

The Flow of ‘Qi’: A Study of Feng Shui in the Chinese Mayor Mansion, Muntok - West Bangka

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ABSTRACT

Tjoeng A Tiam was the mayor of the Chinese under the Dutch Colonial Government in nineteenth-century Bangka, Dutch East Indies. He built a mansion, which is now registered as heritage, known as Chinese Mayor Mansion in the tin-mining town of Muntok. The building, as seen from the main street, is of Colonial Architecture; but the layout, decoration, and overall plot arrangement is a typical Chinese traditional courtyard dwelling, which design was based on the theory of Feng Shui. Feng Shui is a Chinese science of nature that studies how to best manipulate the flow of energy known as “Qi”, which operates the nature, to benefit mankind. The science has been utilized since the Song Dynasty Era (960-1279) to build palaces, tombs, important buildings, and commoners dwellings. The application of Feng Shui in the mansion is a bit different compared to the ideal form, e.g. placement of elements, plot orientation, and the composition of structures. This paper attempts to understand why such differences occurred, what was the purpose, and how the Qi is expected to flow in the mansion. Physical evidence of the built environment was collected and analyzed using the Feng Shui theory. The analysis shows that there are two different flows of Qi on-site which were affected by the two different architectures. By using the combination of architectures in his mansion, he managed to optimize the Qi on site and affiliated him to two identities: as an officer of the Colonial Government and a Chinese man who worked for the Chinese Emperor.

Keywords: *Feng Shui, Chinese Traditional Architecture, Chinese Mayor Mansion, Muntok, Bangka*

1. INTRODUCTION

In the Chinese district of tin mining town Muntok - West Bangka Indonesia, a sizable Colonial styled building belongs to the late Mayor of the Chinese, Tjoeng A Tiam, and his family stand in the corner of R.E. Martadinata Street. The colonial building is of Indische Empire architecture style as seen from the neoclassical elements adjusted to Indische culture. Indische culture came from Europeans living in the Dutch East Indies who mimicked habits of both European and indigenous aristocrats. In colonial architecture it was embedded in the design of a veranda. Veranda was an element copied from the French who uses them as space of entertainment and gatherings; added with a slanted roof the veranda became a cooling device suitable for buildings in the hot and humid environment. Indische Empire architecture refers to the neoclassical movement during post-revolution France and was brought by then Governor General of the Dutch East India Company, Daendels, who was in office 1808–1811. The neoclassical elements included in the design e.g. classical columns, thick white washed walls, entablature on top of the roof, large double pane windows and doors, marble floors and crown mouldings [1]. The Indische culture elements in this architecture such as large garden surrounding the building, a roundabout at the front of the

main entrance of the building, slanted roof over spacious veranda, and the symmetrical floor plan which consists of large hall in the centre and rooms at its both sides [2].

In the mansion we can see a large veranda with a row of Doric columns right from the Main Street. The walls are painted white, the ceiling is tall, and floor is spacious. The mansion facade has three large double panes doors at its centre and large windows arranged symmetrically. There are differences between this mansion and the common neoclassical or colonial Indische Empire architectures. Such differences are the missing entablature on the front edge of the roof, there is no furniture in the veranda, and no large garden surrounding the structure or providing a roundabout at front of its entrance. Instead, several Chinese decorative elements are viewed. First, large wooden plates painted in red adorned with golden Chinese letters are placed on top of the door in the centre of the main entrance. At both edges of the front side of the veranda are Chinese traditional stone lions. The ornaments display the owner’s Chinese identity; made the overall colonial architecture building appearance stands out.

The missing roundabout and large garden around the mansion is caused by the landscape design which is a type of traditional Chinese architecture known as courtyard house or *siheyuan*. The architecture of *siheyuan* is characterized by open courtyards in the middle of the site, surrounded by buildings or walls. The design focuses on

creating a spacious open space inside instead of outside, which is the opposite of Indische Empire which prefer large garden outside surrounding the building.

The combination of Colonial and Chinese traditional architecture in the mansion affected each other as seen on some peculiarities in the design. We have discussed the missing garden outside the colonial building, but there are more, particularly in the *siheyuan*. Such are the two main entrances on site which against the principal of having only single at the southeast corner of a *siheyuan* house and the placement of the tallest structure on site – which is the Indische Empire style building - at the front side of the plot while *siheyuan* usually put it far back.

The architecture of *siheyuan* is based on the science of Feng Shui which rooted in the principle of Yin Yang. Therefore those aforementioned peculiarities at a glance have contradicted Feng Shui theory thus sparked questions of what was the thought behind from theoretical view.

Since the building is located outside China, one might argue that it was due to the lack of knowledgeable practitioner, ignorant owner, or improper application of Feng Shui theory in the design. However the owner, Tjoeng A Tiam, was born and bred in China before he came to Bangka with his first son [3]. Also, there are decorative items in the mansion displaying Tjoeng's family affiliation to Chinese Imperial government and elite academy which shows that the family is well educated and held important position in the Chinese society.

The affiliation is seen on a plate at the western veranda which commemorates a Tjoeng becoming a member of Han Lin Yuan in 1871, awarded by the Chinese Emperor. Han Lin Yuan or Han Lin Academy is the most popular imperial academy established in the 9th Century Tang Dynasty Era to provide personal assistance to the Emperor [4]. In the main hall of the house are a pair of ancestral portrait of Tjoeng A Tiam and his wife wearing Qing Dynasty official uniform. On the front of his robe is an emblem with an image of flying egret and on top of his hat is a white precious stone. Both are accessories of a sixth level civil servant official of the Qing Dynasty Imperial government [5, 6]. Therefore the option of owner ignorance on Feng Shui is omitted from this research.

Chinese should be aware of Feng Shui considering their culture as highly superstitious people [7]. This is as observed by a Dutch scientist Dr. Johan Hendrik Croockewit who visited Bangka-Belitung islands in 1850 and documented his experiences there. He wrote that one example of this superstitious attitude was when Chinese workers refused to work in an underground mine before holding a certain ritual, as they believed that the dark tunnel was occupied by spirits [7]. This belief is part of Chinese ancient religion based on divination. They were taught that men are part of a cosmic arrangement and their lives will always related to the metaphysical such as gods and goddesses, spirit of their ancestors, as well as the natural environment surrounding them. Divination is used to transform uncountable metaphysics phenomenon into something man could calculates and manipulates for their benefit [8]. Even though it is called divination it does not concern with predicting future events. Instead, Chinese

divination gives probabilities of the future by referring to records of similar events in the past [9]. This is what Feng Shui, one of the divination methods, applied in Chinese architecture, does. Feng Shui was introduced to public during Song Dynasty (960-1279) yet the symbols and techniques it uses were actually available in the culture since ancient times [10]. It does not have strict form or interpretations, instead it varies depend on the school and the practitioners. It was also often abused as political tools throughout the Dynasties in relation to development projects such as when they rejected a railway construction because it contradicts the result of Feng Shui analysis of the location [10, 11]. Nevertheless the theory is still widely used in Chinese architecture.

There are two major schools of Feng Shui known as Form School and Compass School. Form School is the applied theory in *siheyuan* design; therefore this research will refer to the same. Form School concocted Feng Shui ideal model which analyse the metaphysical energy in natural environment to benefit the user of the architecture. As the name suggests, it focuses on the physical features on site as object of analysis. The metaphysical aspect in Chinese traditional architecture is considered as an energy that rules the universe known as Qi (Chi) and there are positive and negative types of it. The positive Qi should flow into the house and brings prosperity to its inhabitants while negative Qi should flow outward to prevent misfortunes to stay in the house. The flow of Qi is explained in the model. Therefore it is interesting to analyse why the peculiarities exists in the design based on the theory of Feng Shui. How it could work with the two different architecture styles. How does the Qi flow in the mansion?

1.1. Related Work

Mak and Ng published a research on Feng Shui as basis of an integrated architecture design [12]. The theory of Feng Shui was presented as steps based on four fundamental concepts. Form School Feng Shui which studies the geographical forms of the site was translated into a hierarchical Feng Shui theory applicable in creating an integrated design. The ideal form of geography according to Form School Feng Shui is that it should have Mountains and Hills at its back, the sand surrounding the site, and the running body of water at its front. Form school also analyse four mythological animal of Chinese Constellation and placed them in a compass directions. From the ideal model we see that the cave in the middle of the elements is the best spot according to Feng Shui. The basic model then translated into a diagram of a design criteria divided into outer and inner forms and elaborated into: (1) *Surrounding environment*, focusing in topography, front – rear – sides of site, street location, water view, and wind directions, (2) *External layout*, which are the site and building shapes, entrance, orientation, trees and ponds. (3) *Interior arrangement*, which are door openings, bed – living – kitchen – and bath rooms, and (4) *Internal layout*, which are the layout, doors, windows, room shapes, staircases, and ceiling.

Research on how *siheyuan* type residence evolves through time is provided by Liu and Awotona [13]. The Feng Shui application in *siheyuan* is similar to the previous reference, which defines an ideal site for a residence. It should be surrounded by higher land on three sides; preferably have a river nearby to ease draining; and to have an enclosed landscaping form. This form is related with how Qi flow into the house and how it could enhance the quality of life of the residents. The model of Feng Shui was designed with concern to the relationship between man, built, and natural environment. The square shaped *siheyuan* with courtyard within is related to the symbol of Earth as square and Heaven or sky as circle. There is also a saying that when man is close to the earth, he would be in a good health. The ideal site is very difficult to obtain today in urban China where available land plots are limited and people have to live in high-rise buildings, yet somehow the application of four enclosed walls among most things are still applicable as much as possible. At the same time, old *siheyuan* residences are overpopulated and have had been altered in the number of buildings on site, its form and arrangements that it is missing its quality in providing a healthy prosperous balanced life to its residents as initially attempted. This paper concluded that at the very end *siheyuan* is the ideal model of Chinese dwellings as it embodied the people's attempt to define their relationship with the surrounding environment.

Writing about this mansion is available. One research focused on the use of European column in the facade [14]. The mansion was also included in historical narration of Bangka, especially because of being related to the social economy of the tin mining town [3]. To our knowledge, research about the architectural aspect of the house including from the Chinese natural science such as Feng Shui point of view are not available yet.

1.2. Our Contribution

This paper presents the study of colonial building in a Chinese traditional landscape design by determining how the Qi flows on and analysed using Feng Shui theory. The combination of architectural styles and how the theory of Feng Shui affected them is presented from the Qi point of view. The research shows that the residence has two Qi orientations to optimise the Qi from the street in the west and the Qi from the river in the east. The two flows of Qi come from the two different entrances and they are regulated by arrangement of space in the land plot of the house. The owner affiliations to two different worlds, the Dutch and Chinese might have affected this decision as well as seen from how the different architectures have affected the Feng Shui design of the plot. This research may begin a traditional natural science approach towards Chinese traditional architecture in the Dutch East Indies, especially those that are owned by Chinese officials of the Dutch government.

1.3. Paper Structure

This paper begins with an introduction of the object of research and why the Feng Shui theory was chosen. Section 2 is the preliminary studies of the mansion in general, a short background history of its owner, the theory of Feng Shui, and the characteristic of Chinese Courtyard House *siheyuan*. Section 3 is the analysis of how the Qi flows according to the Feng Shui theory. Section 4 is the conclusion of the study and direction for future research.

2. BACKGROUND

2.1. Tjoeng A Tiam and his Mansion

Tjoeng A Tiam was a Hakka from Jiayingzhou area in southern China who came to work for tin mining industry in nineteenth century Bangka Island [3]. He was the owner of the Chinese Mayor Mansion now listed as heritage building and partially functioned as a museum. His sixth generation descendant from the main line, Mr. Tjoeng Tet Cun (Indonesian name: Hendra) is currently living in the mansion. Tjoeng A Tiam's career as an official began as Lieutenant for the Chinese in 1863, then as a Captain in 1879 and as Mayor in 1886 until his death in 1895. "Tjoeng A Tiam" is the name written in Latin, in official family tree and in western archives such as newspapers and books. This name however, does not exist in family heirlooms that are attributed to him.

In Tjoeng A Tiam's gravestone for example, his name was written in Chinese as "Tjoeng Jung Fong" [15]. This name is also written on a large wooden plate or *bian* at the top of altar. In the *bian*, it is said that Tjoeng Jung Fong rebuilt family altar in 1879 to house nineteen generations of Tjoeng Family. According to Mr. Tjoeng Tet Cun, the altar was brought from Tjoeng A Tiam's hometown in China instead of being rebuilt.

The red painted wooden plate mentioned earlier in the introduction is of a family member named Tjoeng Yen Lim made in 1871. Another plate was also made of him earlier in 1870. The 1871 plate is for his affiliation with Han Lin Academy while the other is for his achievement passing provincial level Imperial Examination. They are both placed atop of the central doors at western and eastern verandas of the colonial building that open to the main hall. Because the family altar is placed in this hall, it is considered as the most important room in this mansion [16]. Tjoeng Yen Lim's Han Lin Academy affiliation board is hung above Tjoeng A Tiam's own plate which stated his title "Mayor" in Chinese onomatopoeia "Ma Yao". Considering that hierarchy is very important in Chinese culture and that the placements of the plates are unaltered, this means that Tjoeng A Tiam himself regards the family's affiliation to Chinese government at a higher position than to the Colonial Dutch.

It is not clear on why Tjoeng A Tiam does not put similar plate under his name since according to his tombstone he

is also regarded as *Feng Zhi Da Fu* or Senior Grand Master to the Palace and he was a sixth level Imperial government civil official. His linkage to the government is apparent in his portrait at the main hall. In it, he is sitting on a chair wearing an official uniform, the standard pose for a government official portrait, showing his rank as a civil officer [17].

On a side note there are two Mayors who lived in the mansion. The other was his first son who came with him to Bangka from China, Tjoeng Fai Hioen. Fai Hioen was appointed as Lieutenant in 1887, Captain in 1896, and Mayor in 1910 until his death in 1915. Fai Hioen does not have any ancestral portrait wearing Qing Dynasty official uniform like his father even though his title as an official for the emperor was also written on his gravestone [15]. However this paper still refers to Tjoeng A Tiam as the Mayor and owner of the house based on the information from the family. The rank was not military; instead was created to bridge administrative issues between the Colonial governments with Chinese people on island. It is required as the amount of Chinese increased significantly since the eighteenth century along with the booming tin industry.

Tjoeng A Tiam's mansion was famous since it was built. It was the biggest structure in town and the architecture was initially only used by the European society. The impressed King of Thailand even wrote about it in his traveling journal when he visited Bangka in 1896 [3]. The interior of the mansion is also extravagant. The main hall floor is covered in granite stones and was at least a hundred and fifty metre square wide; and height is of five metre tall which are another characteristics of an Indische Empire architecture [2]. The sizeable structure and the lavish architecture are only small part of the complex. Further analyses shows that it contains more information on how culturally intricate the design truly is.

2.2. Feng Shui Theory and how the Qi flows

In Chinese *Feng* ‘風’ means ‘wind’ and *Shui* ‘水’ means ‘water’. A German missionary who lived in 19th century Hongkong, Eitel (1873), wrote a book that introduced this science to the west and stated that Feng Shui is basically a science of nature that is like the wind which we cannot see and water which we cannot grasp; in particular he said, it is a poetic, emotional, and reverential view towards the nature. Feng Shui was not created based on western style scientific research but on the beliefs that there is a major energy that rule everything on heaven (or sky) and earth. They believed that the heaven was created first and then earth which is the copy of heaven. They believe that to understand how the earth works, they should understand how the heaven or the unseen works. For example, through observing the five planets, it was the number of planet known by Chinese at the time, then one can understand the five elements on earth; or by observing the moon one can understand a mortal female biological cycle [10].

Feng Shui is rooted in Chinese ancient religion that relies on divination. Divination for the Chinese is a method of rationalising the unseen or the metaphysical, helping them understand and calculate the phenomenon better. Chinese divination does not predict future events rather they give probabilities of what might occur in the future based on what is happening today and what had happened in the past as recorded [18]. The divination helps them in making decisions in almost every aspect of their life including in architecture which is where Feng Shui became a part of. As they believe the major energy is ruling the nature, they attempted to use that very energy to benefit the built environment and its inhabitants. This means that the nature where the energy flows would be incorporated into the building design, focusing on getting the positive energies in and the negative out. The concept of integrating nature to architecture is not novel as humans are designed to be fond of nature from birth. We believe that nature is beneficial for us, we associate flowing water and lush greens with sense of tranquillity, we love pets as companion that could lower our adrenaline, and more [8]. Feng Shui is based on Yin Yang theory. *Yin* means ‘shadow’ and *Yang* means ‘light’. As previously explained on the creation of heaven and earth, the light is the heaven and the shadow is the earth. The letter *Yin* ‘阴’ contains ‘moon’ character, and *Yang* ‘阳’ has ‘sun’ character. The meaning, contrast, and correlation are the purpose of Yin Yang which is to reach unity between heaven and earth. The unity in Chinese architecture is translated into an undisturbed connection between the two, a point where the earth is ‘touched’ directly by the heaven, or sky. It is the courtyard, the main feature of Chinese traditional dwelling *siheyuan* or Courtyard House [19].

The auspicious spot to place the courtyard, in turns became the location of the house itself, as determined by Feng Shui. The Form School Feng Shui pictured Qi as a Dragon's Blood flows through the ridge of mountains. Rivers from springs flowing outward from those mountains are the dragon's veins, carrying the Qi at the direction of its course. Mountains would meet smaller hills and forms a cave or a sunken surface in between shaped like a horseshoe. This horseshoe meeting point is where the Qi is at its best quality, and is where the architecture should be built on [20]. This art of finding best location was initially used to determine burial site because Chinese people believes that their ancestor's afterlife would effect the live of the living descendants. The well being of spirit of their ancestors is ensured by burying them in the best place with abundant Qi, as well as worshipping them regularly and involving them in important events of the family. This is also the reason why the ridge of mountains carrying good Qi is called the ancestor, forefather, grandfather, and parents. The Form School Feng Shui ideal model is pictured in Figure 1 [21].

The auspicious horseshoe site is surrounded by hills and faces south direction labelled as ‘Bright Court’. A river carrying Qi is located at its front, left, and right sides.

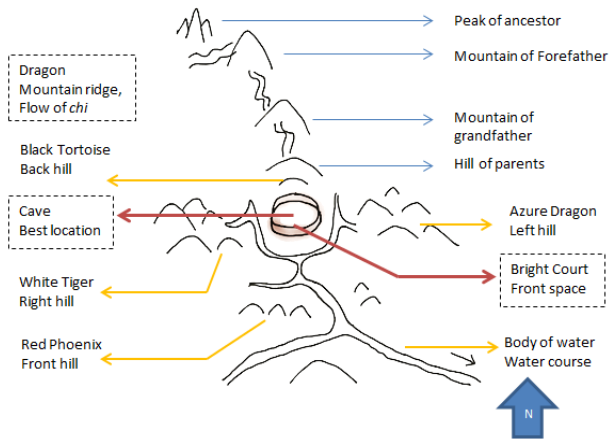


Figure 1 The map of ideal site according to Form School Feng Shui. (Redrawn from Mak and So, 2011)

The mythical animals on the hills surrounding the site refer to the compass. North is the Black Tortoise, south is the Red Phoenix, west is the White Tiger, and east is the Azure Dragon. The four animals represent four elements: the Tortoise for water, Phoenix for fire, Tiger for metal, and Dragon for the wood. As the site faces south the Azure Dragon would be at its left side and the White Tiger is at its right. This Dragon at its left and Tiger at its right are maintained even when the site does not facing south [20].

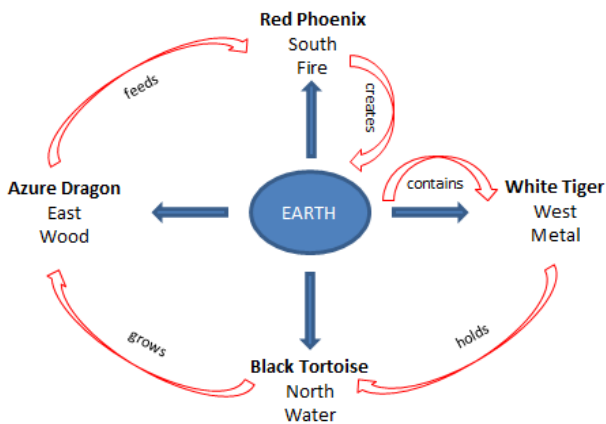


Figure 2 The nurturing cycle of the five elements and their compass direction. (Drawn by author from text)

There is earth element without animal representation. It is located at the centre, where the courtyard of a *siheyuan* should be. The location of the other four elements is determined by where they are most abundant. Fire element is at south direction because China is located at the northern sphere where the sun light and warm air blew from the south, the opposite of the cold water element at north. The wood is on the east because they are commonly found at the eastern region, so is metal at the opposite direction [20]. The nurturing cycle of the elements is illustrated in Figure 2. The location of the elements is

important in designing a house layout based on what elements the rooms represent.

3. ANALYSIS

3.1. How the Qi flows according to the site arrangement and building orientations

The mansion's site, illustrated in Figure 3, consists of several buildings symmetrically arranged at an east-west axis forming an enclosure with open spaces in the middle. The enclosing walls on four sides of the plot, the symmetrical arrangement, the invisible axis, and the courtyard in the middle are some of the characters of a *siheyuan* [22].

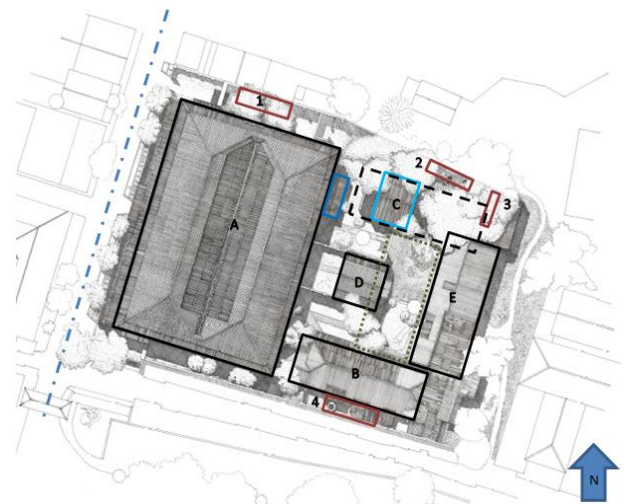


Figure 3 Site plan. (Source: K. R. Kurniawan, 2019)

The buildings are (A) main building (B) kitchen, (C) firewood storage, (D) central pavilion, (E) eastern wings, (1) Mayor's bath, (2) guest's bath, (3) family bathrooms, (4) washing area. The firewood storage was identical with the kitchen but destroyed during war against Japanese in 1940s. It was then rebuilt to the current form and became smaller than the kitchen. The dotted square between the central pavilion and eastern wings is a semi-open platform which now gone.

The open spaces between kitchen, pavilion, and firewood storage are the smaller courtyards. They are located at lower elevation ground compared to its surroundings. The main street is located at the west side of the plot, where the colonial architecture mansion is visible from. The eastern side outside the plot is a short dead-end alley and a block of buildings which separates it from a river and a traditional market. Another road is at the southern of the plot, but according to Mr. Tjoeng Tet Cun it was initially part of the mansion before given to the public sometime in early twentieth century.

The site has two entrances, at west and east side. They are visually connected by an axis dividing the site in two equal

parts, north and south. The existence of this main entrance is supported by the presence of two stone lions called *shishi*. Traditionally, they are the guardians that protect the inhabitants, bringing good fortunes, and symbol of the balance of the universe in Chinese architecture. They are usually placed at the main entrance of various buildings; from private residence to government offices, palaces, and tombs. The material used to make the *shishi* displays the owner's social status and wealth [23]. The 'Ma Yao' and Han Lin academy affiliation plates are mounted on this entrance. The three large doors, at the centre in the veranda, open to a large hall flanked by private chambers at both sides. Another three doors are placed at the eastern side of this hall that opens to the eastern veranda. The symmetrical layout of one large hall in the middle with rooms at its sides is typical in Indische Empire style building [2]. The rooms in this mansion however are traditionally arranged, separated between genders. The northern rooms are for female and the southern for male as signified by the placement of Tjoeng A Tiam and his wife portraits on its walls. The family altar is located in this hall, with its back against the central door at the eastern wall and its front facing the main entrance at the west. The front direction of the altar signifies the west as a main entrance [24].

The main street on the west is the urban version of water element that carries Qi when refers to the Form School Feng Shui ideal model [21]. The ideal entrance in a *siheyuan* however should be at the southeast corner of the plot. The southeast corner is considered as a good place to bring in the warmth in China [19]. Since the mansion is located at a tropical region, the entrance location is more flexible.

In accordance to the Form School Feng Shui, the site should be supported by a mountain element at its back. It can be in a form of mountain or, in urban setting, a tall structure [21]. The colonial building is the largest and the tallest structure on site and there is no towering structure or mountain at its back. The mountain element as the ideal model according to the Form School is missing thus weakens the west's status as main entrance.

The second entrance is at the eastern wing: a small door that opens to a narrow alley straight to the large courtyard. This entrance is smaller than the previous, more subtle, and is not decorated with plates nor *shishi*. Its function as main entrance instead of mere backdoor is supported by the existence of mountain element in form of the previously discussed colonial building.

The water element for this entrance is the road and river at the eastern direction. It is not very ideal according to the Form School Feng Shui as the vision to the element is blocked by several buildings. However the buildings were likely non-existent when the mansion was built in late 19th century thus does not obstruct the view from this entrance to the water element. The form of the entrance itself is also suitable to a *siheyuan*. The small sized door ensures the owner's privacy is protected from public [19]. The double water element in form of a road and a river can also be considered as auspicious for the site. The buildings arrangement on site based on their sizes, the form of the

entrance, and the complete element of water and mountain according to Form School Feng Shui, supported the eastern door as the main entrance.

The main difference of the entrances is that one is more lavishly decorated and grander than the other. The grand entrance at the west colonial building faces the main street while the subtle entrance at the east is not directly visible from the road. The plate stating the owner status as a Mayor is also placed at the west entrance. There is a similarity between the plate and *shishi* as well as the architecture of the west entrance which is their connection to the European government and society. The plate and *shishi* ensure that Chinese people requiring administrative assistance in regard to the Colonial government knows where the Mayor of the Chinese people lives. The colonial architecture appeals as a sign of wealth, progress, and link to western knowledge and government [2] for European society. Meanwhile according to Mr. Tjoeng Tet Cun, the eastern entrance was used by guests who came by boat, mostly Tjoeng A Tiam's fellow Chinese merchants. From here we could understand that the two entrances were meant to be utilized for two different cultures and purposes as required by the two identities the owner has.

3.3. How the Qi flows according to the three courtyards and a screen wall

Previously discussed here that a *siheyuan* design is based on Yin Yang principle of Feng Shui and that purpose of Yin Yang is the unity between the heaven and earth. It is embodied in the courtyard and so it became the most important element in a *siheyuan* [19]. Courtyards are usually rectangular and its amount varies between houses depending on the plot size. Courtyards in one house are mostly divided into outer and inner courtyard. The house's floor plan would follow the courtyard arrangement where servants' quarter and service areas at outer courtyard while family bedrooms, study room, and halls are at inner courtyard. Main hall area where the family altar is placed would be located at the end of the inner courtyard on the highest elevation of the land to signify its important status [25]. Courtyards of *siheyuan* in southern China are smaller than those in the north. Because of its small size they are usually called *tianjing* or light well. *Tianjing* is used to exhaust hot air from the interior, the opposite of large courtyard in the northern region's *siheyuan* that brings warm breeze in [26].

There are three courtyards in this mansion. Though the mansion is located in a tropical region, the courtyards are large and cannot be considered as *tianjing*. The smaller courtyards are next to the colonial building. They are separated in the middle by a small wooden pavilion. The other courtyard is the largest, located next to the smaller courtyard at their eastern side: see Figure 4 marked in green rectangle. The courtyards are placed aligned to the east-west axis. The courtyards arrangement is different with common *siheyuan* because of the double entrances this site has. To understand which one is the inner and

which is the outer, one cannot analyse from the entrance only instead should be looking into the courtyards' characteristics.

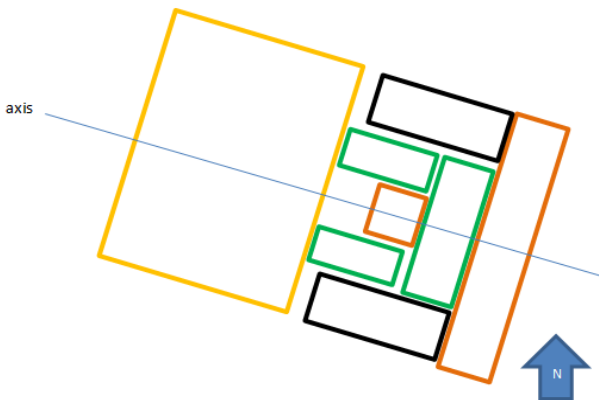


Figure 4 Diagram of buildings and courtyards in the mansion. (Source: Author)

Inner and outer courtyards are different in design. Outer courtyard is more utilitarian than the inner. Inner courtyard is considered as a private place, as it is closer to the chambers of the elders and female member of the family. Inner courtyard is designed to be a place for relaxation and meditation, giving sense of tranquillity from organic placement of shrubs and pathways [25].

So are the two smaller courtyards in this mansion as seen in Figure 5. Far right in the image is the colonial building's eastern veranda. An organic shaped pathway is seen runs between collection of flowery shrubs and small trees. A wall in the background separates the courtyard with the veranda and the wooden pavilion, connected by a small door with descending steps. The courtyard is at lower elevation compared with its surrounding structures.



Figure 5 View of northern side inner courtyard. (Source: Muhammad Iqbal, 2019)

The largest courtyard is considerably less-organic as seen in Figure 6. Here the roof once covering the pathway has gone, but the pathways itself and some columns which supported the roof are still intact and seen creating a route between the eastern entrance, the kitchen in the

background of the picture, and the firewood storage not shown in the picture.

The green areas between pathways are barren unlike the smaller courtyards. Roof is not a common feature in courtyard design as roofed pathways between buildings are usually created by the extension of the building alleys instead of a stand alone like in this mansion. The use of roof is then understood as an adaptation to local climate, providing comfortable shaded area without making the courtyard less formal in the design as well as ensuring that the purpose of unity according to Feng Shui is still fulfilled.



Figure 6 Eastern courtyard facing south (Source: Hedista Rani, 2019)

In Figure 6 a wall is seen on the right side of the courtyard. It connects the kitchen at south to the central wooden pavilion and the firewood storage at north. There are two openings that connect the outer courtyard to the inner courtyards. This outer courtyard is at the same elevation with the wooden pavilion and other structures, higher than the inner courtyards.

The position of the wall in the image signifies its function as screen wall, another characteristic of a *siheyuan*. Screen wall, or *yingbi* in Chinese, can be placed right after a main entrance or even outside of the house compound when the house site took a whole lane. Mostly it is placed between the outer and inner courtyard to block the view from passer-by when the entrance is open [27]. The *yingbi* in this mansion protects inner courtyard from public view when the eastern entrance is opened. The decoration of this *yingbi* helps us to understand which side of the *yingbi* can be considered as its front.

At the eastern side of *yingbi* are four large stone aquariums that can only be viewed from outer courtyard. At the centre of these aquariums are two bigger aquariums attached to the eastern wall of the wooden pavilion. The two aquariums are decorated with carvings of auspicious motifs such as phoenix bird and a *shou* character which symbolises longevity. The wooden pavilion itself has a contrasting facade in which the eastern is made of stone wall decorated with aquariums while the western facade consisted of undecorated wood planks as seen in Figure 7. This is interesting because the lack of decoration western facade is what people can directly see from the colonial building eastern veranda because they are at the same land

elevation. Aquariums are considered as water elements and according to Form School Feng Shui it is advised to be placed at the front of a site. Therefore their placement indicates that the eastern side of the *yingbi* and the eastern facade of the pavilion are considered as the front side.

The wooden pavilion has similar layout with the colonial building, of little hall in the centre and several chambers on its both sides. We think that it was functional to provide extra chambers while keeping the symmetry on site as the other side of the inner courtyards are already occupied by service buildings. Even though this pavilion is smaller than the colonial building, it is taller than the services buildings and the eastern wings signifying its importance. As discussed previously, the building's level of importance increases as the distance from the main entrance.



Figure 7 The central pavilion. Eastern facade (up) western facade (below) (H. Rani & author, 2019)

The location of inner and outer courtyards based on their design; the existence and location of *yingbi*; the wooden pavilion; and the additional information about the front side of the *yingbi* based on its decoration supported eastern door as main entrance on site. Qi is expected to come from this entrance, flowing to the western inner courtyard.

3.2. How the Qi flows according to the rooms

We divided the rooms on site into three categories: the bedchambers, the service area, and the public area.

Service area in general seems to be scattered throughout the land plot, yet they are grouped according to function and related elements. First are the bathrooms. There are three different bathroom areas each with their own well and several shower cubicles. Bathrooms, and toilet, are considered as water element; a place with a negative energy as the water believed to be carrying Qi out of the house. Usually the baths are placed separately from other rooms to prevent the spreading of this negative Qi. The custom might have been influenced by Chinese people relationship to bathing rituals in ancient time which was not really positive. They believed that taking bath on daily basis would make them sick, it was in fact related to the cold weather; and baths are reserved for once per five days only [28].

The separation of bathrooms with the rest of the house is also influenced by then underdeveloped sewage system [29]. Later when water heating method and proper sewage system were discovered the Chinese began to enjoy bathing activities more, visit public bath houses, and most of all wash themselves daily [30, 31], but the principle of separating baths area is still maintained. The ideal location of bathrooms according to Form School Feng Shui is at northern direction of the site where the water element is located. Placement of water element at northern area and the water element at southern area in front of the site are different. The water element at south is expected to have positive Qi, it should be flowing in form of river or street, which will flow into the house through the main entrance. The water element of bathrooms is the opposite; it is expected to carry negative Qi outside.

The bathrooms in the mansions are placed at the north end of the site. They are almost aligned in an eastern-western axis, likely to ease drainage system. They are also separated from other buildings on site. The location and placement of the bathrooms are considered proper according to Form School Feng Shui.



Figure 8 The well at the open area of the kitchen and the stove at few meters to the north. (H. Rani, 2019)

The well and washing area in the south is considered as part of the kitchen. Kitchen is both fire and water element but the fire is dominant in form of stoves. As bathrooms, it is suggested that kitchens are placed separately with other function of the house including dining to avoid clashing different types of Qi. Kitchen is best to have its own access, proper lighting and ventilation, and proper distancing between the contradictive fire (stove) and water (sink) elements [32]. The dominant fire element in the kitchen caused it to be placed at southern direction [33].

The kitchen in Mayor's house is at the southern side of the plot. It has its own access from the semi-open platform and the other is from the left side of the colonial building. The kitchen well and cleaning area are placed in open air at a distance from the stove in the centre of the room. The bad Qi from the burning stove does not collide with the outflow Qi from the well and cleaning area drainages, as seen in Figure 8. The large open-air ventilation increases the comfort by exhausting smells, smokes, and hot air out. The kitchen door in the outer courtyard provides the separation it needed; blocking the view of kitchen activities from private and common areas of the mansion.

Bedrooms are not detailed in Feng Shui other than being separated with service areas to avoid gaining negative Qi from various activities earlier discussed. In *siheyuan* however, bedrooms are arranged based on the patriarchal ideology and they differs in size and decoration. Rooms for elders are called as 'principal rooms' and are the largest; while those of children are the 'wings room' and are smaller in size. Since the ideal front face of a house is at the south, the wings would be located at the west – east direction, and principal room would be at the north. Rooms for female and male family members are also differentiated by the courtyards where they are placed. Female rooms and their activities would be limited to the inner courtyard, while males are at the outer courtyard and is less restricted [34].

The Mayor's house has several bedroom areas. First are in the colonial building. There are rooms on both side of the main hall. The family informed that these belong to the elders in the family, including the Mayor himself. Second set of rooms are in the pavilion. Back then it was reserved for guests. Lastly there are rooms at the eastern wing of the plot. Its original function is unknown and is currently used by Mr. Tjoeng Tet Cun.

The largest rooms are at the colonial building, followed by the rooms in central pavilion, and then the smallest in the eastern wings. Following earlier discussions on courtyards it is understood that principal rooms in the west are at the end of the inner courtyard, and wing rooms in the east are at the outer courtyard.

Interestingly the servant's quarter in Mayor's house are also located in the colonial building, though placed at the veranda instead of inside the building itself. The quarters are made of small wooden cubicle arranged in a line at the eastern veranda as seen in Figure 9, forming a contrast with the Doric columns where it is attached to.

According to Mr. Tjoeng Tet Cun, this eastern veranda is the centre of activities for the whole family. The Mayor was known to be fond of spending his time enjoying the

morning sun, meeting his colleagues, and resting in the afternoon in this veranda. The family's activities including dining are also held in this veranda, on the large table in the middle. The red wooden plates that says Tjoeng Yan Lim's title as a provincial level officer is placed on top of the central door in the veranda. It faces the east and can be seen by people coming from the central pavilion.



Figure 9 Servant's quarter (left) at the southern part of the east veranda. (Author, 2019)

The arrangement of bedrooms and the placement of service areas mostly supported the eastern as main entrance. Though the site is not oriented towards southern direction, the placement of service areas are still in accordance with their related elements. The Mayor's habit of using the eastern veranda for his daily activities is a sign that this veranda is considered as the 'pool' of Qi that flows from the eastern entrance. The servants' quarters might be placed in this area to ease services because it is close to the chambers of the elders and the centre of the family's activity.

3.3. The two different flows of Qi

It is understood that there are two different flows of Qi in the mansion; one coming from the western direction and the other from the east. To understand how the two different flows could work without obstructing or clashing further analysis on the overall elements of an ideal Form School Feng Shui is done. The water element that should be located at front of site is already present in form of Main Street in the west and another street and a river in the east as in Figure 10.

The mountain element for the western entrance in the colonial building is non-existent as there is neither mountain nor tall structure exists behind the site. While the mountain element for eastern entrance is the colonial building. The facing direction of the altar should also be put into consideration. By facing west, it supports the western entrance as the main entrance. By being placed at

the main hall, it established the colonial building as the most important structure on site that ought to be located at the far back of the site plan. Here we see a contradiction of the status of this colonial building, whether it is the front or back of the site.

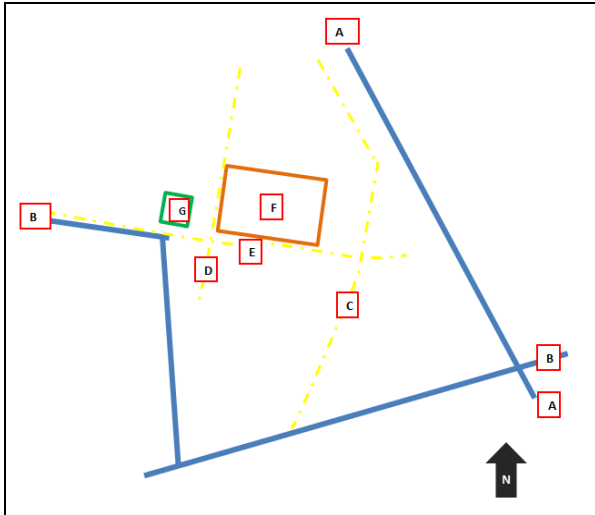


Figure 10 Streets in yellow and waterways in blue surrounding the mansion site (F) in brown coloured rectangle. (Source: Author, 2020)

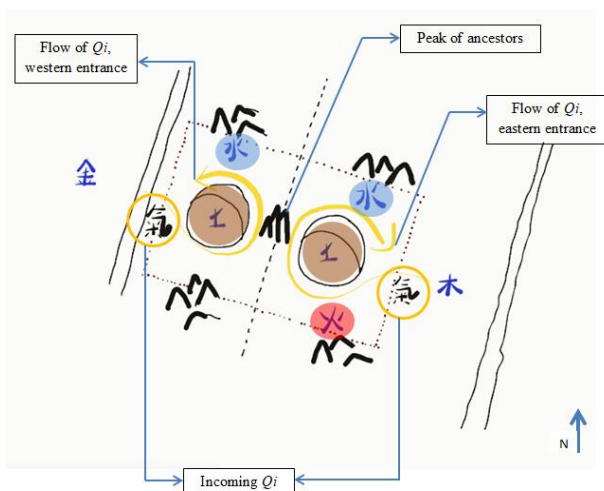


Figure 11 The two different flows of Qi and the placement of elements on site. (Author, 2020)

We proceeded by looking at the overall site plan and traced them to understand the placement of the elements as illustrated in Figure 11. Apparently the site can be divided into two equal parts. The first part at the western area of the site consists of the colonial building including its narrow perimeter. The second part at the east consists of the rest of the structures and the courtyards. Since the altar is placed at the eastern wall of the colonial building, ignoring the gap by eastern veranda, it is considered as being placed right in the middle. The importance of altar in a *siheyuan* made it located at the far back. By facing west,

the altar marks the back side of the western entrance and the eastern entrance, or the centre between the site's two parts. Thus, the mountain element for the western entrance is the altar itself. We omitted the rest of the site when reading the Qi that flows through this western entrance.

The mountain element for the eastern entrance thus should lie in the eastern part of the site. As previously discussed, the floor plan of the central wooden pavilion mimicked the colonial building. It is possible that this pavilion is the mountain element of the eastern entrance. The other fire and water elements have also occupied the proper location in the north and south area on site. With the completed elements, the flow of Qi can be read as flowing from both entrances in the east and the west, where each ended in the middle of the site before flowing outwards through the northern water elements.

4. CONCLUSION

Tjoeng A Tiam's mansion combined colonial architecture Indische Empire style with Chinese traditional *siheyuan*. The colonial architecture is used in the building facing Main Street and can be seen easily by public while the *siheyuan* design is applied to the site landscape and not easily recognizable unless from people entering the site from the opposite direction. The colonial architecture was a symbol of owner's prestige, wealth, and affiliation to the colonial government. Yet the identity on display is Chinese; i.e. the name plates and the guardian lion statues or *shishi*. The colonial design was adjusted to accommodate the *siheyuan* landscape: by being located at the site perimeter instead of its centre, to create the courtyards of a *siheyuan*. At the same time, the large openings, symmetrical design, and the sizeable structure were incorporated into the site's Feng Shui calculation.

It is done by creating two opposite entrances where two different direction of incoming Qi is welcomed into the site. By using altar as the back end of a site in accordance to *siheyuan* design and by dividing the site into two equal parts, the two incoming Qi could flows without obstructing or clashing with each other. The placement of altar at the main hall of the colonial building enabled it to utilise the symmetrical floor plan and its luxurious interior decorations properly. The large western entrance at the colonial building was not altered into a small sized one in *siheyuan* manner, but instead was followed by the other entrance at the east to create an axis thus maintaining both colonial architecture characteristics and *siheyuan* type landscape.

Even though the largest entrance is at the west, the Mayor was known to have his daily activities, including meeting his guests, done at the eastern veranda of the colonial building facing eastern direction. Here we see that the Mayor put importance to guests coming from the eastern entrance. Since the eastern entrance is small, not decorated, and is located a bit further from the road or the river, the guest entering them should be familiar with its existence. It is likely his fellow Chinese or, like Mr. Tjoeng Tet Cun said, merchants. The western entrance

then became more of a formal facade in relation to his works as a Mayor and of his prestige to be linked with the western knowledge.

Future research may focus on similar topic addressing other Chinese architecture built during the Dutch East Indies era. The structural title of Mayor for Chinese people is not specific to Bangka, thus the same title existed at many other regions in the Dutch East Indies. The result can be used for further studies on how a natural science belongs to foreign cultures underwent some adaptation to locality and identity of its owner.

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