

The Indigenous Adaptation of Modern Chinese Church Universities: A Case Study of The Main Building of Fu Jen Catholic University

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Abstract. At the end of the 19th century, many church cases occurred, which seriously affected Christian missionary activities in China and forced missionaries to think about the relationship between the Christian church and the people in China. After that, a movement for the indigenous adaptation of Christianity gradually emerged, with church schools becoming one of the main representatives of indigenisation. The Main Building of Fu Jen Catholic University, designed by Dom Adelbert Gresnigt, is a good example of the indigenous adaptation of the church university in this context. This paper analyses the design approach of the Main Building of Fu Jen Catholic University, extracts the embodiment of the Chinese traditional revival style and summarises the characteristics and reasons for the indigenous adaptation of the Main Building compared with other church university cases. The results show that the Main Building of Fu Jen Catholic University has features such as a traditional Chinese roof and decoration in the context of the Catholic indigenisation movement but is more conservative in design and plainer in colour than similar buildings. Gresnigt, as both a priest and architect, designed Fu Jen Catholic University with a more Catholic character and religious atmosphere than other church universities.

Keywords: Gresnigt; Catholic; Main Building; Fu Jen Catholic University.

1. Introduction

In the late 19th and early 20th centuries, many church cases occurred as the resistance of the Chinese to foreign powers. Boxer Rebellion was a representative, and many buildings, including churches and other religious were destroyed. The church cases made the relationship between China and the West tense. The Western countries and Christian missionaries were forced to rethink the relationship between the church and the people in China. In the following decades, a movement for the indigenous adaptation of Christianity emerged and gradually became dominant within the Christian church.

In 1905, the Qing government formally abolished the Imperial Examinations and established an education system modelled on the Western public school system. In this stage, Western church schools were introduced to China along with Western educational models, producing a type of architecture completely different from traditional Chinese architecture, the church university. Along with its introduction, Western architectural techniques and spaces in Chinese buildings have become increasingly widespread. Many higher education institutions, such as Yenching University and Soochow University, were founded in this period. In terms of architectural form and campus layout, church university architecture made some innovative changes, creating a blend of Chinese and Western architectural styles [1].

The Main Building of Fu Jen Catholic University (FJCU) is a good example of the architectural dimension of the Catholic indigenous adaptation in China, combining traditional Chinese pavilions with Western church building forms. It was designed by the Belgian missionary Dom Adelbert Gresnigt on the site of the former Tao Beilei Mansion in 1929 and completed in 1930. Current research on FJCU is divided into two main categories. Chinese researchers focus more on the Chinese and Western architectural elements, but foreign countries are more interested in the personal experience of missionary Gresnigt and the characteristics of the four major buildings he designed in China from the architect's point of view [2,3].

This paper describes the Architectural characteristics of FJCU and explores the reasons for the emergence of the Catholic indigenisation movement in China with the social and ecclesiastical context of the time. It also contrasts with other traditional revival and church university buildings to analyse the differences between Gresnigt's adaptive design and that of other architects.

2. Background of FJCU

2.1. Background

After the Boxer Rebellion, many churches were rebuilt in compensation from the Qing government in Gothic and Romanesque styles, which were the most visible expression of the Western worldview and Christian mission. However, the Christian missionary environment was even harsher in China. The Holy See, therefore, developed new guidelines, such as the *Maximum Illud*, in accordance with the latest missionary situation in China. A movement for indigenisation, initiated by the Holy See, was launched.

One of the most significant challenges to indigenisation is in the field of education. As the Pontifical Delegate of the Catholic Church in China, Celso Benigno Luigi Cardinal Costantini (Chinese name: Gang Hengyi) prioritised establishing educational institutions, regional seminaries, and Catholic universities. All these educational institutions required appropriate buildings with symbolic and functional significance. Faced with competition from the rising Protestant churches in America and Europe, the new buildings had to combine Chinese and Christian traditions but also show a distinction from Protestant architecture. However, Western styles, especially the Gothic, are incongruous with Chinese architecture. Therefore, the greatest challenge of indigenisation was finding a spiritual resonance rather than just using Chinese architectural forms and decoration [4].

The Chinese Catholic priest, Father Ma Xiangbo, and the believer, Ying Lianzhi, sensed that Protestantism frequently established higher education institutions in China. In order to compete with Protestantism and secure the position of Catholicism in China, they petitioned the Holy See to establish a university in Beijing. The Holy See, considering the American Benedictines' interest in preserving ancient culture and developing higher education, appointed them full responsibility for enhancing education in Beijing. The founding of FJCU was one of these important tasks [5].

FJCU was located at the Tao Beilei Mansion. Its previous owner, Beilei Zaitao, was the uncle of Puyi, the last emperor of the Qing Dynasty. In 1928 the Benedictines commissioned Gresnigt to design the Main Building for FJCU. Based on the idea of the indigenous adaptation put forward by the Pontifical Delegate to China, the design of the Main Building should reflect the Catholic "ecumenical spirit". The Main Building adopted the forms of traditional Chinese architecture to adapt to the requirements of a modern school.

2.2. The Architect

Gresnigt's architectural design ideas fit well with the design requirements set by the university. He paid great attention to studying traditional Chinese architectural forms, studying primary sources of classical architecture in northern China, and doing fieldwork on classical buildings in and around Beijing to summarise their architectural features. In addition, he also researched many temples in southern China to study the connection between traditional Chinese architecture and Christianity. Although the temples are Buddhist buildings, their solemn religious character is connected to Christianity, and traditional Chinese architecture and religion can coexist spiritually. Gresnigt used traditional Chinese architectural elements to shape the religious atmosphere in the Christian church and designed an enclosed Chinese palace-style castle for FJCU [3]. The building simultaneously shows the Catholic Church's characteristics, traditional Chinese architecture and modern architecture.

2.3. Architectural prototypes

In order to distinguish it from the protestant universities, Gresnigt chose an important Catholic intention, the monastery, and combined it with the traditional Chinese walls to form a traditional Chinese revival style with a Catholic character [2,3].

The monastery is a characteristic Catholic building and the prototype for many European medieval universities. In addition to training monks and spreading doctrine, monastic education fulfills the human quest for non-utilitarianism and the purification of the human soul. Since its emergence, the university has been under the monastery's influence. As such, the monastery is a religious architecture in keeping with the university's spirit.

The city wall, inspired by the imperial palace form in Beijing, represented the Chinese intention in the design of the Main Building of FJCU. Compared with a series of traditional Chinese buildings, Gresnigt felt that FJCU needed to find an alternative structural approach within the classical Chinese architectural tradition from the perspective of economic, environment, and access conditions. The walls, wall gates, and gatehouses are representative to show precisely the kind of distinctive character of Chinese imperial palaces. At the time of the rise of traditional Chinese revival architecture, these elements were relatively unnoticed and underused but were an integral part of Chinese architecture, reflecting majesty and solemnity. The tall, enclosed space fits well with the monastic imagery (Fig. 1).



Fig. 1 City wall and monastery imagery of FJCU

3. Architectural features of the Main Building of FJCU

3.1. Structure and materials

The main body of the building is brick and concrete construction. The thick external walls are constructed of green brick with clear boundaries. The large arches with round coupons and whiskers are made of Chinese white jade, the roof is covered by green glazed tiles, and the window frames are made of red carved wood.

3.2. Facade, layout and function

The Main Building is expressed as a fully enclosed Chinese palace-style castle, with the central axis of the building being determined based on the North Sea of the Forbidden City. The monastery-type system is enclosed on all sides and separated into two small courtyards by the middle building, with the east, west, north, and south corners. The heavy walls and deeply recessed windows are covered with heavy eaves-hipped roofs. The eaves of the four surrounding buildings are made into the shape of battlements, with a kind of palace-like aura of security.

Gresnigt prefers a combination of high and low volumes with a rich and varied shading effect. On the façade, the Main Building has four square towers at the corners, the centre of the façade is three storeys, and the rest is two storeys. Gresnigt uses the features of the city walls, such as the gatehouses, wall gates and corner towers, to naturally integrate the building into the design of the façade in accordance with the principle of five horizontal and three vertical sections standard in Western architecture. On the façade, the entrance gates and the gatehouse are the visual centrepieces (Fig. 2).

With an area of approximately 4,600 square metres, the Main Building reflects simple functionalism in the arrangement of the internal functional spaces. There are more than 500 rooms

throughout the building, including offices, laboratories, libraries and classrooms. The classrooms can accommodate more than 800 students, and the dormitories can accommodate more than 200. Unlike the open corridors of the western monasteries, the corridors are closed, considering the reasons in climate and the imagery of the city walls. The north-south facing rooms are used for teaching, and the corridors are arranged on one side, while the east-west facing rooms are used for offices, and the corridors are centred. The Main Building has a library on the middle and lower floors, and it also contains an auditorium with a capacity of more than 1,000 people [2] (Fig. 3).



Fig. 2 Gatehouse of FJCU

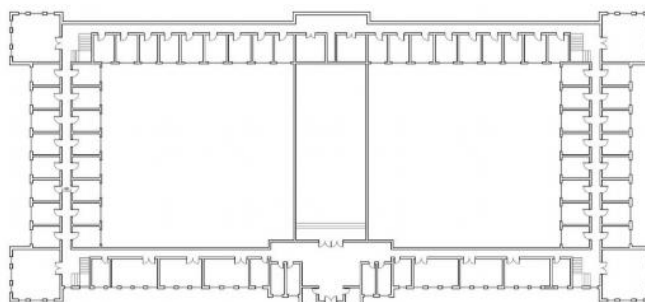


Fig. 3 Layout of FJCU

3.3. Roof, decoration and colour

In the design of the roof of the Main Building, the roof of the southern gatehouse protrudes forward twice in succession on its axis, forming a complex combination of hipped roofs. They are covered with green glazed tiles. The balcony is raised from the central arch, imitating the pedestal and balustrade style of classical Chinese architecture. Combined with the hipped roof, they create a simple form of the palace, like the Buddhist niche, indicating the importance of the entrance. The corner towers around the building are heavy eaves with hipped roofs, and the enclosed part of the building has an overhanging roof with flying eaves and graceful curves.

The traditional Chinese structural elements are more often used as decorative elements. In the design process, Gresnigt has retained the circular column and arch elements of traditional architecture, gradually transforming them from the functional and decorative nature of traditional architecture to purely decorative elements. The form of the arch has been simplified, adopting the sculptural approach of the Chinese caves, with geometric figures arranged in a continuous pattern under the eaves. Decorations such as 'Ang' and 'Beam head' imply the location of the columns (Fig. 4a).

Gleeson also uses a mixture of classical Chinese architectural details such as green glazed tiles, carved wooden window frames, Chinese white jade shumai pedestals, wooden red lacquered doors with golden bronze nails, and even the shape of a southern fire-filled mountain wall. Various styles of doors and windows feature openwork motifs. Other architectural decorations, such as the clasp drums, eaves panels, the stone pillars of the main gatehouse, and the stone balustrades of the corner towers, also use traditional images. There are a pair of traditional Chinese stone lions crouched on

the outer gatehouse's pier pillars and more than 40 pairs on the railings surrounding the Main Building, complementing the layout of the building and reflecting its solemnity [5] (Fig. 4b).

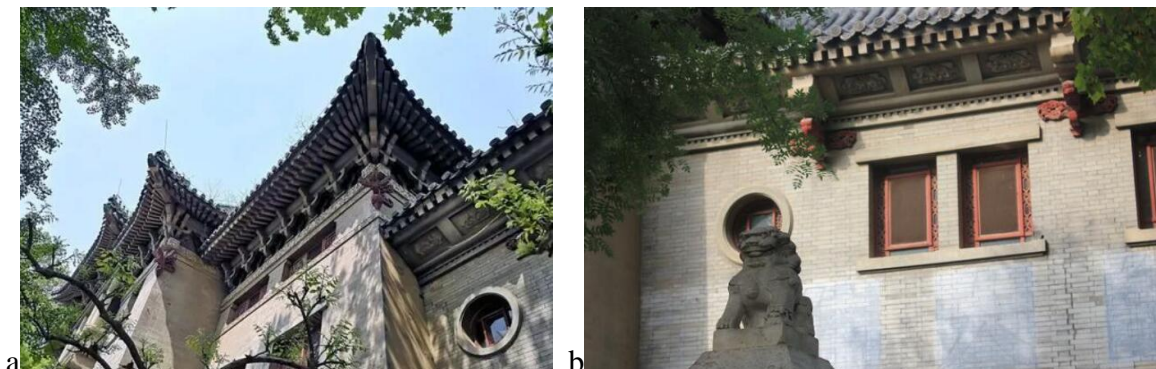


Fig. 4 Decoration of FJCU

3.4. The gardens and buildings around the main building

Some of the buildings from the former Tao Beilei's garden are still preserved on the campus of FJCU, including the Ge and the Yu Xiang Pavilions. The Main Building, as a modern multi-storey building, has reached a fusion with some of the preserved classical buildings and gardens. This fusion is mainly reflected in the perspective of mutual observation (Fig. 5). The design of the Main Building considers traditional Chinese 'Jie Jing' techniques. For example, the design of the opening windows considered the angle of view of the outside world.



Fig. 5 Garden of FJCU

4. The indigenous adaptation of the FJCU main building and its reason

4.1. Traditional Chinese revival architectural features

Due to the influence of different regional cultures, ecclesiastical styles, and human factors, Chinese church schools mainly include two types: Chinese Traditional Revival and Western Gothic Revival, with some existing eclectic single buildings. During the development of the church schools, Chinese and Western architectural elements changed from conflict to fusion, resulting in the Chinese Traditional Revival style. The Main Building of FJCU exhibits commonalities with the conventional Chinese Traditional Revival architectural design to achieve indigenous adaptation. However, there are also some differences [6].

The first difference is the roof. The roof is the most distinctive feature of classical Chinese architecture and easily gives a visual sense of the art of classical Chinese architecture. The use of roofs in Traditional Revival architecture is divided into two main categories. One is Murphy's earliest Traditional Revival campus buildings, like Yali University. The buildings used space inside the sloping roof and many tiger windows, common in Western-style architecture, to provide natural light to the interior. The other category, like FJCU, does not choose a large roof but uses its form in some

key central locations to highlight their importance. Compared to the first category, FJCU's design is more conservative and tends to be a direct application of traditional Chinese architectural techniques [7].

Secondly, similar to the majority of Chinese Traditional Revival buildings, the design of the walls of the Main Building mainly adopts Chinese methods, such as the use of some traditional architectural elements such as flying eaves, architraves, shumai bases, door and window sets, and the use of detailed ornamentation such as colour painting and leaky windows. The difference between the different buildings is in the level of detailing and the number of different types of craftsmanship.

With regard to colour, the Main Building is in a grey and blue palette. Traditional Chinese Revival architecture draws on the colours of palace architecture, such as coloured glazed tiles, vermilion red door walls, painted arches and beams, and white jade balustrades. It adjusts the colours of the building's decoration with its function and building materials. In contrast to the rich colours of the building, FJCU has selected a more subdued grey and blue palette because its architects wanted to convey the solemn Catholic religious atmosphere.

The third feature is the form of the layout. The traditional Chinese spatial sequence is the typical layout of a Chinese church university, which follows a distinct axis and square courtyards. The composition of the courtyards and the individual buildings in the traditional revival style also tend to be symmetrical, with the centre as the axis. However, due to the size of the building, FJCU could only choose a centralised building design rather than the traditional Chinese layout [8].

4.2. The religious character of the main building

The Main Building of FJCU is one of the three most famous East-West buildings in Beijing at the time, and the other two are the Peking Union Medical College building and the Yenching University building. All three buildings were church universities, built in the Traditional Chinese Revival style, but with some differences.

In the case of the Peking Union Medical College, its architect Coolidge is from abroad. He had not yet studied traditional Chinese architecture in-depth, and his understanding of it is still rather partial and fragmented. Coolidge extracted many elements of traditional Chinese architecture and collaged them into his new building, such as the glazed tile hipped roof and the Chinese white jade balustrade plinths, which are exquisitely designed and of high construction quality (Fig. 6). However, there is still a large gap between the organisation and planning of the entire campus and the arrangement of traditional Chinese building groups. It is assumed that the architects' understanding of the essential structural parts of traditional Chinese architecture is still at a vague stage [9].



Fig. 6 Peking Union Medical College

The architecture of Yenching University is mainly modelled on the traditional Chinese official style, with its most distinctive features being the use of the traditional Chinese large roof and courtyard layout. In terms of layout, it is a significant improvement over Union Medical College. The architect Murphy also borrowed much from the Union Medical College in his design. The most notable feature is the use of a large roof in the traditional Chinese official style (Fig. 7). In terms of material construction, reinforced concrete materials were introduced, and walls rather than columns

were used for load bearing. The columns are freely arranged according to Western proportions, similar to the FJCU gatehouse design. Murphy's design of the buttresses is similarly a transformative approach from a single-storey to a multi-storey building. In terms of decoration and detailing, other traditional Chinese architectural details are introduced, such as window panes and wall patterns between windows. Traditional Chinese colour paintings are used to achieve a colourful decorative effect [10,11].



Fig. 7 Roof of Yenching University building

The Main Building of FJCU has more reconstruction than the Union Medical College building and the Yenching University building. Unlike Coolidge and Murphy, Gresnigt was a priest in addition to his role as an architect. Although FJCU was not established solely to spread religion, it had a direct connection with religion. Therefore, from the priest's point of view, the solemn religious atmosphere of Western church architecture that the building portrays is a very important aspect, in addition to meeting the functional requirements of use [3,12]. Gresnigt learned from a broader range of different types of traditional Chinese architecture, especially the walls, towers, and temples in Beijing, and reorganised them to suit his conditions and needs. However, some details of the architecture, such as glazed tiles, roof forms and plinths, are common to traditional Chinese architecture but are not directly transposed without much change. The architects of Yenching University and the Union Medical College were more concerned with the solidity and practicality of the buildings and lacked religious imagery.

4.3. Reasons for the emergence of the indigenous character

The architect Gresnigt was the determining factor in the specificity of the indigenous character of the architecture of FJCU. His dual role as missionary and architect enabled him to have an in-depth study of traditional Chinese architecture and a deep understanding of the religious atmosphere of Catholicism.

Before designing the Main Building of FJCU, Gresnigt had already designed several buildings in southern China and had gained a specific understanding of the traditional architectural culture of southern China. Through his fieldwork, he also found that many of the temples in China are beautifully set in and integrated with the natural environment, such as the mountains. Gresnigt used southern temples and shrines to reflect the Catholic religious atmosphere of the Main Building of FJCU. For example, in the design of the façade, while following the common Western principle of 'five sections horizontally and three vertically', the altar is placed in the centre, with a hipped roof in the middle, flanked by Chinese garden-style corridors, and a pagoda or city tower prominently designed at either end with another stylistic effect. A similar approach is found in Gresnigt's four major Chinese buildings, including the Main Building of FJCU [3]. These quirky design techniques stemmed from the foreigner's lack of understanding of the Chinese legal system. It interpreted Chinese tradition not only from the foreigner's perspective but also from the missionary's perspective, this dual perspective critical design approach that was relatively new in the indigenous adaptation of the time.

In addition, Gresnigt found that Chinese Confucian concepts had long been deeply integrated into people's daily lives and the Chinese's traditional architectural culture. He, therefore, argued that Western architectural forms should not simply be relocated to China but that it was more important to adopt traditional Chinese forms for the construction of Catholic churches, but at the same time to be creative to pass on Catholic culture while at the same time unifying architectural forms with Chinese culture.

5. Conclusion

In the context of the 20th century's Christian indigenisation movement, in order to distinguish it from the universities established by the Protestants, Gresnigt chose an important representative Catholic intention, the monastery, and combined it with the traditional Chinese intention of the city walls to form a Traditional Chinese Revival style building with Catholic characteristics. The main body of the building is brick and concrete construction. The internal layout is modelled on a Western monastery, with two floors enclosing an enclosed courtyard. The courtyard is divided into two square patios by the enclosure and the central building. Externally, the building is a tall walled city, with a three-storey corner tower standing at each corner.

The Main Building of FJCU is a particular part of the indigenous adaptation of Chinese church university architecture. In the indigenous adaptation style, Gresnigt blends the architectural imagery of city walls with that of a monastery to form a unique traditional revival style building. Gresnigt introduces a traditional Chinese roof and extensive classical Chinese decoration on the Main Building, and reassembles it according to his understanding of traditional Chinese architecture.

The design of the Main Building, however, is influenced by the architect's religious background and reflects a strong religious atmosphere, whereas in the case of Yenching University and the Union Medical College, which are also church universities, the professional architect's design takes little account of the school's religious background in the design of the building. The reason for this, however, is not that the architects were completely ignorant of the relevant design techniques, but rather the difference between Catholicism and Protestantism. Protestant churches, for example, are built in various ways and architectural styles and do not adhere to a particular stylistic approach. Catholicism, by contrast, is more serious in its religious traditions, and its architectural designs, even though they also incorporate Chinese traditions, are much more conservative in their approach, as is the case with church buildings.

References

- [1] Dong Li, *Studies on the History of Modern Chinese Church University Architecture*. Beijing: Science Press, 2010
- [2] Zhang Lin, Liu Lijing. A preliminary exploration of the "traditional revival" architectural style in the early 20th century: the main building of Fu Jen Catholic University as an example. *Architecture and Culture*, 2017(03):71-72.
- [3] Coomans Thomas. Dom Adelbert Gresnigt. Agent van de roomse inculturatiepolitiek in China (1927-1932). *Bulletin KNOB*, 2014: 74-93.
- [4] Liu Guopeng. The localisation of Chinese Catholicism: historical perspective, realistic situation and its dilemma. *Christian Religious Studies*, 2016(02):303-317.
- [5] Li Yinzhong. *Modern Church University Architecture under the Influence of Traditional Chinese Architectural Style: The Modern Architecture of Private Beijing Fu Jen University*. Chinese Residence, 2011(11):81-86.
- [6] Wang Junxiao. *A Study of American Church School Architecture in Beijing and Tianjin*. Beijing University of Architecture, 2019.
- [7] Luo Guohui, Liu Yingqi. A study on the roof forms of traditional revival university campus buildings in modern China. *Urban Architecture*, 2021, 18(21):116-119.

- [8] Lv Bo. A study of traditional revival campus forms in modern Chinese universities. Tianjin University,2017.
- [9] Li Meihui. Research on Architectural Design of Beijing Union Hospital in Various Historical Stages. Beijing University of Architecture, 2020.
- [10] Feng Gang, Lv Bo. A study of Henry Murphy's traditional revival style university campus design ideas. Journal of Architecture,2016(07):74-80.
- [11] Li Ruoshui. The elements of Ming and Qing governmental architecture in Murphy's "adaptive architecture". Chinese Cultural Heritage, 2020(01):79-88.
- [12] Rivinius K J. Die Katholische Fu-Jen-Universität in Peking im Dienst der Evangelisierung. Nurt SVD, 2014, 135(1): 122-160.