructed. UHRP gives an example: "aside from (at least) one local community mosque, the famous Islamic college, Hanliq Madrassa, renowned for its illustrious history stretching back into the 11th century, was seemingly torn down to make room for an athletic field".³⁶ In these regions, with the demolition of its vernacular architecture, Kashgar's former way of life and its centuries-long layered architectural history are completely gone; and the government has no future plan of restoring them. Instead, the now-emptied land is available for more economic development that benefit the Han-dominated corporations and the Han-dominated government at the expense of the Uyghurs' livelihoods and architectural traditions. The lack – or the intentional exclusion – of a local Uyghur voice in the demolition and reconstruction of Old City of Kashgar enables this power imbalance. Priorities decided by the government purposely and inevitably omit the interests of local communities when administering their displacement and resettlement.

Some – such as the travel blog on Kashgar's Old City by Far West China – do not believe that "China was purposefully trying to squelch the Uyghur culture (the true heart of Kashgar's Old City)",³⁷ and instead allude to other factors at play, such as infrastructure improvement or economic development. Although I cannot dismiss these factors as politically performative talk or fabricated excuses, I do believe that the government is very aware of the detrimental impacts of its reconstruction projects on Kashgar's Uyghur residents, and is at the very least choosing to ignore them, hence preventing any impedance of its political and economic advancements in the city. Taking a step further, I argue that the government recognizes the storytelling, placemaking, and identity-shaping functions of architecture and proactively manipulates them to more effectively push forward its political and economic advancements in Kashgar.

To reinforce this, we can examine how the government consistently manipulates narratives on the reconstruction of Kashgar to legitimize their policies. Li Jieqiong of Xinhua News claims that

*The renovation of the Old City of Kashgar has been recognized by UNESCO, which believes that "the Chinese government has invested a huge amount of money in the renovation of the Old City of Kashgar, which is a rare and admirable move in the world. The renovation has taken forward-looking preventive measures against earthquakes and other disasters. After the transformation, the original architectural features and the traditional living habits of the residents here are preserved."*³⁸

This narrative is echoed in a billboard erected by officials in Kashgar that claims UNESCO Program Specialist in Beijing, Beatrice Kaldun, praised the demolition project (Fig.4-4-27³⁹). However during an interview with the Global Post, Kaldun

36 Ibid.

37 "Kashgar's Old City | Traveler's Guide to an Evolving City." Far West China: Exploring Xinjiang and the Silk Road. Accessed November 11, 2021. <https://www.farwestchina.com/travel/kashgar/old-city/>.

38 Li Jieqiong, "Rebirth of An Ancient City - Documentary on The Transformation of An Old City in Kashgar, Xinjiang". Xinhua News. 26 September 2015. http://www.xinhuanet.com/politics/2015-09/26/c_1116687056.htm.

39 Uyghur Human Rights Project. "Living on the Margins: The Chinese State's Demolition of Uyghur Communities". March 2012, 60. https://uhrp.org/wp-content/uploads/2022/07/Living_on_the_Margins_The_Chinese_States.pdf.



Fig.4-4-27 A billboard telling residents that UNESCO praised the Kashgar Old City demolition project. Photograph by Sharron Lovell of Global Post.³⁹

conveys that UNESCO was concerned about preserving cultural heritage, and that her opinions are egregiously misrepresented in the billboard. She had in fact told Kashgar officials that they need respect local people and customs. Despite this, officials did not remove the billboard.⁴⁰

In March 2011, the European parliament passed a resolution that urged officials in Beijing to consider including Kashgar in its submission of World Heritage sites to UNESCO, and end the forced resettlement of Uyghurs in Kashgar.⁴¹ This is expectedly ignored by the Chinese government, who has continued its large-scale demolition and reconstruction of Kashgar without hesitation or delay. June Dreyer – a professor of East Asian studies at the University of Miami – provides a reason for the lack of effect this resolution has on the action of the Chinese officials: “If you have nothing but contempt for the culture it came out of, I suppose it’s hard to perceive [the site’s significance].”⁴² I am conflicted as to whether I agree with her undoubtedly, which raises the question: does the government value the architectural tradition and cultural representation that are embodied in Kashgar’s vernacular Old City? On one hand, the government has invested enormous amounts of efforts and money to destroy their vernacular spaces, houses, and settlements, bulldozing over 85% of Old City to eliminate the “unsafe”, “unhygienic”, and “untidy” architectural customs. On the other hand, it has spent just as much to reconstruct the Old City to resemble the original, asserting its conviction to preserve and promote the rich architectural history and style of the Old City. My opinion is that the government values the Old City’s vernacular architectural styles and cultural symbolism rather than its century-old inherited architectural history and the local residents’ personal and community attachment to it; the authorities value the Old City only when it is economically profitable or politically productive to them. Whether through preservation, renovation, demolition or reconstruction, the government perceives architecture as a tool rather than an integral

40 Ibid.

41 Ibid.

42 Ibid.

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part of indigenous livelihood – a tool to minister the local residents’ movements, lifestyle, and financial well-being, thus compelling them into compliance with the government’s policies and propaganda.

Unfortunately, Old City of Kashgar is not the only target for demolition and reconstruction in Xinjiang. As mentioned in section 2.2.1 on “Belt and Road” Initiative, according to the Jiang Dan, in Xinjiang’s Hotan River Area alone, a large number of old city reconstruction projects have been implemented. The most notable of which are the old city core of Kashgar, Kuqa, and Hotan City. As a part of the economic structural transformation under the premise of “Belt and Road” Initiative, he claims, these projects are done to address the differences in shape and pattern between the old and new urban areas, to reorganize social relations and social order with a new commercial economic model, and to encourage the natural bridging between the original spaces and new production spaces that emerge after more capital is introduced. He believes through the development of commerce and tourism in the traditional ethnic minority settlements, and the development of businesses in the surrounding area, ethnic minorities’ traditional customs can be retained and promoted, and their economy can become the main body of commercial production.⁴³ Although all the aspects Jiang Dan lists sound like very compelling arguments for the reconstruction of old city cores, given what we have learned about the reconstruction of Old City of Kashgar and its impacts on local Uyghur residents, I have my doubts about whether, to what extent, and at what cost, the ethnic minorities’ traditional customs can be retained and promoted; and whether, and to what extent, and at what cost, their economy can become the main body of commercial production. It is difficult for me to believe that after all the demolition, reconstruction, displacement, and resettlement of an indigenous population whose voice is omitted during the entire process, the government’s priorities have been protecting their heritage and investing in their future.

In *Down A Narrow Road*, Jay Dautcher argues that “the Chinese state sought to undermine specific practices that bound Uyghur identity to place by literally dissembling the meaning of local identity and then reorganizing these meanings according to its own plan”; as a result, “Uyghur’s capacity to define and defend their interests in the face of the state was diminished”.⁴⁴ Reconstruction of old vernacular cities and towns achieves exactly this. By reshuffling and re-organizing the ethnic minority populations in old cities and towns, the state systematically reorder the basis of Uyghur “chthonic identity” – with which members of the Uyghur community “experience solidarity simultaneously with a social collective and with a physical place”⁴⁵ – hence weakening their claims to political entitlement. Consequently, the government reinforces the authoritarian control over the non-Han ethnic groups in Xinjiang by undermining their ability to defend their interests against the rapid Han invasion and erosion of their vernacular houses and towns. After all, the voice of an individual is much quieter than that of an entire community.

43 Dan Jiang, *Xinjiang Hotan River Area: A Study on The Evolution of Traditional Village Settlements*. Beijing: Chinese Construction Industry Publishing, 2016, 102.

44 Jay Dautcher, *Down a Narrow Road: Identity and Masculinity in a Uyghur Community in Xinjiang China*, Harvard East Asian Monographs 312. Cambridge, Mass: Harvard University Asia Center, 2009: 51.

45 Ibid, 50.

4.4.1. Yingmaili Community, Uqturpan County, Aksu Prefecture

英买里街区保留住宅及树木说明:

一、保留民居

- 保留民居为图中填充示意位置 (编号说明, 如11-3 (70), 其中“11-3”表示门牌号, “70”表示拆迁编号。)
 (1) 保留门牌号为11-3 (70)的住宅院落、树木及其过街楼, 需保留与过街楼相连“T”字形墙体, 并采取必要的加固措施, 避面侧塌。
 (2) 保留门牌号为9-1 (86)的住宅;
 (3) 保留门牌号为7-9 (107)的住宅院落及其院内成组树木。
 (4) 保留拆迁号为199号的住宅, 该住宅的院落入口具有典型特色。
- 拆迁区域的民居大门及具有花式特色的门、窗、柱、均拆下后留用,
- 英买里路6-1-5号院落内部装饰精美, 住宅的门、窗、柱和装饰过梁均拆下留用。(院落位于拟建和谐佳苑小区内)因没有现状地形示意, 故图中未示意其具体位置。

二、保留树木

- 保留图中示意树木。具体位置可根据图中标注的院落门牌号查找。(编号说明, 如11-3 (70), 其中“11-3”表示门牌号, “70”表示拆迁编号。)
- 保留树种图例如下表所示, 图中树木标号, 首字母代表树种类, 第二位字母D代表树半径, 数字代表树的具体直径植。例如: “L-D50”即代表柳树, 直径50cm。
- 图中所示树木品种如与实际树种有异, 以实际为准。
- 保留树木约60棵。

图例	
poplar tree	BY 杨树
willow tree	L 柳树
mulberry tree	S 桑树
apricot tree	X 杏树
fig tree	W无花果树



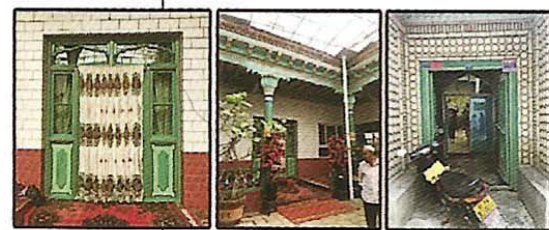
#7-9 (107) photos

7-9号 (107) 实景照片



拆迁编号
199号实景
照片

Demolition #199 photos



6-1-5实景
照片

#6-1-5 photos

#6-1-5 house
6-1-5号住宅



11-3 (70) 实景照片 #11-3 (70) photos



#9-1 (86) photos

9-1号 (86)
实景照片

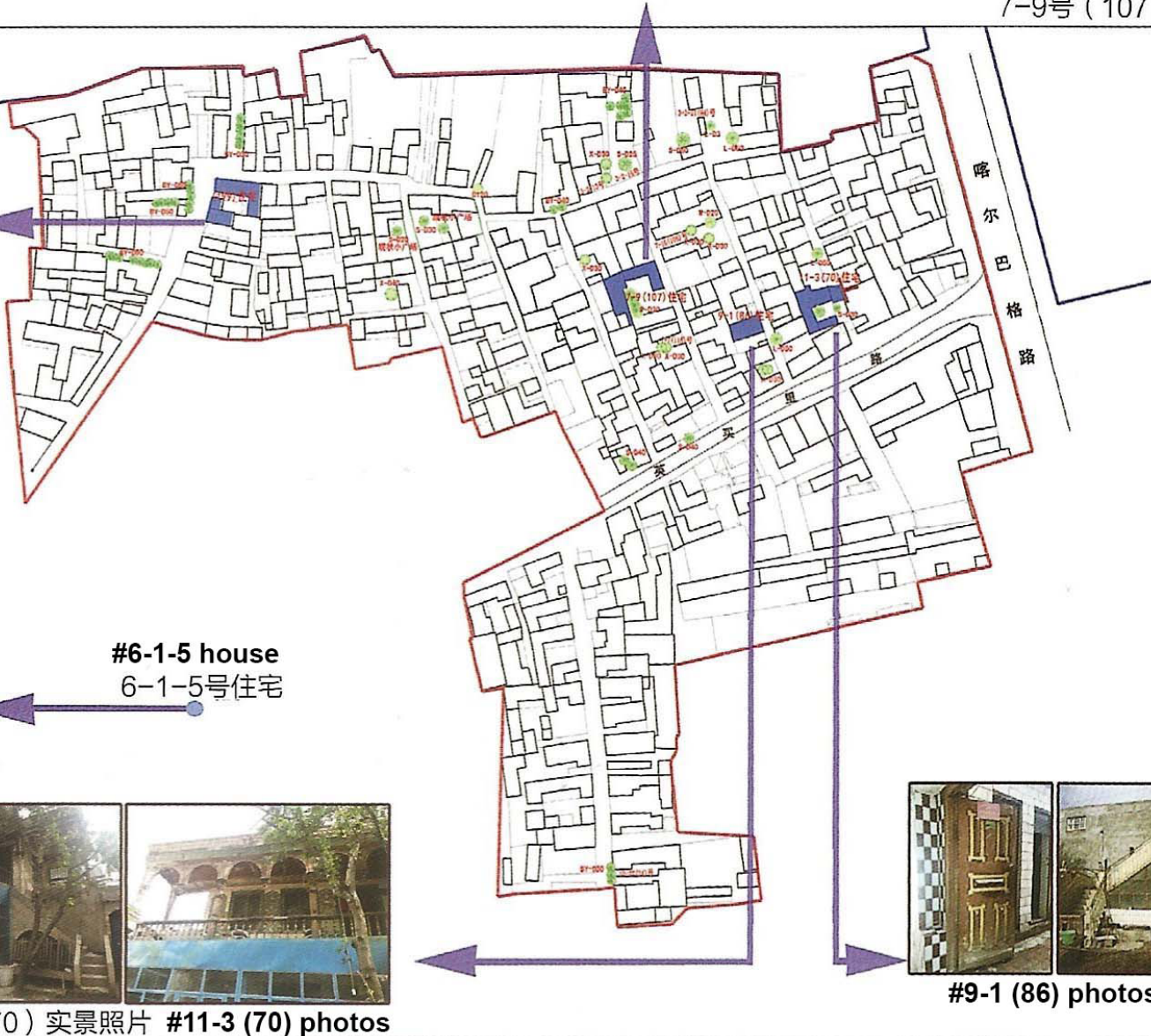


Fig.4-4-28 Schematic diagram of tree and traditional houses to keep in Yingmaili. Drawing by Du Juan.⁴⁶ Translated by author. Translation of text block above diagram as follows:

Description of houses and trees to keep in Yingmaili neighbourhood:

Houses to keep:

- Keep the residential houses as shown in the figure (number description, such as 11-3 (70), where “11-3” represents the house number, “70” represents the demolition number)
 - Keep the residential courtyard, trees and cross-street building of house with number 11-3 (70); need to keep the T-shaped wall connected to the cross-street building, and take necessary reinforcement measures to prevent sideways collapse;
 - Keep the house with number 9-1 (86);
 - Keep the residential courtyard of house 7-9 (107) and the groups of trees inside;
 - Keep the house with demolition number 199; it has a typical courtyard entrance.
- The gates, doors, windows, and columns with fancy characteristics, of residential buildings in the demolition area will be removed and kept.
- The interiors of the courtyard at #6-1-5 Yingmaili Road is exquisitely decorated. The doors, windows, columns, and decorative ornaments of the house will be removed and kept. (The courtyard is located in the proposed Harmony Community.) Since there is no current terrain representation, its location is not shown on the map.

Trees to keep:

- Keep the trees as shown in the picture. The specific location can be found according to the courtyard house number in the picture.
- The legend for tree species is shown in the table below. The letters in the picture represent the tree species. The letter D means diameter; the two-digit number after D represents the specific diameter of the tree. For example, “L-D50” represents a willow tree with a diameter of 50cm.
- If the tree species shown in the picture are different from the actual tree species, the actual tree species shall prevail.
- Keep about 60 trees.

To show the extent of demolition and reconstruction of vernacular settlements in Xinjiang for tourism development, this section is dedicated to the recent transformation of Yingmaili neighbourhood in Uqturpan County, Aksu Prefecture centered around two images in the book *The Interpretation and Inheritance of Traditional Chinese Architecture* (Fig 4-4-28⁴⁶). This neighbourhood was completely demolished except 4-5 houses/courtyards and approximately 60 trees. In 2017, an architect (presumably Du Juan) has designed an “immersive commercial district” here named “Yingmaili Time”, and called for the preservation of a few specific houses in order to “retain the historical memory of the place” (Fig.4-4-29⁴⁷).⁴⁸

After hundreds of vernacular houses destroyed, and hundreds of indigenous families displaced, the only connection left to the neighbourhood’s past memory is a few houses/courtyards, 60 trees, and a folk museum in the centre of this new commercial block full of stores, markets, restaurants, and theatres. I assume that the doors, windows, columns, decorative elements that are removed during demolition are to be kept in the folk museum as cultural relics. On top of all this, nearly a third of the neighbourhood’s original footprint is designed to be a parking lot. *The Interpretation and Inheritance of Traditional Chinese Architecture*, published by Chinese Construction Industry Publishing, which is directly under the Ministry of Construction in the central government of China, praises the design and its architect for their clever coordination of landscape, environment, internal and external spaces, for “creating a space familiar to the people” and “reflecting the continuation of historical context”.⁴⁹ I have a difficult time understanding how this design achieves these objectives realistically. To be honest, I find it rather sad. I could not find any information on whether the design has been realized; and if so, to what degree.

46 Editorial Committee of the Interpretation and Inheritance of Traditional Chinese Architecture: Xinjiang Volume, *The Interpretation and Inheritance of Traditional Chinese Architecture*, vol. Xinjiang Volume. Chinese Construction Industry Publishing, 2020: 260.

47 Ibid, 266.

48 Ibid, 259.

49 Ibid, 266.

Fig.4-4-29 The newly designed architectural settlement texture of Yingmaili Time. Drawing by Du Juan on August 3, 2017.⁴⁷ Translated by author.



CHAPTER 5. CONCLUSION

The Uyghur Autonomous Region of Xinjiang, the largest and the west-most province of The People's Republic of China, is situated in Central Asia along the ancient Silk Road and today's economic belt that connects China geographically to the west. Given Xinjiang's rich history, this vast land has witnessed the rise and fall of countless ruling powers who brought with them communities of different ethnicities and religions. As a result, today's Xinjiang is not only an economic exchange hub, but also a cultural one that is home to more than 40 ethnic groups, each of them with distinct ancestral wisdoms and customs, which are embodied in and represented by their vernacular architecture. In the vast expanse of Xinjiang, geographic and climate conditions – altitude, body of water, temperature, precipitation, soil, vegetation – differ drastically from region to region, producing a diverse variety of terrains, ranging from desert and grassland to forest and mountains. Throughout generations, indigenous communities have developed a deep connection with this land, steadily building a library of collective knowledge – inherited and expanded on by their descendants – which they rely on for survival and growth. Each community, bonded by their geographical situation, their blood, or their value and beliefs, confide in their material traditions and architectural customs, enabling them to establish architectural forms and spaces that are characteristically unique to satisfy their needs and accommodate their lifestyle. Thus Xinjiang's vernacular architecture is important in two aspects: its locality and its sociality. It is like a regional dialect spoken by the community that lives in it, reflecting its geographical context, such as local availability of certain building materials, special weather conditions that require certain building forms, or surrounding resources that allow the engagement of certain activities in certain architectural spaces. It is also a social representation, a medium for the community to record its collective history and express its cultural identity. Through the organically developed spatial organization found within vernacular settlements, the members of the indigenous community form a sense of personal and communal belonging to their home and land. However this is quickly changing.

In recent year, the Uyghur Autonomous Region of Xinjiang is gradually losing its Uyghur majority in population, as large government-orchestrated Han migrations are in the process of replacing the Uyghur majority with a Han majority, ensued by a Han dominance in the labour market, including the architecture and construction industry. The ethnic minorities in Xinjiang, which now include the Uyghurs, are also losing their "autonomy", as their ancestral land and vernacular architecture are being transformed or even "disappeared" under government policies. With guidance and support from the government, Xinjiang has seen a massive surge of urban and rural development and reconstruction projects in recent years at the great expense of

the indigenous community and their vernacular architecture. Arguments have been made by the government and supported by some scholarly studies that claim these traditional homes are no longer fit for modern life because they are prone to collapse during earthquake; disorderly thus spatially inefficient; outdated for enabling unhealthy habits; and even dangerous for harbouring extremist activities. Hence under the claim of eliminating unhygienic customs and unsafe houses, improving living situations, and establishing a new modern lifestyle and atmosphere, many vernacular houses are renovated to the government's Communist secular standards or repurposed or demolished; many vernacular settlements are reconstructed to accommodate the "modern" and "civilized" lifestyle or new tourism economy, or destroyed entirely to make room for "orderly" villages and "advanced" city centers; many rural and suburban areas are planned and built up by the authorities in accordance with the "Three News" campaign. These projects are completed at such an alarming rate that leads me to believe the officials responsible for them may be in pursuit of expedient political achievements. As a result, a large amount of indigenous communities are forced to transform or abandon their ancestral homes and land to live in a modified or entirely new homes facilitated by the government and adopt a new lifestyle promoted by the government, consequently severing their personal and collective attachment to their traditional homes and lifestyles and to each other. These government-directed architectural "upgrades" not only reshape the appearance of vernacular architecture and settlements in Xinjiang, but also forcefully revise the social representation and cultural identification functions of architecture to cater to government officials and their political goals. In addition to being part of government-led processes of urbanization and modernization in Xinjiang, they are also effective methods of population control and resources management. As the government's influence extends to every urban and rural corner, and enters every room of every residential building, all aspects of local residents' life and livelihood are under state administrative powers. Resources and opportunities are thus centralized and distributed by the government, to further reinforce behaviour and belief control.

To assert the validity of the massive architectural projects that have caused the rapid transformation and disappearance of vernacular architecture in Xinjiang in recent years, the Chinese government has placed heavy emphasis on its pledge to eliminate poverty and improve living conditions for the rural poor and the ethnic minorities. Books written by Chinese scholars – albeit some of them are not published by a publishing company with direct affiliation with the government – all unanimously credit the government for its efforts in assisting these communities through architectural interventions. Online articles written in Chinese also share the same sentiment, quoting members from the impacted communities thanking the government for introducing light to their life. On the other hand, western journalists and scholars have an entirely different perspective. Although there are not many researches on Xinjiang's vernacular architecture done in English, the few I found mainly focus on the displacement of Uyghur population from their traditional homes and livelihoods, or the demolition of vernacular urban fabric, in context of the Xinjiang humanitarian crisis that has gathered wide global attention. In particular, Timothy Grose argues that by transforming Uyghur domestic spaces, the government intends to subconsciously condition Uyghur's perceptions of space and order, uproot Uyghur configurations of order, and replace them with Han domestic sensibilities.¹ From that perspective, the government's architectural endeavors in Xinjiang has much more underlying political goals than it is willing to disclose. Perhaps suggested by the name of the province – although the name was first given by the Manchu rulers of Qing dynasty and later

¹ Timothy A. Grose. "If You Don't Know How, Just Learn: Chinese Housing and the Transformation of Uyghur Domestic Space". *Ethnic and Racial Studies* 44, no. 11 (2 September 2021): 2052–2073. <https://doi.org/10.1080/01419870.2020.1789686>.

inherited by the Communist Party of China – to the Han-dominated governing body of China, “Xinjiang” is a “new territory” to be colonized. The Chinese government’s recent activities in Xinjiang are certainly comparable to the process of colonization (and by extension, imperialism), which is defined by three key actions: first, settling among the indigenous people of the region; second, establishing control over them; and third, appropriating the region for the colonizers’ own use. Analysing through this lens, the government-orchestrated-and-encouraged Han migrations into Xinjiang since 1950s can be seen as step one in this process, setting the stage for step two and three, which not only are operated on the government’s bureaucratic level, but also are implemented by a series of extensive province-wide architectural renewal projects and campaigns targeting the indigenous communities’ domestic spaces and vernacular towns, effectively ideologically and culturally assimilating them into Han population under the authority of the Communist Party of China.

The argument on the recent architectural “updates” in Xinjiang being the government’s means of assimilation and cultural erasure can be further reinforced if we examine the province’s political and social contexts. In recent years, Xinjiang has been the center of international attention due to reported human rights violation convicted by the Chinese government towards its ethnic minority citizens that reside in the province. In 2021, Canada’s parliament passed a non-binding motion saying that China’s treatment of the Uyghur Muslim minority in the Xinjiang region constitutes genocide. House of Commons voted 266-0 for the motion.² In response, the Chinese government put out a statement written in Chinese on their Embassy’s website, refuting all human right violation allegations in Xinjiang. It reads:

Re-education Camps’ never exist in Xinjiang. Xinjiang’s legally established Career Skills Vocational Training Centers are schools, that are preventative measures to counter terrorism and extremism. Their goal is to eliminate terrorism and extremism from their roots [...] The Training Centers fully respect and protect students’ religious freedoms, cultural habits and their rights to use their languages. Upon returning home, students with religious beliefs have the freedom to choose whether to participate in any legal religious practices [...] They fully insure students’ personal freedom and dignity. They implement boarding management. Students can ask for leave if they have affairs to attend to, can go home regularly, and have freedom of communication. Training Centers strictly forbid personal insults and abuses of students in any way. There is no such thing as “suppression of ethnic minorities” and “persecution of Muslims”.³

Despite their claims, surfacing evidence collected by western journalists has shown many of Xinjiang’s ethnic minorities have undergone compulsory ideological and cultural cleansing programmes that aim to acculturate and assimilate. There is also evidence of local authorities using the same strategy to manipulate official narratives on Xinjiang’s architectural transformations in recent years. For example, to justify the mass-scale demolition of the Old City of Kashgar, UNESCO’s recommendation to the Chinese government to respect local people and customs was egregiously misrepresented and misquoted to match the state propaganda. The false claim of UNESCO’s deeming the Chinese government’s renovation of the Old City of Kashgar respectable and admirable has been circulated in news articles and on billboards positioned in the demolished areas. These examples of narrative

2 Ryan Patrick Jones, ‘MPs Vote to Label China’s Persecution of Uighurs a Genocide | CBC News’, CBC, 23 February 2021, <https://www.cbc.ca/news/politics/uighur-genocide-motion-vote-1.5922711>.

3 “24 Lies and Truths about Xinjiang” Consulat General de la Republique Populaire de Chine a Montreal. 5 February 2021. http://montreal.china-consulate.gov.cn/chn/zgyw/202102/t20210223_10383390.htm.

manipulation to reinforce official propaganda are not uncommon in Xinjiang and in China under the governance of an authoritarian party. It certainly cast some doubts on the credibility of any sources with close affiliation with the government, or under the jurisdiction of the government. We are thus more inclined to believe in accounts from independent foreign journalists and visitors to Xinjiang, and make the connection between recent disappearance and transformation of vernacular architecture with the forced incarceration and indoctrination of ethnic minorities in the “re-education” camps. Population control, cultural assimilation, and replacement of social order all lead towards the conclusion of colonization.

However, if for a moment, we disregard Xinjiang's political contexts and focus only on the architectural implications, can we consider the Chinese government's recent architectural projects and interventions appropriate? If we take the government's statements as factual and ignore the argument of colonization and cultural erasure, can their architectural projects be justified by their social and economic outcomes – assuming the government's alleged goals are achieved – perhaps by arguing for an absurd case of “end justifies the means”? My answer for both of these questions is no, and here are my reasonings:

- 1. Lack of input from end users.** Despite the official narrative claiming that there is participation from local residents, more evidence shows an obvious lack of respect for their wishes and a lack of protection for their interests and rights. From location of their new homes and villages, to layouts of their new homes and courtyards, decisions are made by the government; designs are given by Han architects and planners located in central China; their livelihood and lifestyle are also imposed by the government and their newly assigned built environment.
- 2. Lack of consideration for alternatives.** The government implemented sweeping policies that led to mass eviction and relocation of locals; and mass destruction and reconstruction of houses in the millions are done so rapidly and decidedly that any alternative approaches that could result in less impacts on the locals and their vernacular houses either have not been considered seriously or have been quickly dismissed.
- 3. Lack of transparency and negotiability.** The planning, design, and construction processes of government-led architectural projects are not open to the public and to the impacted communities. The locals are only informed of the projects when they are already being carried out. There are no realistically practical way for them to opt out or negotiate the impacts of these projects.
- 4. Inappropriate conservation strategies** for areas the government claims to preserve and protect.
 - a. Little documentation of the existing.** With the exception of Gaotai, I have found little evidence of the government initiating or carrying out thorough documentation – in the form of drawings, photographs, models – of vernacular architecture and towns that have been demolished and reconstructed.
 - b. Lack of testing for original materials.** Despite general consensus in China on the low earthquake resistance of raw-earth materials, I have found no scientific study on the mechanical and chemical properties of vernacular construction materials in Xinjiang, or evaluation on their condition, seismic performance, causes of deterioration, damage or distress, to confirm they are problematic and in need of substitute materials.

- c. **Replace rather than repair.** Instead of looking for repair solutions to issues of vernacular architecture that allegedly endanger the residents' safety and health, the government makes a sweeping decision to demolish almost all vernacular houses and settlements completely and replace them with reconstructed replicas.
- d. **Removal of character-defining architectural elements.** In many remodelled houses, domestic spaces and functions such as kang, supas, mehrabs, etc., which are physical embodiment of the residents' religious and cultural practices, are absent. Instead, they make room for modern furniture and new spatial arrangements promoted by the government.
- e. **Create a false sense of architectural heritage.** Reconstructed replicas are not the original but take place of the original to tell the historical and cultural story of the original they replaced. The government and government-affiliated corporations also extract profits from the reconstructed replicas and the story they tell.

5. The alleged end users are not benefited. Many locals residents are forcefully displaced from their land and moved to city peripheries because they can not afford to live in the increasingly gentrified old towns, which were reconstructed with the promise of improving their living conditions. Only the rich, the Han-dominated government, and Han-dominated corporations are direct beneficiaries of the architectural projects.

6. Increased income and resource disparity between urban and rural, between Han and ethnic minorities. Local residents who are driven out of urban center, away from their traditional methods of livelihood, are now reliant on the government's welfare system, and forced to seek out new opportunities. Resources produced in new rural villages are concentrated by authorities, to better supply the demands of urban dwellers. With the resources and opportunities now concentrated, the Han-dominated government, with no checks and balances of power, can easily have Han-preferential treatment and allocate more resources and opportunities to the Han instead of the impacted ethnic minority communities.

This begs the question – to which I have no clear answer to – what is an appropriate intervention for Xinjiang's vernacular architecture? Many Chinese planners and architects have offered their perspective in their books on this question. All of them show a deep appreciation for the wisdom of Xinjiang vernacular houses, and express a strong desire to protect and preserve them; but many of them support some degree of “upgrade” on vernacular materials or forms, which are presumably within the acceptable framework laid out by Chinese government policies (otherwise they would not be published). The level of preservation for Xinjiang's vernacular architecture they perceive to be appropriate varies greatly, ranging from preserving both traditional materials and form to preserving only the “soul” of vernacular architecture. The following are two perspectives from Chinese scholars that I find to be the least invasive and the most respectful, while within the acceptable boundaries of government policies.

Chen Zhengdong dedicates a few pages of *Xinjiang Houses* on “Protection of Xinjiang Residential Houses, Prospects and Countermeasure for New Residential Houses”. He lists 5 recommendations at the end:

1. For ancient villages, historical streets, historical nodes and spaces, and traditional dwellings with long history and rich cultural value, including those

that have been identified as historical and cultural villages, famous towns, protected units and outstanding traditional dwellings, as well as points that are being discovered – as a whole, group or individual – a protection plan should be prepared as early as possible; repair and follow-up should be carried out based on protection; and village infrastructure should be improved. As long as the building does not involve safety issues or can be reinforced and maintained, “protection first” should be implemented. It should not be demolished, rebuilt, or “cloned”.

2. For some valuable villages and blocks, many buildings have been renovated or newly built without recognition and attention in the past. Their overall texture should be protected; their village and town features should be renovated and improved; their infrastructure should be improved, hence adjusting the internal layout of the villages and its courtyard residences.
3. For some new residential areas built in the past, on the premise of improving their infrastructure, we should promote the local style of the villages and show their unique features.
4. New residential areas to be built should be carefully selected, well planned, carefully designed, carefully constructed, and soundly managed based on the rational layout of the regional village and town system.
5. The new residential buildings that are being built, under the guidance of various design plans, residents should participate and work together to create their own architectural style and reflect local characteristics.⁴

In the book *Xinjiang Raw Earth Houses* – co-authored by Li Qun, An Da Zhen and Liang Mei – an entire chapter titled “Regenerative Design of Residential Ecological Buildings” is dedicated to the discussion of the future of Xinjiang’s raw-earth vernacular architecture. Full translation of the entire chapter can be found in Appendix. In this chapter, the scholars acknowledge the sustainable characteristics of vernacular raw-earth adobe materials and construction methods, and advocate for more research to overcome their structural flaws, develop more ecological building technologies, and incorporate them in future architectural designs. The scholars also call for further exploration of development potentials for vernacular raw-earth adobe buildings, such as in housing development, commercial development and tourism development. They believe that because raw-earth buildings contains rich cultural connotations, it is advantageous to completely preserve the original ecology of century-old dwellings. Through proper design and planning, we can make use of the original ecological characteristics of vernacular houses and villages as supplementary means of urban and economic development in the current historical condition. They also propose a few approaches to address the shortcomings of raw-earth houses, such as to standardize height requirements, and to improve flexibility of house layout. Through transformative and regenerative design by introducing contemporary design concepts, they believe raw-earth buildings can effectively save energy, save land, reduce carbon emissions, and reduce pollution.⁵

Given the current trajectory of Xinjiang’s remaining vernacular architecture and settlements, it is hard to imagine what the future holds for them. Perhaps by examining some existing design proposals by architects on protection and intervention of Xinjiang’s vernacular architecture, we can have some sense of hope.

4 Zhendong Chen. *Xinjiang Houses*, 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 276.

5 Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014, 246-258.

5.1. Scholar-led Proposals

I have selected 5 scholar-led proposals on Xinjiang's residential houses inspired by or based on vernacular architectural traditions in the two books previously mentioned – *Xinjiang Houses* and *Xinjiang Raw Earth Houses* – to examine. The analytical framework is based on two sets of questions. The first set is objective and deals with circumstances of the design, including:

- Who is the architect/planner?
- Who is the client?
- When was the design proposed?
- Where is the site of the design?
- What is the type of design? New construction/reconstruction/adjustment/addition/etc.?
- Was the design realized? If so, to what degree?
- What is the content and scope of the design?

The second set is more subjective, as the answers to the questions are my personal opinion on whether – and to what degree – the design retains elements of the original vernacular buildings and/or settlements, based on the available information and graphics provided in the books. The questions include:

- Does the design retain vernacular forms and appearance?
- Does the design retain vernacular materiality?
- Does the design retain vernacular domestic sensibilities and spatial arrangement?
- Does the design retain vernacular settlement patterns?
- Does the design show appreciation for the site's architectural traditions and customs?
- Is there consultation with local residents?

Due to limited information I can obtain on these projects, I often do not have answers to all these questions. However, whether these designs are sensible and appropriate are up for personal interpretations.

5.1.1. Project 1

Project name: Unknown

Architect/planner: Chen Zhengdong (unconfirmed)

Time of project: Unknown (before December of 2009 – when the book was published)

Client: Unknown (I suspect to be local government)

Location: A new village in Shanshan County

Type of project: New construction

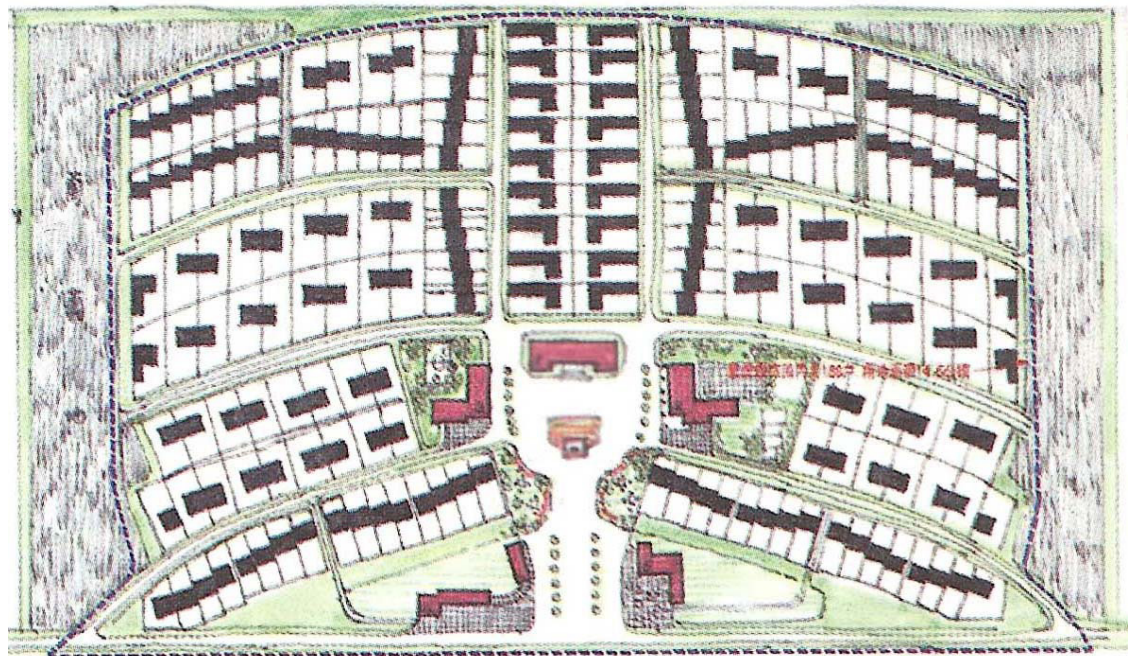
Was the design realized? Unknown

Project Description: None found

Images: Fig.5-1-1~7¹

1 Zhendong Chen. *Xinjiang Houses*, 1st ed. Chinese Houses Architecture Series. Beijing: Chinese Construction Industry Publishing, 2009: 269-270.

Fig.5-1-1 Suggested plan for new residential houses in an experimental village in Shanshan County, featuring a symmetrical grid layout.¹



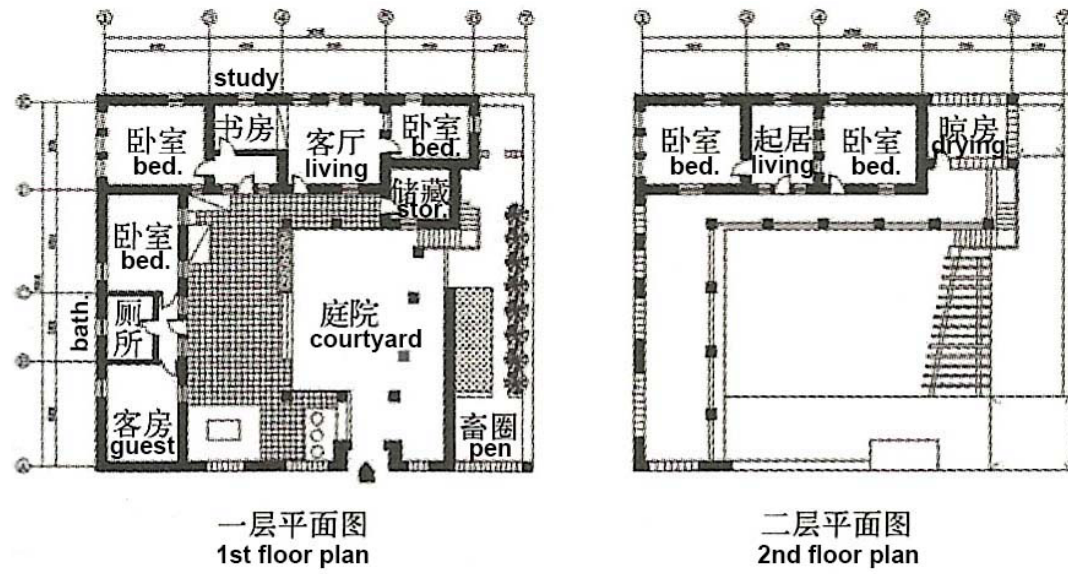


Fig.5-1-2 (top left) Floor plans for Design 1 for new residential houses in a new village in Shanshan County.¹

Fig.5-1-3 (bottom left) Rendering for Design 1.¹

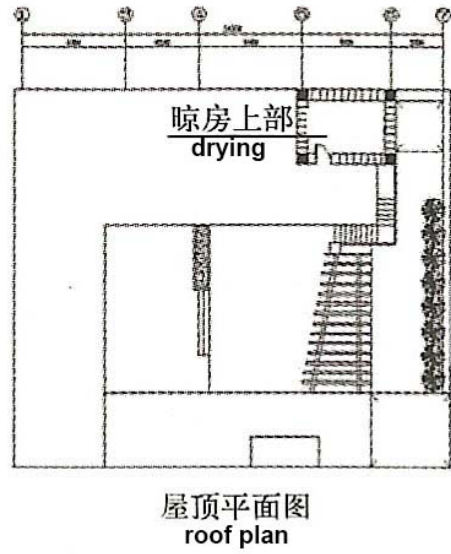
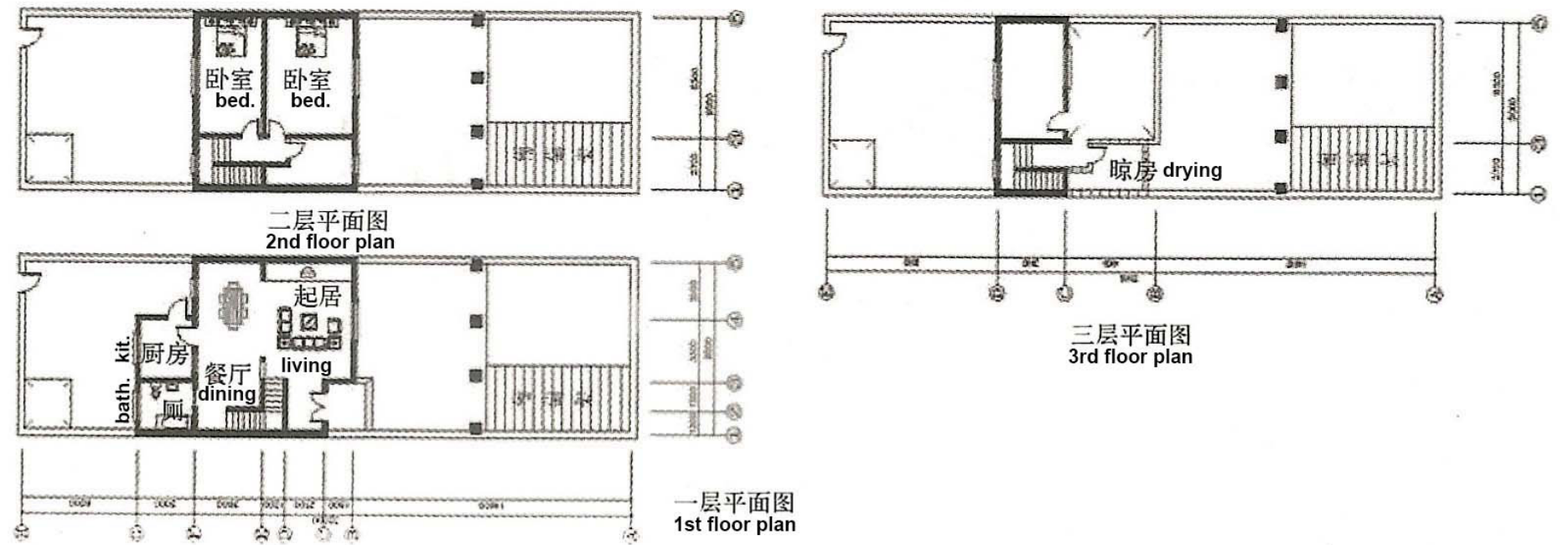


Fig.5-1-4 (top) Rendering for Design 2 for new residential houses in a new village in Shanshan County.¹

Fig.5-1-5 (bottom) Floor plans for Design 2.¹



Does the design retain vernacular forms and appearance? Yes, such as the perforated walls of air-drying rooms, the railings of covered rooftop garden, and the presence of grape trellis show resemblance to vernacular forms and appearance to a moderate degree.

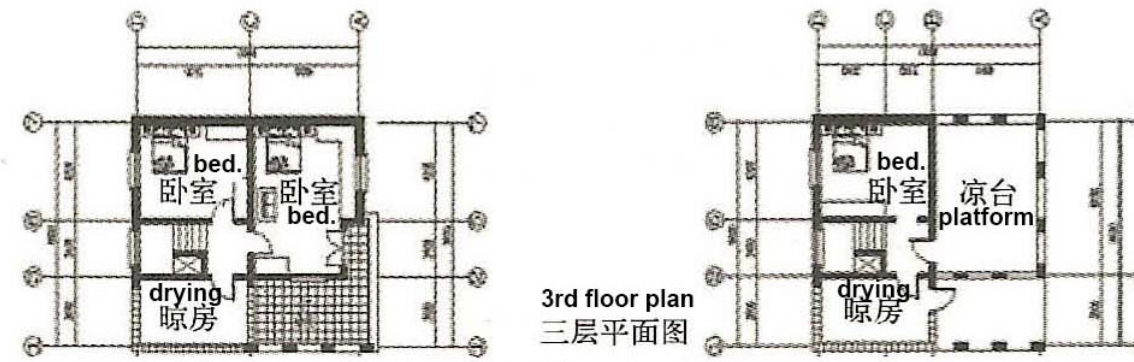
Does the design retain vernacular materiality? Unknown

Does the design retain vernacular domestic sensibilities and spatial arrangement? The presence of modern furniture arrangement in plans – such as beds, couches, and dining tables – suggest vernacular domestic sensibilities are not retained. Although the presence of rooftop air-drying rooms and covered gardens shows hints of vernacular spatial arrangement, the overall configuration of rooms strays away from it.

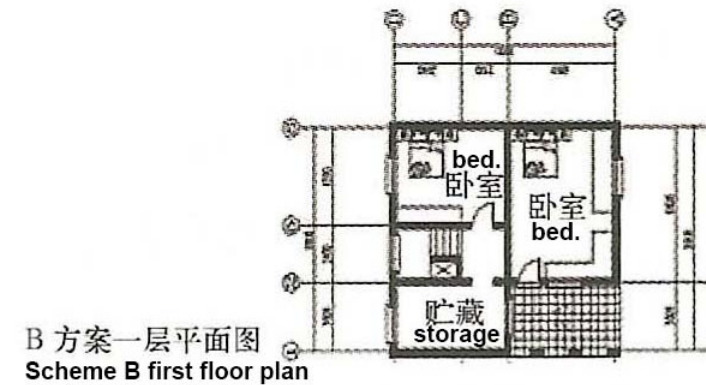
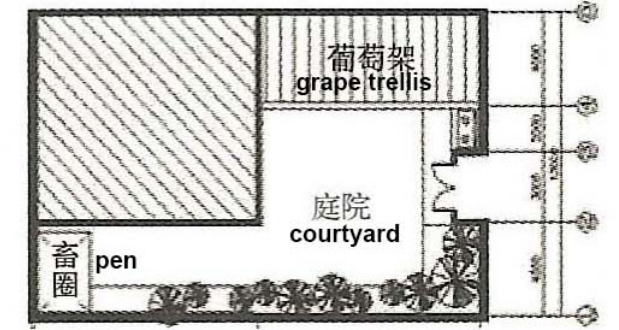
Does the design retain vernacular settlement patterns? No, the symmetrical organization of similar courtyards within the new village suggests an imposed spatial order.

Does the design show appreciation for the site's architectural traditions and customs? It is unknown whether the site was barren land, or previously had a neighbourhood that was demolished to make room for the new construction. It is also unknown what ethnic group community lives nearby.

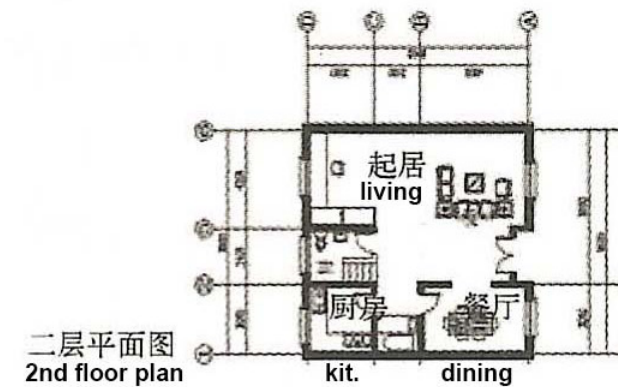
Is there consultation with local residents? Unknown.



A 方案二层平面图 Scheme A 2nd floor plan
(一层同 B 方案) (1st floor is the same as Scheme B)



B 方案一层平面图 Scheme B first floor plan



二层平面图 2nd floor plan

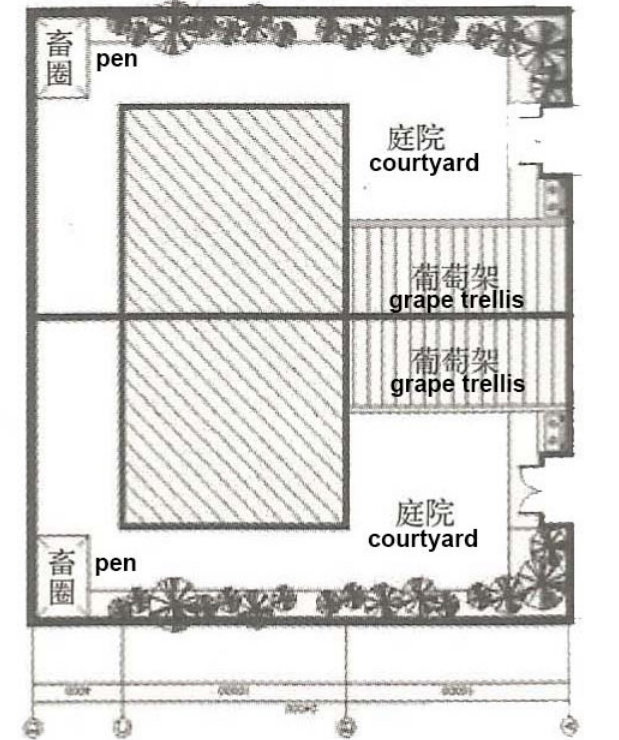
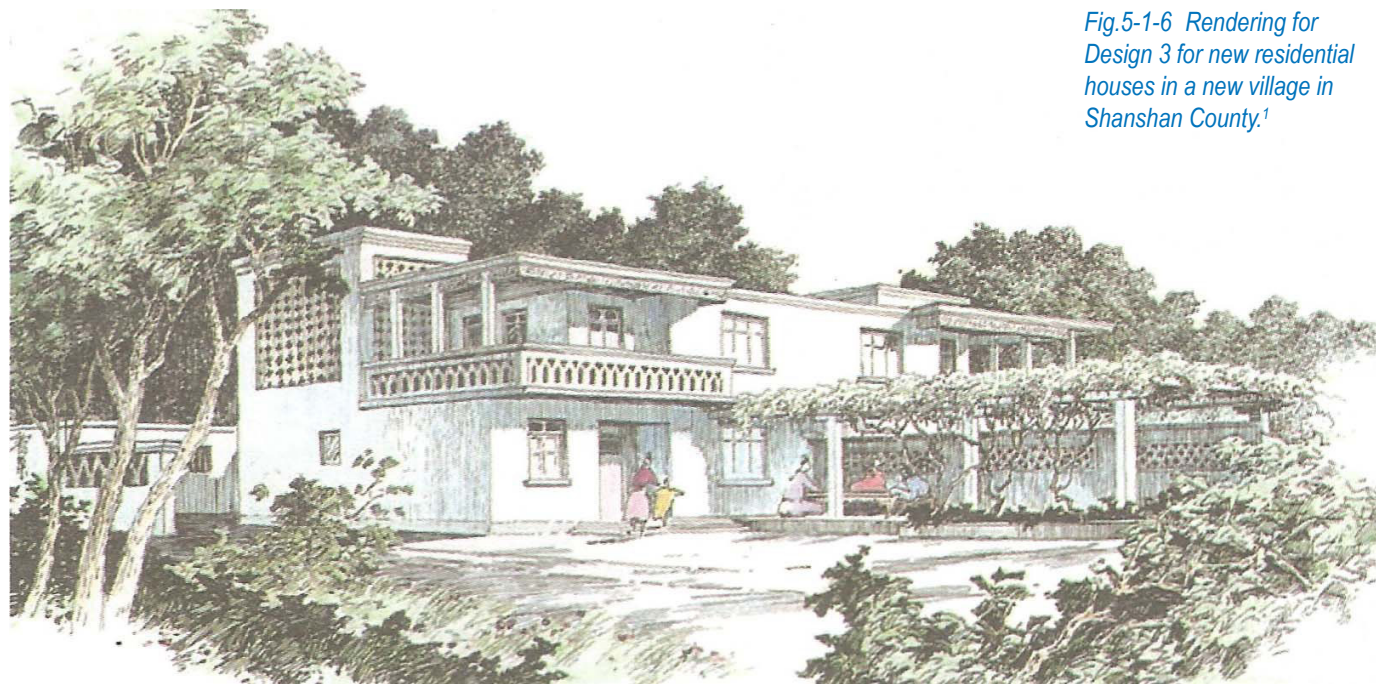


Fig.5-1-7 Floor Plans for Design 3 for new residential houses in a new village in Shanshan County.¹

Fig.5-1-6 Rendering for Design 3 for new residential houses in a new village in Shanshan County.¹



5.1.2. Project 2

Project name: Unknown

Architect/planner: Chen Zhengdong (unconfirmed)

Time of project: Unknown (before December of 2009 – when the book was published)

Client: Unknown (I suspect to be local government)

Location: Somewhere in Aksu Prefecture

Type of project: New construction

Was the design realized? Unknown

Project Description: None found

Images: [Fig. 5-1-8~11² Experimental new residential buildings in Aksu.](#)

² Ibid, 271.







Does the design retain vernacular forms and appearance? The appearance of perforated windows, railings, columns, arcades between columns, seems to resemble vernacular forms; but the façade colours do not.

Does the design retain vernacular materiality? Unknown, but based on façade colours, I suspect not.

Does the design retain vernacular domestic sensibilities and spatial arrangement? Unknown.

Does the design retain vernacular settlement patterns? No, but the inward orientation of the neighbourhood suggests a community-centric design.

Does the design show appreciation for the site's architectural traditions and customs? It is unknown whether the site was barren land, or previously had a neighbourhood that was demolished to make room for the new construction. It is also unknown what ethnic group community lives nearby.

Is there consultation with local residents? Unknown.

5.1.3. Project 3

Project name: “Earth Nature” Culture – Landscape Planning of Raw Earth Architecture in Mazaaleli Village, Shanshan County, Xinjiang

Architect/planner: Li Qun, Li Wenhao, Yan Fei, Yi Xiao, Wang Lei, Jia Yan

Time of project: July 1, 2009

Client: Entry to 11th National Art Exhibition

Location: Mazaaleli Village, Tuyugou Township, Shanshan County (鄯善县吐峪沟乡麻扎阿勒迪村)

Translation note: the book uses “麻扎村 (Mazha Village)” for short in Chinese. “Mazaaleli” is pinyin of the Chinese phonetic translation (麻扎阿勒迪) of the original Uyghur term, which is not found.

Type of project: New construction

Was the design realized? Unknown

Project Description: Translated from page 270-271 in book *Xinjiang Raw Earth Houses*:³

Xinjiang is a unique multicultural complex historical plate, which contains rich cultural connections. Its typical adobe architecture is the material carrier of the local culture of ethnic minorities. Based on this cultural design project, it not only has the significance of developing material heritage, but also has the value of developing intangible cultural heritage because of its distinctive regional cultural characteristics.

The research significance of the design project is mainly as follows:

- 1. Develop ecological buildings, create a healthy environment, and build a harmonious society.** Strengthening rural residential construction and building a harmonious society is a major task proposed by the state. This design scheme intends to study Xinjiang vernacular architecture, taking ecology and environmental protection as the design concept, absorbing traditional architectural form and cultural elements, constructing a unique architectural vocabulary in the western region, and making necessary preparations for the transformation of rural environments and the promotion of vernacular residential demonstration areas, which is conducive to the overall construction and development of the economy and culture in the western region.
- 2. Excavate regional folk resources and display the connotation of material and non-material culture.** Xinjiang native architecture is a rural settlement culture that has been tempered and condensed for thousands of years, and it is a vivid “history book” of folk settlements. Xinjiang adobe architecture is a complete life system, with many precious construction methods, materials, techniques, styles, etc., reflecting the multicultural characteristics of regional ethnic groups, and it is an important part of my country’s architectural culture. This project tries to show the material and non-material cultural connotations of Xinjiang adobe architecture through research and innovation through the original graphic materials and on-site inspection of Mazaaleli Village, Shanshan County, Xinjiang.

³ Li, Qun, Dazhen An, and Mei Liang. *Xinjiang Raw Earth Houses*. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014: 270-271.

3. Improve the living environment of ethnic minorities and improve the quality of life. The purpose of this design project is to improve the living environment of ethnic minorities and improve the quality of life. According to the local geographical environment and living customs of Shanshan County, the low-cost raw soil building model is selected, and the principle of space combination is cleverly used to inherit excellent architectural art and national culture, to create a living environment that is beneficial to human health, and to build a rural tourism community and build a new landscape of village culture with strong regional characteristics.

The main content of design work of “Earth Nature’ Culture”:

Mazaaledi Village belongs to the Tuyugou Township, Shanshan County. It is located at the southern foot of the Flame Mountain. It is adjacent to Subeixi and Bezeklik cultural relics in the north; and Yanghai ancient tomb, Astana ancient tomb, and Gaochang ancient city ruins in the south; and Liuzhong city and Dikai Village in the Old City of Loulan to the east. Mazaaledi Village is the one of the oldest native dwellings in Xinjiang. It brings together many elements of multiculturalism. It is not only a holy place for Islamic worship, but also retains the relics of Buddhist culture and the traces of Central Plains culture. Mazaaledi Village has been included in the protection category of national cultural and historical famous villages, and is one of the important projects for the development of tourism resources in Xinjiang. This design project is based on the government’s new rural construction plan, the protection and transformation of Mazaaledi Village in Shanshan County; and the design goal is to build a village history museum, an art post station, and a new rural native dwelling demonstration area, so as to drive the local tourism economy

1. Design scheme of “Village History Museum”

Mazaaledi Village has deep historical and cultural connotations. The continuation and superposition of farming culture and nomadic culture in the village have formed the most original ecological village in modern society. The establishment of the “Village History Museum” has become a window to understand the ancient ethnic culture of Mazaaledi Village in Shanshan County, and deepen the understanding of all sectors of society on Xinjiang’s overall landform, ethnic customs, and architectural culture.

The landscape square of the Village History Museum is located on the platform at the entrance of Mazaaledi Village, covering a total area of about 8500 sqm. Among them, the construction area of the Village History Museum is about 2400 sqm, the entrance square covers an area of about 4200 sqm, and the small folk life square covers an area of about 1250 sqm.

Programmes: entrance square landscape, village history museum, small square of folk life

Colour tone: yellow clay is the natural colour of the building

Form: Using slope land, combining landscape the architecture, taking the existing residential buildings in Mazaaledi Village as elements, namely square space, sunken space, differentiated oblique walls, and triangular flower walls

2. Design scheme of “Art Station”

The well-proportioned residential style art station is designed to provide a platform for research and exchange for scholars, tourists, artists, etc. to experience local folk customs; at the same time, it creates conditions for

increasing the economic income of local villagers and driving the development of local tourism economy.

The art station is located on the roadside of Mazaaledi Village, with a total area of about 6000 sqm. Among them, small hotels, galleries, restaurants, and other building areas cover an area of about 2800 sqm, and the parking lot covers an area of about 3200 sqm.

Programmes: small hotel, gallery, restaurant, parking lot

Colour tone: yellow clay is the natural colour of the building

Form: taking the existing residential buildings in Mazaaledi Village as elements, that is, air-drying room ventilation space, sunken space, high scaffolding, flower wall

3. Design scheme of “demonstration area of native dwellings”

The new ecological living model with raw soil as the main building material highlights the architectural features of yellow clay flat-roofed houses, high sheds, drying houses and adobe-walled courtyards. Building new style housing with ethnic and local characteristics and continuing the original living customs can improve the quality of life and living customs can improve the quality of life and living environment of local villagers and form a unique indigenous village.

Three kinds of houses with different areas are built on the same homestead, and the single floor area is 410 sqm.

Programmes: House Type A (3-storey), House Type B (2-storey), House Type C (1-storey)

Colour tone: yellow clay is the natural colour of the building

Form: take the existing residential buildings in Mazaaledi Village as elements, namely flat-roofed houses, adobe arches, sunken spaces, high scaffolding, drying rooms, and flower walls

The basic idea of the design work of “‘Earth Nature’ Culture”:

Mazaaledi Village is located at the southern foot of the Flame Mountain in Shanshan. The unique climate, geology and history have profoundly affected the overall layout and architectural form of the village, forming a unique and flexible residential village style. The design idea of this project main starts from the following aspects:

- 1. Sociality:** the design project hopes to deepen the understanding of Xinjiang’s overall landform, ethnic customs, and architectural culture from all walks of life; the original intention is to pay attention to the living environment and lifestyle of low-income farmers in Xinjiang’s rural areas.
- 2. Culture:** this project is based on the carrier of human material culture and spiritual culture, absorbing the precious cultural elements of traditional architectural forms, integrating the protection of historical buildings and cultural inheritance into the whole design, and creating a native village in Xinjiang that blends old and new with regional culture.
- 3. Artistry:** this case focuses on modern design concepts. With the original ecology, low cost, and environmental protection as the design idea, it uses the construction methods of bricks, bases, arches, structures, and residential

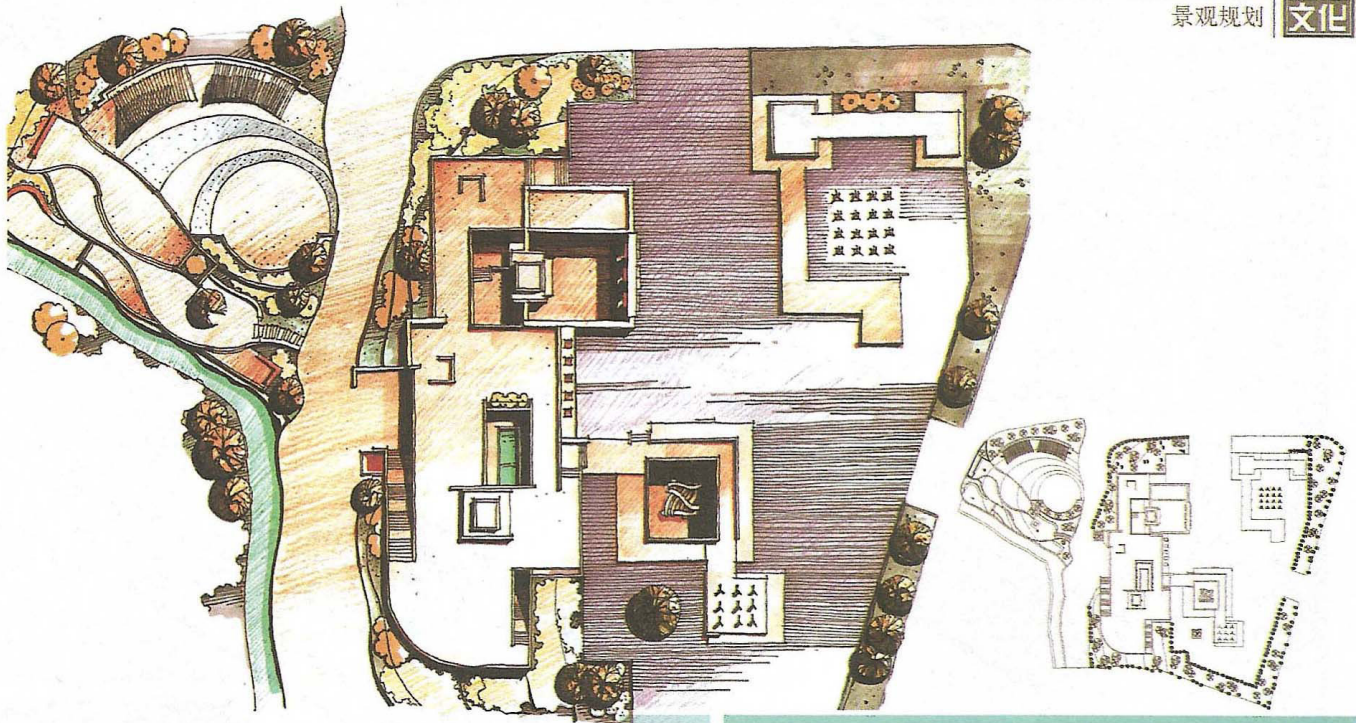
patterns and space elements, etc., highlighting regional traditional architecture “raw-earth” characteristics.

- 4. Practicability:** raw earth dwellings are an ancient architectural model in Xinjiang villages. It has the advantages of environmental protection, low cost, war in winter and cool in summer, etc., but it also has the disadvantages of poor earthquake resistance, small bays and weak lighting. Through our transformative design, we strive to introduce contemporary residential design concepts on the basis of the protection of the original architectural form, and form a new construction model that takes into account both morphological features and living quality.

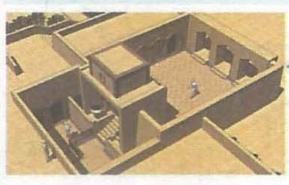
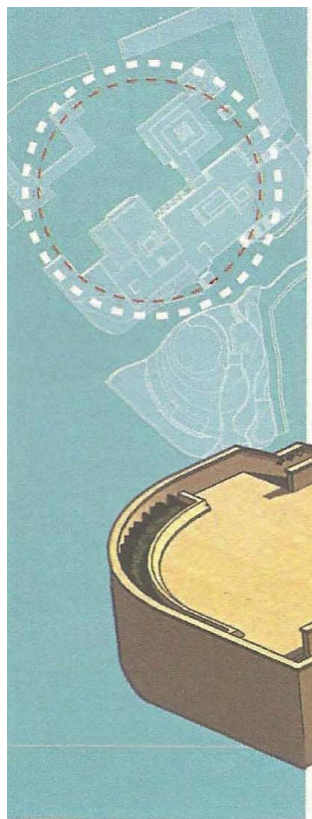
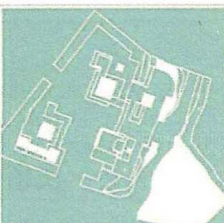
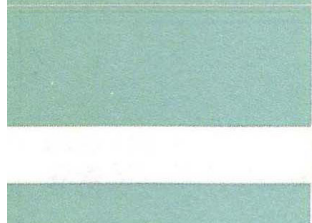
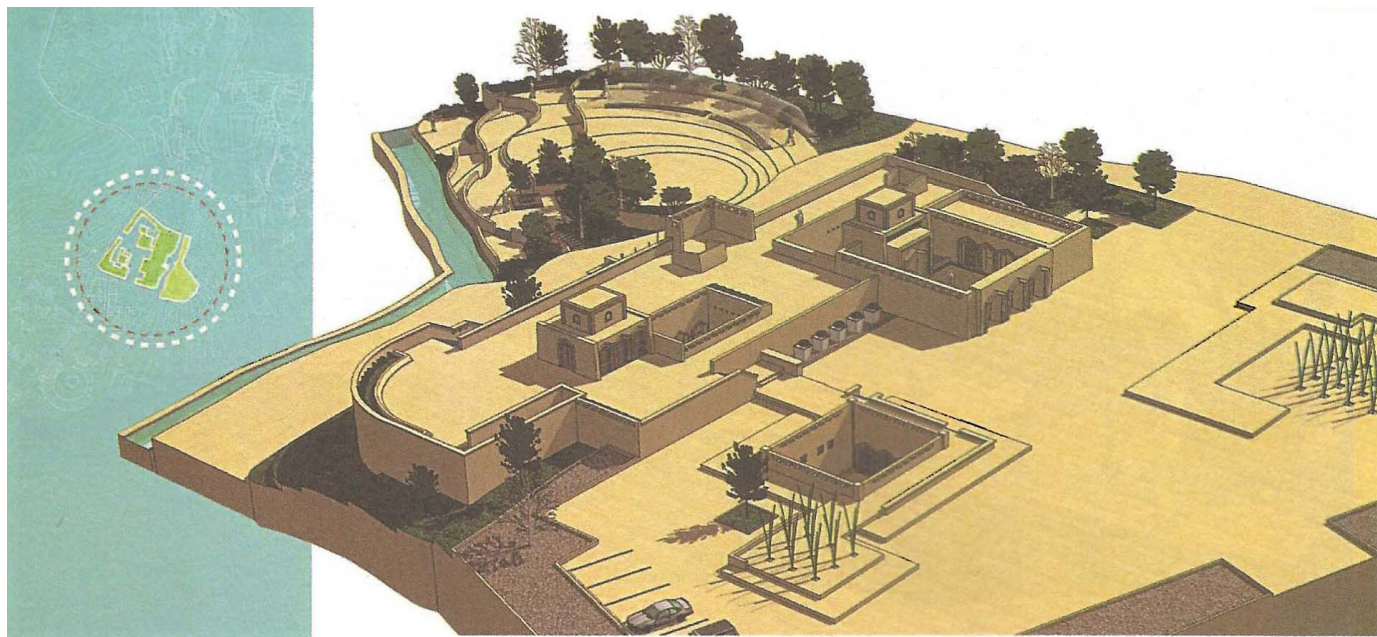
Images: Fig.5-1-12~36⁴ *Raw-earth architecture landscape plan in Mazaaleli Village, Shanshan County. Translated by author.*

4 Ibid, 272-289.

鄯善县麻扎村生土建筑
景观规划

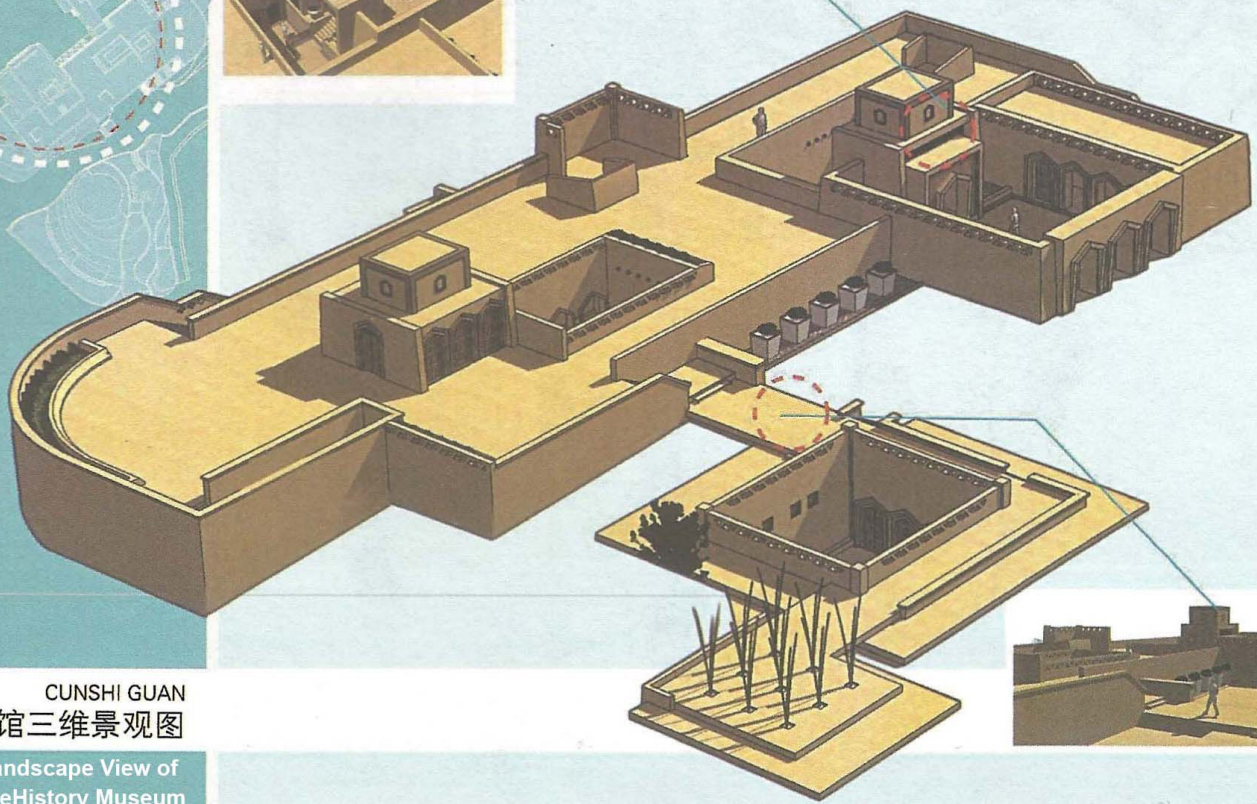


CUNSHI GUAN
村史馆手绘平面布置图
Hand-drawn Plan of Village History Museum



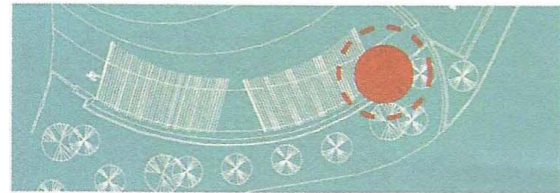
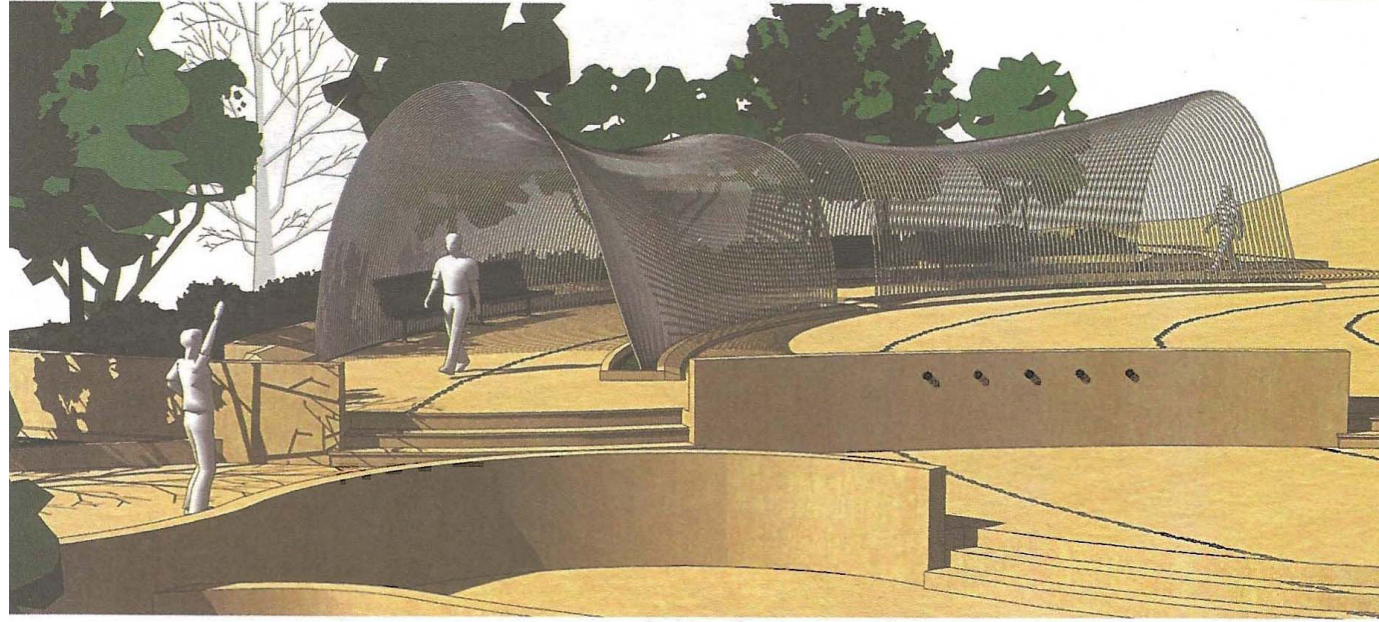
鄯善县麻扎村生土建筑
景观规划

土性
文化



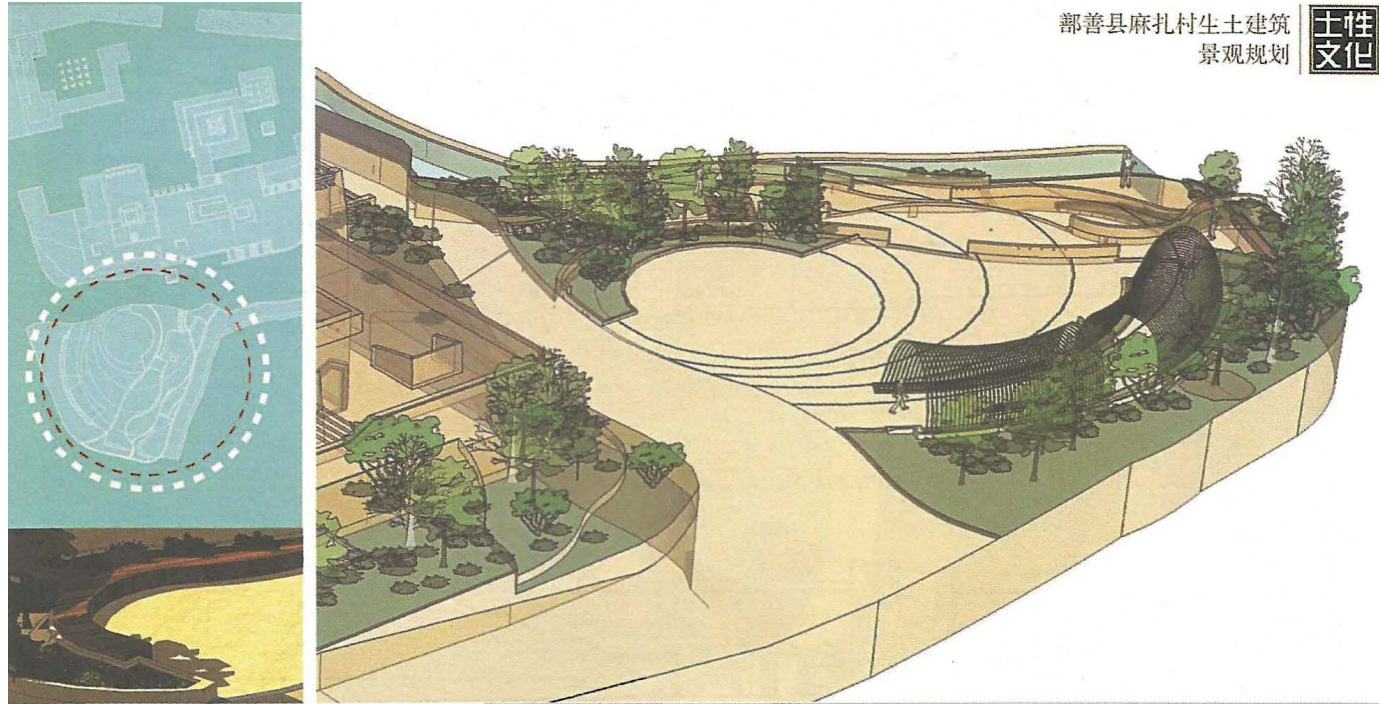
CUNSHI GUAN
村史馆三维景观图
3D Landscape View of
VillageHistory Museum

部善县麻扎村生土建筑
景观规划

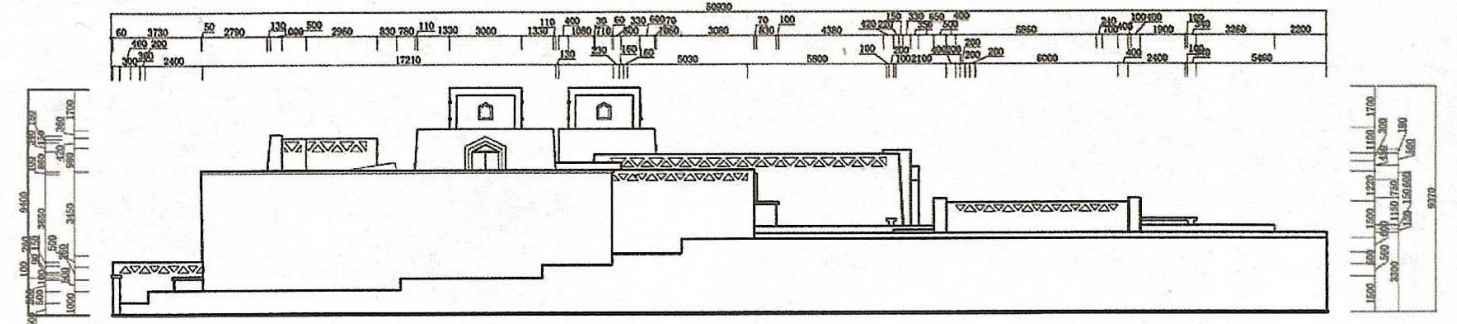


Partial Landscape of Folk
Life Small Square
CUNSHI GUAN
民俗生活小广场局部景观

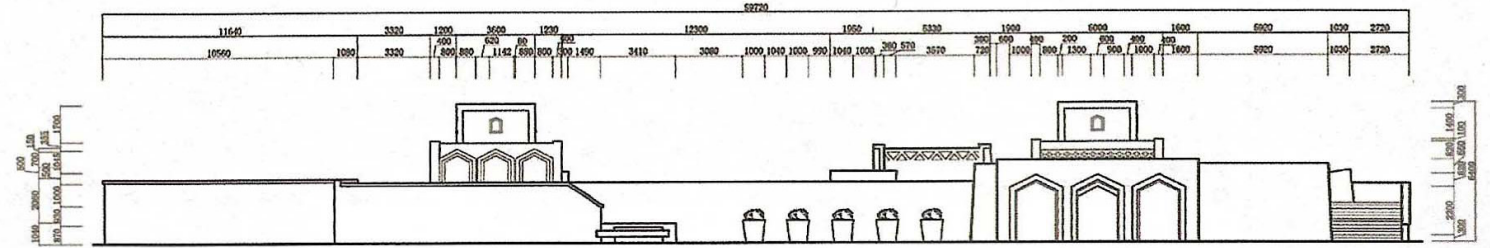
部善县麻扎村生土建筑
景观规划



CUNSHI GUAN
民俗生活小广场景观
Partial Landscape of Folk
Life Small Square

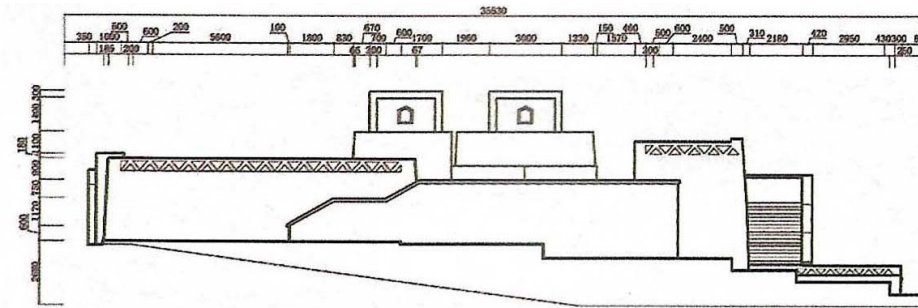


A Elevation
A立面

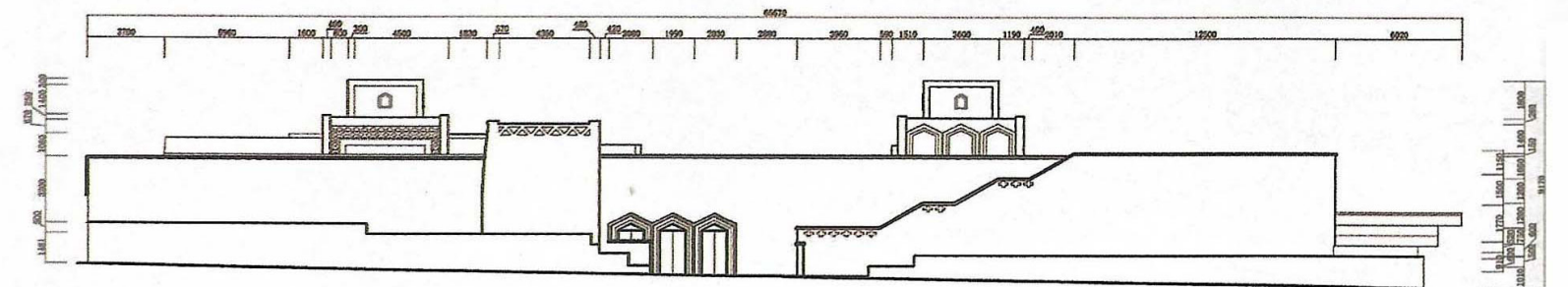


B Elevation
B立面

CUNSHI GUAN
Village History Museum A Elevation 村史馆A立面图
B Elevation B立面图

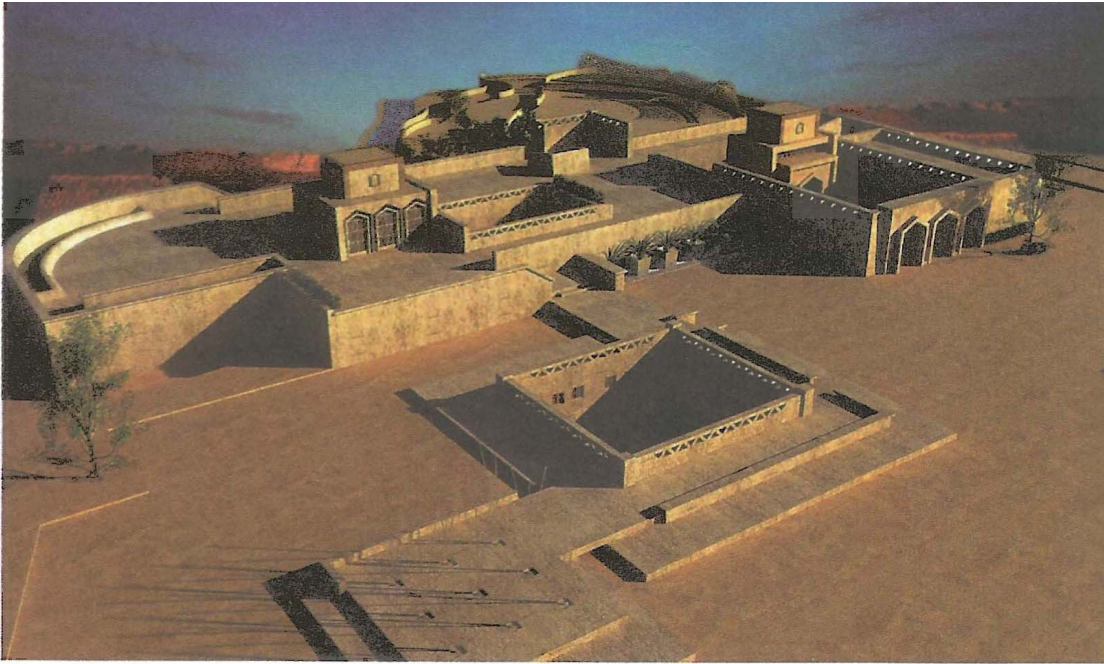


C Elevation
C立面



D Elevation
D立面

CUNSHI GUAN
Village History Museum C Elevation 村史馆C立面图
D Elevation D立面图

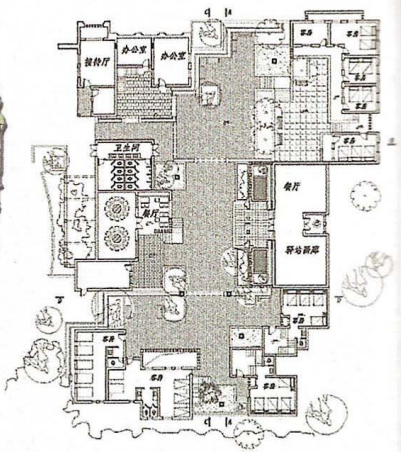
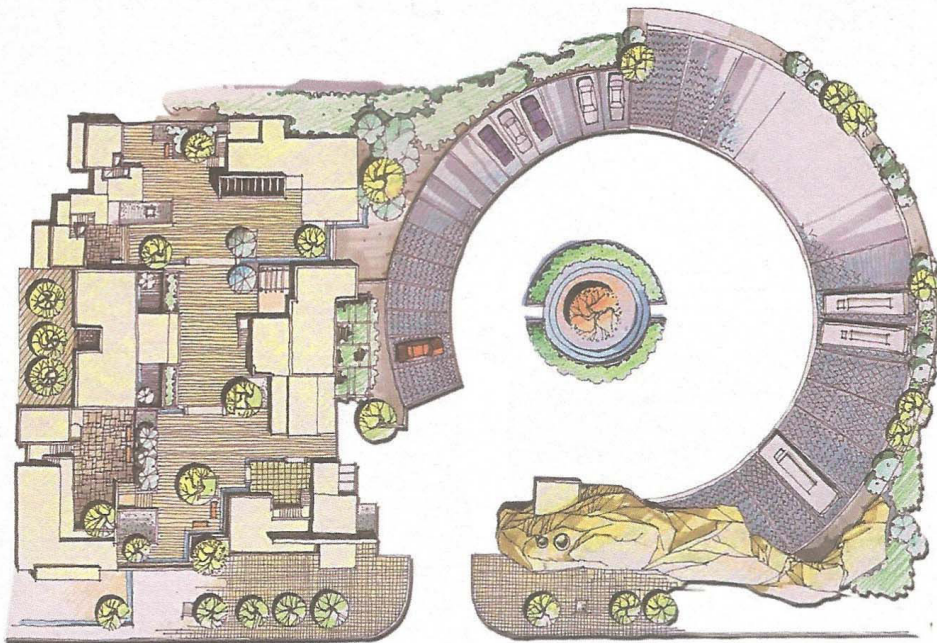


CUNSHI GUAN
村史馆效果图

Village History Museum Rendering

部善县麻扎村生土建筑
景观规划

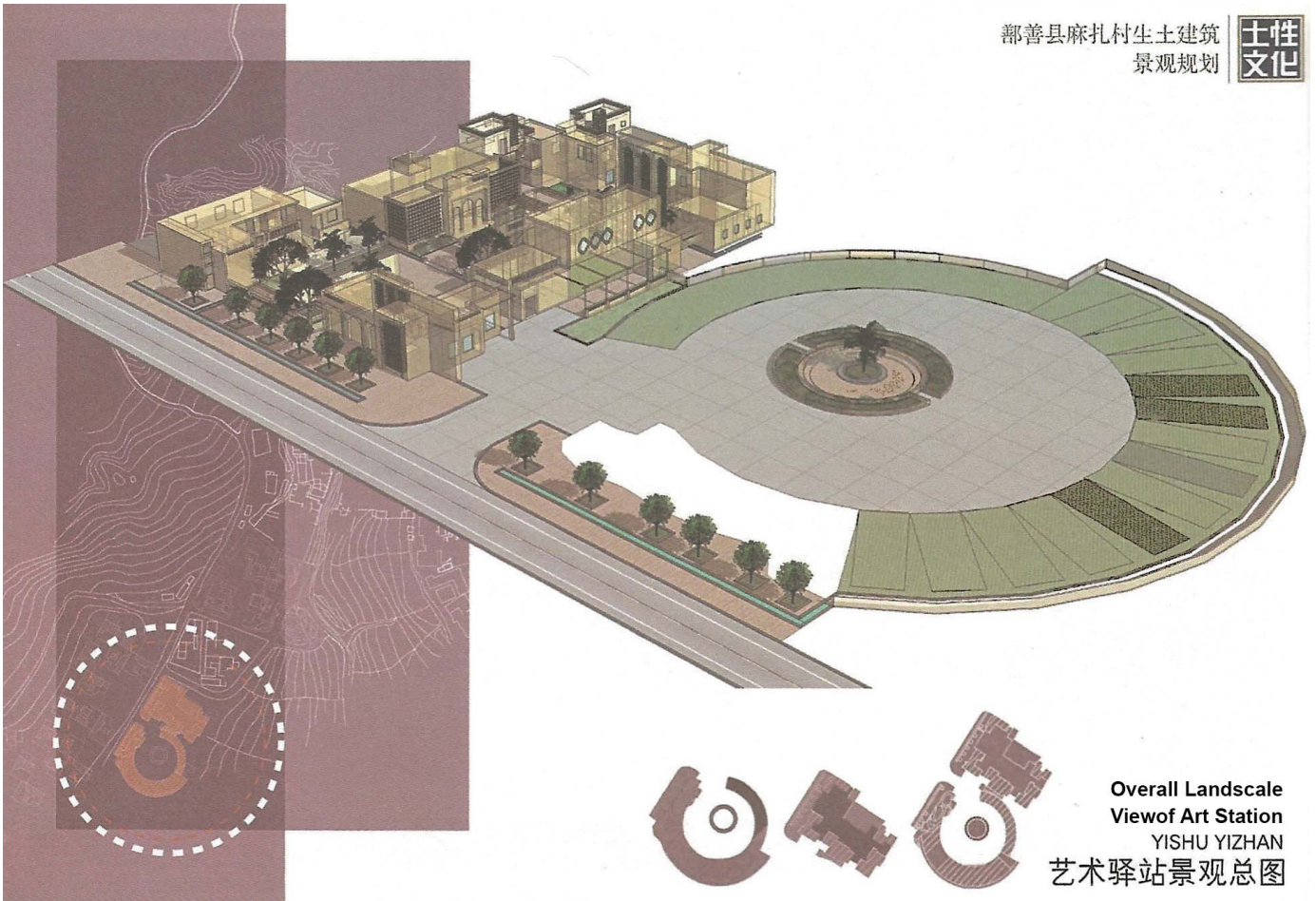
土性
文化



YISHU YIZHAN
艺术驿站手绘平面布置图
Hand-drawn Plan of Art Station

鄯善县麻扎村生土建筑
景观规划

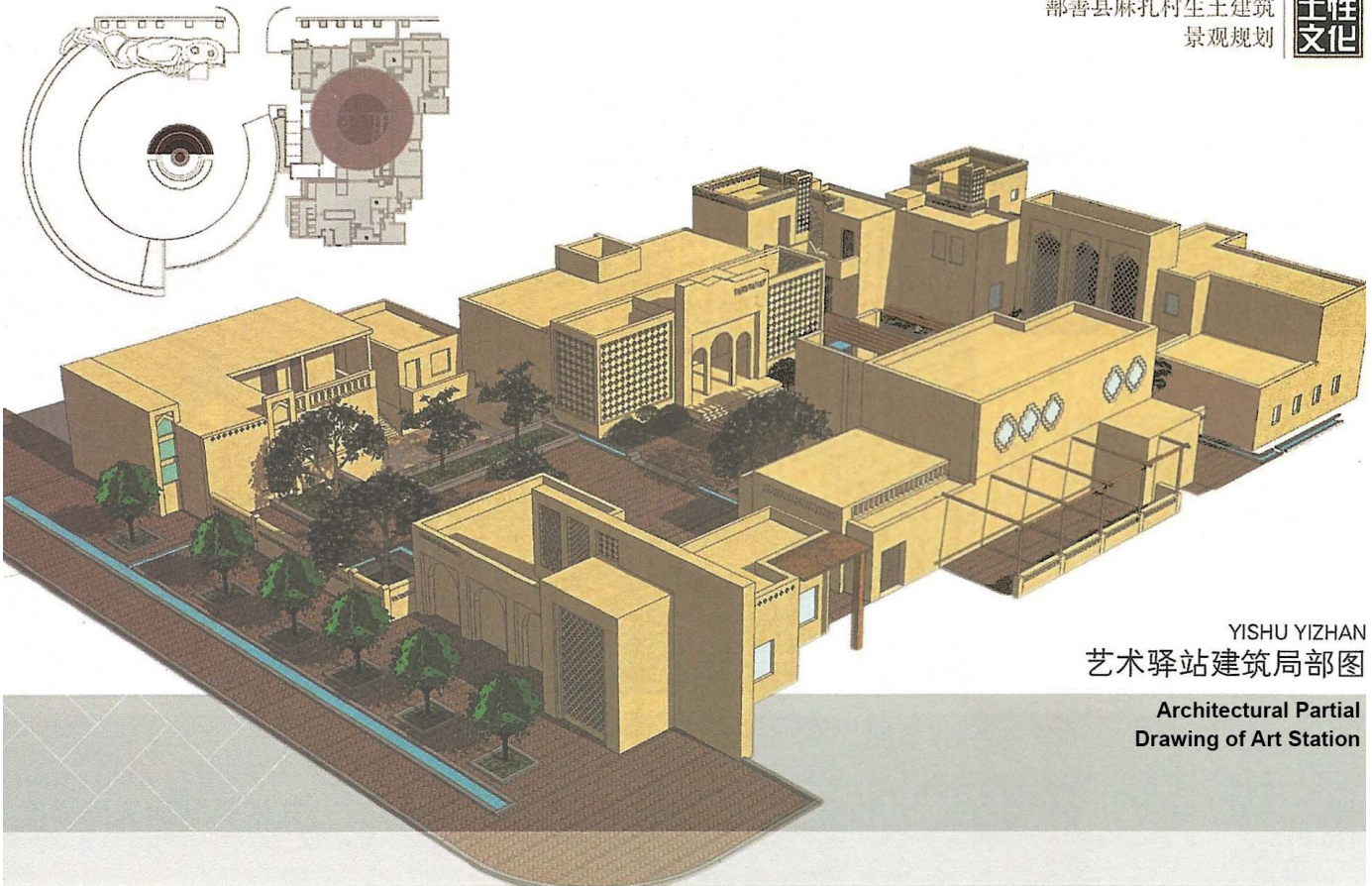
土性
文化



Overall Landscape
View of Art Station
YISHU YIZHAN
艺术驿站景观总图

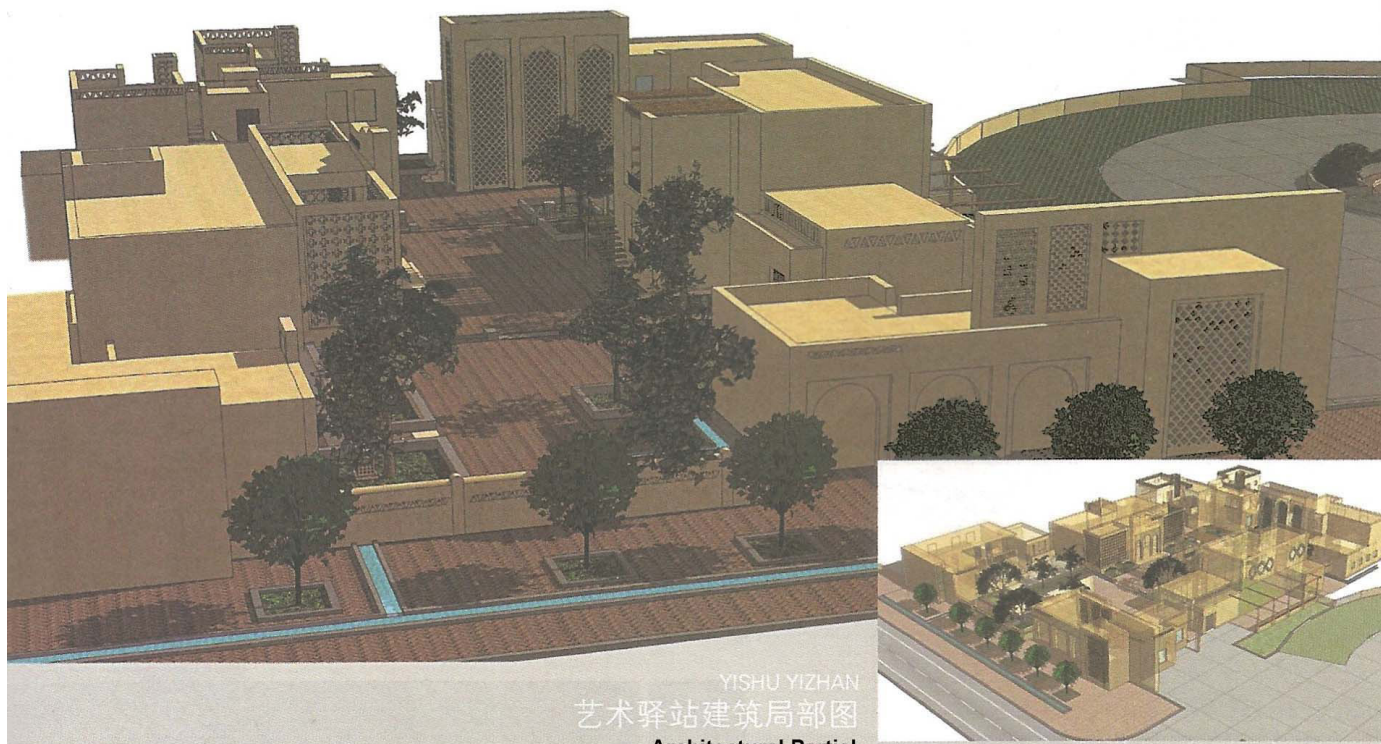
鄯善县麻扎村生土建筑
景观规划

土性
文化

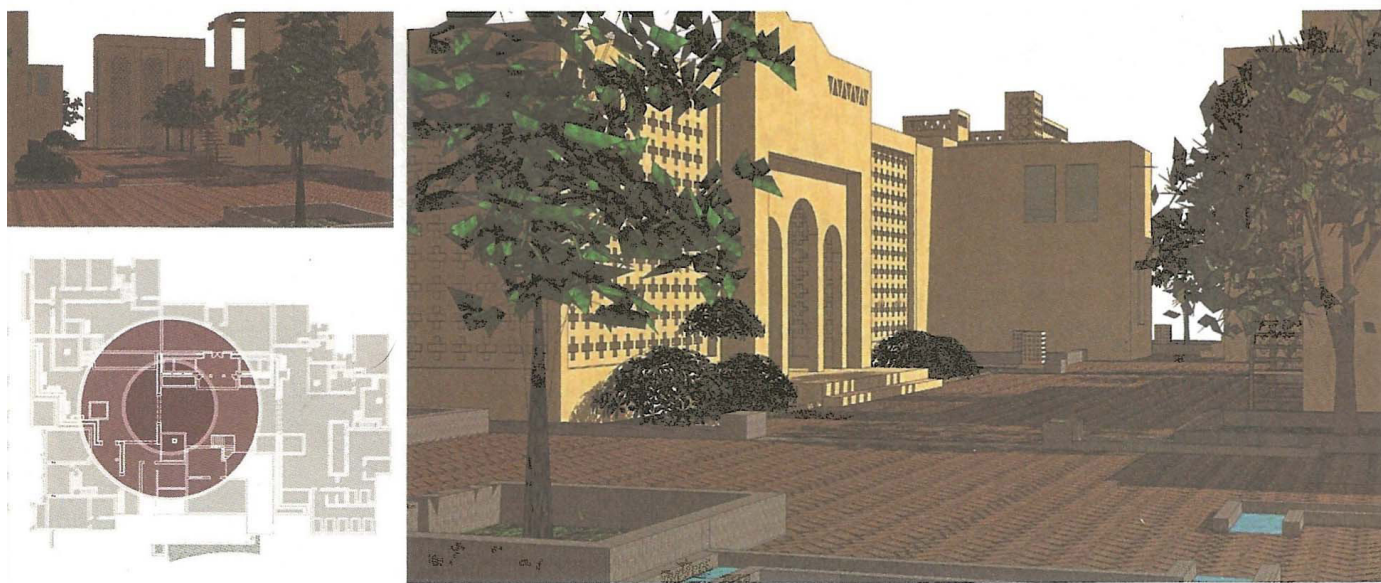


YISHU YIZHAN
艺术驿站建筑局部图

Architectural Partial
Drawing of Art Station

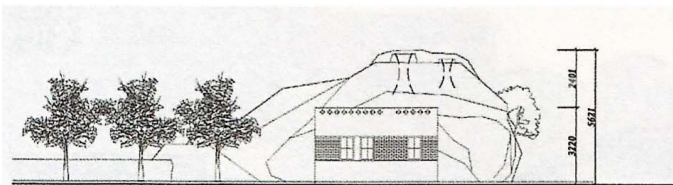


YISHU YIZHAN
艺术驿站建筑局部图
Architectural Partial
Drawing of Art Station

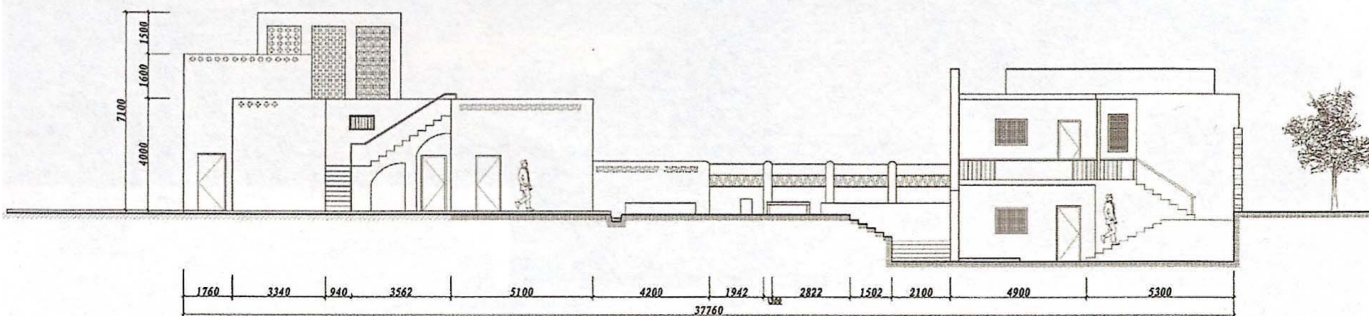


YISHU YIZHAN
艺术驿站建筑局部图
Architectural Partial
Drawing of Art Station

部善县麻扎村生土建筑
景观规划



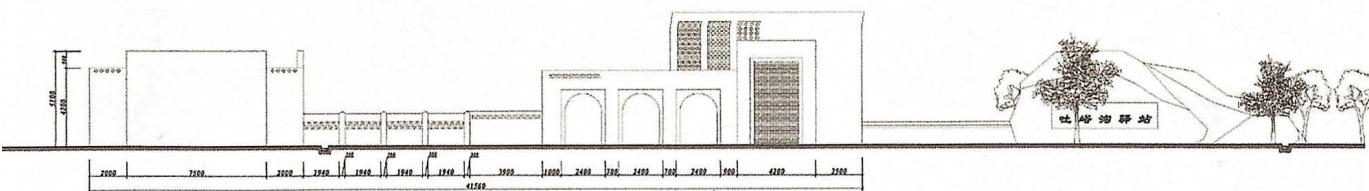
B-B剖面图 B-B Section



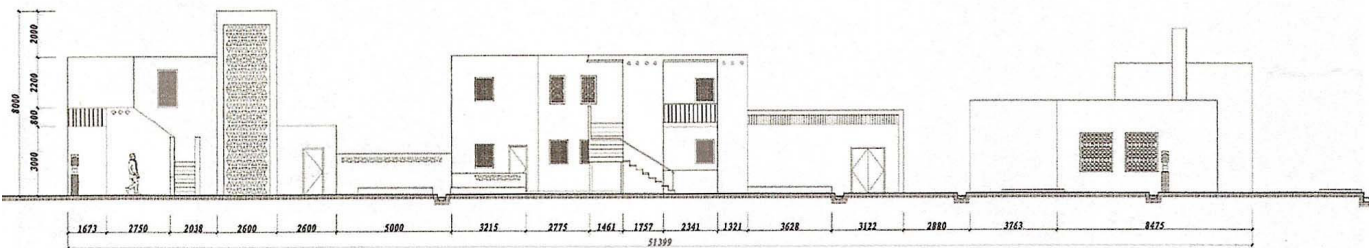
B-B剖面图 B-B Section



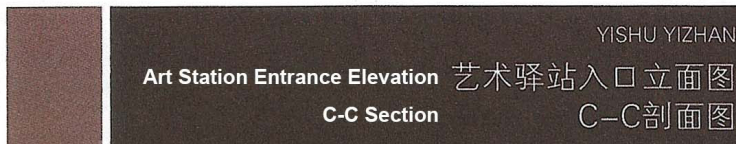
部善县麻扎村生土建筑
景观规划

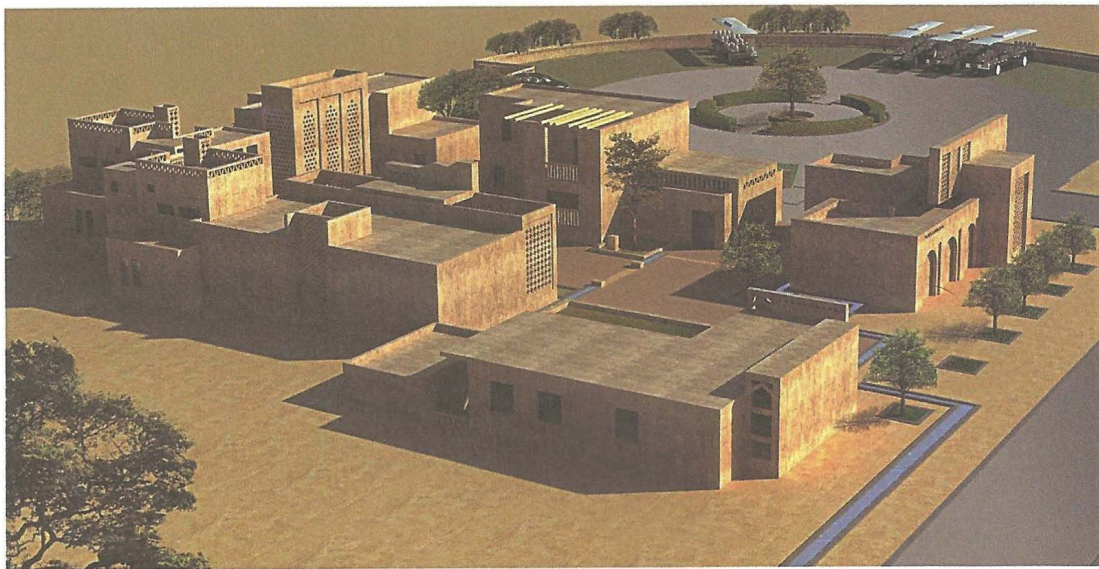


入口立面图 Entrance Elevation



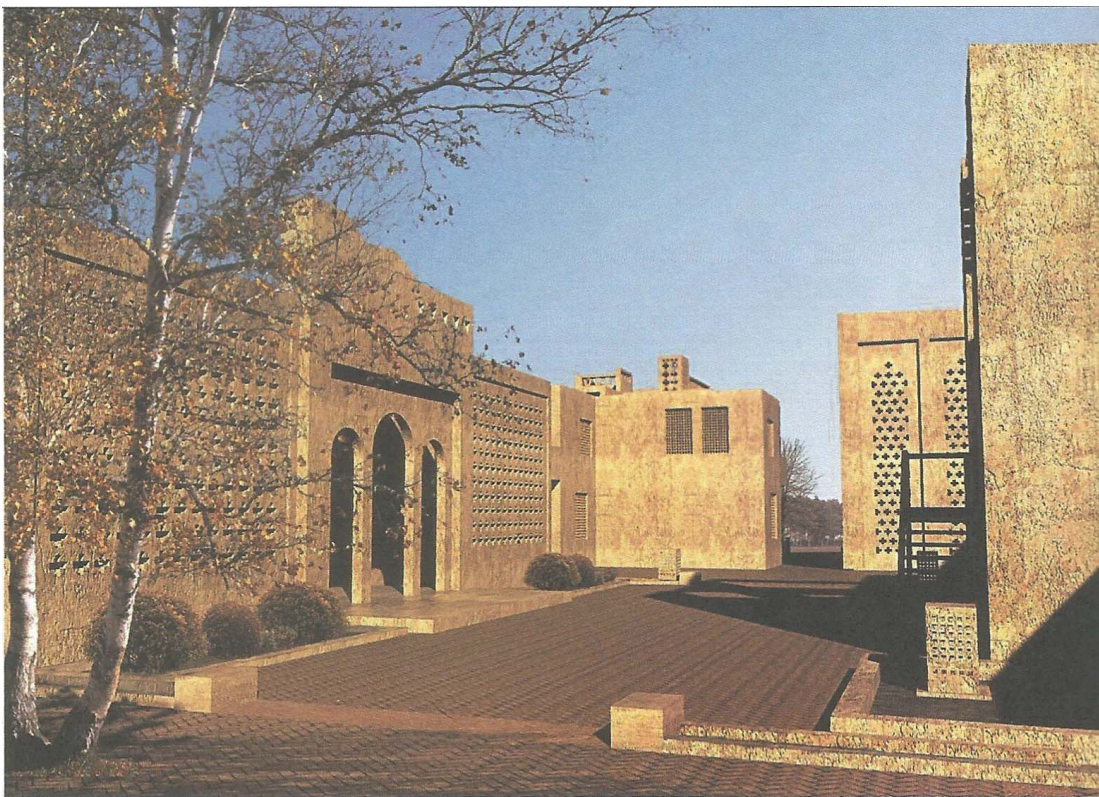
C-C剖面图 C-C Section





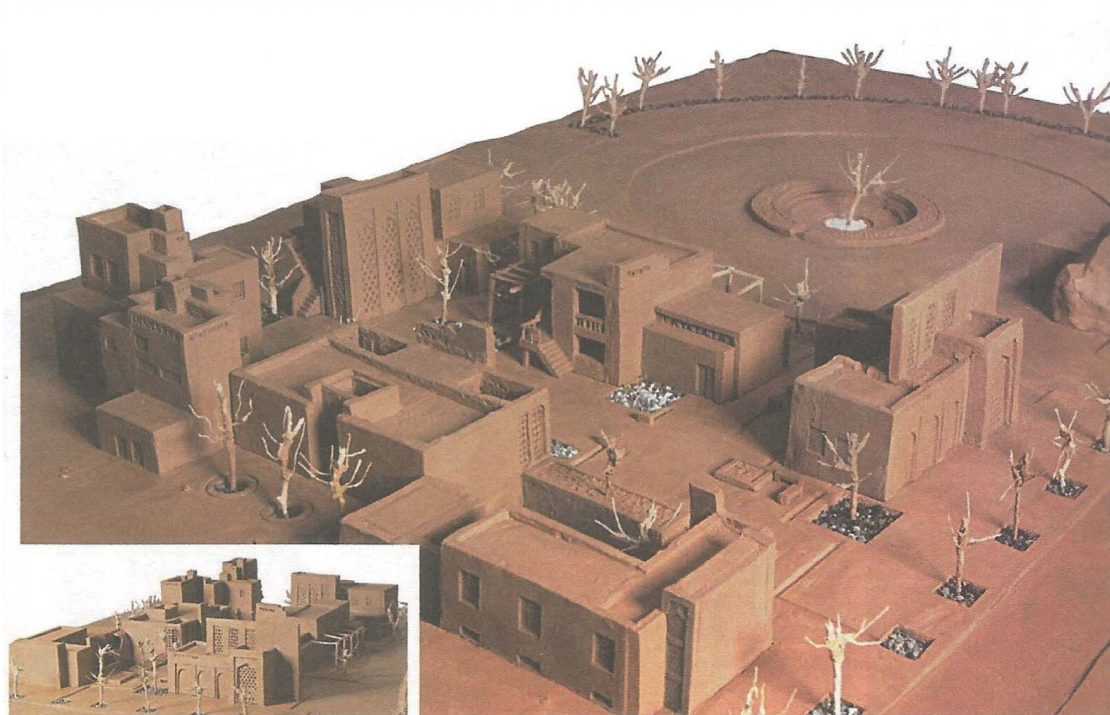
艺术驿站效果图 YISHU YIZHAN

Art Station Rendering



Art Station Rendering

艺术驿站效果图 YISHU YIZHAN



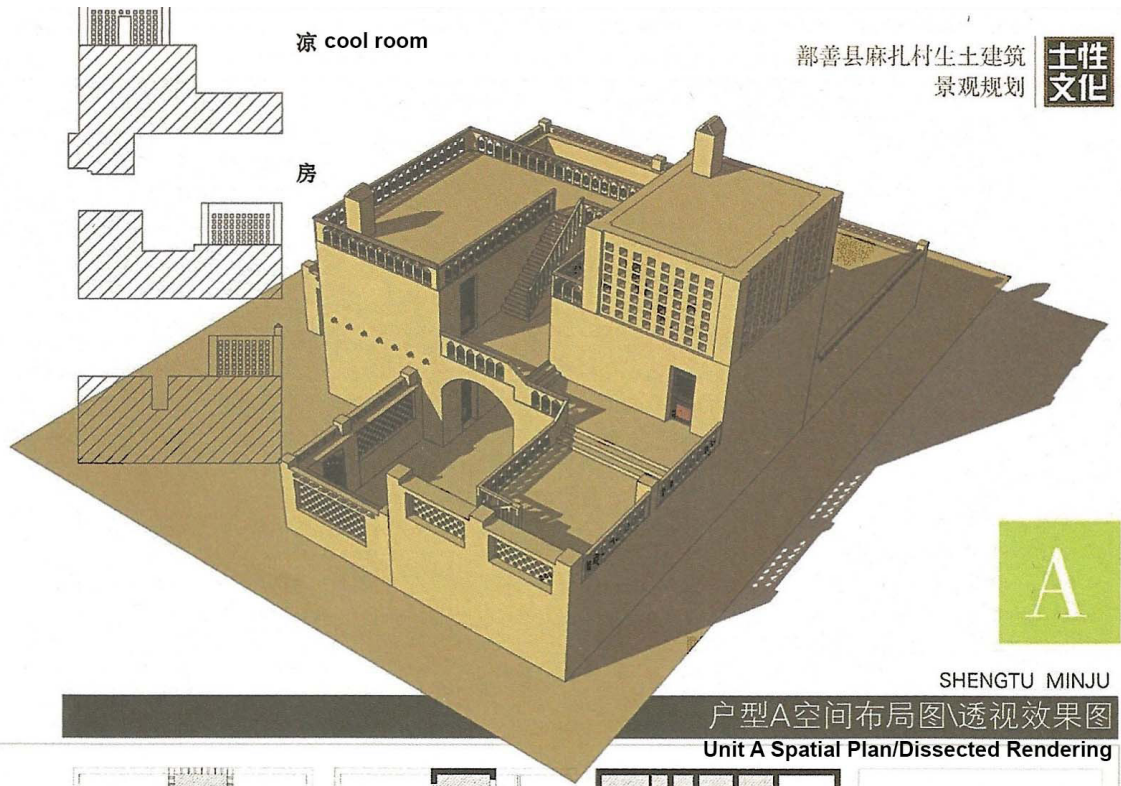
Art Station Rendering

艺术驿站模型图 YISHU YIZHAN

鄯善县麻扎村生土建筑
景观规划



SHENGTU MINJU
生土民居A/B/C户型布局图
Raw-earth House A/B/C Unit Plan

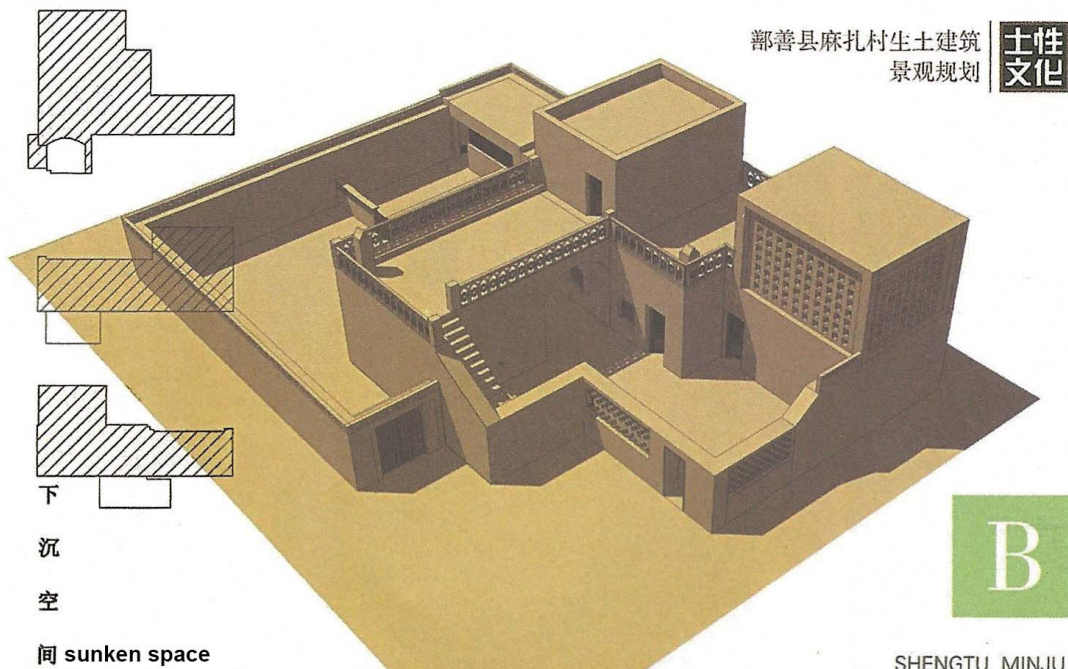
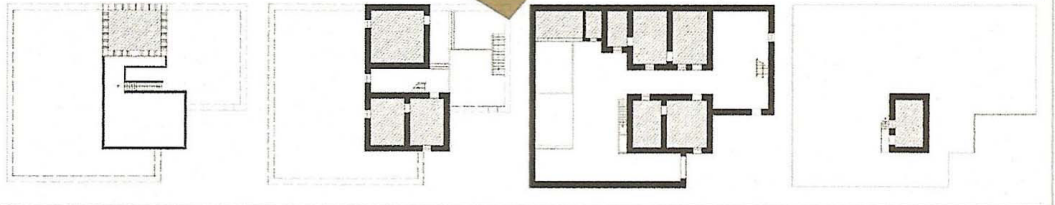


A

SHENG TU MINJU

户型A空间布局图\透视效果图

Unit A Spatial Plan/Dissected Rendering



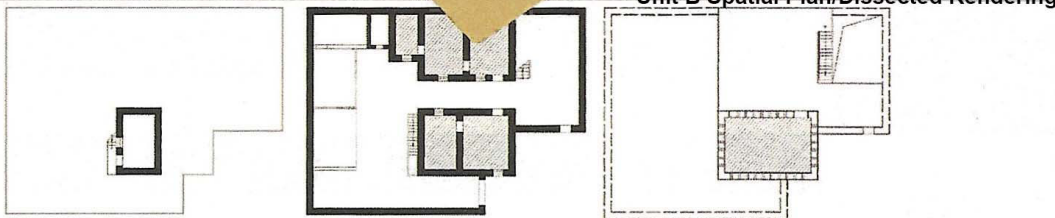
B

下
沉
空
间 sunken space

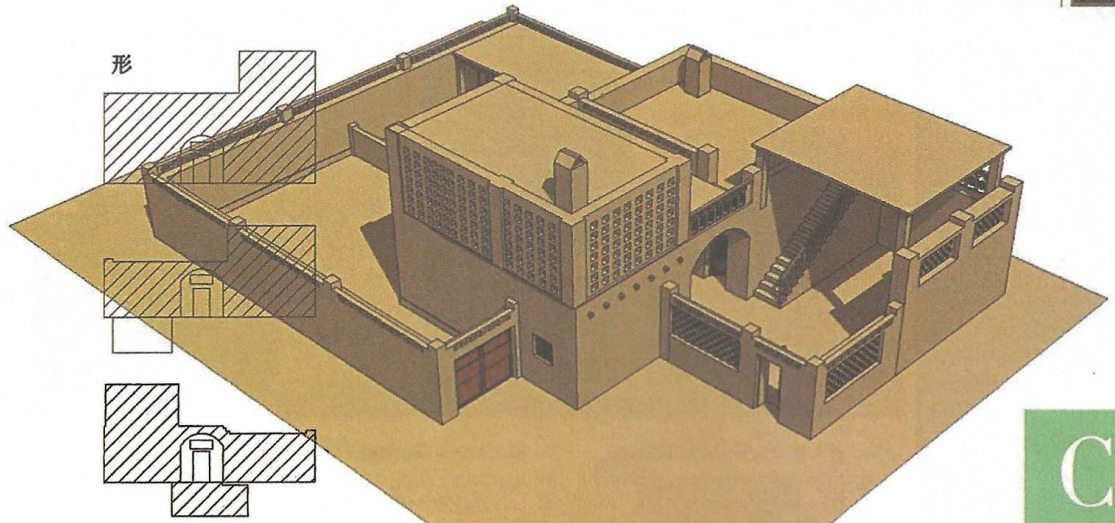
SHENG TU MINJU

户型B空间布局图\透视效果图

Unit B Spatial Plan/Dissected Rendering

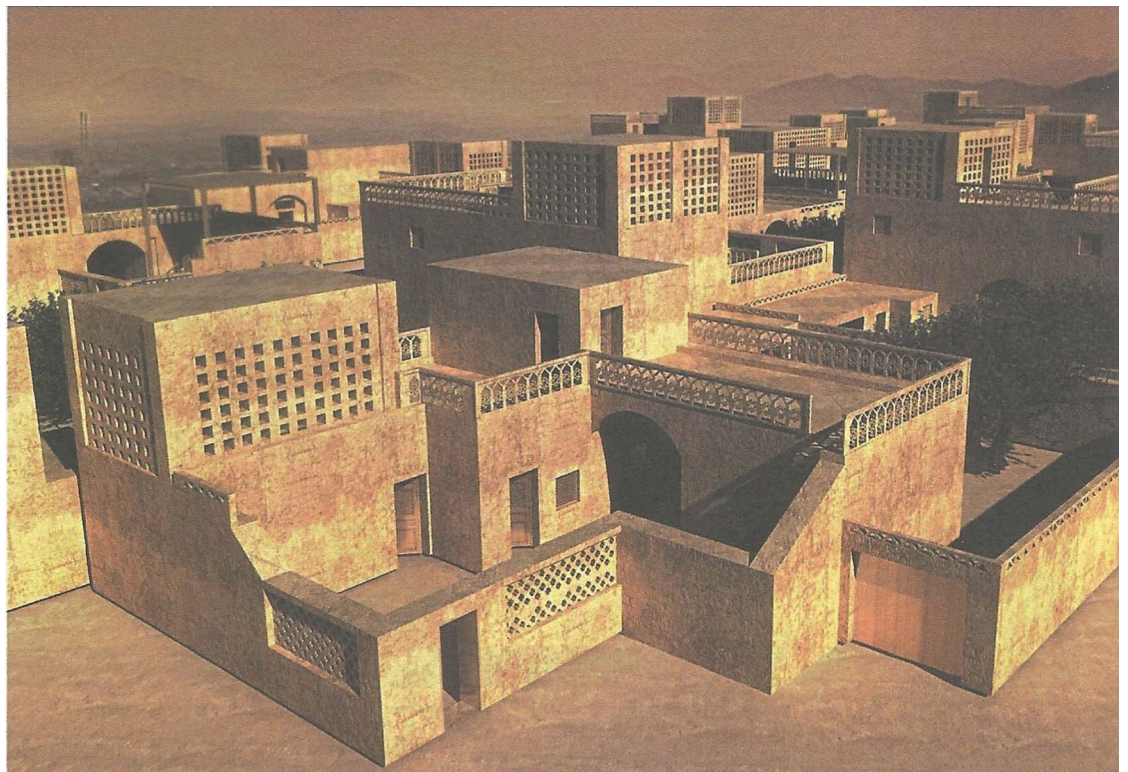
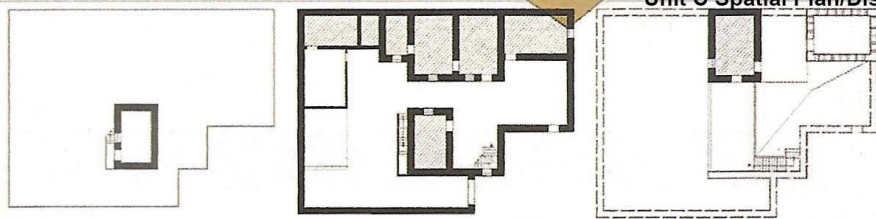


拱 Archway



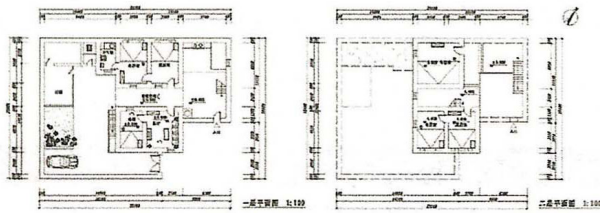
SHENGTU MINJU

户型C空间布局图\透视效果图
Unit C Spatial Plan/Dissected Rendering



SHENGTU MINJU

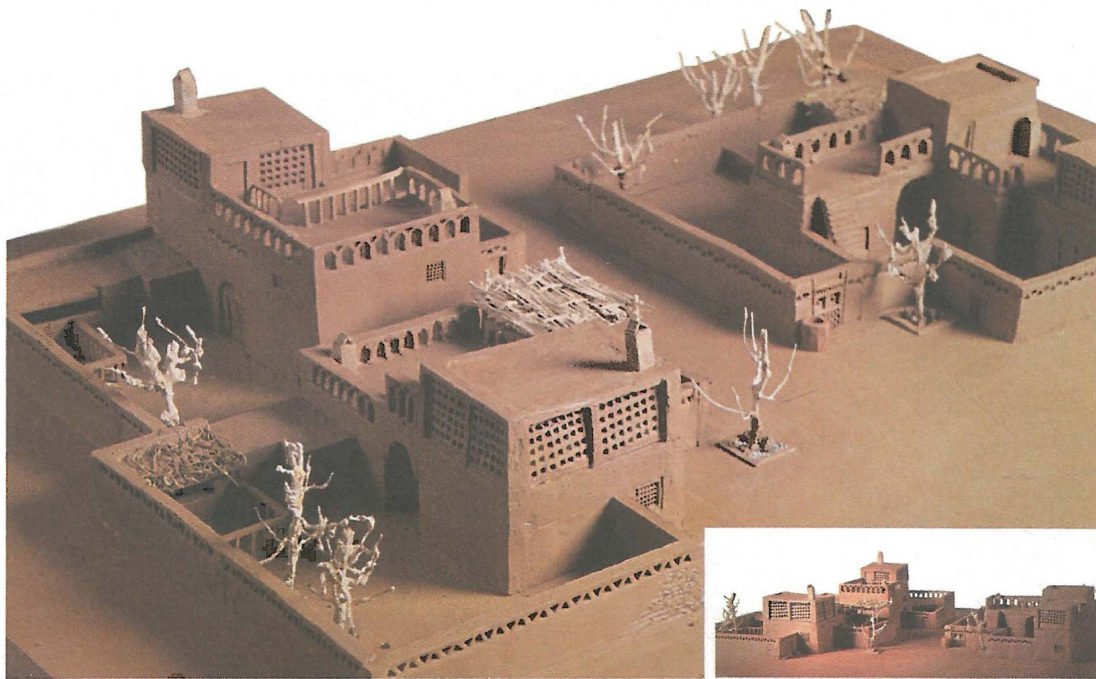
生土民居A\B\C户型组合效果图
Raw-earth House A/B/C Units Combination Rendering



SHENGTU MINJU

生土民居户型A效果图\平面布局图

Raw-earth Unit A Rendering/Floor Plan



SHENGTU MINJU

生土民居户型A\B\C模型图

Raw-earth House A/B/C Units Combination Rendering

Does the design retain vernacular forms and appearance? Yes, from flat roofs, sunken spaces, to arched doorways, perforated walls, and railings, it retains vernacular forms and appearance to a high degree.

Does the design retain vernacular materiality? Yes, raw-earth adobe materials and traditional construction methods are proposed for the design.

Does the design retain vernacular domestic sensibilities and spatial arrangement? Somewhat. Spaces and functions such as supas, rooftop air-drying rooms, and courtyard layouts – for the most part – follow vernacular examples. However the proposed demonstration residential houses all have very similar layouts, suggesting a sense of modularity.

Does the design retain vernacular settlement patterns? To a certain extent, the design follows and extends the original vernacular settlement pattern; but it also introduces more vehicular-oriented patterns such as widened roads for cars and large circular plaza for car parking (in the plan for Art Station).

Does the design show appreciation for the site's architectural traditions and customs? Yes, from the site plan, the design seems to be sited at a distance away from the original Mazaaleli Village; the new construction would theoretically not cause demolition of the original vernacular neighbourhood. The Uyghur culture in Mazaaleli Village is also appreciated and embraced in the design.

Is there consultation with local residents? Unknown.

5.1.4. Project 4

Project name: Protection and Repair Scheme for Mazaaleli Village, Tuyugou Township, Shanshan County

Architect/planner: Department of Environment Art Design, College of Fine Arts, Xinjiang Normal University; Xinjiang “Earth Nature’ Culture” Studio – Li Qun, Yan Fei, Guo Wenli, Chen Hui, Huang Xiao, Zhu Weiwei, Hou Peng, Chen Jia

Time of project: September 22, 2010

Client: Tuyugou Township Government

Location: Mazaaleli Village, Tuyugou Township, Shanshan County (鄯善县吐峪沟乡麻扎阿勒迪村)

Type of project: Repair, renovation, and new construction (5 construction stages proposed)

Was the design realized? Unknown

Project Description: Translated from page 294-296 in book *Xinjiang Raw Earth Houses*:⁵

This design project is based on the research of the National Social Science Fund Xinjiang Native Residential Architectural Forms and received by Shanshan County. Entrusted by the Tuyugou Township Government, it carried out protective repairs and landscape design of ancient dwellings. Mazaaleli Village is known as “China’s No.1 Village” and has been recognized as a “Historical and Cultural Famous Village” by the state.

A total of 69 households of Uyghur residents live here. Among them, 49 dwellings still retain the historical style and traditional shape and pattern of the original adobe buildings. They have formed unique courtyard layouts, lower kiln upper houses, and doorways based on many factors such as local climate, terrain, materials, and living customs. Decoration and other architectural features contain historical information of communication with Han culture. The traditional ancient dwellings in Mazaaleli Village represent one of the main types of traditional dwellings in Xinjiang, and are a traditional architectural culture worthy of protection and inheritance.

From the analysis of the overall layout of the village’s housing buildings, to ensure the availability of funds and the quality of the restoration, it is suggested that the whole village be divided into five phases and gradually repaired in batches. This atlas is the first phase of the repair plan.

Main content:

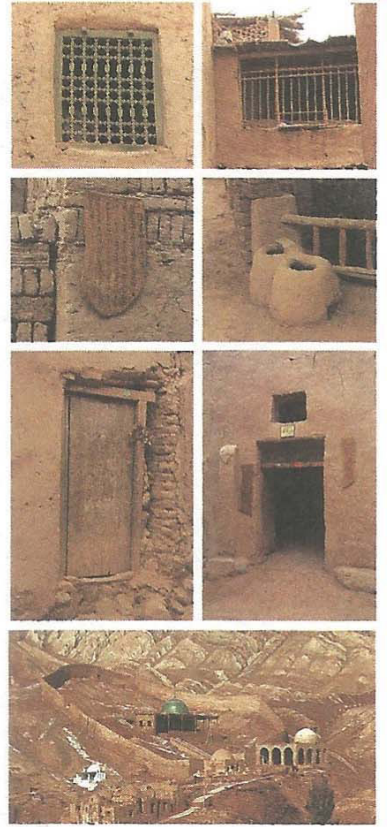
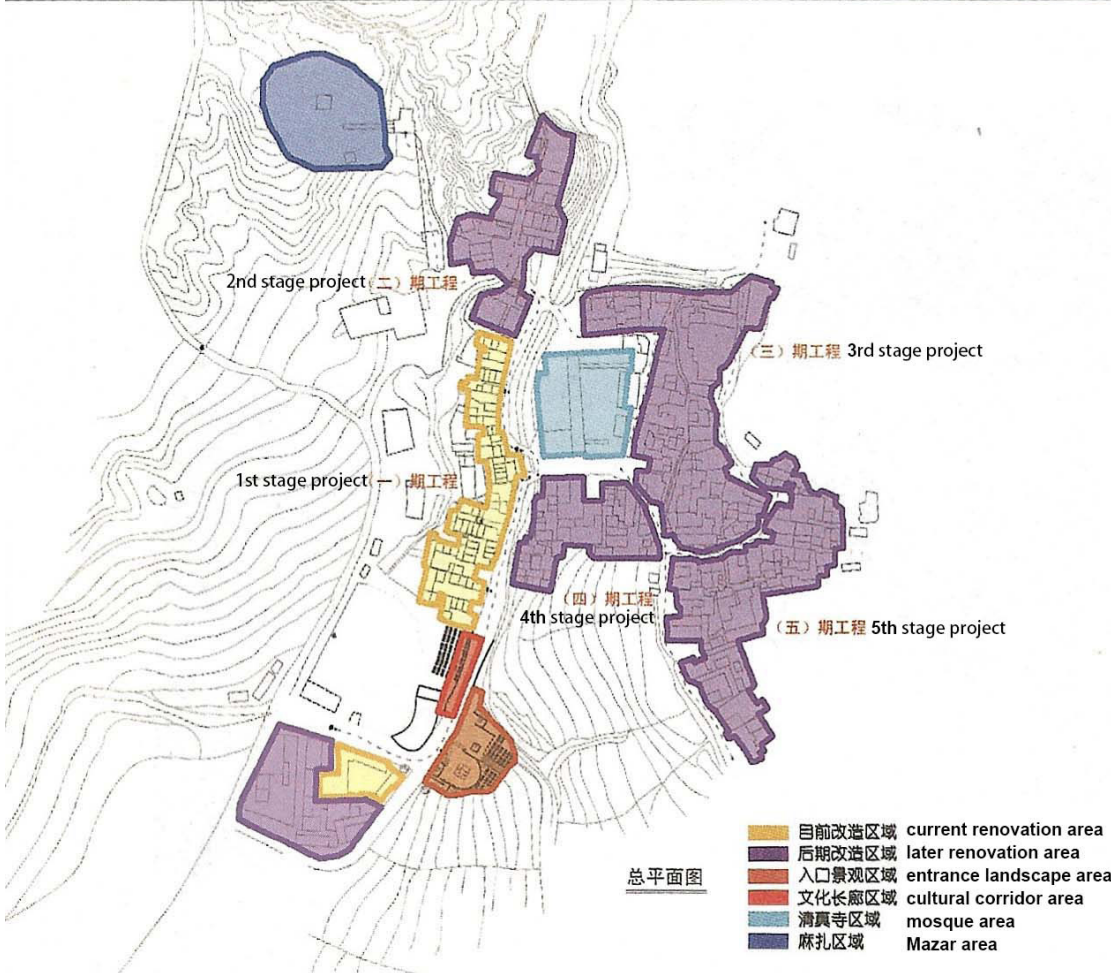
1. Leisure landscape design at the entrance of the scenic spot;
2. The “cultural knowledge” corridor of Mazaaleli Village;
3. Design of the renovation plan for 11 ancient houses and museum houses on the left side of the village along the river;
4. Partial design of the courtyard of “Haibibu Food Station”.

Images: Fig.5-1-37~58⁶ *Shanshan Tuyugou Mazaaleli Village Protection and Repair Plan*.
Translated by author.

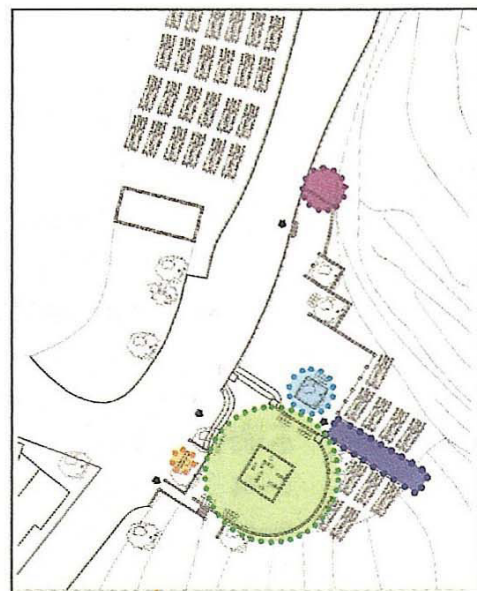
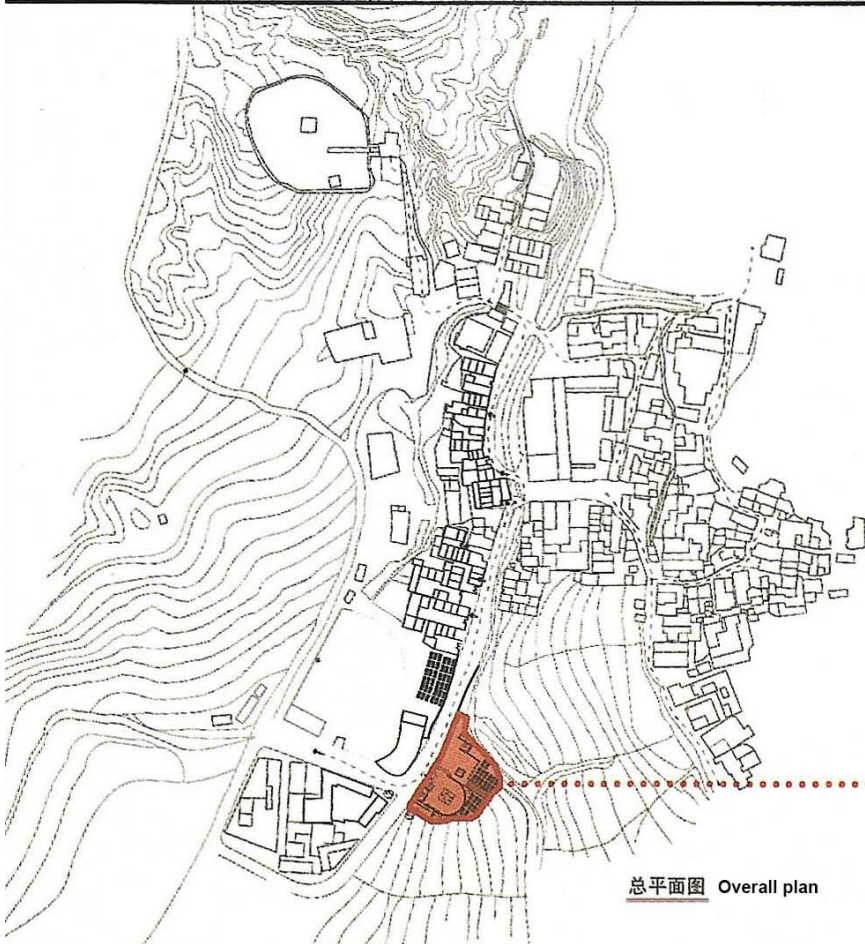
⁵ Ibid, 294-296.

⁶ Ibid, 294-312.

Renovation Design Location Map



Leisure Landscape Diagram



景观平面图 Landscape plan

- | | |
|--------|-------------------------------|
| 麻扎村简介 | Introduction to Mazha Village |
| 公共艺术设计 | Public Art Design |
| 景观局部 | Partial Landscape |
| 葡萄长廊 | Grape Gallery |
| 观景台 | Observation Deck |



“麻扎村简介”牌
“Introduction to Mazha
Village” Plaque



公共艺术
Public Art



休闲景观局部
Leisure Partial Landscape



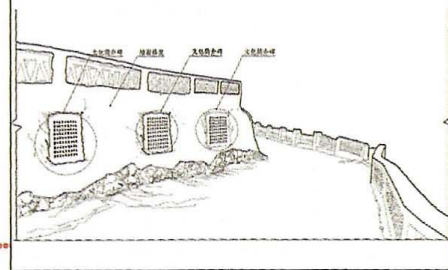
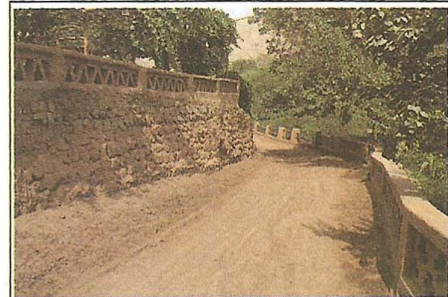
葡萄长廊
Grape Gallery



景观台
Observation Deck



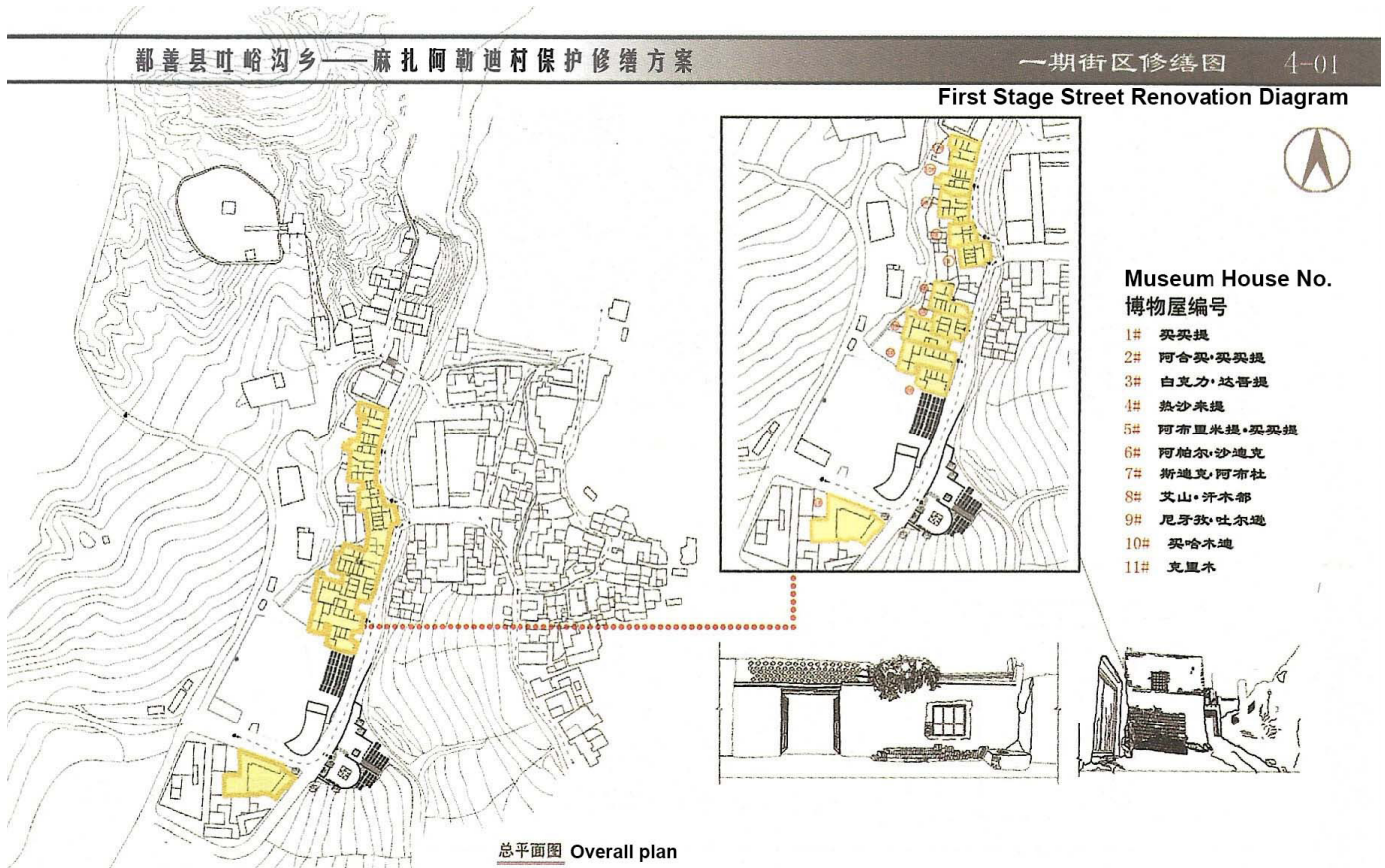
总平面图 Overall plan



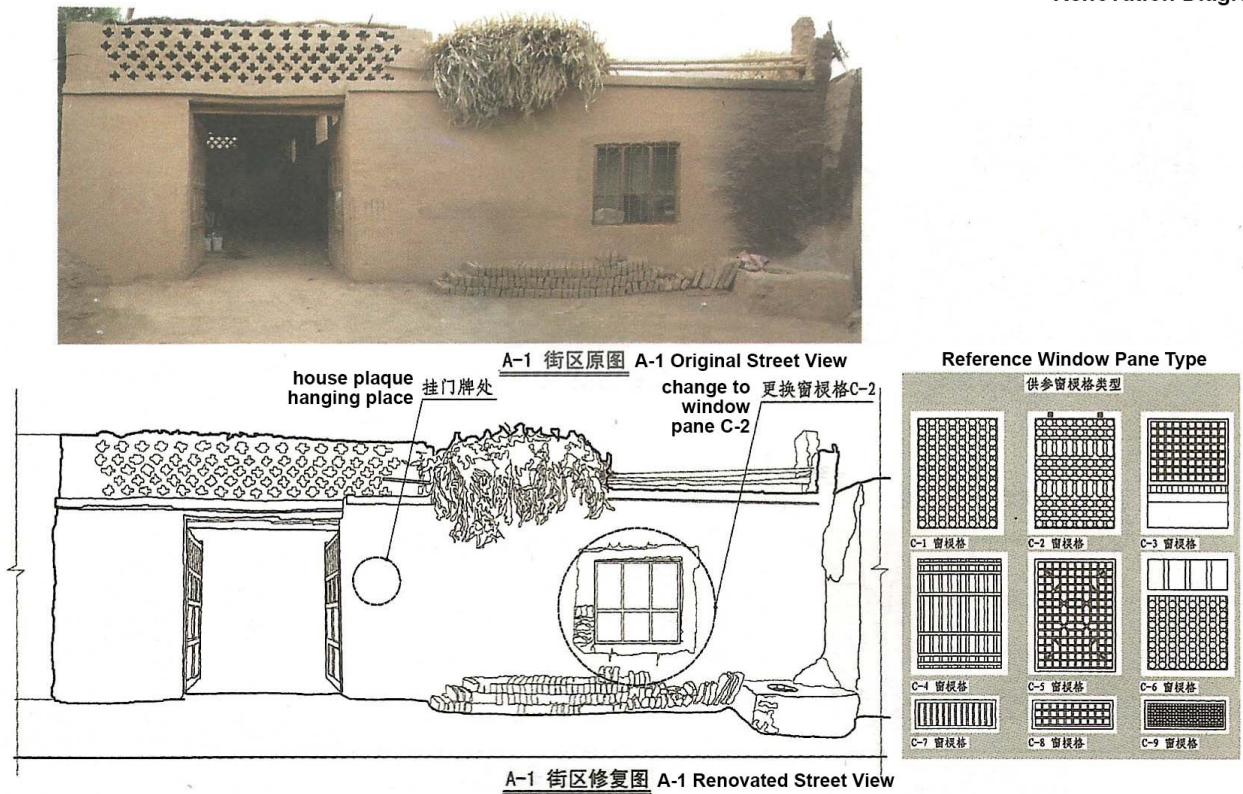
文化长廊示意图
Cultural Corridor Diagram

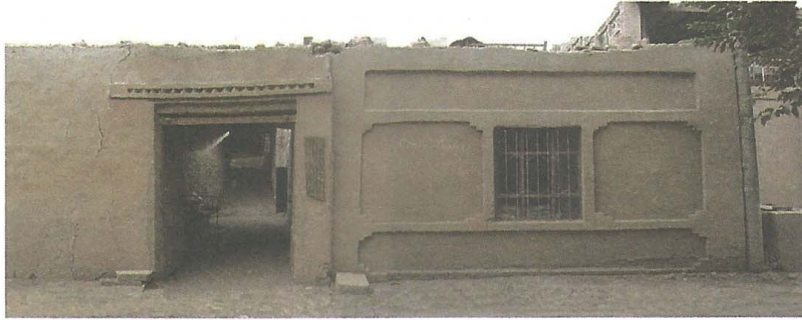


First Stage Street Renovation Diagram

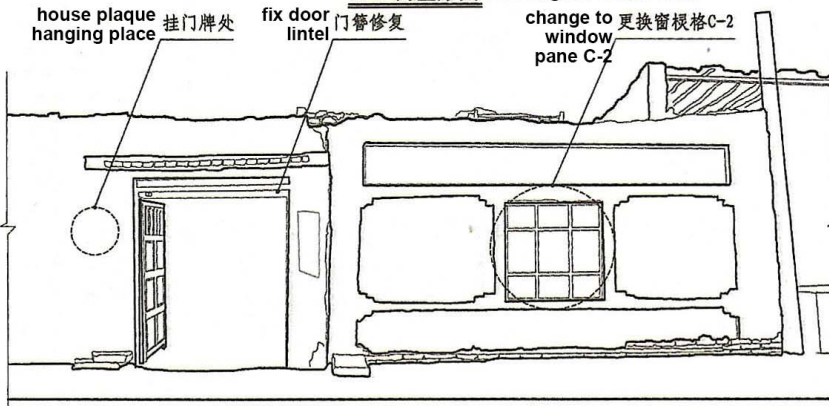


Renovation Diagram



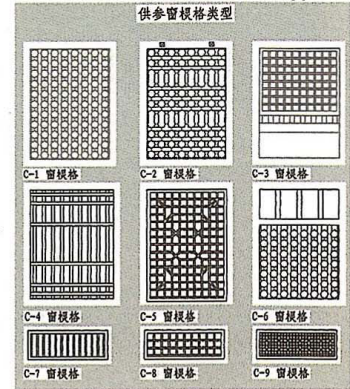


A-2 街区原图 A-2 Original Street View



A-2 街区修复图 A-2 Renovated Street View

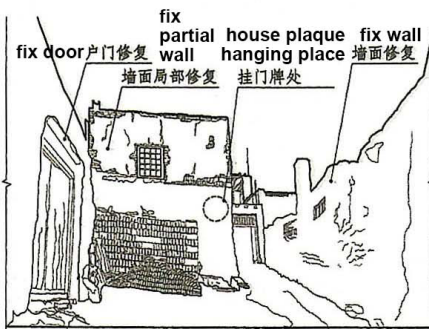
Reference Window Pane Type



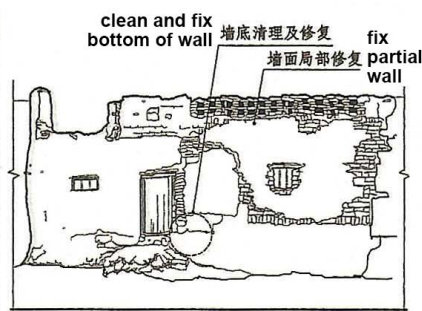
B-1 街区原图



B-2 街区原图 B-2 Original Street View

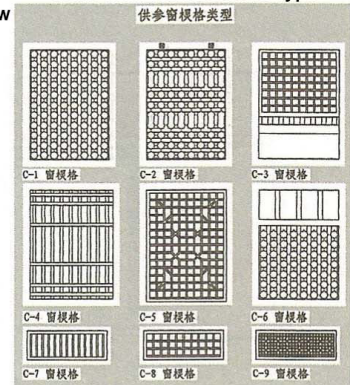


B-1 街区修复图
B-1 Renovated Street View



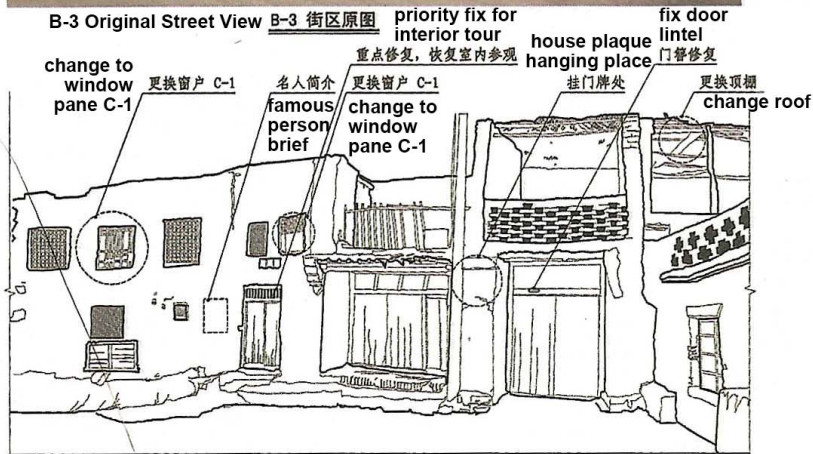
B-2 街区修复图
B-2 Renovated Street View

Reference Window Pane Type



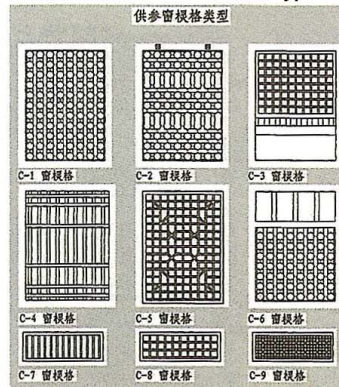


B-3 Original Street View B-3 街区原图

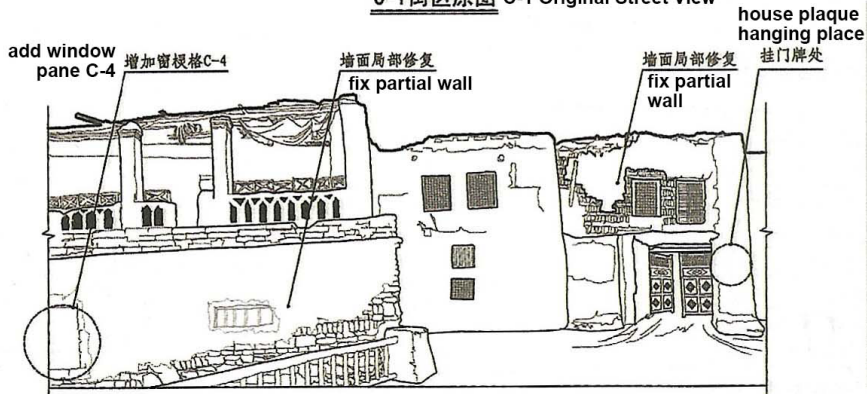


B-3 Renovated Street View B-3 街区修复图

Reference Window Pane Type

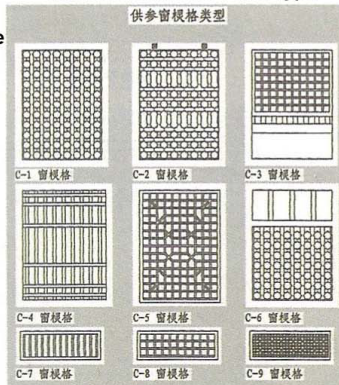


C-1 街区原图 C-1 Original Street View

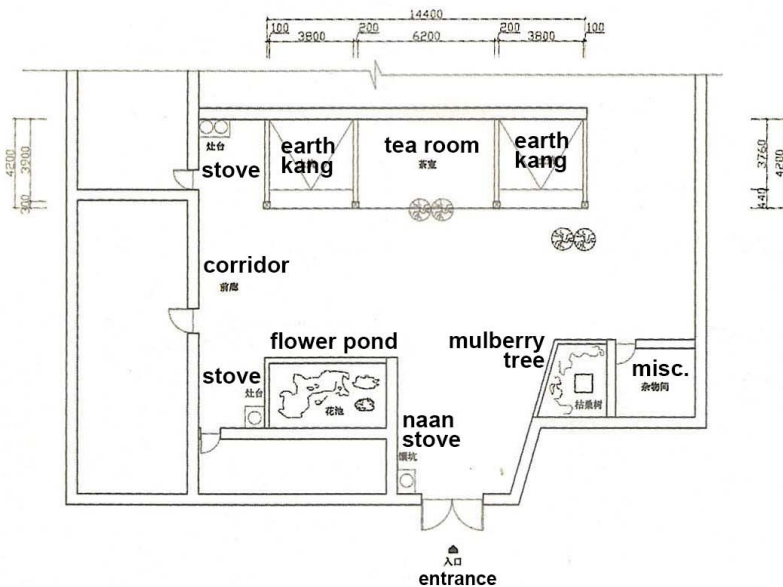


C-1 街区修复图 C-1 Renovated Street View

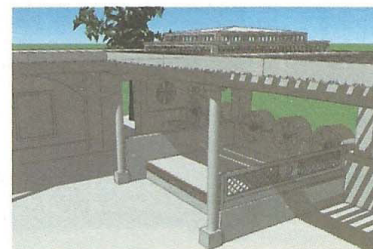
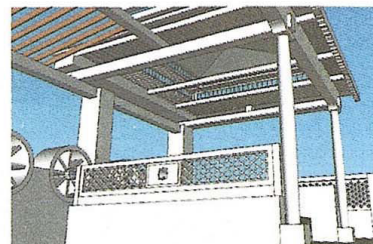
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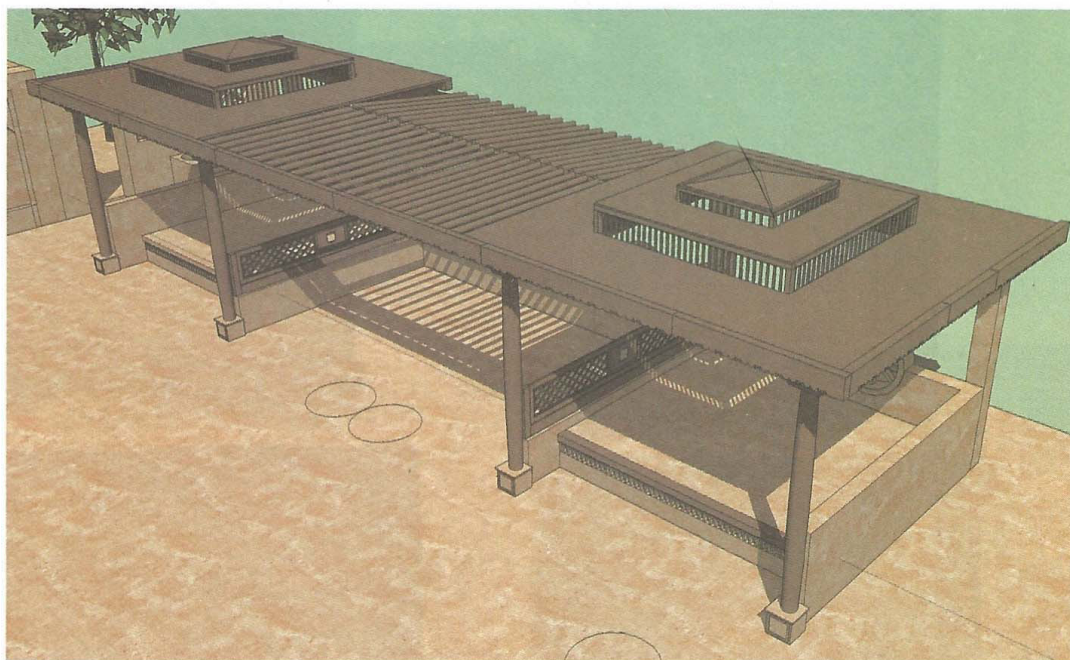
Food Station Plan



食驿坊平面图 Food Station Plan



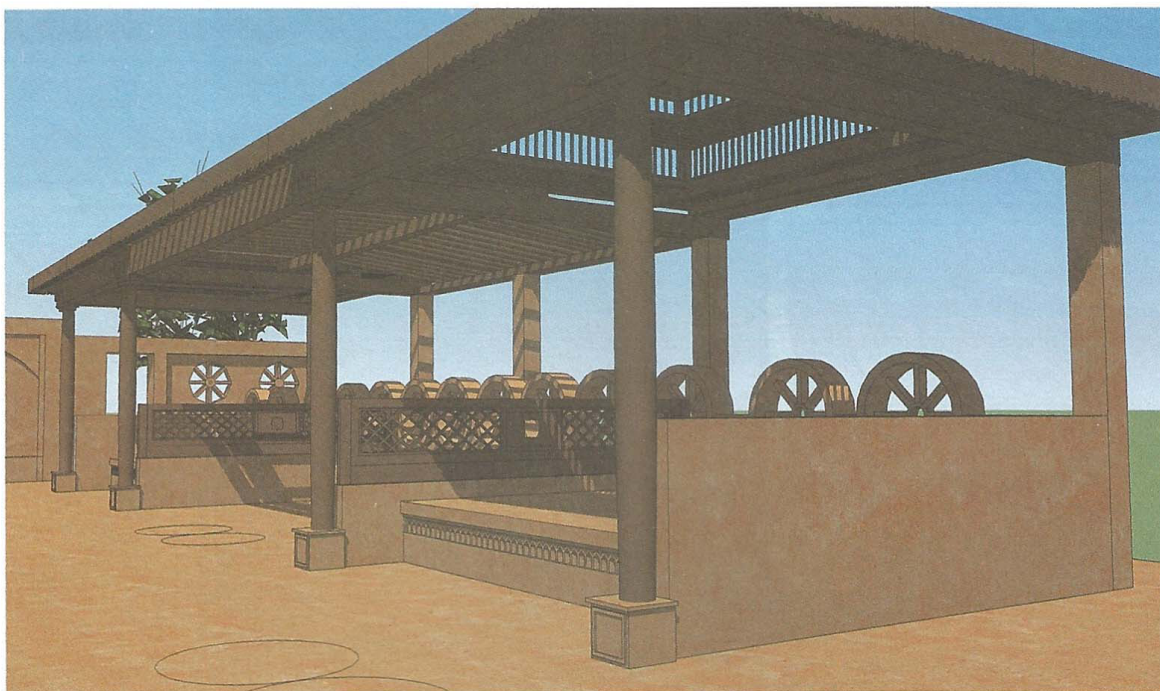
Food Station Top View



食驿坊顶面图
Food Station Top View

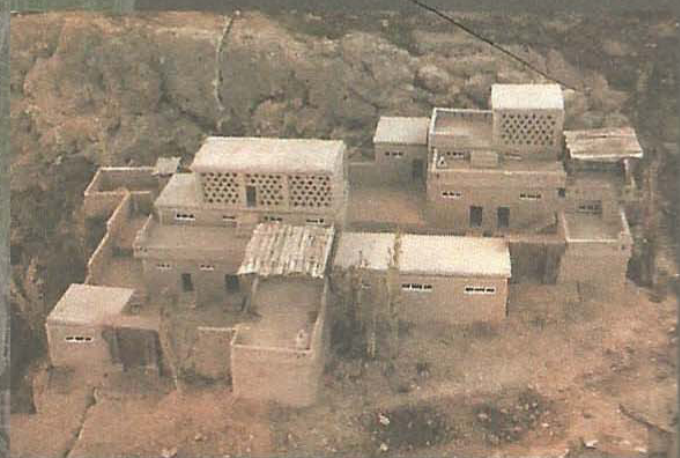
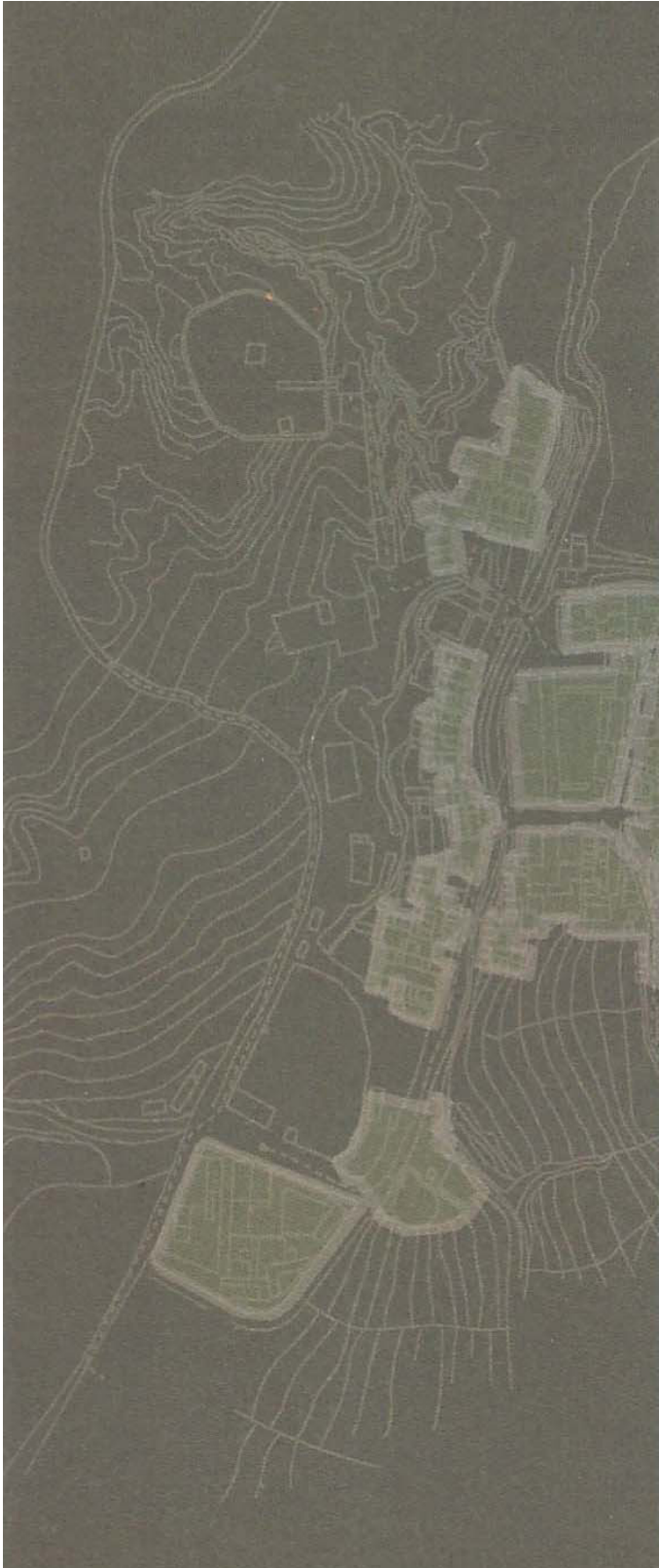


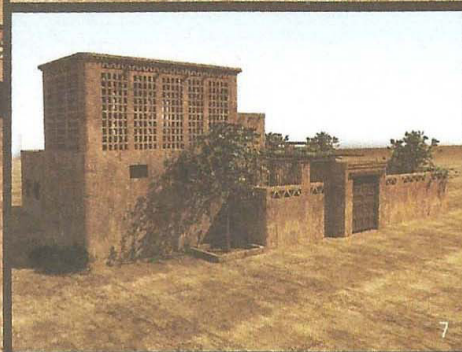
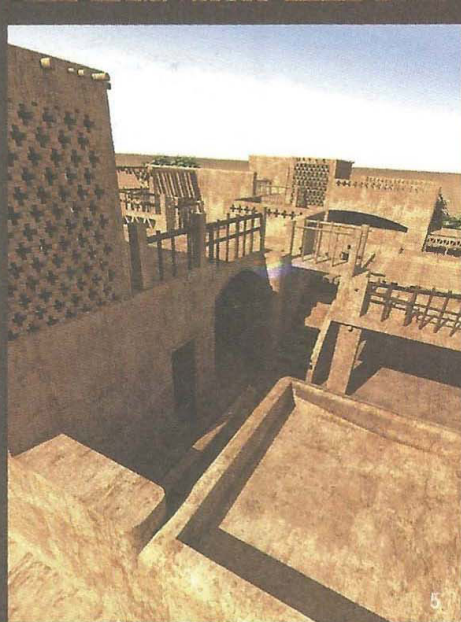
食驿坊仰视图
Food Station Bottom View



食驿坊效果图
Food Station Rendering

生土民居方案模型
Raw-earth House Scheme Model





生土民居 设计方案

Raw-earth House
Design Scheme

1. 民居方案-A
 2. 民居方案-A
 3. 民居方案-A
 4. 民居方案-A
 5. 民居方案-B
 6. 民居方案-C
 7. 民居方案-C
 8. 民居方案-D
- Scheme



Does the design retain vernacular forms and appearance? Yes, the original buildings' forms and appearance are retained. The new design for the food station and public spaces also respects vernacular forms.

Does the design retain vernacular materiality? Yes, the original buildings' materiality is retained. The new design for the food station and public spaces also uses vernacular materials.

Does the design retain vernacular domestic sensibilities and spatial arrangement? Yes, the original buildings' spatial arrangement and domestic functions are retained.

Does the design retain vernacular settlement patterns? Yes, the original settlement pattern of Mazaaleedi Village is retained. The new design for the food station and public spaces does not disrupt the pattern either.

Does the design show appreciation for the site's architectural traditions and customs? Yes, the architects documents the existing conditions of each household and proposes minimal interventions to preserve the original while repairing any damages. The new design for the food station and public spaces is not invasive.

Is there consultation with local residents? I assume so because the architects show the names of the house owners in their presentation.

5.1.5. Project 5

Project name: Green Architecture – Reviewing the History is Not Equal to Lagging Behind

Architect/planner: Undergraduate students

Time of project: 2007

Client: Design for graduation project

Location: Unknown

Type of project: New construction

Was the design realized? Unknown

Project Description: Translated from page 313 in book *Xinjiang Raw Earth Houses*:⁷

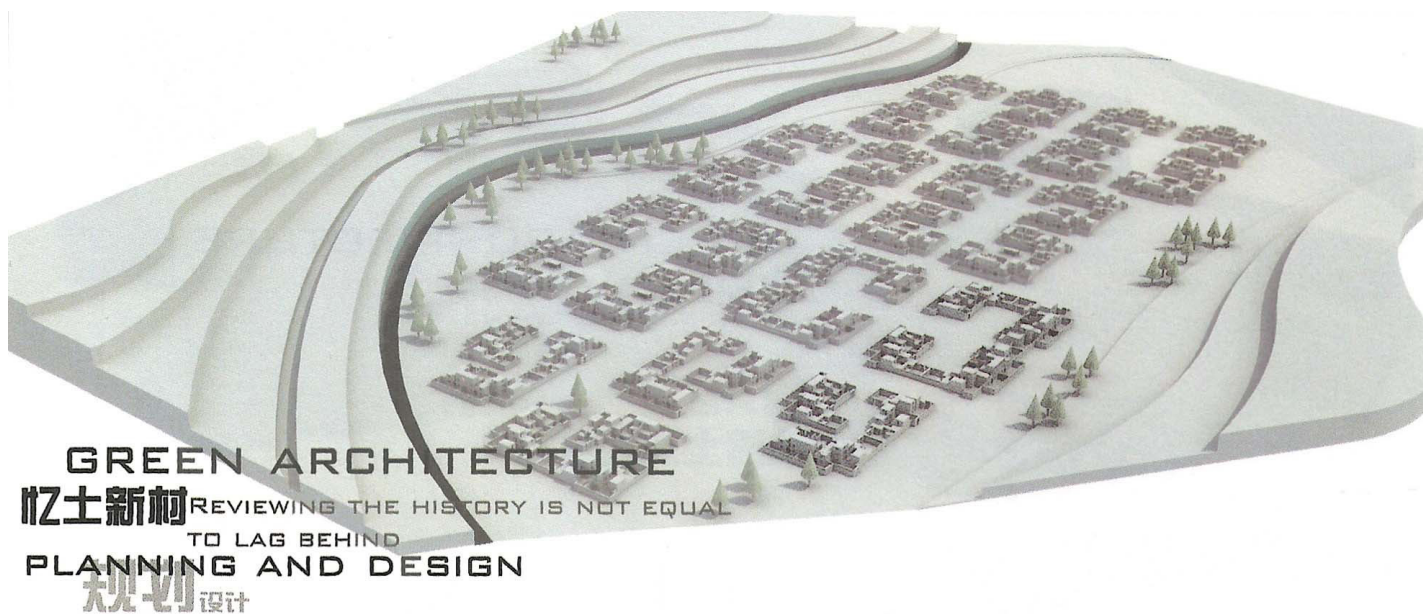
The basic group structure is 60m by 60m in size, and is divided into three types of units, divided into large, medium, and small to meet different household needs. The building areas of each household are 380 sqm, 400 sqm and 430 sqm respectively. At the beginning of the design, we considered the traditional customs of the Uyghur people and paid attention to the relationship between courtyards, so the design was based on group style. The design must be in line with the local middle- and low-income groups. Each group has its own shared space. Although it is inside the group, it is also an open landscape, whether it is residents returning from busy farming, interactions between neighbours or tourists entering. Visiting a village undoubtedly plays its role as a social space. Afterwards, people enter their own courtyards and fully enjoy their own piece of sky. To ensure privacy and safety, high walls are used as barriers between each household, ensuring the beauty of the building while ensuring safety.

The growth space should be considered from the beginning of the architectural design, and each household can build on the reserved land according to their needs. Each household does not interfere with each other, achieving harmony and unity of the entire environment.

Images: [Fig. 5-1-59~63](#)⁸ *Year of 2007 Undergraduate Graduation Project – Native Folk House Regeneration Design Works*.

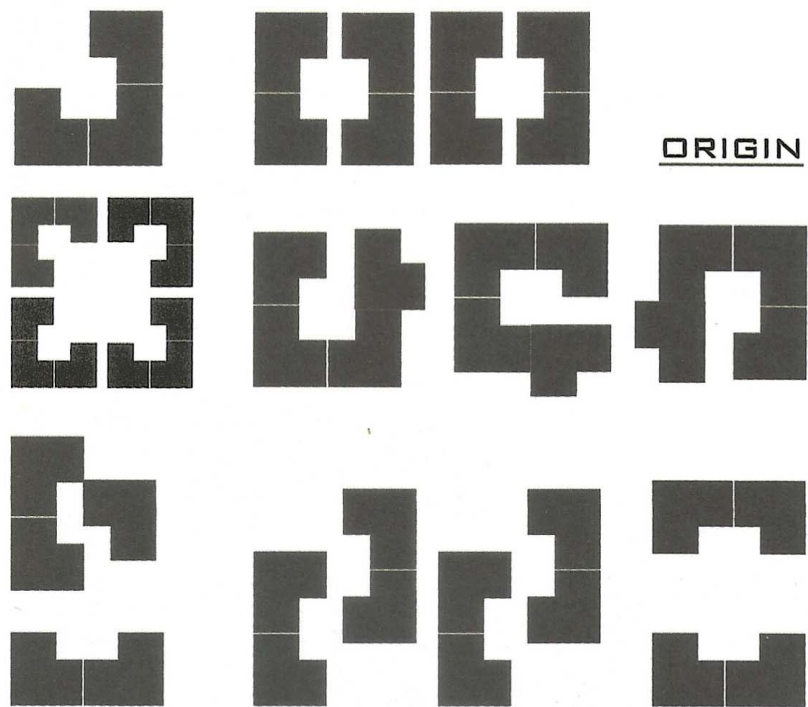
⁷ Ibid, 313.

⁸ Ibid, 313-317.



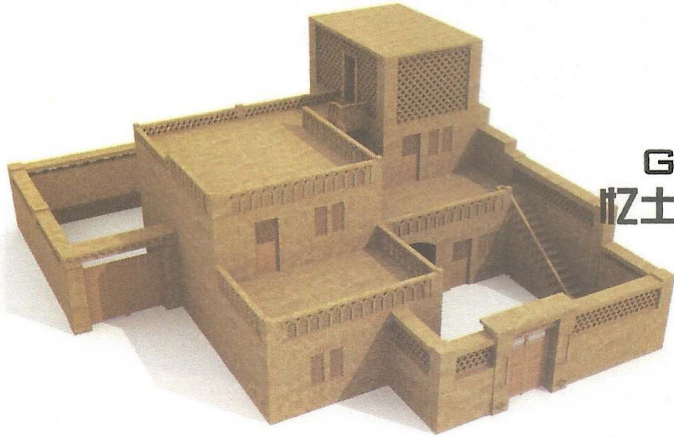
基本组团结构构成的规模为 $60\text{m} \times 60\text{m}$ ，总共分为三套户型以大中小区分，以满足不同的住户需求。每户建筑面积分别为 380m^2 、 400m^2 、 430m^2 。设计之初考虑维吾尔族传统习俗注重院落的关系，所以设计以组团式为首发。设计必须符合当地的中低收入人群，每个组团的都有自己的共享空间，这虽然是组团的内部，但也是开放的景观，无论是住户农忙归去、邻里之间的交流互动还是游客进入村落参观，无疑发挥出它的社会性空间作用。之后人们进入自己的庭院，完全享受自己的一片天空，为保证私密与安全性每户之间都以高墙为阻隔，在安全的前提下保证了建筑的美观。

成长空间的建筑设计之初就应当考虑，每户根据需求可在预留用地上进行加建。每户之间互不干涉，达到于整个大环境的和谐统一。

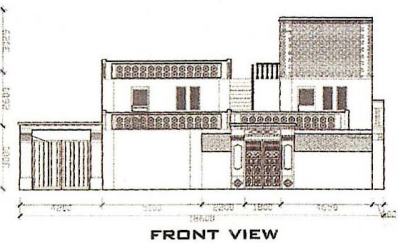
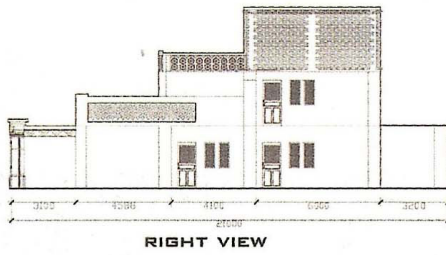


DESIGNSKETCH

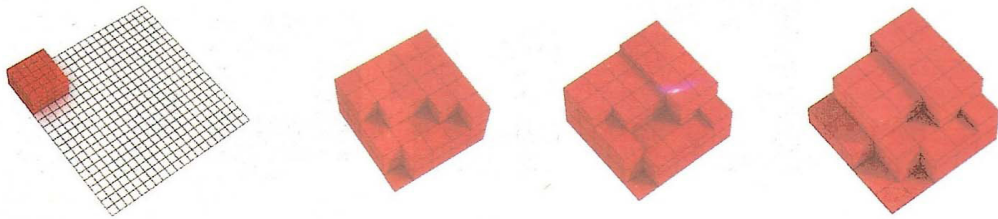




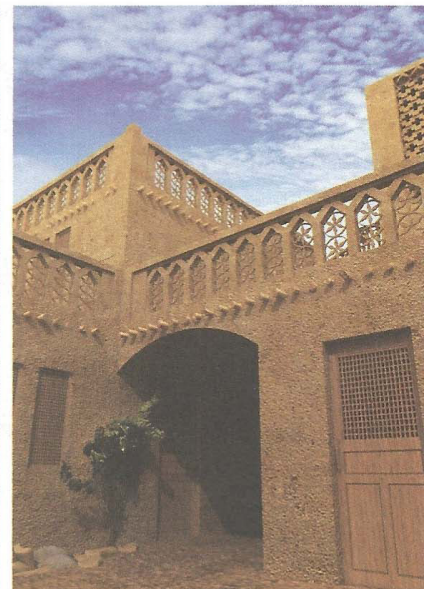
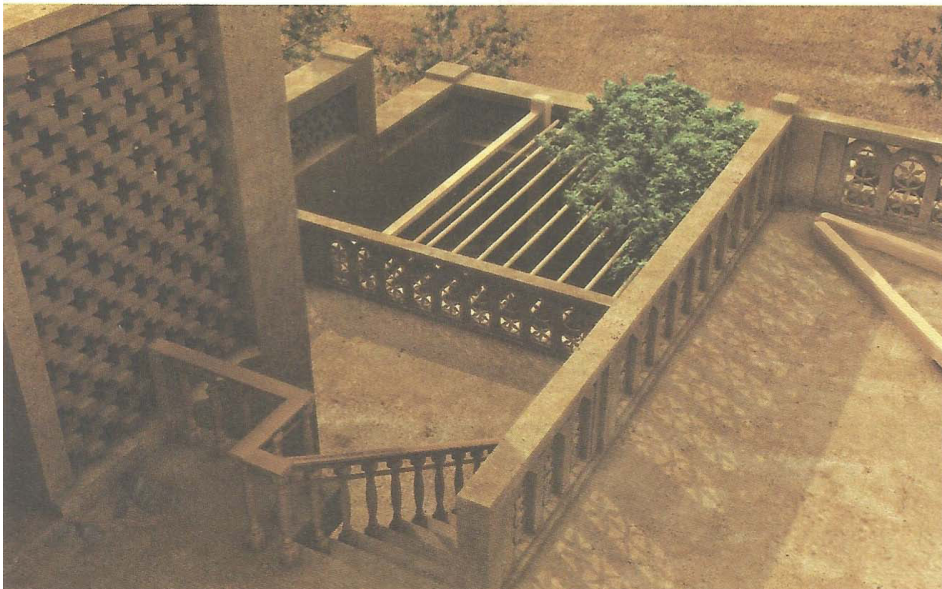
GREEN ARCHITECTURE
忆土新村 REVIEWING THE HISTORY IS NOT EQUAL
 TO LAG BEHIND

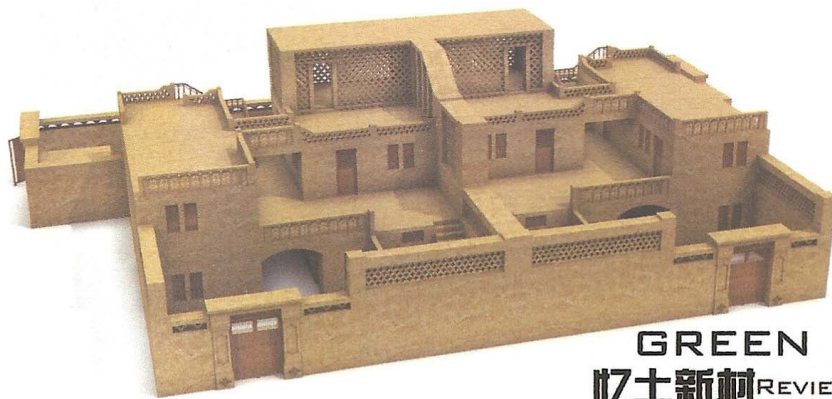


ORIGIN



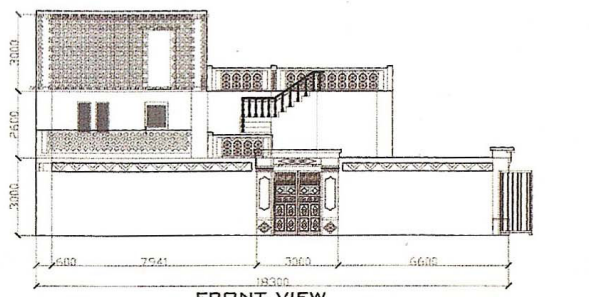
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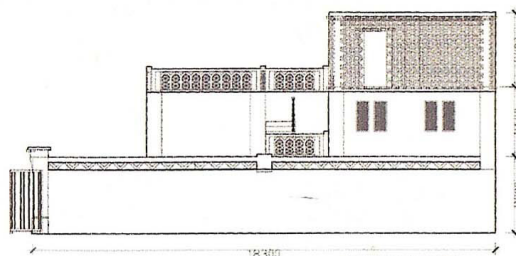


GREEN ARCHITECTURE

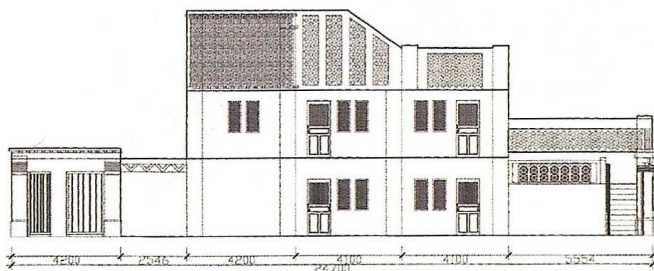
忆土新村 REVIEWING THE HISTORY IS NOT EQUAL TO LAG BEHIND



FRONT VIEW

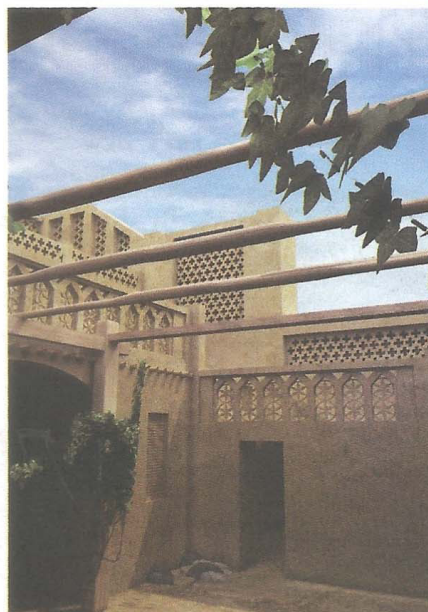
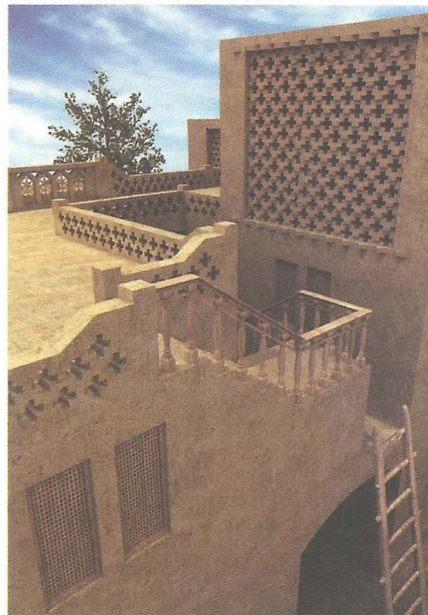


BACK VIEW

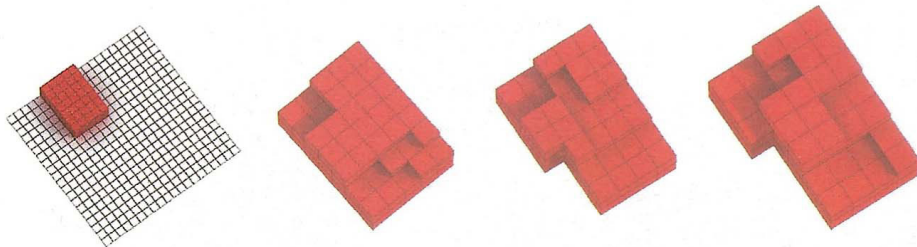


LEFT VIEW

DESIGNSKETCH

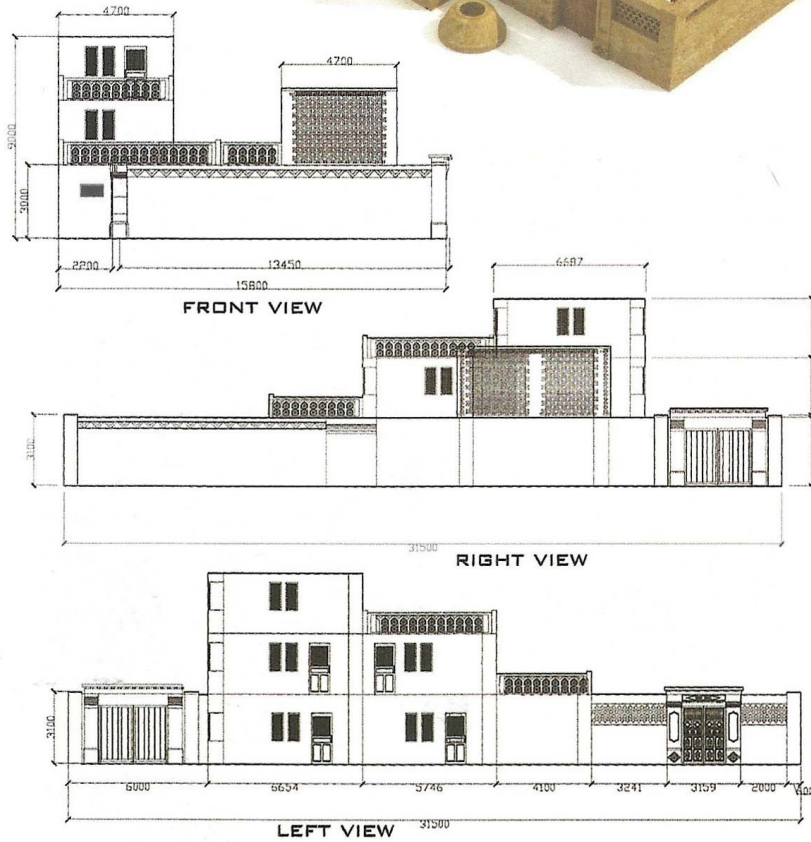
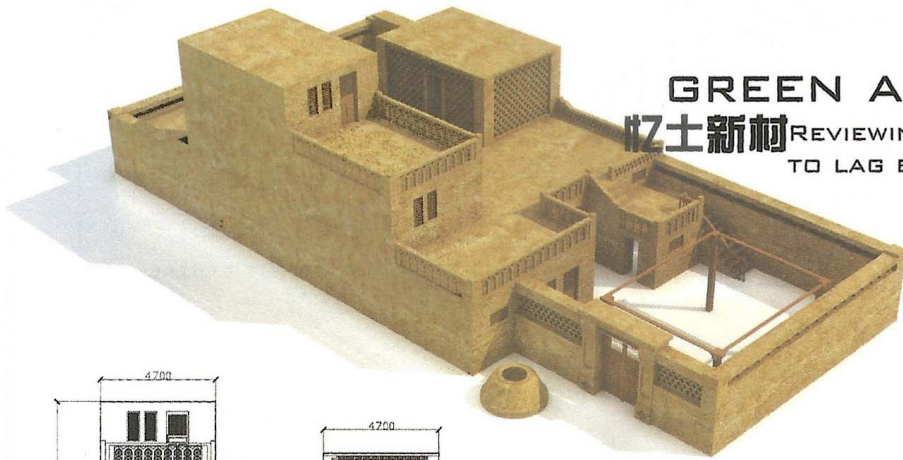


ORIGIN

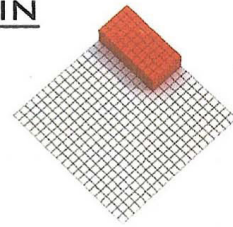


GREEN ARCHITECTURE

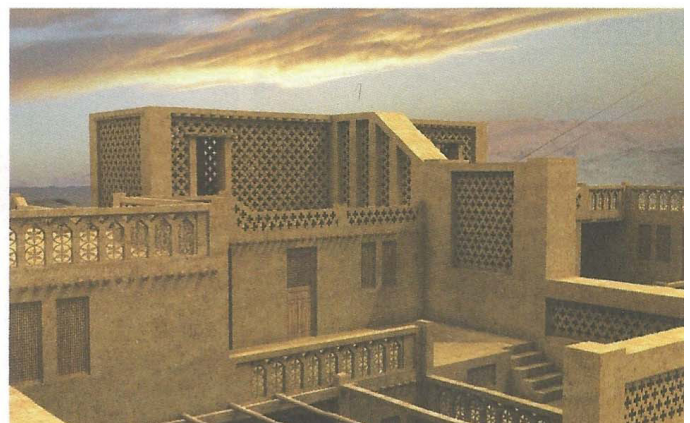
忆士新村 REVIEWING THE HISTORY IS NOT EQUAL TO LAG BEHIND



ORIGIN

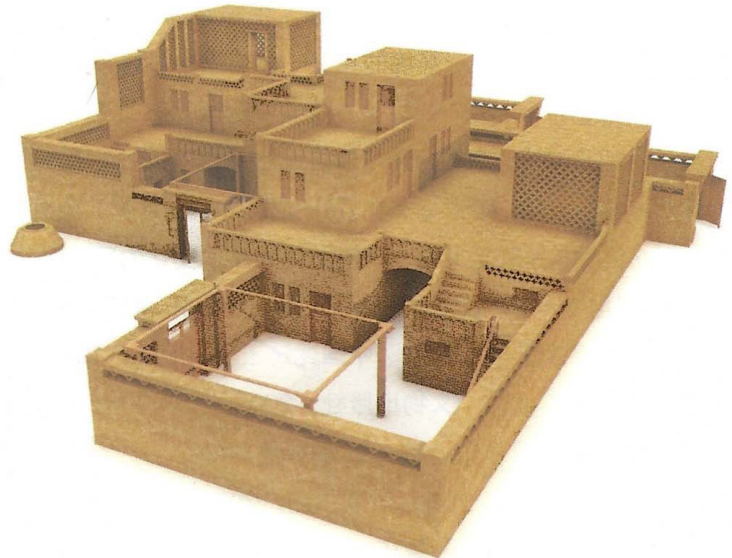
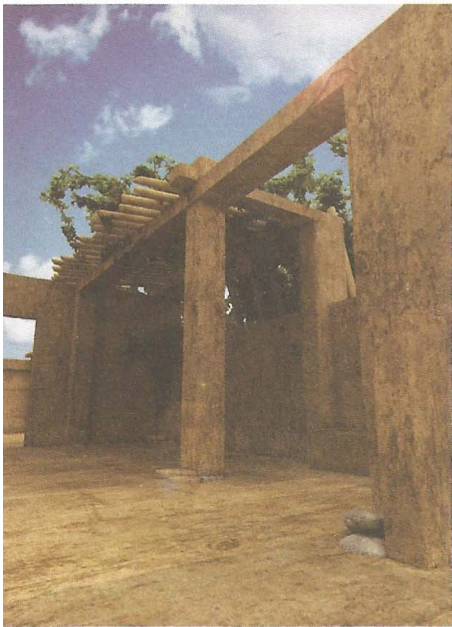
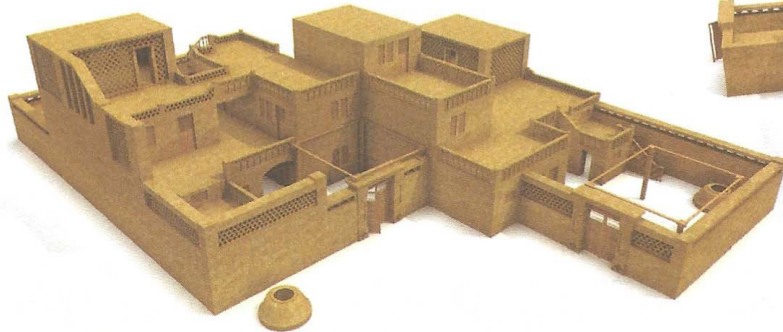


DESIGNSKETCH





GREEN ARCHITECTURE
忆土新村 REVIEWING THE HISTORY IS NOT EQUAL
TO LAG BEHIND
LANDSCAPE



Does the design retain vernacular forms and appearance? Yes, from flat roofs, sunken spaces, to arched doorways, perforated walls, and railings, it retains vernacular forms and appearance to a high degree.

Does the design retain vernacular materiality? From the graphics, it appears that raw-earth adobe materials are proposed for the design.

Does the design retain vernacular domestic sensibilities and spatial arrangement? Unknown from the lack of floor plans, but the presence of rooftop air-drying rooms, and the courtyard spatial layouts seems to follow vernacular examples.

Does the design retain vernacular settlement patterns? The gradual outward expansion of domestic spaces is commonly found in vernacular settlements. However, the [-shaped blocks form an orthogonally gridded village layout which is not a typical pattern Xinjiang's vernacular settlements.

Does the design show appreciation for the site's architectural traditions and customs? Site is unknown.

Is there consultation with local residents? Unknown.

5.2. Bigger Picture

The story of “Sinicization”, the process of Han Chinese colonization, in Xinjiang goes much further beyond indigenous vernacular architecture, and goes back further beyond the recent few decades that are examined in this thesis. In 1991, Jay Dautcher visited a Uyghur community at the periphery of the city of Yining in northern Xinjiang, and stayed with a local family for a period of time. In his recount in *Down a Narrow Road* published in 2009, he describes the gradual introduction of Han population and Han symbolism into the neighbourhood (“mehele” in Uyghur) of Zawut during his stay. Perhaps Dautcher’s non-native background invited the locals to express their anger and frustration at the transformations of their neighbourhood they were witnessing.

One feature common to Zawut and surrounding mehele was the gradual arrival of Han families into Uyghur neighbourhoods, as Yining’s Han population grew through in-migration. A large six-storey brick dormitory to house the Han workers at a new pharmaceutical factory was under construction on the northern edge of Zawut. “Great One-Hundred-Year Plan” proclaimed the banner that hung from the site’s construction crane tower, a none-too-subtle reminder to local residents that the Han in-migrants had come to stay.

Not every new project in the mehele was built to house the growing Han population, however. In a Uyghur mehele on the western edge of the city, Yining’s municipal government had constructed what it hoped would be a tourist attraction, a gated park containing a statue of Lin Zexu, a famous Han statesman who resided in the area in the nineteenth century after being exiled there by the Qing emperor. Soon after I first visited the site, I was invited to be guest at several nearby homes, where residents recalled angrily how the government took land from Uyghur homeowners to build the monument. This in itself can be seen as an unintended but fitting tribute to Lin, considering that he was put in charge of Han colonization efforts in the area in 1844. It is also ironic that a statue of Lin, a Han national hero remembered for standing up to the British during the Opium War, now looks out over communities of Uyghurs for whom heroin addiction is a major source of social problems, and who widely blame the Han for permitting the illicit trafficking of a drug they see as a genocidal poison.¹

Comparing this story to today, themes of Han in-migration, government land seizure, political slogan, ethnic conflicts, and colonization have remained largely unchanged since the 1990s. When Yining’s municipal government took land from locals to impose Lin Zexu – a Han national hero responsible for Han colonization in the region – on them, either through ignorant or deliberate action, the motion of “Sinicization” was already underway.

Along with the introduction of Han heroes into Xinjiang is the steady disappearance of Uyghur heroes. Throughout Xinjiang, veneration of saints has been performed in countless mosques, mausoleums and mazars (small shrines) for centuries. The pilgrimage to these shrines and holy sites are called “ziyarat” (literally means visits), and are recommended as a meritorious deed. During the ziyarat, local residents would adorn the shrine to pay respect for the saint buried

¹ Jay Dautcher, *Down a Narrow Road: Identity and Masculinity in a Uyghur Community in Xinjiang China*, Harvard East Asian Monographs 312. Cambridge, Mass: Harvard University Asia Center, 2009: 37.

there, thus continuing the living memory of their good services to their community members (Fig.5-2-1²). These shrines and the locals' continuous pilgrimage to them serve as an important part of their cultural identity.³ However, since the 1990s, many mazars in Xinjiang have been turned by Han private firms into tourist attractions; many mausoleums into museums, which have then been declared inaccessible to pilgrims. Furthermore, the emergence of tourist interest increases the rate of forced secularization, especially when these sites started requesting for an entrance fee

2 Lisa Ross. "Living Shrines (2002-2010)." Studio Lisa Ross. Accessed October 16, 2021. <https://www.studiolaross.com/projects/living-shrines-black-garden.php>. (Reference for painting).

3 Lisa Ross et al., eds., *Living Shrines of Uyghur China*, 1st ed. New York: The Monacelli Press, 2013: 13.



Fig.5-2-1 Painting by author, titled "Shrine", depicts a crib-like shrine typically found on pilgrimage routes or near the desert. This shrine in particular marks a burial site of a local saint, who performed miracles and provided healings and blessings to the local residents during their lifetime. Tree branches and colourful fabrics adorn the shrine, and are symbols of respect for the saint, and gratitude for the wondrous service they had done to their community members. There is a little door on the left side of the crib-like shrine, where visitors can open and place small gifts in memory of the saint. Shrines like this are maintained and venerated for many generations, and are material embodiments of their tradition and culture. Reference photograph by Lisa Ross.²

of 15 yuan which was unaffordable to the poorer locals, and started requiring every visitor to provide personal information – including full name, nationality, address, and occupation – in a registration book. The level of control and regulation around mazars was further reinforced after violent ethnic conflicts between Han and Uyghur in 2008, consequently repressing pilgrimages.⁴ The Uyghur culture of saint veneration has since declined significantly, leaving only remnants of any physical memory of these local heroes.

Rian Thum tells an interesting story in *The Sacred Routes of Uyghur History* about one particular mausoleum that has been repaired by the government, converted to a tourist attraction, and has had its cultural memories and narratives manipulated by the state. In Kashgar, a popular tourist destination is the family mausoleum – called “White Mountain shrine” by locals – founded by Afaq Khoja, a Uyghur nationalist hero. Today, the place is known – to the tourists – for the story of Xiang Fei, a Kashgarian woman who entered a Qing emperor’s court as a concubine in the 1760s. However Xiang Fei’s legend had no known connection to the mausoleum, nor was she buried here (she was buried in Beijing). Xiang Fei was used by the party as a symbol of “the unity of every ethnicity in China”.⁵

The fate of these mosques, mausoleums and mazars shows the prevalence of the Communist Party’s “Sinicization” efforts in Xinjiang. This process goes beyond Xinjiang’s vernacular houses and settlements; the state’s manipulation of built environments are throughout the province, creating an all encompassing atmosphere which consciously and subconsciously condition the local ethnicities to adopt the state-promoted way of living. “Sinicization” in Xinjiang has been a decades-long process of making Xinjiang more Chinese and bring it under stronger Chinese influence, by acculturating and assimilating local ethnic groups into the dominant Han culture. Locals are coerced by the Han Chinese to speak their language, practice their social norms, express their cultural identity, and share their ideological beliefs.

Additionally, it is important to point out that the Chinese government’s tactics of population control and resource management through architectural means are not only limited within Xinjiang. Instead, they are implemented throughout China, especially in rural areas with vernacular architecture. In *The End of The Village: Planning The Urbanization of Rural China*, Nick Smith studies one rural area – Hailong Village under the administration of Chongqing City (重庆海龙村) – that is undergoing rapid urbanization development under the national policy of “urban-rural coordination” (Fig.5-2-2⁶). Many local villagers were displaced as bulldozers demolished their homes to make room for new development.⁷ Facing strong local resistance, authorities described it as “greedy villagers placing their individual profit ahead of village-wide prosperity”.⁸ Villagers were also excluded from planning processes of Hailong Village’s transformations, as the villager representative committee was tightly controlled by the party secretary.⁹ Smith argues that the urbanization of Hailong Village that results in demolition of reconstruction of its rural landscape is an effort to extend processes of socio-spatial transformation to better serve the interests of authorities, planners

4 Ibid, 15.

5 Rian Richard Thum, *The Sacred Routes of Uyghur History*. Cambridge, Massachusetts: Harvard University Press, 2014: 230-236.

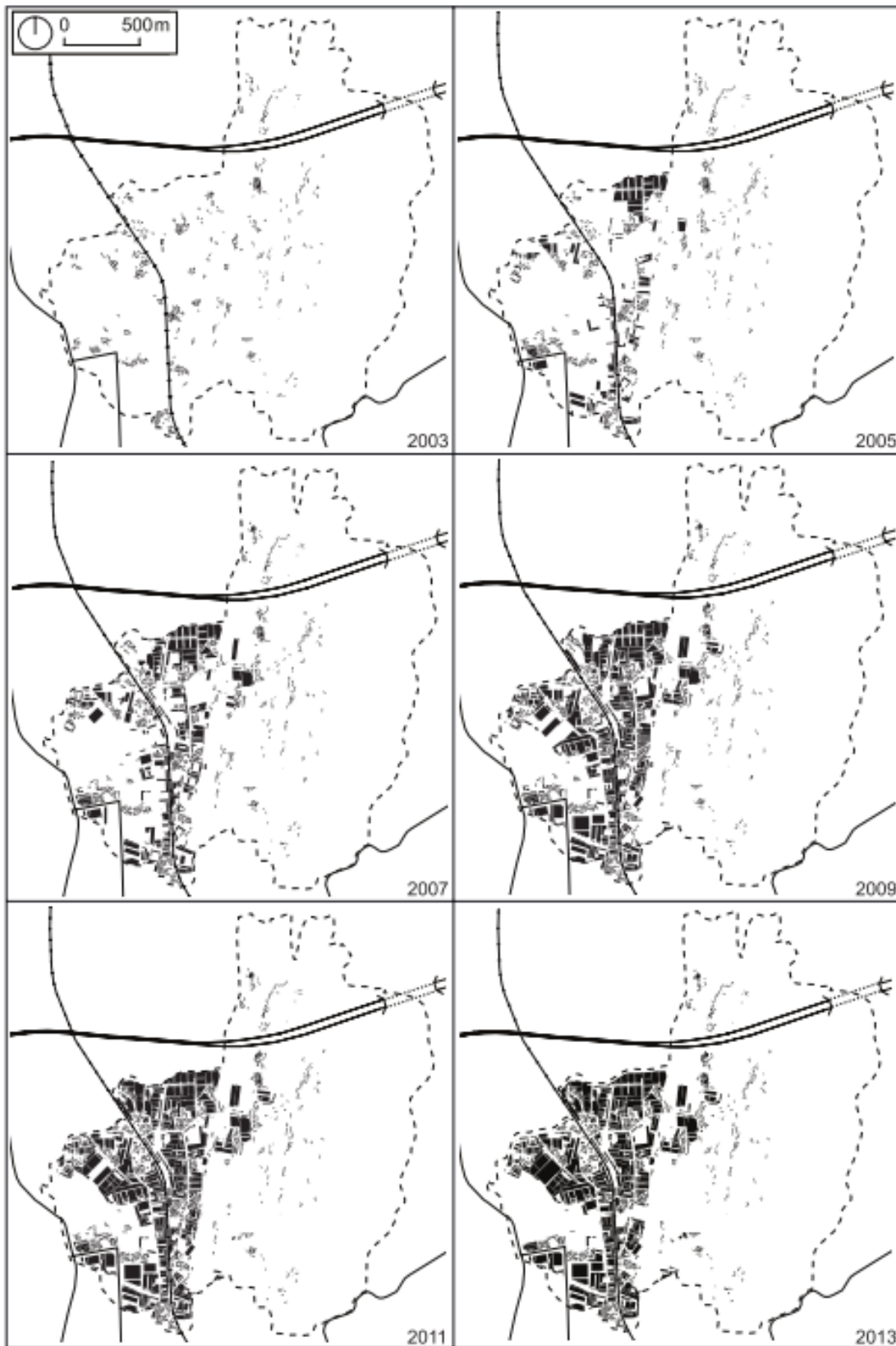
6 Nick R. Smith, *The End of The Village: Planning The Urbanization of Rural China*, Globalization and Community, volume 33. Minneapolis: University of Minnesota Press, 2021: 54.

7 Ibid, 197.

8 Ibid, 206.

9 Ibid, 212.

Fig.5-2-2 Village Transformation. This series of figure-ground drawings shows the rapid intensification of land use during the 2000s, as Hailong transformed from a sleepy agricultural backwater into a thriving industrial estate. The bulk of construction was concentrated in Hailong's flatter and more accessible west.⁶



and policy makers. It is also “a political process for accumulation, consolidation, redistribution, and contestation of resources and power”. The authorities’ goal is not only to “attract industrial, real estate, and financial capital into the administrative village”, but also to reinforce their “discretionary control over and reduce villagers’ claims on collective resources”.¹⁰ Under the central government policy, Hailong Village is certainly not an isolated case.

The stories of these voiceless citizens, both in Hailong Village and in Xinjiang, are part of the reason I want to write about my thesis topic. Throughout my research, some curious friends and some concerned family members, have asked me: why do I choose to write an entire thesis on Xinjiang when I was not born in Xinjiang or have no relatives in Xinjiang? Why do I still insist on writing about Xinjiang’s vernacular architecture when I am fully aware of the potential dangers on writing and publishing critical opinions on the Chinese government regarding a heavily politically sensitive topic? Stories about whistleblowers from Xinjiang who are “disappeared” by the government can be heard in many books and news reports. I have also contemplated on these “whys” for quite some time; and at the very end of my thesis, perhaps I can finally answer them.

Being raised both in China and in Canada, I have also been both fascinated and conflicted by the large discrepancy between Chinese narratives and western perspectives on China. Xinjiang, being the center of global attention in recent years, is also a topic of heated debate formulated between these two drastically different narratives. The shortage of English studies on the demolition and reconstruction of Xinjiang vernacular architecture evoked my interest to conduct an investigative research to find the truths amidst opposing Chinese and English sources. I have also been particularly interested in the China government’s methods of voice suppression and population control, which are reoccurring themes in my childhood experience in China. Architecture-empowered governance in Xinjiang, under the current political circumstance, thus became a topic of high passion for me. However most importantly, I want to tell a story in my thesis – the story of people, community, and culture through the story of their evolving architecture. I want to find hope in this depressing story of displacement and assimilation. I want to find potential answers to the questions of what the future holds for Xinjiang’s vernacular architecture, and what we, as architects, can and should do to ensure this future.

¹⁰ Ibid, 227.

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Appendix: Translation

This appendix is my translation of page 246 to 258 in the book Xinjiang Raw Earth Houses co-authored by Li Qun, An Da Zhen and Liang Mei – on its chapter 8 “Regenerative Design of Residential Ecological Buildings”.¹

CHAPTER 8 REGENERATIVE DESIGN OF RESIDENTIAL ECOLOGICAL BUILDINGS

The history of social development shows that people will focus on new buildings only in the historical period devoted for the developments of productive forces. Although adobe architecture is not a new type of architecture, it has its special advantages. If it is future-oriented, it can be widely recognized as an effective solution to ecological, resource and energy crises. It is generally believed that buildings made of mud are just simple shelters for ethnic groups of “backward” areas; and people tend to have a disapproving attitude towards ordinary folk houses, especially the vernacular buildings constructed of raw soil. This opinion represents people’s blind spot in understanding vernacular architecture. Architectural space is very cultural and is a derivative of human beings; and the need for creativity is a basic human need. In other words, the relationship between human and their living space is a kind of experimental and creative relationship. This relationship contains the rationality of nature, and is extended in two directions of the time series: one is the what Husserl called Phenomenological Reduction, which is to return to the original state and restore the original appearance of the original ecology; the other is to go to the future and obtain a new style via international exchanges. What matters is not whether we see raw earth architecture as an art form, crude or even primitive as it may be, but the fact that it still holds a special place in the system of architectural culture. With the introduction of contemporary high-tech building technology and new materials, it is still important to develop its good heat storage effect and its own structural stability potential in the process of the design of human settlements towards large-scale and high-rise developments. This is a subject worthy of high attention.

Section 1 The Significance and Sustainability of Regeneration

Factors affecting human comfort main come from changes in climate, such as temperature, humidity, radiation, airflow, etc. The form of residential buildings is the result of balancing these climatic factors. Following the principle of natural harmony, different climatic conditions (elements from natural environment such as geology, hydrology, wind direction, sunshine, rainfall, temperature and etc.) and construction resources prompt different construction methods. Modern organic constructors believe that buildings are just containers for adaptation to the climate. As a tradition of collective unconscious cultural accumulation, whether it is the prototype model of a house or that of a settlement, there will more or less, quantitative or qualitative changes in the actual construction process, that is the “deformation” of the prototype in terms of entity of space. Therefore, when grasping the prototype of historical traditional buildings, it is necessary to take the initiative to carry out a step-by-step transformative design. Looking forward to the development trend of architecture in the future, ecological technology will undoubtedly be an important direction. With the

¹ Li, Qun, Dazhen An, and Mei Liang. Xinjiang Raw Earth Houses. 1st ed. Beijing: Chinese Construction Industry Publishing, 2014, 246-258.

strengthening of human constraints on the low-carbon economy and the search for a sustainable living environment, the green ecological prospect of future living will inevitably make people refocus their attention to adobe architecture.

A. Living Difficulties Caused by Defects of Raw Earth Buildings

As early as the 1970s, many developed countries have begun to realize that adobe architecture has fundamental significance for human existence. Adobe architecture embodies the achievements of human civilization progress in a specific era; and also belongs to the future form of architecture. Scientists have pointed out that the most suitable temperature for human living is 18 to 22°C; and the relative humidity is within the range of 30% to 75%. And raw earth materials just meet this requirement. The cold and heat resistance of raw earth materials is very good; and its firmness and durability are also better than other building materials. The indoor thermal environment of raw earth wall is much more stable than that of the brick wall; and it is more effective in blocking outdoor heat in summer. Taking adobe brick as an example, its heat insulation performance is good, but its cost is only 1/15 of that of concrete brick and 1/3 of that of clay brick. Secondly, its casting process does not require forging or processing/machining, and has only extremely low material energy consumption. Tests have shown that raw soil and other construction technologies based on natural materials have the advantage of low cost, no pollution, low energy consumption, simple construction, and usage of local materials, and are thus ideal building material technologies when selecting ecological building technology. The recycling of building materials is a necessary condition for this life cycle process. Raw soil is not only a good building material, but also has the characteristics of flexible construction technology; and it can be recycled as farmland soil after dismantling, which will not pollute the environment and achieve the purpose of resource recycling. Its advantages of energy saving, material saving, and land saving may be overlooked by us in many cases. Therefore, adobe architecture is absolutely an ecological architecture. Of course, this ancient cultural tradition cannot only belong to history; after its benefits are known, it should be favoured. It is very necessary to design new types and endow new functions for the development of adobe architecture. At the same time, the process of transformation is not only a return to the original ecology, but also a technological choice under the new humanistic conditions. The raw earth building technology integrates solar energy technology, biogas technology, drinking water purification technology, household facility breeding technology, and water-saving planting technology, hence developing an ecological lifestyle suitable contemporary people's life.

B. Earthquake Resistance

Xinjiang is an earthquake-prone area; thus residents generally have high requirements for earthquake resistance in their houses. The overall structure of houses is related to the earthquake resistance and safety of buildings. Therefore, an important topic for the renovation of native houses is to overcome their inherent deficiencies and establish an effective defense mechanism. Various methods can be adopted in the design to improve the seismic performance; for example, the use of lap-joint transfer column structure to improve the bearing capacity of building and to reduce the loss of life and property caused by external forces to the building. The area around Tarim Basin is an earthquake-prone area; and the locals have adopted a wooden frame system to form a complete and scientific earthquake-resistant system. The actual application shows that the composite wall can absorb higher seismic

energy than the adobe wall. The traditional plain adobe wall is combined with and supported by wooden columns and beams to form a composite wall, which can meet the 9th-degree earthquake-resistant standard that requires the building to withstand strong earthquakes without cracking and collapsing. By using construction methods such as mortise joint (榫接), tenon joint (卯接), and binding (绑扎), the integrity and flexibility of the structure increases. Columns have diagonal and two-way support. Wooden vertical components are fixed with column foot tenon (柱脚榫), top tenon (套顶榫), bun tenon (馒头榫), through tenon (透榫), half-through tenon (半透榫), mullion railing tenon (直棂栏杆榫), etc.; while horizontal fixations use groove tenon (槽榫), through tenon, half-through tenon, etc., to strengthen the stability of the structure and the sturdiness of the wooden frame.

Due to adobe brick's low strength, poor seismic performance, and low construction quality, once an adobe building is hit by an earthquake, the damage is often beyond expectations. The post-earthquake survey results of a raw-earth building in Kashgar show that the load-bearing walls of raw-earth houses in the old urban area have building materials with low strength, poor structural integrity, lack of necessary earthquake resistance, and have difficulties meeting the corresponding seismic performance requirements. Therefore, it is necessary to focus on the special earthquake-proof renovation for the raw-earth buildings in the old city. The method of combining local wood with adobe walls to form wood-column-beam-adobe composite walls can be used to improve their seismic performance. Other improvements include: checking the anti-seismic effect of the joints between the roof joist (屋盖龙骨) and the wooden ring beam (木圈梁), and between the raw-earth wall and the wooden columns; observing the damage of each wall; checking the anti-collapse ability of the wall and the effect of reinforcement measures on improving the integrity of the roof; determining whether the original performance of Kashgar old house with the same reinforcement measures can meet the local 8th-degree earthquake-resistant standards, etc. In addition, according to many experiments, the model of gypsum plus adobe wall be used and is a suitable new structure for residential building in southern Xinjiang.

C. Prospects for The Development of Regional Living Environment

In accordance to Lao Tzu's principles of "Tao follows nature", the first problem we face in renovation and reconstruction is how to protect the original architectural ecological system. According to Wright's "organic architecture" concept, the occurrence and reconstruction of architecture itself is an inseparable organic whole, and human beings are also part of the ecology of nature, and cannot surpass the power of nature. Thus a good ecological environment established in adherence to our relationship with nature is crucial to future development. Perhaps it is necessary to consider the possible problems of demolition at the same time of construction. In fact, it is not difficult for us to find, in the scattering of raw-earth buildings, from the structure of individual buildings to the formation of communities, that, just like human bones and muscles, the growth and replacement cycle depends on the maintenance function of the external natural environment.

Due to the excellent original ecological style of adobe architecture, freeing from the shackles of bustling cities and returning to nature is a popular trend that modern people yearn for. In the context of contemporary residential life being increasingly affected by environmental pollution, if life and environment are to be organically linked, it is necessary to learn for the historical experience of the construction method of adobe. It also provides at least one paradigm to help us consider how to restore

the natural form of life and how to effectively use and allocate natural resources. Under the guidance of this technology-supported way of life, not only the dynamic balance between people is maintained, but also the relationship between people and the living environment is facing profound changes. Physiologists believe that light with different wavelengths can stimulate the nervous system of the brain; and with different intensity and structure, it can fit differently in external physical structure, physiological feeling structure and social emotional structure of human beings. For example, noise is a harmful factor in daily life; and because raw-earth absorbs sound better and does not produce echoes, living in a raw-earth house gives a particularly comfortable experience. Using these characteristics of adobe architecture, developers of residential projects should have good reasons to invest in this ancient and modern renovation project, and to adopt a more active approach to improve environmental quality, to save energy, and to control environmental noise pollution, taking this opportunity to promote new architectural space design concepts.

From agriculture, mechanization, informatization and digitization, the way humans live is constantly changing. Nicholas Negroponte, professor at the Massachusetts Institute of Technology, pointed out that computing is no longer only related to mathematics; it will determine our survival. The key to change is the relationship between people and places. Means of communication between people and places vary; and the value orientation of raw-earth architecture is firstly expressed as the interactive relationship between people and places. With the development of economy, it is necessary to carry out multi-level research, protection and development of native residential buildings: for example, how to improve the bearing capacity, integrity and earthquake resistance of walls, as well as the flexibility of the house's layout. There are many issues that should be paid attention to. Mixed brick and adobe walls have become the historical appearance of Uyghur residential buildings in Xinjiang. Nowadays, brick-concrete frame structures are mostly used; the roof is a wooden frame structure, which is tapered or herringbone, with vents and wrapped in iron sheets, in response to local climate that is rich in rain and snow. Judging from the situation in Puchang Village (蒲台镇), Qiketai Town (七克台乡) – the combination of courtyards and high sheds, the layout centered on winter bedrooms, indoor ceilings and chandeliers, self-built basements, shared walls with neighbours, livestock houses, and open-air sundry rooms – the rational layout and characteristics of the separation of living areas, toilets, and residential areas are more prominent, and the intention of design or planning is more obvious. However with the expansion of surplus labour, subtle changes have taken place in the composition of raw-earth residential buildings. It is not difficult to find from the situation of new housing in Tuyugou Mazha Village (吐峪沟麻扎村) that farmers who became rich first began to use a combination of brick and wood. People began to pay attention to the overall shape of the building, and used a large number of low tiled walls and high tiled hollowed walls. In some areas, even commemorative cultural landscapes can be found. Many of the relevant design schemes start from the local natural geographical environment and the characteristics of raw earth buildings. They combine space, structure, material, economy, environment and green technology and other elements, and take the original ecology, low cost and environmental protection as the main design ideas, using masonry construction methods and referring to residential patterns or spatial elements, to highlight the “raw-earth” characteristics of regional traditional buildings, and strive to highlight the buildings of yellow clay flat-roofed houses, high sheds, drying houses and adobe-walled courtyards, hence striving to restore their simple appearance on the outside and rich life they support on the inside. Although the residential houses built in Shanshan County (鄯善县), Qiketai Town (七克台乡) in the 1980s were of brick-and-wood structure, with aluminum alloy doors, floor bricks, ceramic tiles and other new

building materials, the courtyard walls were still made of adobe, mainly with rammed earth, preserving the original appearance of “raw-earth”. At the same time, the 3 raw-earth buildings or building groups – namely the village history museum, art station and the new village raw-earth demonstrative residential houses – are design targets and models. On the basis of fully maintaining the original ecological environment, rationally transforming infrastructure, digging deep into historical and folk resources and the basic model of regional vernacular residential buildings have certain practical significance for environmental protection and building a conservation-oriented society. In addition, when studying raw-earth architecture from the perspective of postmodernism, architects’ creations should pay attention to the original texture of the soil, be rooted in the fertile soil of regional culture, learn from history, emphasize public communication and locality, and pay attention to urban context, public participation, and public domain.

D. Urbanization Development

The centralization of housing for rural residents is inevitable for development; and with the intensification of urban pollution, returning to the countryside will soon become a trend. Vicky Richardson pointed out that any form of vernacular architecture can be built according to specific needs and adapted to values, economies and ways of life in the cultural context that gave rise to them. How to preserve the traditional culture and obtain the characteristics of the current time is always a topic worth studying. How to establish urban information belt at a faster speed and play the role of urban informatization is still a subject that we must face. Restoration of the original ecological environment is worthy of attention. The “Jurassic Century Park” planning project invested and constructed by Jurassic World Investment Company in Lufeng County (禄丰县), Yunnan Province (云南省) can be an example. The design of the ruins museum tries to restore the scene about 160 million years ago, simulating the moment before the death of dinosaurs and capturing the stunning scenes of their struggling and twisting in time. Its retrospect across a vast span of time is extraordinary. At the same time, restoration activities include the designer’s conception of historical drama, which requires a sense of authenticity in details.

If the reconstruction of adobe architecture is widely recognized, its restoration of history must be a theme worth pursuing. Consistent with this, industrialization will also be promoted accordingly. Under the circumstances, more attention should be paid to the design and planning of earth buildings, and to strive for the initiative or urban-rural population flow. However, the traditional adobe building community also has the prominent problem of scattered living in ethnic townships. Rural architecture is the main form of folk houses. The important issue is how to preserve traditional cultural values. While overcoming historical shortcomings, the planning and design of residents should also consider the rural residents’ occupations – such as general farmers, professional farmers, and individual industrial and commercial service workers, enterprise employees returning to their hometowns, etc. – so that we do not lose the style of the times, and also grasp the return of technology and fully reflect the characteristics of the times. Since scattered residents in ethnic townships instinctively reject foreign cultures and scatter residents belong to vulnerable groups, transformation is not easy. Architecture is a city in miniature, and a city is an enlarged building. In promoting the construction of a new socialist countryside, the future direction of the transformation of native dwellings is inseparable from the construction model of miniature towns. The traditional indigenous houses lack the concept of “street”, so it is necessary to make up for this deficiency, and make the private garden and the market situation complement each other as much as possible. Gestalt

psychologist Kurt Koffka believes that behaviours arise from the environment and are regulated by the behavioural environment. Basic behaviour requirements of people living buildings are mostly divided into necessary, spontaneous and social types, including sex life, sleeping habits, raising small animals, planting flowers and plants, resistance to bad weather, good sanitation, parking of vehicles, cooking, heating, insulation and other living habits; while the appearance of the building only confirms people's customs in clothing, eating habits, and dealing with people. Therefore, it is necessary to start with the large environment and carry out hierarchical contraction, so that the living environment and the living space can be skillfully integrated, and each household should try to be as close as possible to the unity of privacy and openness.

Due to the large temperature difference between day and night on the ground in the Turpan area, the average daily temperature difference in the summer is over 15°C, resulting in the frequent expansion and contraction of old building walls. Under the combined action of wind erosion and rain soaking, it is very easy to cause damage phenomena such as wall cracking, crack generation, and mud peeling off. In the case of high humidity, the surface layer of raw earth buildings melts under the action of water, and forms fragile flakes after drying, which will peel off in large areas when trampled, touched, or expanded with heat or contracted with cold. Therefore, when selecting a site, we should focus on places with higher terrain, away from areas that store water all year round or that may be flooded. The loss of certain architectural elements in renovations is inevitable. For example, the trapezoidal platform in the natural state cannot be preserved in construction and renovation, but by weakening the overall effect, reducing density and breaking whole into parts, artificialization can restore the natural state of the original native building, and distinguish the functions of courtyards, and hence let the mind fluctuate between returning to the old place and modern feeling, which can be looked forward to. Flexible disposal methods come from the pursuit of harmonious coexistence with nature. For example, the cultural elements of native houses such as grape trellises on the veranda, stairs, brick flowers and arched door openings are used. The appearance is simple and lively, and the interior is simple and elegant. While retaining the original style, it does not lose the modern atmosphere. Borrow the corridor code to solve the problem of ventilation, and strive to open the courtyard, so that the division of functional areas is clear and the layout is flexible. The wisdom of construction reverberates between experience and imagination, presenting a variety of forms following the laws of physical forces. The test for architects' creativity lies not only in the reference of technical standards, but also in their familiarity with the secrets of the original ecological native dwellings. On this basis, there is the so-called exploration of all possibilities.

F. Commercial Development

From the overall situation in Xinjiang, the formation of adobe architecture presents some common characteristics; and the public units of the building and the individual residences naturally form an internal unity. With the increasing development of transportation, the residence of immigrants is showing a trend of expansion. Adapting to the change of population increase in the reconstruction, solving the increasingly tense housing problem with cheap and high quality native houses, and creating new immigrant villages are also necessary measures to meet the needs of the times. To this end, first of all, we should adopt decentralized, agglomerated and changeable models to maintain the most vital factors of raw earth architecture. The plane and shape are irregular in composition, just like native biological forms; secondly, we should adopt courtyard design, forming an indistinct zone between external space and internal space. Traditional space elements such as flat roofs,

arcades, terraces, and cloisters can be used to set up gymnasiums, solariums, etc. to expand outdoor activities and increase business opportunities; and the improved management in the back garden can increase fun and create a paradise-like realm. For example, the native houses in Shanshan County (鄯善县) skillfully build new residences around big trees, which looks no less than Wright's "Flowing Water Villa". It is full of strong local cultural atmosphere and reflects distinct regional characteristics. For example, according to the planning concept of Shanshan County. It is divided into one center, one axis, two lines, and two areas: the comprehensive economic zone with the county as the core, and the 312 National Highway as the economic and open axis of the county, and the construction of two mineral resources, development zone, and the oil resources in the north and the mineral resources in the south designated as new mining areas. This planning concept emphasizes the premise of respecting nature and history, creating a new type of beautiful living environment, diluting nostalgia, and making homesickness more intense; forgetting the inspiration of modern industry, but calling for the arrival of a new era of industrialization, it is becoming the intended target of a new type of industrial, commercial and tourist city with comprehensive economic and social development. Although this process is full of ups and downs, and the time has been long and slow, it is still moving forward with an unyielding will.

It is worth noting that the commercial use of adobe buildings id s potential value; and the courtyard economy of poplars, elms, grape trellises, and mulberry trees has not yet been fully developed. Under the influence of the tide of commodity economy, many residents along the street began to brainstorm to develop the economic efficiency of private housing. For example, Ablizi Aihemaiti (阿布力孜·艾合买提)'s family in Mazaalei Village, Tuyugou (吐峪沟麻扎阿勒迪村) opened up a small supermarket and set up a miniature chain of telephone bars in a suite along the street, which became a commercial highlight of the whole village. Locate the meeting point between commercial development and religion may be important. In fact, Islam does not exclude merchants. Merchants and businessman can use their economic resources to support religious causes; so they enjoy a special status in society, while ritual content is placed in the community. As a meeting place, mosques perform part of the social supervisory duties and mediate disputes and partial conflicts among neighbours. Mosques are composed of respected religious figures, reasonably regulate the behaviour of community citizens, and maintain necessary social order.

Judging from the current international housing renewal cycle, it is generally about 50 years, and this cycle is likely to be shortened. In the past, it is outdated to think that housing renovation only lies in old renovations. The main reason for people to build new houses is to expand the living area and enjoy bathrooms, electronic transmission equipment, energy utilization equipment (gas stoves, solar stoves, water stoves) and modern appliances during reconstruction. Kitchenware and the benefits of new decoration materials. Therefore, taking advantage of the opportunity of renovating the second-hand housing market can increase the relevant added value of the business. How the street transforms from a traffic scene to a street market, that is, how to construct an urban scene that combines games, sports, socializing, cooking and dining. Some special types of buildings, such as nursing homes, hotels, and cultural centers, can be planned in the form of adobe buildings. In addition, as far as the significance of building renewal is concerned, commercial advertisements can increase its added value. Although traditional residential buildings do not have any attached information signs, iconic attached information is always indispensable for new commercial buildings. The collage feature of advertisements is also influencing the tradition of native architecture, adding vitality of ancient buildings and forming vibrant native villages.

F. Development of Tourism Resources

The transformation of raw earth buildings contains rich cultural connotations. Using the advantages of relatively complete preservation and original ecology of ancient dwellings, the design and construction of guild-style buildings can be used as a supplementary means of economic development under a new historical condition, and enter the track of a virtuous economic cycle. Old buildings are the carriers of historical information, and when conditions permit, restoring native dwellings with preservation value is also one of the important contents of cultural construction. We can try to make full use of the original ecological characteristics of Mazha Village in Tuyugou Township (吐峪沟乡麻扎村), and take the ancient natural native dwellings and long-standing multi-historical and cultural relics as the theme to fully display its native dwelling culture, canyon natural landscape culture, fold culture, etc. to create a harmonious cultural village where ancient civilization and modern life blend, and become a new landmark of tourism culture in Turpan. If through the arrangement and display of the historical and cultural texts, pictures, and physical materials of Mazha Village in Tuyugou Township, on the basis of fully respecting the original village layout and architectural forms, the protective development of its original architectural heritage will be fully realized. Five full play to its unique natural and cultural landscape, attract tourists and artists to come here for sightseeing and artistic creation, and build a “post station” and corresponding catering facilities in the open space in the south of Mazha Village, so as to attract foreign tourists and drive development of the local tourism economy.

The development of tourism economy focuses on the local characteristic economy, which is a feasible way that has been proved by practice. From the perspective of developing cultural soft power in the future, sightseeing and tourism around adobe architectural complexes is a potentially valuable project. The adobe architecture has been endowed with a new mission, re-recognized by people by restoring the ancient appearance, and used as a new form of advertising to promote local specialties. Chiting (赤亭) is located at the southern end of Nanhu Village, Shanshan County (鄯善县南湖村). It was the only place to pass through when entering the Western Regions in the Han Dynasty, and the east gate of Xizhou (西州) in the Tang Dynasty. Its adobe architectural art is comparable to the ancient cities of Jiaohe (交河) and Gaochang (高昌). Kumtag (库木塔格) Desert Park is the only desert in the world that is attached to the city. It is known as the “Desert in the City”. Rich cultural resources developed. In addition, Liuzhong City (柳中市) is located in Lukeqin Town (鲁克沁镇), which is a famous ancient city with a history of more than two thousand years. Liuzhong City has been famous for its willow scenery since ancient times, so that it is called “Green Willow City”. High mountains, rich spatial layers, good for viewing and picturing, all belong to projects with development value. Turpan grapes have long been famous at home and abroad, and the grape industry has always been a representative of local culture. The grape trellis can not only keep shade from the sun, but also provide abundant fresh grapes and raisins for the market. In expanding the grape planting industry, due to the grape airing house built with soil blocks, every 100 cubic meter of room volume can dry 5 – 5.5 tons of raisins, so the future development of the courtyard economy has a good room for development. If air-drying houses are included in tourism projects and combined with native dwellings, it will not only enhance the popularity of the courtyard economy, but also promote the industrialization of air-drying houses to obtain good economic benefits.

According to Edward Soja’s theory of Thirdspace, people’s daily life is mainly distributed in three living spaces, namely the first space (living space), the second place (working space), and the third space (shopping and leisure places). To

improve people's quality of life, it is necessary to consider the three living spaces simultaneously, and the improvement of the quality of life is often manifested in the reduction of the stay time in the first and second living spaces, and the increase of the activity time in the third living space. Therefore, we must improve the quality of the third living space as the key point of people's quality of life. The strategic planning of modern commercial formats is precisely reflected in how to carefully position and plan the third living space. The planning of adobe buildings is no exception. Combined with the functional requirements of the development of modern tourism, the street design should start from the overall planning, and the number of retail stores should be determined according to the increase of population. Enough trees should be planted at the parking station, and the parking facilities should not occupy the front of the street as much as possible. The layout for the surface parking lot should focus on the needs of the next ten years or even longer. At the same time, the improvement of roads, residential repairs and water source facilities should be integrated into the development of tourism resources, so that the two can benefit from each other and prosper together, so as to accelerate the local economic development. The increase in wealth will inevitably promote people's exploration of ancient culture. This nostalgic interest in ancient culture is reflected in the excavation of the history and culture of ancient villages, the protection and maintenance of ancient dwellings, and the interactive field for displaying residential dwelling life, creating opportunities for the tourism industry. It is helpful to make the famous cultural village truly become a natural, harmonious and beautiful tourism and cultural sanctuary. The special climate, geology and historical conditions of the basin in which Turpan is located have profoundly affected its overall layout and the richness of architectural art, forming a highly free tribal style of dwellings with individuality and flexibility. From a phenomenological point of view, the entity may undergo a fundamental change here. It is no longer the physical world itself, but the perceived object itself. These natural and organic external space forms are not only beautiful, but also full of humanistic content. The new design can give full play to the vital elements and reflect the unique ethnic customs of the local Uyghur dwellings in social life. The residential buildings in Turpan area can be described as a model of fully utilizing natural soil resources. They are low-cost, low-energy, and low-pollution ecological buildings. Based on the soil, taken from nature and integrated into nature, its vitality will definitely be longer.

G. Protective Development of Traditional Cultural Heritage

"Early Notes on the Protection of Earthen Sites" mentioned: Experience the images we are familiar with, at least adding the experience of past history, and the site of earthen buildings just provides us with the opportunity to re-understand its value, and experimental content when being reconstructed; and what is meaningful is the newly recognized content. The planning and reconstruction plan of the new rural native dwelling demonstration area: including water canals (canal restoration, new water intake stations, vegetation), road reconstruction (red brick laying, garbage bins, beautification of telephone poles, street lights, broadcasting, wooden seats), residential repairs (village instruction system, façade along the street, such as residual walls, doors, windows etc., establishment of public toilets), and a new folk culture square including traditional culture showrooms (restored pictures of Thousand Buddha Caves and ancient dwellings, murals, replicas of cultural relics, furnishings, door decorative cylinder, floral windowed gallery), village history museum (grotto restoration model, legends, famous visitors), settlement viewing platform (viewing mosques, viewing Mazars, settlements, vineyards, for painters, photographers, film and television shooting, student sketches), small tourist landscapes (Dinggu Temple

Scenic Canyon Observation Deck, Thousand Buddha Cave Scenic Circle Tour Plank Road, Village Plan Schematic, Viewpoint, Dinggukou (定谷口), Laocunkou (老村口, entrance to the old village), Mazhakou (麻扎口, entrance to Mazar), etc. The research on the architectural forms of the native dwellings in Xinjiang, restoring ecological buildings from the perspective of architecture and enriching the content of contemporary buildings, not only has special significance for the development of new ecological residential buildings, the improvement of living environment and quality in Xinjiang, and the creation of unique cultural resources. Significantly, the process of regenerative design also means recording and preserving the experience of original science and technology.

H. Energy System for Sustainable Development and Utilization

In the 1970s, war in the Middle East caused a worldwide energy crisis. A large number of researches and experiments were carried out on earth-covered buildings, represented by Bagues and British architect Kunmubi (pinyin of 坤木比, English spelling unknown). In addition, American architect Millie Amberts emphasized the ecological advantages of covering soil, and did a lot of design experiments on residential public facilities. As far as architectural technology strategies are concerned, a misunderstanding currently exists is the so-called high-tech tendency to pursue technology and materials. This will inevitably lead to a substantial increase in construction costs, but lacks certain regional adaptability and sustainability. American architect Christ Abel proposed that the future ecological architecture “beyond the existing buildings corresponding to the climate, trying to form a complete process of life cycle in accordance with the ecological principle of win-win between architectural use and the environment – from the initial application of the concept of a flexible production system, to the ultimate recycling of building materials

Under the background of the global energy crisis and the deterioration of the ecological environment, after nearly half a century of research and practice, foreign architectural circles generally regard the biological building community as an organic whole of life, which contains a wealth of organic architectural design concepts, that can be used as a reference for modern architecture. It emphasizes transforming the existing technical system into a technical form that pays more attention to environmental protection and can be selected more flexibly according to actual conditions. The first option is naturally to conform to the terrain as much as possible, avoiding the excessive excavation and destruction of the original site. Under the premise of ensuring durability, it is recommended to choose an appropriate technical route based on local social, economic, resource and other conditions and local traditional building technology, and use local renewable and degradable natural materials as much as possible, to avoid high energy consumption and the use of high pollution materials; by exploring, utilizing and improving local traditional construction techniques and using local materials, the construction cost of the project can be minimized to reach an acceptable level for local residents, and achieve the maximum ecologically sustainable performance with minimum cost. In order to make up for the poor water resistance and mold resistance of raw soil materials, natural rubble materials are used to build the wall foundation, which can effectively dehumidify and damp-proof. The inner and outer walls should be built in layers and staggered at the same time. The four corners of the outer wall and the joints of the inner and outer walls should be joined with materials, and a small amount of quicklime should be added to the wheat straw mud on the wall, which can greatly reduce the erosion of rainwater. Using modern insulation materials such as hollow glass windows and solar panels for transformation and treatment can achieve the purpose of energy saving.

At the same time, there are huge hidden dangers in the safety structure of the house, the lack of complete specifications for the construction of supporting spaces, the layout of facilities is full of randomness, the connection of drinking water, dry toilets, livestock pens, sun drying rooms and bedrooms is mostly in a state of disorder, and the microcirculation pollution caused by the environmental layout is serious, and is very detrimental to health, and relevant measures should be strengthened in the transformation. On the premise of respecting local cultural traditions, it is also a reasonable choice to gradually implement standardized construction, such as the net height of residential buildings should not exceed 3m, and the net height of bungalows should not exceed 3.3m. In addition, it is necessary to make overall plans to combine new construction with renovation, and make good use of the old houses left over after relocation for renovation, which can effectively gradually solve the problem of "hollow areas". Just as there is no similar face in the world, based on the needs of the internal and external space development, its composition is ever-changing, and the meaning conveyed by architectural language is also clear and fuzzy. The coming ecological era will re-emphasize nature, no longer regard lifestyle as more important than natural resources, but regard resources as intimate and indispensable friends of human beings. In this sense, green-themed residential renovation will present a diversified pattern, and adobe buildings will be better developed in areas with sufficient wind energy and solar radiation.

Environment and development are the themes of the 21st century. The transformation of adobe buildings involves the protection of the ecological environment and the rational development and utilization of resources. How to continue to improve the efficiency of land use and maintain the traditional functions of adobe buildings must pay attention to the transformation of adobe dwellings. Regrettably, for the old adobe building complexes, the vast majority of areas still lack management and maintenance, lost to research and protection, lost to the discovery and utilization of its value, and they are still in a state of self-destruction. Of course, compared with modern building materials, traditional raw earth materials also have obvious shortcomings, such as small choice of colour, low strength, poor seismic performance, weak structural performance, easy to collapse, easy to damage, etc. The unfavourable aspects further limit the optimal application of raw soil materials. Therefore, it is necessary to use modern building materials to make up for the use of raw soil materials in future buildings, so as to better utilize the potential advantages of raw soil buildings. Through transformative design, earth buildings can be effectively used to save energy, save land, reduce carbon emissions and reduce pollution, so as to benefit the ecological balance. On the basis of the original building protection, we strive to introduce contemporary residential design concepts to traditional forms and living spaces creating a brand new build model with quality in mind.

1. Low Carbon

Energy conservation experts from the World Bank once proposed ways to reduce carbon emissions, thinking that energy-saving buildings must adopt high technology and high prices, which may lead us astray. Focusing on the transformation of native buildings, it can be predicted that there is a huge complementarity between rural and urban buildings. On the contrary, original ecological architecture may provide us with a new way to solve practical difficulties. The traditional heating method of the Uyghurs is to use fireplaces, fire walls, heated kang, and use firewood and crop stalks as fuel for heating. After long-term efforts, great changes have taken place in the structure of household fuels. Coal is used instead of firewood, and fire walls are used for heating. The air in the rooms is better and the pollution is lighter. With the development of oil and gas fields in the Tarim Basin and the establishment of Zepu Oil Base in the

southern Xinjiang, a considerable number of Uyghur residents use gas for cooking. If it is operated with the help of natural gas pipeline equipment, it will directly reduce the carbon emissions of the adobe buildings, thus benefiting the surrounding aboriginal residents. The actual situation shows that the biggest problem facing modern urban life is the thermal insulation of the enclosure wall structure. According to statistics, the existing enclosure structure walls in Urumqi lost most of the heat during use. In order to enhance the thermal insulation performance, the combination of raw soil and modern building materials can be regarded as a reference method. According to the requirement of building energy saving of 65%, coupled with a long winter in this region, there should be a lot of room for development in the use of raw-soil building materials for energy saving.

Foreign architectural circles regard the adobe building community as an organic whole of life, and believe that the adobe wall structure building has an irreplaceable environmental ecological advantage, and its building physical performance is excellent, which is a kind of green building. The use of raw earth building materials combined with arch structures and dome structures can also achieve the effectiveness of stabilizing structures, which will significantly reduce our dependence on wood. Especially sandy soil, due to the low cohesive force and the poor waterproof performance of the raw soil, if it is often in a wet state, it will collapse on its own. At the same time, the deterioration of the soil structure is accelerated due to wind erosion, sand-laden airflow and freeze-thaw cycles. How to maximize the strengths and avoid weaknesses, improve the physical properties of soil materials, enhance the agglomeration performance of soil clay and gravel, and reduce the heat loss of building envelopes in winter, is to maximize the use of natural energy such as solar energy and wind energy. At the same time, the corresponding vegetation is added to enhance the tensile and compressive properties of the adobe, so that the decorative materials are gradually updated, and the modern materials such as aluminum alloys and ceramic tiles gradually replace raw soil and wood. At the same time, vertical and horizontal restraint members are set in the adobe wall to enhance the compressive bearing capacity and deformation capacity of the wall, enhance the seismic structure, and ensure sufficient strength. Today, the traditional dwellings in the Hotan area still largely preserve the architectural features of the ancient dwellings in Niya. Of course, it also has shortcomings such as small bay span, limited layout, insufficient sunlight, poor ventilation and humidity, etc., which need to be improved in the gradual improvement.

2. Water-Saving

Water is the source of life in the arid areas of Xinjiang. In the past, the villagers used the river water flowing through the canyon for their daily life and agriculture. Therefore, the industrious and wise villagers diverted the river water from the upstream to the front and back of the houses on the downstream hillside according to the terrain for easy access to water. Although the villagers have access to tap water, they still cannot supply water normally. The original water system is still the main source of water for the villagers. The three water systems are also the lifeblood of the prosperity and continuation of the ancient villages in the past, and they are the prerequisites for the vitality of the ancient villages. Therefore, the transformation and utilization of the water system is an effective way to rejuvenate ancient villages. In addition, the sanitation environment is relatively outdated, the roadways are dusty, and there is no scientific public toilet. When using groundwater resources for renovation, it is necessary to take into account many possibilities, such as overall planning in the design of bathing, bathroom, and kitchen, which has important reference value for the renovation and utilization of adobe buildings. The snowmelt water on the Tianshan

Mountains and the groundwater in the Karez Well, these non-polluted resources, if they can be used rationally, they can be beneficial to the local region.

3. *Energy-Saving*

Xinjiang has unique solar and wind energy resources. The annual sunshine hours are 2800 – 3300 hours, ranking second in the country. The total wind energy resource storage is 189.1 million kW, which can generate 819 billion kWh per year, equivalent to 34.398 million tons of standard coal. In Xinjiang, we should vigorously promote the use of solar collectors, solar cookers, solar water heaters and solar houses to provide clean and inexhaustible energy for buildings. The biggest advantage of the raw earth wall is that after absorbing the solar energy, it does not store it in the wall and then radiate it, but converts the solar energy into chemical energy, so as to make full and skillful use of the two heat sources inside and outside. The building structure promotes the conversion of solar energy movement from passive to active, and realizes the rationality of heat exchange. According to estimates, each household installs a solar cooker, which can be used for 200 days a year, saving about 900kg of coal; each household has a solar water heater, which can be used normally for 6 months a year, solving domestic hot water and bathing problems. In Xinjiang in 2006, 62.5% of the rural housing users mainly used firewood as the traditional cooking fuel, which was 2.6 percentage points higher than that of the whole country. Coal gas, natural gas, biogas, solar energy and other new fuels and clean energy are adopted by few households; and the utilization rate is low.

How to use local light resources to organically combine sufficient light energy with native buildings, convert them into electricity, heat and other resources in a timely manner, and endow new interior buildings with traditional cultural content? For example, carefully consider the area and orientation of windows, and install natural light introduction devices such as reflective panels or light pipes. The interior decoration of the building can adopt light colours and increase the secondary reflected light. Through these means, sufficient indoor light can be obtained and uniformity can be achieved, thereby reducing artificial illumination during the day and saving light consumption.

There are many ideas and technical factors consistent with the green building system in the traditional native houses, which have achieved the purpose of energy saving and environmental protection in the original state. Due to Turpan's special geographical climate, the value of energy generated has unlimited potential. For example, here is drought, little rain, and strong wind and sand, so the roofs of residential houses are often made of grass and mud slopes. If grass is planted on the roof, it will have multiple effects. On the one hand, turfs can, through photosynthesis, prevent the exposure of the roof to the scorching sun in the summer, serving the purpose of heat insulation; on the other hand, the thick grass mat plays a certain role in heat preservation for the residential buildings in winter; moreover, the green turf can also beautify the roof and improve the microcirculation climate of the residential buildings. In addition, such as the use of solar energy, the annual sunshine is more than 3000 hours, which has been fully reflected in the planar structure of raw earth buildings. The use of wind power generation is also a major feature of this region. The monsoons are not only abundant, but also strong. On average, 36 days a year, there are eight strong winds. In order to make full use of renewable energy, we can also imitate the four-in-one biogas ecological agriculture model that combines plastic greenhouses, biogas digesters, and poultry house toilets popularized in northern China. Using biogas as a link, we can further improve rural areas in the transformation of raw soil buildings' sanitation environment, and develop green breeding and green planting industries.

When the native houses are demolished after being used for many years, the wood can be used for other purposes, and the stone can be returned to nature. Because a lot of organic matter such as wheat straw was added during the construction of residential houses, the wall mud and house mud can be used as good fertilizers and returned to the farmland to fertilize the land when they are demolished. Complete adobes can be reused directly during dismantling, and damaged and broken adobes are decomposed and broken under the action of sunshine and rain, and then sent to the farmland. At the same time, in residence, there is no need to manually filter and recycle the turbid gas generated in the room, and the same purpose can be achieved by using traditional ventilation facilities. There is a broad and deep social foundation for utilizing the superior performance of raw earth building: it has the benefits of using local materials, easy construction, good regeneration, natural circulation, easy self-construction, and low cost, but it also has the disadvantages of poor earthquake resistance, small bays and weak lighting. Judging from the economic development model of “mass production, mass consumption and mass waste” in the 21st century, the recycling of construction waste has considerable prospects. The organic distribution of modern electrical equipment and buildings is still in the trial stage, and there is still a lot of room for the development of wind energy and solar energy.

In short, in a certain sense, earth architecture is only a historical understanding of the process of human life. Re-exploring the significance of adobe architectural culture is likely to be the main basis for planning adobe architectural communities. Mr. Wu Liangyong said in this book “The Future of Architecture” that the direction of future architectural development should follow the principle of “regionalization of modern architecture and modernization of vernacular architecture”, and steadily advance the development of earthen architecture. Utilization is tantamount to rethinking the distance between man and nature in modern life. It is a pilgrimage to return to nature. With the development of environmental science and expansion of green space planning ideas in human settlements, “sustainable development” has become the main theme of the times for human survival. A new milestone of consciousness, the traditional experience of earthen architecture is being consciously absorbed into contemporary architecture. It can be expected that, under the impact of contemporary open consciousness, the forms of cultural expression are also tending to pluralistic and free forms, and the humanized natural reality is showing that the world is moving towards a more harmonious state between man and nature.

Section 2 Native Dwellings Mapping Illustration

The architectural form carries a kind of spatial order of local people’s life behaviour. In each sequence, it has its own behaviour logic, revealing the nature of human relations in a subtle way. The planar form of raw earth buildings is characterized by strong plasticity. At the same time, architectural layout and space division is a very complicated issue, which has both natural factors and the effects of social history and cultural traditions. According to Maslow’s hierarchy of needs theory, people’s needs can be roughly divided into hunger, sex and fear, etc. Buildings that satisfy the needs of hunger, such as restaurants, buildings that meet sexual needs, such as bedrooms, and buildings that meet the needs of eliminating fear, such as reception rooms, etc. If extending this necessary assumption, there can also be religious buildings, display buildings such as shops, and supervisory buildings such as prisons. At the most primitive level, earth architecture reveals to us the reason for the space setting with extremely simplified symbols. It is directly presented to us in the simplest form, which helps us find the content people need in their daily life in

a concise way. New needs are also brewing at the same time, resulting in practical problems faced by the design.

Husserl once highly praised the method of geometry to grasp the essence, especially the geometry that abandons the algebraic method. In their hands, new structures are endlessly developed according to imagination. In fact, native residents are opposed to building houses into parallelograms, because the absolute perfection of form gives people a rigid feeling, and the seemingly square pattern may bring hidden dangers. Sometimes they even prefer to go against the rules, whichever is the most beneficial. Therefore, the layout of residential courtyards is very flexible, and the layout is often adapted to local conditions, and the forms are also diverse. No matter what the reason is, it all lies in how to facilitate the communication and simple production activities of family members. There are no certain rules for the materials to be used, the pattern to be adopted, the shape used, the survival duration, and the overall layout, and of course they are not completely without rules to follow.

Due to Xinjiang's unique geographical location, Eastern and Western architectural cultures blend here, and the spatial combination form has a dual nature. On the one hand, it has the influence from the west and Central Asian; and on the other hand, it also leaves a clear imprint of the Central Plains culture. The architectural sites of Bactria, Sogdia, and Eastern Parthia in Central Asia show that there are three plane combinations with obvious characteristics of Western Regions: one is the atrium-style combination, the main building is located in the center, surrounded by corridors or halls, it is often seen in religious building sites; the second is horizontal combination, buildings are arranged on both sides of the main axis of the group, and it is more common in residential site; the third is cross-shaped corridor combination, with vertically intersecting corridors connecting the four buildings together. These combination types can be self-contained, and can also become the basic unit of a large building complex. Some representative types fully reflect the customs of home plan composition in Xinjiang adobe buildings. In this process, aggregation and separation become the basic state. The content of aggregation lies in its publicity, while the content of separation lies in its privacy, so as to maintain the freedom of individuality. At the same time, we should not blindly climb higher, pay attention to the reasonable and standardized design of the plane and façade, and carry out transformative development or have profound potential.

1. Atrium-Style Combination

According to the principle of space combination, there are roughly four forms: aggregation and containment, linear sorting, grid compilation, and level superposition. The atrium-style combination belongs to the point-like aggregation space. For example, the residential buildings in Hetian are in the Ayiwang style, that is the central bright hall is the center, and all the rooms are arranged to adapt to the climate of sandstorm days. Neighbourhoods are densely packed to adapt to the earthquake and drought climate characteristics; Turpan dwellings are centralized and high shed courtyard style, that is earth arch kilns are used to build semi-underground and above ground houses, and high sheds are set in the courtyard for sunshade to adapt to the special dry and hot climate. Even though there are various differences, the cooperation between the living room and the courtyard and the ingenious transformation of the space at that time are still the core content of the layout.

There are two important factors in the indoor pattern, one is privacy and the other is decoration, so two patterns are formed. One is centered on the living room. The living room has a moderate plane position and is closely connected with the outdoor space. The living room is large in size and is the focus of decoration. For example,

the courtyard layout of Tuyugou Xia Village is relatively free: typical built on flat land and mostly connected to an interior room, which can be arranged to be occupied by guests. The floor of the living room is carpeted, and visitors can sit on the floor, reflecting the intimate relationship between neighbours and friends. The other is centered on the bedroom. The bedroom and the living room are mostly square, so that furniture can be placed arbitrarily without discomfort.

Native dwellings in Xinjiang are generally divided into two types: summer and winter. The reception room and the guest room are separated from each other, and low walls are used as space division entities in the courtyard. The bedroom pattern can generally be divided into three types: closed type, semi-closed type and open type. The closed pattern contains implicit meaning. Bedrooms are often divided into winter bedrooms and summer bedrooms. They are generally placed in a hidden place of the building, with a small skylight or a small high window for lighting. There are inner and outer rooms: the outer room has a flat roof; the inner room is a cave dwellings, and the winter bedroom is the center to form different satellite areas. Most of the bedrooms in winter are cave dwellings, which serve as a place to avoid the cold and survive the winter, and are the center of gravity of all supporting facilities. In Tuyugou, the bedrooms dug down are warm in winter and cool in summer, occupying a central position in the courtyard, and especially suitable for the elderly to live in. In summer, the bedrooms are distributed in a scatter manner, which can be adjusted at will according to the situation. Other rooms, such as the clean room, can be shared with the utility room that is connected to the bedroom in general residences. Senior houses are set up separately. Kitchen are set up separately in medium-sized houses. The main bedroom is laid out horizontally, and the façade setting is downplayed, with rectangular walls, half exposed and half covered, relatively obscure. Ponds are dug in the courtyard where conditions permit, and trees are planted around the pools.

2. Horizontal Combination Layout

Horizontal combination belongs to linear arrange, and the plane layout of Xinjiang dwellings can be roughly divided into two types: one is one-bedroom households, such as the Puyi Pavilion of the Tajik people, the shacks and fence houses of the Luobu people, and the “bazi house” of the Keriya people, the round wooden house of Tuva people in Mongolia, “Zhukecha” and “Urege Geri” of Daur nationality; the other is a multi-room household, which is similar to a horizontal Central Asian combination. On the basis of households, due to the distinction between quietness, inside and outside, privacy and openness, and cleanliness in people’s daily life, the planar forms of folk houses have been differentiated into “one-shaped”, “curved-foot-shaped”, “concave-shaped”, clustered etc. different planar layout form. At the same time, the rational standards for spatial relations formed by people naturally, such as adjacency, sequence, connection, separation, overlapping, etc., secretly affect the shape of buildings, so the patterns and styles of buildings are also different.

3. Cross-Shaped Corridors Combination

Cross-Shaped Corridors Combination belongs to the grid system. For example, there are two types of plane layouts for the Russians in Yili: one is the living room, bedroom, guest room, storage room, kitchen, etc. are set on both sides of the corridor; the other is that the corridor becomes the living room, with a room on each side, the end of the corridor is enlarged into a living room, and there is a suite in the living room for the bedroom for study, and a kitchen, a warehouse or vegetable cellar are built behind the main house. Formally, the building groups or functional areas are roughly divided according to the cross-shaped corridor.

4. New Architectural Vocabulary

The native dwellings in Xinjiang interpret the power of infinite imagination among the people in their own national way, and regional factors have a crucial impact on the prototype composition of the living room. Due to the influence of the commercialization of contemporary society, modern Islamic architecture continues to generate new vocabulary. Organic space combination bears a certain spatial order of local people's life behaviour, and the indoor layout is also varied. According to the indoor habitual path, it is generally divided into three types: independent type, parallel type and connected type. The stand-alone type is a single courtyard, the parallel type is composed of two buildings connected into one house, and the connected type is generally composed of five to six households. In areas where land is relatively scarce, townhouses are more popular. In addition, there is also a distinction between a parallel layout and a series layout. Bedrooms, living rooms, kitchens, toilets, and sheepfolds are mostly combined in parallel. The entrance hall doubles as a kitchen, showing a strong concave-convex relationship. According to the parallel arrangement, they enter the winter and summer suites respectively. The tandem arrangement enters the bedroom, living room, kitchen or drying room, sundry room, livestock shed, toilet, etc. in turn, and there are spiral ladders and aisle connections, and the resulting behaviour is characterized by looping and reciprocating.

In a word, adobe buildings are widely distributed in the western region, follow the traditional customs, and generally have multi-room and multi-functional combined layouts. Such as living, production, warehousing, for the setting of the courtyard, whether all the rooms can be arranged in the most suitable position so that they can have their own place is always an old topic. However, life has its own rules, and the creation of order and space configuration starts with the appropriateness, which is a kind of action order, spatial order and diverse order. Those preserved in a formal appearance, refined again by designers, are more standardized on the sublimation level, which is the basic law followed by the renovation of residential buildings.