

# The Transmutations of the Hakka Enclosed Dwelling Displayed Historically and Geographically by its Watchtowers

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**Abstract:** The paper analyzes the “Origin” and the “Derivative” of Hakka Enclosed Dwelling’s by a specific transmutation instance of Longsheng House of Liuzhou in Qing Dynasty, and researches on Hakka Enclosed Dwelling’s layout, size, and the transmutation of forms. It points out that as one of the fittest to the environment among the vernacular dwelling, Enclosed Dwelling’s construction site and defence structure, more specifically: the Watchtower’s trade-offs and layouts have a close relationship. By comparing with the architectural forms between “the Origin” and “the Derivative” in Enclosed Dwelling, and analyzing the relevant heritage of dwellings in Hakka culture influenced areas, it shows that Hakka vernacular dwelling like Qing Liuzhou Longsheng House should be protected because it not only is built on the basis of the original form but also was shaped in the way of combination of the local context and historical architecture features.

**Keywords:** Enclosed Dwelling, Watchtower layout, Geographical transmutation, Qing Liuzhou Longsheng House.

## 1. INTRODUCTION

Hakka vernacular dwellings in core Hakka architecture cultural areas and sub-architecture cultural areas [1] have been fully studied. To the architectural field of specifically regional groups, the way of comparing with the regional groups' architecture style historically scattering in different areas have increasingly become one of the discussing topics, which has boosted the intensive studies in some influenced areas of Hakka culture, such as Huizhou, Heyuan, Chengdu Sichuan, Guangxi, Hezhou, Liuzhou, Bobai, etc [2]. Scholars have gradually approached to the geographical Hakka vernacular dwellings. Stemming from the original zones, the Hakka Enclosed Dwelling adapts to the migrated land easily and promotes the generation of the derivative effectively by the powerful defence factors. What's more, as one type of Hakka vernacular dwellings, Longsheng House of Liuzhou in Qing Dynasty did not just actively upgrade the defence layout and their decorate themes, but also fitted in the local architecture technology in the environmental construction and humanity environment. In addition, Qing Liuzhou Longsheng House inherits the essence of traditional Hakka vernacular dwellings and shows the difference cultural characters and vitality from core Hakka vernacular dwelling.

## 2. HISTORICAL DERIVATIVE ON HAKKA ENCLOSED DWELLING DEFENCE

There are mainly two types of layouts on Hakka Vernacular Dwelling (As Fig. 1). All of them are centralized defence vernacular dwelling. One is called “Courtyard”, “Enclosed House”, “Mud House” or “the Mud

Enclosed” which is located in three hill areas (Longnan, Quannan, Dingnan) in Gannan (namely, southern Jiangxi Province). The other type is derived from vernacular dwellings in Minnan (namely, southern Fujian Province) and “Hucuo Type” vernacular dwellings in Yuedong (namely, eastern Guangdong Province). For example, the vernacular dwellings which are located in Minxi (namely, western Fujian Province) hill areas including Xingning, Meizhou, Wuhua (in Guangdong Province), are one of these types. Jiangxi (a province in middle China) is considered as the “Origin” of Hakka. And Min and Yue (they are represented Fujian Province and Guangdong Province respectively) are considered as the “Derivative” [3]. Therefore, by the way of the comparison of the construction topographies and defence forms between Jiangxi Enclosed House and Minnan Enclosed Dwellings, it reveals that Hakka vernacular dwellings in geographic derivative are also like other vernacular dwellings which are evolving on the basis of local climate. As Mr. Liu Yishi considered: The vernacular dwellings which are located in mountains are almost towering Mud House, Rectangle House, Circled House. The vernacular dwellings which are located in the half of mountains or hills are almost enclosed dwellings. What Mr. Liu considered also shows the relationship between Fengshui and vernacular dwelling culture [4]. Mr. Liu Dunzhen and Mr. Lu Yuanding early or late also pointed out that Enclosed Dwelling is a special derivative example for the hilly environment [5, 6] in Hakka regional groups.

From what is mentioned above, the watchtower is no longer the most distinctive external feature of Enclosed Dwelling. As the most initiative defence structure, watchtower became less important in Enclosed Dwelling's function: The actual living space such as Ceremony Halls System and Daily Living System surpass original Mud Enclosed defence function and become the primary content of Min and

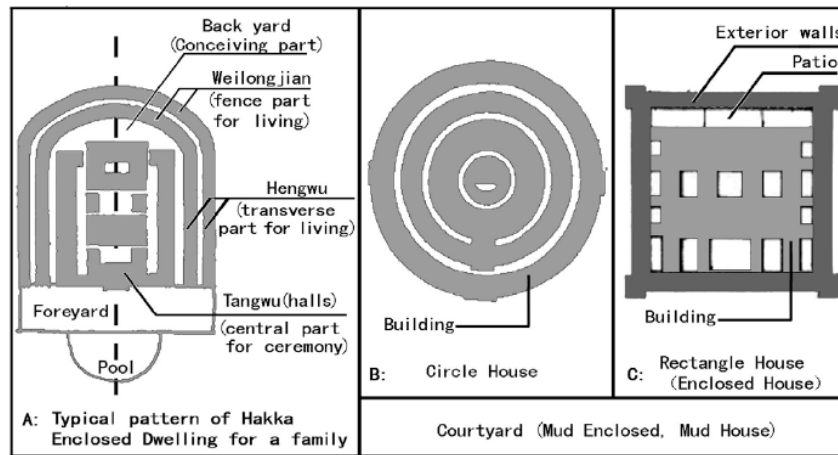


Fig. (1). The differences between the mud house and the enclosed dwelling.

Yue Hakka vernacular dwelling. When comparing with the architecture features between Enclosed Dwelling and Gannan Enclosed House, Mr. Lu Yuanding pointed out that: Gannan Enclosed House shows the “Defence” feature and Enclosed Dwelling presents the “Half-Defence” feature. Following the Hakka regional groups’ historical migration routes, Min and Yue Enclosed Dwellings have become the new “Originality” of Hakka vernacular dwelling and kept influence on Hakka culture areas in Huidong, Huiyang (eastern Guangdong Province) and Guangxi, Sichuan etc (Guangxi and Sichuan are represented Guangxi Autonomous Region and Sichuan Province respectively) in Ming and Qing Dynasty.

### 3. WATCHTOWER’S LAYOUT OF “THE ORIGIN” AND “THE DERIVATIVE” ENCLOSED DWELLINGS

Enclosed Dwelling’s architectures forms are consisted of Tangwu, Hengwu, (also called “Gangwu” or “Hucuo” “Huwei”) and Weilongjian (means “Enclosed Tail”, the subsidiary rooms aligned with a gentle curve, as well as the rear fence part of the house), as it is showed in Fig. (1). A row of Tangwu and rows of Hengwu are usually located in lower places. Gentle-curve Weilongjian and house’s inner conceiving part are usually located in gently sloping places, as it is showed in Fig. (2). The sloping terrain is not only beneficial for cutting and draining off water as house’s function but also means and expresses Hakka’s desire of “More sons More Happiness”.

The foundational elements in Enclosed Dwelling defence function: Location (located in hill side, i.e. in relatively higher site), Watchtowers (or “Paolou” “Jiaolou”, Walls, embrasures in exterior walls, ponds, all of these form a series of inner yards, enhancing the house’s defensibility. Moreover, being located in higher site, setting watchtower is the most obvious defensive factors of Enclosed Dwelling. But researches also reveal that: Enclosed Dwelling sited in higher altitude is overwhelming for releasing farmlands, draining off water, windproof precautions, and also meets the needs of Fengshui. Comparing with Enclosed Dwellings in the “Origin” and the “Derivative” areas, finds that located in higher site is also an advantage for defence. Whether placed in higher locality may also influence the other defensive element: Watchtower’s trade-offs and its layout.

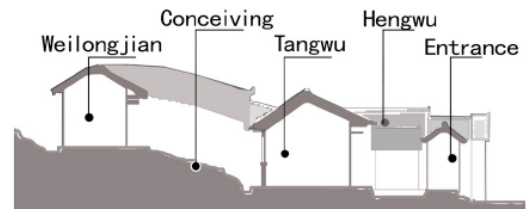








Fig. (2). A typically diagrammatic relationship of the vertical section between the enclosed dwelling and its site.

Hakka Enclosed Dwelling in core cultural areas has watchtowers and their options on watchtowers’ layout include the following pattern: Firstly, in two corners of main facade; Secondly, in the two joints between ends of the exterior walls of Weilongjian and those of the most external walls of Henwu; they are both called “Jiaolou”. Because Enclosed Dwelling is a derivative dwelling in Hakka regional groups which adapts to the environment of Min and Yue hill areas. In the “Origin” of Min and Yue hill areas, watchtower is a part of defensive system in Enclosed Dwelling but it’s not an essential one. In Minxi, especially in Xingning and Meizhou (the northeastern Guangdong Province) areas, Watchtower has a series of changes in Enclosed Dwelling’s constructions. Focusing on the available literature’s samples of Enclosed Dwelling, Anzhenbao which is located in Minxi has its own watchtowers. Nevertheless, from the classic documentaries such as Guangdong Vernacular Dwelling, and Chinese Traditional Residential Architecture etc, little information could be found about the enclosed dwellings with watchtowers in Xingning and Meizhou (in northeastern Guangdong Province). The oldest Enclosed Dwelling available here is built in Dongshenzhai, Luo Family in Xingning in Yuan Dynasty with three Tangwu and two Hengwu and one Weilongjian (the size in Yuan Dynasty) [7] without any watchtower. Even those enclosed dwellings with watchtowers don’t particularly develop the towers’ height and the slope of roofs is gentle due to typhoon prevention, for example, watchtowers of Yetangpananwei in Xingning are in four corners of the house and their eaves of watchtowers are little bit higher than the line of roofs in Tanghenwu, as it is showed in Fig. (3) B. built in the reign of Emperor Guangxu of Qing Dynasty). Another example of the enclosed dwellings, Pengchengtang (Liu Family in

Core Regions of the Hakka Culture in Guangdong and Fujian (Hilly areas)				Riparian Lands	Regions of Plains
					
<b>A</b> Anzhenbao's watchtowers: Lower than Hengwu	<b>B</b> Yetangpanwei's watchtowers: A little bit higher than Hengwu	<b>C</b> Huanghongchangwei's watchtowers: Higher than all Hengwu	<b>D</b> Diaocui Feng's watchtowers: Higher than all Hengwu	<b>E</b> Dawanshiju's watchtowers: Obviously higher than all Hengwu (Built in Shenzhen, Qing)	<b>F</b> Longsheng House's watchtowers: One floor higher than all Hengwu (Built in Liuzhou, Middle of Guangxi, Qing)
pyramid roofs, gentle slopes of roofs, long cantilevered eaves (Built in Fujian, Qing)	gable roofs, gentle slopes of roofs, corbelled cornices, without eaves (Built in Xingning, Eastern Guangdong, Qing)	(Built in Xingning, Eastern Guangdong, Mingguo)		Gable roofs, steep slopes of roofs, corbelled cornices, without overhung eaves	

**Fig. (3).** Graphic analyses on morphologic variations of watchtowers adapting to diverse geographic environments.

Changlin village Xinpi Town Xingning) also has watchtowers in four corners of the house. Its watchtowers are two-story high, the same as its Tangwu and hengwu's roofs height (built in the reign of Emperor Kangxi of Qing Dynasty). Until the Republic of China, Watchtower had a trend of becoming higher, like Huangchangwei in Xingning, Xinpoxinziwei, Xingtianfengqiangwei, Diaofangdiaocuiwei, as it is showed in Fig. (3) D. All of these enclosed dwellings have its own watchtowers which are placed in four corners of exterior walls and one floor higher than their Tangwu and hengwu. Obviously, before the republic of China in Xingning and Meizhou's hill areas, the defensive function of Watchtower is less important than the one of house's higher locality. The defensive system depends on three points as below: Location on hills, high and thick exterior walls with embrasures, forming colony with groups of enclosed dwellings.

The "Derivative" areas of Enclosed Dwelling are the places where the Hakka migrate to Dongjiang River, along the southeastern-orientated migration route in Qing Dynasty, as well as the riparian zone gradually descending from Nanlin (the range of mountains between south China and the north) to Pearl River Estuary. In the plainer site watchtower presents more important, primarily reflecting on the height of Watchtower. There are a little amount of Enclosed Dwellings built up in the reigns of Emperor Kangxi and Yongzheng (sequent periods in Qing Dynasty) have the watchtowers which roofs are as high as those in others parts of the house. While after the regin of Emperor of Qanlong and Jiaqing of Qing Dynasty the watchtowers' bodies are all obviously higher than those of Tangwu and hengwu [8]. One reason of the above change lies on their sites in Huiyang and Shenzhen, the riparian lands abutting on Pearl River Estuary, namely the smooth terrain promotes the watchtowers become higher. Furthermore parts of the "Conceiving" and the curved (Weilongjian), the rear of the house prototype, lost their originally typical construction condition—sloping terrain, which forces the Enclosed Dwelling in the "Derivative" areas to change their forms. Firstly, Curved fence part of the house is inclined to a straight line (examples named Guilinxinju, in Shantangwei, Qiuchang Town, Huiyang). Moreover, the numbers of watchtowers have increased. For example, Dawanshiju which was built in Pintantianyang, Pinshan Town (Now Shenzhen) in the reign of Emperor Jiaqing of

the Qing Dynasty, is divided into the exterior fence part and the interior with 8 watchtowers in it [9].

There are lots of enclosed dwellings which were built in Qing Dynasty in Hakka culture influenced areas (like Guangxi) and one example has been found in Sichuan (Clan Temple of Liao Family, in Dongshanshibantan, Chendu City, without watchtowers) Qing Liuzhou Longsheng House layout is a mutation in Hakka culture influenced areas.

#### 4. A SPECIAL INSTANCE—QING LIUZHOU LONGSHENG HOUSE'S WATCHTOWERS IN LIUJIANG-RIVER PLAIN

##### 4.1. Qing Liuzhou Hakka Dwelling Construction Background Under Influences of Cultural Conflicts

Southwestern outskirts, Maping County, Liuzhou Qing Dynasty is the traditional habitation of Zhuang ethnicity, as well as in Liujiang River Plain with the most centralized, fertile paddy soil and the dense water network of Liujiang River Tributaries. The alien people from Meizhou and Xingning areas (they both belong to Guangdong) were the largest immigrant group for the reclamation economy. There were over 120 villages built in the countryside in Liujiang-river plain in Qing Dynasty. The regional Villages in the period of time of Emperor Qianlong to Xianfeng in Qing Dynasty were mostly built by Guang Dong Hakka man. And lots of Hakka dwellings which are standing still here are the clear evidences. The immigration once caused the severe conflicts between local folks and Hakka man for the land confirmation and right's belongings. In later of the reign of Emperor of Jiaqing of Qing Dynasty, with the economic development and cultural interaction in and the conflicts between local and Hakka, gradually disappear. Qing Liuzhou Longsheng House was built on the mentioned background, and its positive defence space: Watchtower's layout has been much more valued than those in its prototype.

##### 4.2. Qing Liuzhou Longsheng House

Longsheng House was built by Hakka people Mr. Xun Zeng and Mr. Guanglin Zeng who settled in Liuzhou from Jiaying prefecture, (now Meizhou) Guangdong from the reign of Emperor Qianlong to Jiaqing of the Qing Dynasty Qing Dynasty (1796-1802). Longsheng House is southeast-facing, approximately covering a site of 1.3 square hectome-

ter (20MU, MU is the unit measurement in traditional China) amongst the vast farmland, with 120 rooms. Longsheng House and its watchtowers are one-storey high and two-story high respectively (Fig. 4). What's more, in Longsheng House, there are several halls and more than 10 patios which are called "nine halls and eighteen patios" in local. In July, 2000, the House was listed as the Guangxi essential heritage building. According to writer's field research, Qing Liuzhou Longsheng House is a Hucuo type Enclosed Dwelling which consists of Tangwu, Hengwu (Hucuo) and Weilongjian. And it's also a form of two Tangwu and six Hengwu and one Weilongjian. Longsheng House not only has halls and daily living rooms in Hengwu and Tangwu but also has goods storage, corn storage, grinding chamber, employees and gardeners rooms. With more and more sons and grandson for Zeng Family, nine or fifteen blocks of nine halls and eighteen patios enclosed dwellings were built. Qing Liuzhou Longsheng House is a typical form and more completely enclosed dwelling.

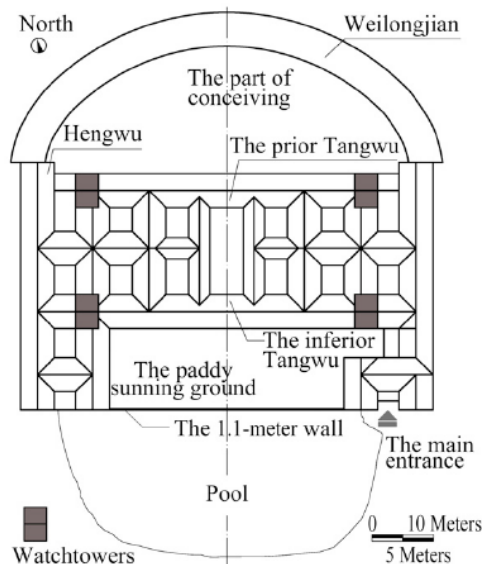


Fig. (4). Reconstruction drawing on the roofs' plan of Qing Liuzhou Longsheng House.

#### 4.3. Qing Liuzhou Longsheng House with Upgraded Defence Function

Qing Liuzhou Longsheng House follows the original form which is a checkerboard pattern involving Hengwu - Tangwu and curved Weilongjian. This kind of pattern was a usual Hakka dwelling form in Xingning and Meizhou areas in Qing Dynasty. Liuzhou River Plain is hard to represent the sloping site for the Conceiving part of the prototype in vertical aspect. Thus its layout still remains Hakka culture features but with fewer numbers of "Weilongjian" (usually, the number of "Weilongjian" echoes to the number of "Hengwu", for example, two "Hengwu" echoes to one "Weilongjian", four "Hengwu" echoes to two "Weilongjian"). Additionally Liuzhou is rainy but no need for typhoon prevention, so its patios (formed from the distance between Hengwu) is larger than the one in Xingning and Meizhou areas.

The most distinction between Longsheng House and its prototype is the significantly upgraded defence function. It makes Hengwu-Tangwu axis as axial symmetry to set four watchtowers which are not just simply copied from its "Origin" ones usually being set in the corner of exterior walls. Here watchtowers were moved into four ends of two row of interior Hengwu, as it is showed in Fig. (4), each side of watchtowers has embrasures, which makes sure that there are no blind areas for shooting. Watchtowers have become control tower, serving as a bird's-eye view of Longsheng House under the cover of high exterior walls, as it is showed in Fig. (4) and Fig. (5): Moving into inner site makes each watchtower can master any information from enemies and realizes the strategy of "Watch out for each other, and attend in time to provide support in case of emergency". Contrarily, the original watchtowers which were placed in exterior walls can't get this function. As far as the research subject available, the house's layout with the watchtowers is the only sample as an objective in reality.

Plain environment and using of cedar cannon (gun) are two essential factors for Qing Liuzhou Longsheng House's layout. Comparing with hills and rivers, plain is much harder to defence and the range of cannon (gun) is further than bow and arrow. For the potential sake of the above factors, the watchtowers abandoned the layout in the exterior walls. Also, the size of Qing Liuzhou Longsheng House is grand and is located in widely plain with wider defence visual threshold, in order to defence enemies, inner watchtowers and three exterior walls (three walls expect for the front one) form three hierarchies defence spaces: "High exterior walls" - "Low interior walls - Watchtowers"; The exterior walls are approximately four to five meters high. The interior walls are more than three meters high. The watchtowers are about six to seven meters high (till roof). Finally, the front facade forms a four-hierarchy defence space: "Pond - paddy sunning ground" - "low front walls" - watchtowers", as it is showed in Fig. (4) and Fig. (5).

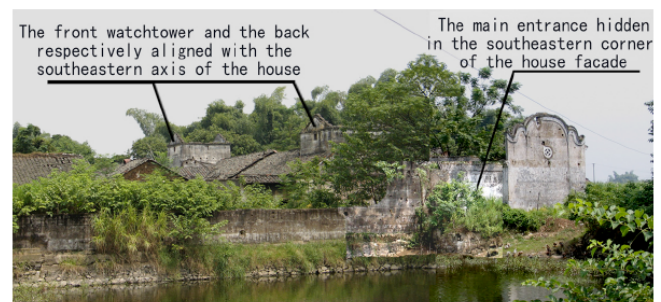


Fig. (5). The Qing Liuzhou Longsheng House's entrance and the southeastern side watchtowers.

#### 4.4. The Historical Proof of Qing Liuzhou Longsheng House Defence System

September 8th, 1858 (the year of the reign of Emperor Xianfeng of the Qing Dynasty), the host Mr. Zeng was hunted by Qing government because he helped "Rebel" Dacheng army with foodstuffs, which resulted in attacking on Longsheng House. After guarding more than twenty days, Longsheng House was destroyed by Qing army because ran out of ammunition. In wartime, a vernacular dwelling which

could fight a battle with government and lost for running out of ammunition but not its own structure, it shows that its defence system (especially the positive defence structure—Watchtower) is very firm and effective.

## CONCLUSION

Researching the Hakka influenced culture areas and focusing on Enclosed Dwellings' historical derivative, our analyses revealed the following principles: First, as one of the fittest environmental vernacular dwellings, The construction environment and defence structure factors in Enclosed Dwelling have a close relationship by means of Watchtower's trade-offs and layout; Second, in plain, therefore, Watchtowers' number and layout are a far cry from those in Min and Yue hill areas. By comparing with the architecture forms between "Origin" and "Derivative" in Enclosed Dwelling and analyzing historical dwellings, it shows that the Hakka vernacular dwelling like Qing Liuzhou Longsheng House should be protected, because it is not only built on the basis of the original form but also is a combination of local environment and historical architecture features, namely, Combined with Linnan and Yuexi (Yuexi is short for west part of Guangdong Province) architectures cultural style in centered watchtower layout.

## CONFLICT OF INTEREST

The author confirms that this article content has no conflict of interest.

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