

Architectural Extinction

The westernization of traditional housing before the 1930s in Thailand.

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Project : AR2A011 History Thesis

Abstract

Is that *Ruean Thai* facing extinction? Despite this, traditional Thai accommodation represents Thainess as Thai people believe. Yet it is rarely found, particularly in Bangkok's capital city. *Ruean Thai* seems obsolete, unnecessary, and complicated design from a modern perspective. Some traditional Thai houses still exist, but many are old and neglected and will devalue over time. How has traditional Thai housing been devalued? Modernization is undoubtedly one factor that influences the alteration of Thai residential design. Conversely, what if it began before modernization after the twentieth century?

Between the 15th and 19th centuries, there was extensive Western colonization across the world. Colonization happened during the Ayutthaya period, from 1350 to 1765, until the relocation of the capital city to Bangkok from 1765 to 1930. The introduction of Western culture in Siam/Thailand began in 1517, establishing Ayutthaya's first trading contact with western nations. As a result, westernization had a substantial role in Siam's development and transformation in every field, including the Thai domestic sector. By influencing Culture, Political, Christian religion, new constructions, and materials from the other side of the world into Ayutthaya. The hypothesis of the extinction of *Ruean Thai* is not only about westernization but also the consideration of the Siam political and social aspects. The transition from Feudalism in Ayutthaya (1350-1868) to before the beginning of democracy (1868-1934) is crucial to understanding how feudalism and patriarchy caused a shift and devaluation in traditional dwelling identity? During the colonial period, how did political and social issues influence the designs of traditional Thai households in terms of architectural orientation and ornamentation vocabulary? What impact does the decline of feudalism and the more equality society has on building orientation?

Towards investigating the *Ruean Thai* extinction process in the context of Thailand's political history, this thesis also explores and analyses the transformation between three different Thai housing characteristics. Namely Thub Kwan Royal Residence (1911), The House on Sathorn (1899), and Baan Na Navee (1887). In order to examine which internal or external factors in which period directly affected the alteration of *Ruean Thai*.

Keywords: Traditional Thai architecture; Housing; Westernization; Political transition; Feudalism; Patriarchy; Thai identity.

Introduction

What contributed to the loss of the identity of Thai dwelling? Even though Thailand is a non-colonized country but has been influenced by a considerable colonial design and construction, especially by Western countries. Therefore, to understand this potential of losing traditional identity in a domestic place. We must consider the political transition in Thailand and the influence of westernization during the colonization era. From the Divine Right of Kings and Feudalism (1350-1868) until before the beginning of Democracy (1868-1934). Presumably, this transition has a significant role in how the condition of feudalism and patriarchy impact a change in traditional architecture identity.

This research investigates the process of disappearance of Traditional Thai identity in residential buildings concerning the valorization of western architecture and the devaluation of Thai architecture. How have political and social factors affected the designs of Traditional Thai houses in terms of building orientation and ornamental vocabulary during the colonization period? How did the Husband-and-wife Law before 1932 substantially play a role in *Ruean Thai* or Thai housing planning design? What consequence does the decline of feudalism along with the democratic society have on building orientation? This research also examines the relationship between *Khung Nang*, or high-ranking noble, and Westerners. Uncover the way *Khung Nang* utilized their residence as an object to represent affluence, political, and social status that impact the design in this present time.

Ruean Thai has gradually transformed throughout Thailand's history due to the world-historical events and Siamese-Westerner connection. Three different examples of the building characteristics built from 1350 to 1930 could portray and compare the alteration of building arrangement, ornamental, and dimensions. The first case study is the Thub Kwan Royal Residence, the traditional design of *Ruean Thai*. This building design was initially associated with Thai cultural beliefs, crafting skills, and climate as a fundamental aspect of *Ruean Thai* design. Secondly, there was a widespread colonial style in the domestic building during the westernization era. The House on Sathorn is a compelling model to indicate this characteristic. The last characteristic is a hybrid style in Château William or Baan Na Navee, integrating Thai and colonial styles.

This paper combines primary and secondary sources of information. Primary data has been collected directly from both national and international archives. The international archived mainly for historical images that Thailand did not have information in the past, such as the *Ruean Thai* image in 1690 from the Engelbert Kaempfer's diary book, *The history of Japan, and a description of the Kingdom of Siam*. There are various methods for national archives that can be accessible for case studies planning. First, the Thub Kwan Royal Residence plan was collected from the archived book *Ruean Thai Derm* (The Traditional Thai accommodation) in 1975 by Ruthie Jongjairuk. Second, the Fine art department of Thailand did a planning survey and registered The House on Sathorn as a historical building in 2000. Lastly, For the planning

of Château William or Baan Na Navee, the researcher interviewed the inheritor of Baan Na Navee, Pim Wanaprapa. She gathered information and sketched the plan of this building.

Secondary data has been gathered primarily from books, thesis, and dissertations. One of the most critical books representing how the political aspect can connect to specific elements in architectural design is the *Political Theory and Architecture* book. The authors Duncan bell and Bernardo Zacka mentioned many topics regarding the composition of buildings that could control human behavior, the decoration vocabulary, scale, dimensions, and material implicitly and ambiguously with politics.

To examine the shifting of Thai houses design, the arrangement of the three chapters also follows the historical timeline. It started from the Ayutthaya period, which has obtained all the ancient traditional culture until King Rama VI (1925), which was the time of the decline of feudalism. The first chapter obtained mainly about the fundamentals of Thai Architectural identity. It indicates the internal factors of Thai traditional culture, politics, and society within the dwelling sector. The second chapter elaborates on the relationship between Westerners and Siamese people, from the beginning of international trading in the Ayutthaya era in 1511 until 1854. Also, the first establishment of colonial housing design in Siam. Continuously of the historical timeline, the third chapter indicates the commencement of the political transition from hierarchy to equality. For example, the new household regulation allows the husband to have only one wife. The equality value also opened for the new residential combination design methodology, between Thai and western-style and the mix-material application.

As an assumption, the extinction of Thai uniqueness in dwelling initiated mainly from the consequence of feudalism and patriarchy in the absolute monarchy that revised the behavior and treading in Thai society, which directly influenced the transformation of residential architecture until the present day.

Chapter I Traditional Culture before the process of Westernization

The lack of archival information

Regarding the emergence of Thai traditional houses, there was no record of the history of Thai dwellings in the pre-Ayutthaya period until 1683. Engelbert Kaempfer, a German writer, documented and described Ayutthaya in his travel diary, *The history of Japan, together with a description of the Kingdom of Siam* (1690)¹, while he voyaged to the Siamese coast between 1 and 10 June 1690, then continuing his journey to Japan. He spent his time in Siam interviewing long-term inhabitants and creating a series of drawings. His diary mentions some aspects of Thai houses and makes a series of sketches in chapter two of *The Court of Siam*, declared (Figure 1):

The House in the common Villages, that stand upon firm Ground, are generally built of Bambous, reed, planks, and other ordinary stuff; some of the Houses in the villages along the banks of the river stand on pales a fathom high (1 fathom = 6 feet), that the waters, which overflow the Country for some month, may freely pass under the houses.²

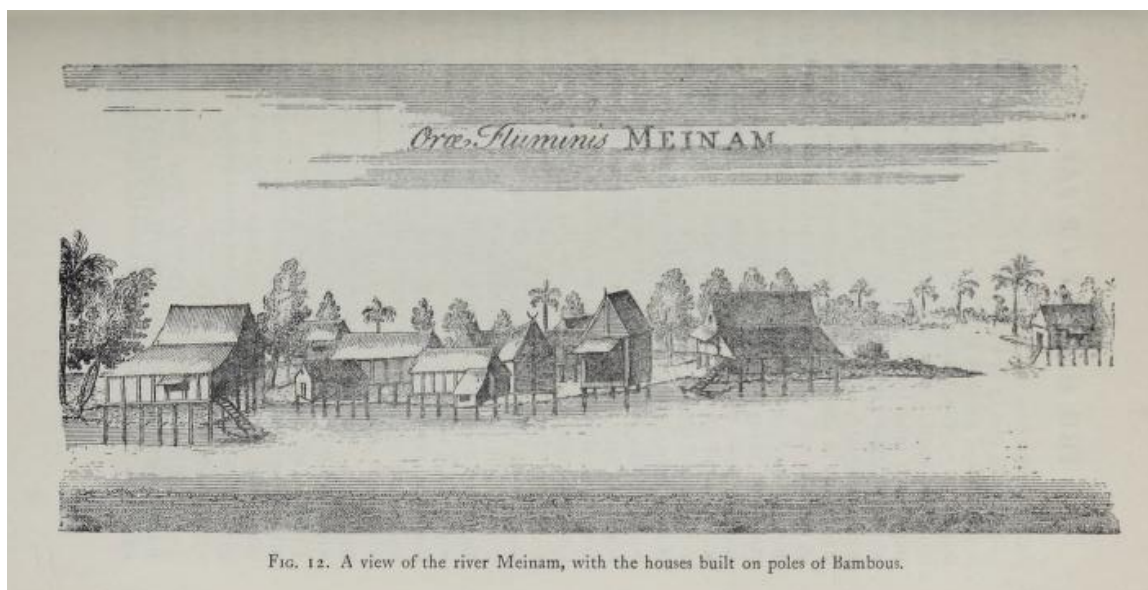


Figure 1 Engelbert Kaempfer's sketch represented Ayutthaya's residential area in 1690.
Source: In the book of *the history of Japan, together with a description of the kingdom of Siam*, 1690-92: 49-53.

¹ Engelbert Kaempfer, *The history of Japan, together with a description of the kingdom of Siam* 1690-92 (Glasgow: The University of Glasgow Press by Robert Maclehose & Company LTD. For James Maclehose and Sons, 1906), volume 1, chap. 2, 49-53.

² Engelbert Kaempfer, *The history of Japan, together with a description of the kingdom of Siam* 1690-92 (Glasgow: The University of Glasgow Press by Robert Maclehose & Company LTD. For James Maclehose and Sons, 1906), volume 1, chap. 2, 49.

Even though the first person who collected the information about the history of Thai houses as an observer did not include all the background behind the housing design, his archived proof of the origin of Thai houses characteristics since the Ayutthaya period. In comparison, Siam did not have an official document about the narrative of the Thai house or *Ruean Thai*. Since the Burmese–Siamese War in 1767 and the relocation of capital cities, all the national archives must be reconsidered and reconstructed. In the Rattanakosin era, two considerable archives accumulated complete details of *Ruean Thai*, namely *Ancient history of Thailand, in Chapter Three, the culture of Constructing Traditional house* (1950) by Yong Satiengkoset³ and *Ruean Thai Derm* (The Traditional Thai accommodation) (1975) by Ruthie Jongjairuk.⁴ Both of these books are crucial evidence for investigating the original design of Thai residences and the primary reference of the next part to understand the traditional method.

The fundamentals of Thai Architectural Identity

When researching Thai housing's cultural heritage, there are two main factors of the building orient and ornamental vocabulary as mentioned in the *Political Theory and Architecture*⁵ book. The book describes how both aspects correlated directly to the political and social context, which is a reliable source for synthesizing two traditional architectural books from Yong Satiengkoset and Ruthie Jongjairuk. More than 200 years ago, the design of the Vernacular Thai residential area was initially associated with climate, geography, agricultural purpose, material, traditional culture, and ancient beliefs, which all these purposes have always been bound with Buddhism values. Because the conventional authority of Thai Kings must preserve and support Buddhism⁶ and a strong belief in the Divine Right of Kings among Siamese/Thai citizens, with approximately 95% of the Siamese population following this Theravada Buddhism.

Ruean Thai was mainly constructed near the river, an essential basis for agriculture, food, and transportation. By utilizing stilts, protecting the negatively impacting from flood or wild animals. On the upper part, Traditional Thai dwellings are frequently designed as a group of single-story timber structures because Thais consider the head the most sacred part of the body; building a house with more than one story is inappropriate. Likewise, the head of the bedside should not face the west, which is the direction of the dead, in contrast with the east, where the sunrise is the best direction for the Buddhist Tabernacle⁷.

The capability of demountable timber structures⁸ in traditional Thai houses allows one *Ruean Thai* group can be adjusted starting from two and extending to six units or more and connected

³ Yong Satiengkoset, *Ancient Traditional house history of Thailand* (Kong Thahan Nhon Publisher, 1950).

⁴ Ruthie Jongjairuk, "Thub Kwan Royal Residence" In *Ruean Thai Derm* (The Traditional Thai house) (University of Silpakorn, 1975).

⁵ Duncan Bell and Bernardo Zacka, "Architecture, Materiality, and Politics: Sensations, Symbols, Situations, and Decors," in *Political Theory and Architecture*, (Great Britain: Bloomsbury Academic, 2020), 277-305.

⁶ Neil A. Englehart, *Culture and Power in Traditional Siamese Government* (Southeast Asia Program Publication, Cornell University, 2001), 108.

⁷ Yong Satiengkoset, *Ancient Traditional house history of Thailand* (Kong Thahan Nhon Publisher, 1950), 1-5.

⁸ Saithiwa Ramasoot, "Dismantle, reassemble, and modify: An adaptive reuse of the traditional Thai house" (PhD diss., University of Pennsylvania, 2008).

by "Chan," the outdoor terrace. This massive outdoor terrace could reach approximately 40-60 percent of the total space of the house, depending on the variation of the housing unit size and quantity.

The Thub Kwan Royal Residence, constructed in Nakhon Pathom province in 1911, provides insights on this issue. Ruthai Jongjairuk's planning drawings of the Thub Kwan Royal Residence portray the residential function's orientation and size (Figure 2). With this quantitative data, the table reveals the measure comparison between the central and support function in order to investigate the percentage and usability in each part of the house (Table 1). For instance, the four units of the primary function situate along with the four cardinal directions. The two largest Bedrooms units are along the North-South direction, while the western and Eastern side is for Hall and Kitchen. It represented the similar criteria as Yong Satienkoset mentioned in his book; as a case in point, the bedrooms situated in the northern part and avoiding the west side adheres to traditional belief. Eight units are connected by a massive terrace area or *Chan*, reaching approximately 43 percent of the total area (Figure 3). Besides, each primary function also has a transitional or corridor area in front of the units. The size of this corridor is roughly 75 square meters, presuming to create a hierarchy for the dweller's privacy.

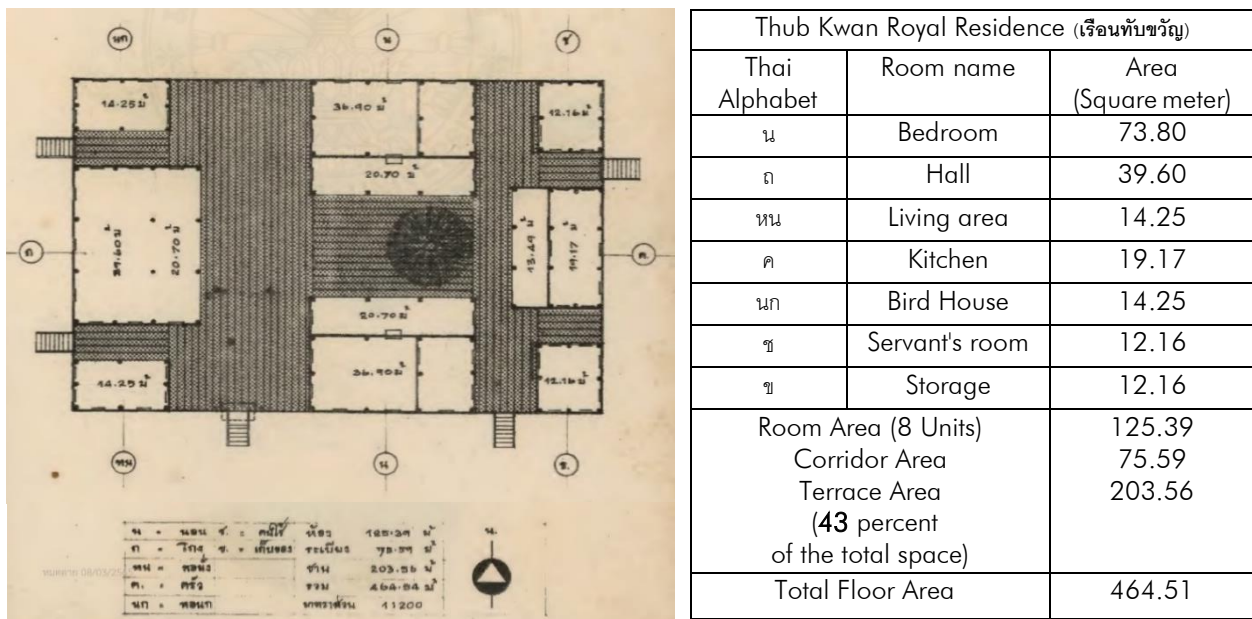


Figure 2: Ruthai Jongjairuk's drawing of the Thub Kwan Royal Residence and the area in square meter of each function in 1975.

Source: *Ruean Thai Derm Book* (Ruthai Jongjairuk, 1975): 119.

Table 1: The Thub Kwan Royal Residence function area in a square meter.

Information source: *Ruean Thai Derm Book* (University of Silpakorn, 1975): 119.



Figure 3: Chan or Terrace area in The Thub Kwan Royal Residence

Source: *Asa conservation award* (Published: 19 June 2016),
<https://asaconservationaward.com/index.php/2016-06-13-15-21-44/building-2527/26-phra-tamnak-tab-khwan>



Figure 4: The Thub Kwan Royal Residence in 2021

Source: *Muangboran museum*, <https://www.muangboranmuseum.com/landmark/the-dvaravati-house%E2%80%A8/>

Another component of the architecture that contributes to the distinctiveness of the residence is the 42 embellishments in *Ruean Thai* in books from Yong Satiengkoset (Figure 5). Since the connectivity of each element without glue or nail for joinery, the entire structure reinforced each other's components. Regardless, the sole roof ornaments that seem to be made especially for aesthetic purposes is *Panlom*, a long, narrow board attached and covered to the edge of a roof in front of a gable. It symbolized the delicacy of the Thai craftspeople's proficiency, and it has completed the *Kanok* pattern, which is one of the crucial foundation patterns in Traditional Thai painting. This pattern of *Panlom* could make the attractiveness difference between Thai houses depending on the artisans' mastering and the owner's budgets.

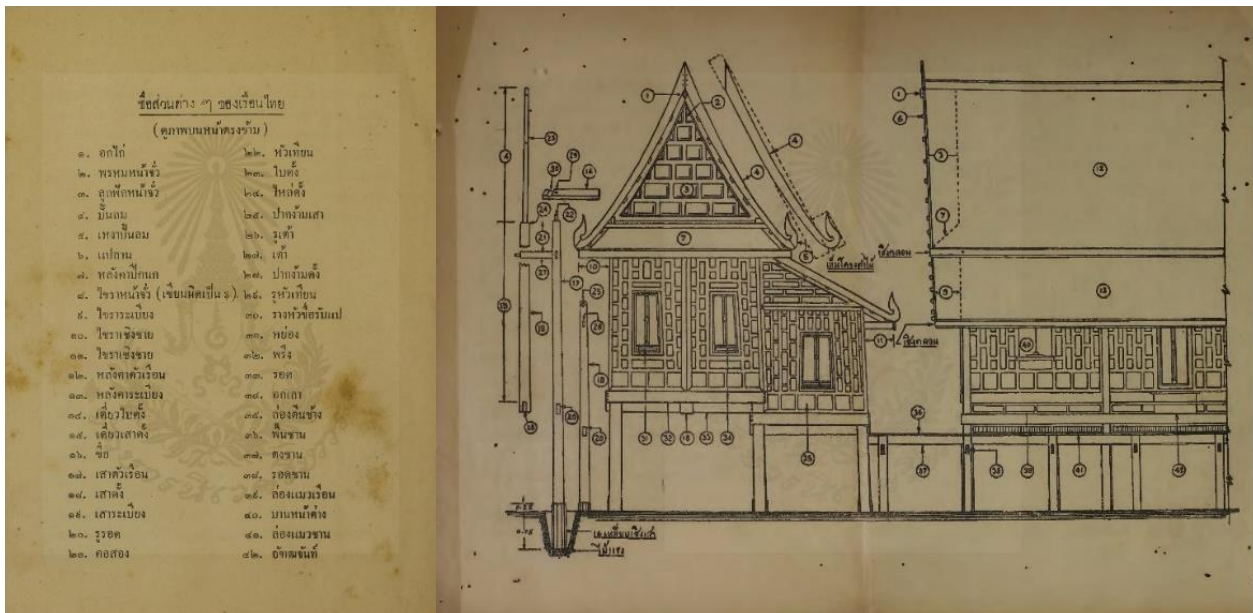


Figure 5: The names of the elements in the Thai house from Ancient Traditional house history of Thailand archived. Source: Yong Satiengkoset, Ancient Traditional house history of Thailand (Kong Thahan Nhon Publisher, 1950), 18-19.

The available information in both books has purely indicated how vernacular architecture tectonic powerfully interrelationship with ancient culture and religion. Although it has illustrated that the adaptability of the construction method allows the homeowner freedom to modify both the spatial organization and building object. The housing scale was limited by sociocultural. Citizens, for example, should not build their residences larger than the palace under the Divine Right of Kings culture. The condemnation would be upon those who did not obey society's rules.

The Siamese *Sakdina* (feudal) system and its patriarchy

During the considered most prosperous period of Siam/Thailand, the Ayutthaya period from 1351 to 1767, was the beginning of the *Ruean Thai*'s expression as an object of power and social status. The transformation of space and building ornament in Thai domestic architecture occurred significantly due to the feudalism regime and male superiority. Regarding

the high-rank nobles have the power in political leadership, moral authority, social privilege, and property control over the housing design.

There are several hypotheses from the book *Political Theory and Architecture*⁹ regarding the relationship between architecture and political aspects. The first assumption about the ornamentation, as aforementioned of *Panlom* in each house, can be adaptable due to the allocation on finding the high artisan skills. Additionally, the new material can describe the wealthiness of the host, for instance, from Kaempfer's journal of travel¹⁰ about the materials of the roof. If it is for the peasants, they apply Bamboo or reed in opposition to the high-rank nobility using the clay roof tile to design such as imbrication pattern. Secondly, the variety of the unit quantity also exemplifies the social class hierarchy mainly in three categories. Ascending order from most minor to most prominent: the single house, group house, and the official house or stilt house for government officers.

In terms of the political situation, Men continue to be on top of the social hierarchy as well as concrete legal evidence leading to the legislation on the qualities of husband and wife, known as "*Phra Aiyakarn* in the essence of husband-and-wife law,"¹¹ was enacted in 1316 until 1910. This regulation allowed men to have multiple wives, which was common in Thai society. However, this legislation also specified the female's illegal regulation of having more than one spouse at the same time. If the woman already has a husband, she cannot marry again until her husband dies. The old family law classified wives into three groups based on how they became wives: *Mia Klang Muang* or the official wife, *Mia Klang Nok* or the minor wife, *Mia Klang Thasi* or the slave wives. This rule directly impacted the expansion and layout of the traditional Thai house depending on the number of wives the husband had.

The husband was responsible for allocating each wife's categories to an individual housing unit and the household role. The adaptability of the Thai house allows the husband the multiply housing unit as much as his affluent can reach. Therefore, the more residences the husband has, the more power he possesses. Another reason why females were considered inferior to men is that the Thai heritage culture of the wife is the property of her parents and husband. At the same time, it was illegal for education for women in the past. they permitted learning only the household chores. These variables involve the functioning of Thai houses, which have begun to evolve in response to societal situations.

⁹ Duncan Bell and Bernardo Zacka, "Architecture, Materiality, and Politics: Sensations, Symbols, Situations, and Decors," in *Political Theory and Architecture*, (Great Britain: Bloomsbury Academic, 2020), 277.

¹⁰ Engelbert Kaempfer, *The history of Japan, together with a description of the kingdom of Siam 1690-92* (Glasgow: The University of Glasgow Press by Robert Maclehose & Company LTD. For James Maclehose and Sons, 1906), volume 1, chap. 2, 49-53.

¹¹ "Phra Aiyakarn in the essence of husband-and-wife law" in *Pramuan Kotmai Rachakan Thi Neung Kotmai Tra Sam Duang* [Three Seals Law], (Bangkok: Reuan kaew kanphim, 1986), volume 2, 205.

Chapter II The commencement of Westernization in Siam

Farang in the Kingdom of Siam (1511-1688)

In the Ayutthaya period, *Meinam*, or river, was the unquestionably crucial element of The Kingdom of Siam. It conforms to multiple purposes such as merchandising, living, transporting, and protecting the city from the enemy, including connection with the other nations. As one of the virtual trading harbors among Southeast Asia countries, Ayutthaya, in the sixteenth century, had the first exchanging international relationship. Starting with Portuguese in 1511, Dutch in 1604, England in 1612, Denmark in 1621, and French in 1662.

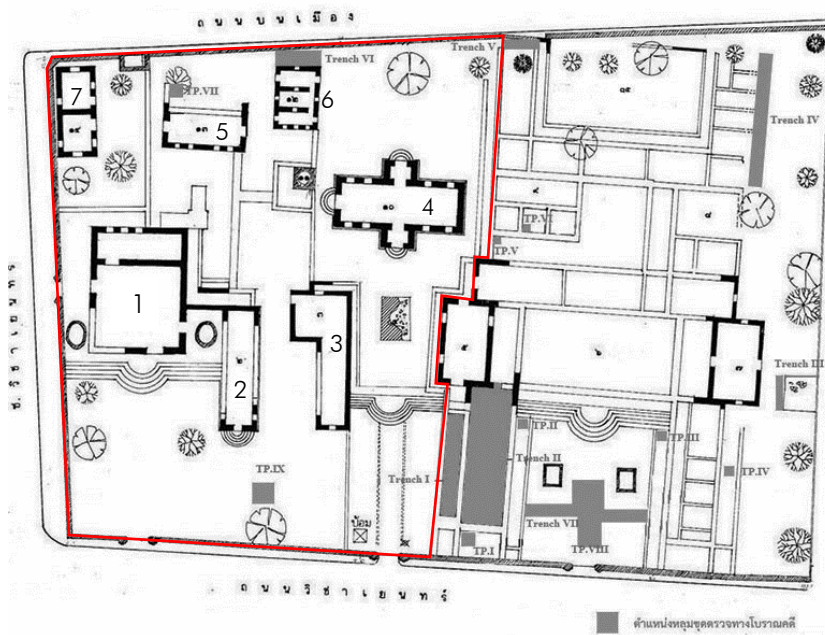
Between the sixteenth and seventeenth centuries, the presence of *Farang* or Westerners was not exclusively about commerce. The King also considered importing innovations, materials, and technologies via missionaries and mercenaries from the other sides of the world. This opened an opportunity for talented Westerners to be *Khung Nang*, or High-rank nobility, employed under the King's command. Due to Narai's tolerance for foreigners, permitting missionaries were allowed to flourish Christianity and establish a seminary in the kingdom. For instance, the Greek adventurer Constantine Phaulkon (1647-1688) became the prime counselor to King Narai. He conveyed his western expertise and his connection with the French empire, which was beneficial to the growth of international commerce for Siam. These circumstances progressively involved *Farang* into Ayutthaya's internal and external politics and culture.

Besides, King Narai permitted him to construct his Renaissance-style residence to accommodate the French Ambassadors in 1683 (Figure 6).¹² His residence is Siam's first European architecture, using brick and cement materials. The arrangement of this dwelling layout differs from *Ruean Thai* that each housing unit is not connected by Chan but rather by the outdoor area between buildings (Figure 7). Also, the location of each function is randomly spread in the title deed. It was designed sequencing from the most crucial function, such as the accommodation area near the front entrance. At the same time, the back of the house is mainly the service function, unlike the centralization plan in Thai houses. *Phaulkon's* residence is the starting point of the new design and perception of domestic architecture in Siam.

¹² "Pinai Sirikiatikul Architects who created images of the past from the ruins. 'House of Wichayen'," *Matichon*, Faculty of architecture, Silpakorn university, accessed April 1, 2022, https://www.matichon.co.th/prachachuen/interview/news_982918.



Figure 6: Phaulkon's residence archaeological site in Lopburi
 Source: The National Archives of Thailand (ภ 002 หมายเหตุ 53/11, 1953)



1. Accommodation for Phaulkon and his wives
2. Dining room
3. Accommodation for French Ambassadors
4. Church
5. Kitchen
6. Bathroom
7. Horse stable

Figure 7: Planning of Phaulkon's residence in Lopburi in 2020
 Source: The Fine Arts Department,
<https://www.finearts.go.th/main/view/19098>- ไซปริศนาห้องลับ-บ้านหลวงรับราชทูต-เมืองลพบุรี

Abolishing and reviving the Western culture. (1688 -1868)

Since Siam had strong traits of nationalism and ethnicity for more than 1,500 years, many Siamese people disagreed with King Narai's intention to develop the country by utilizing western knowledge. With the addition of the confrontation of new modern culture against the oldest tradition in Buddhism. After King Narai died in 1688, Phra Phetracha became King and ruled the "anti-foreign, anti-Christian Revolution." He noticed their gradual partial political control over Siam, such as converting Siam's Buddhists to Christianity and forcing some foreigners to leave the kingdom entirely, predominantly missionaries and mercenaries. After the 1688 revolution, western culture seemed to reduce significantly from the land of Ayutthaya. Everything appeared to be returning to the conventional manner of living. In association with the Burmese–Siamese War in 1765¹³, Ayutthaya's second fall led to relocating the new capital city, namely Bangkok.

In 1782, the founding of the Rattanakosin era and the city of Bangkok was the new era of the Chakri dynasty. Because of the tremendous adjustment for Siamese people after moving to the new environment. Correspondingly, the disappearance and destruction of the national documents after the war. King Rama I, or the first Chakri king, had legislative Drafting and revised the new country's regulations, the *Three Seals Law*¹⁴, which unavoidably maintained the principle from the Ayutthaya period. The main focus of the country's underdeveloped between 1782 to 1851, During the reigns of Rattanakosin first three kings appeared to have a diminishing concentration on the western development direction.

Apart from the *Three Seals Law*, the written histories documents were only accessible to the upper classes. As a result, there was no broadly historical documentation back then, including information on Thai dwellings from 1782 to 1851. Yet, handwriting was not the only method to demonstrate history since Thailand has many talented craftspeople in many fields. Such as wall painting and timber carving, which were applied pervasively in Buddhist temples. On the right-hand side wall above the entry door of Kanlayanamit's Temple is a historical mural painting of a *Ruean Thai* during the time of King Rama III (Figure 8). This artwork is crucial evidence for exploring the accommodation design in the period of King Rama I to King Rama III that is still similar to the Ayutthaya Thai household.

Again, in the 18th century, colonial powers emerged after the vast British expanses of territory in Southeast Asia after they launched official territorial claims in India in 1854. The rising of British imperialism started to be penetrated into Siam. The neglect of The First three King and Siamese governors on *Farang*. However, it was becoming clear that dealing with foreigners was unavoidable. When King Rama III was unwilling to accept an international arrangement with Henry Burney's British expedition, his ministers and close relatives reminded him that:

¹³ Helen James. "The Fall of Ayutthaya: A Reassessment." *Journal of Burma Studies* 5 (2000): 75-108.

¹⁴ *Pramuan kotmai rachakan thi neung kotmai tra sam duang* [Three Seals Law], Vols I and II, (Bangkok: Reuan kaew kanphim, 1986).

The British [colonial] borderlands were expanding closer [towards Siam]. If we are not flexible [to their demands], we will make an unwanted enemy¹⁵

[...] The Siamese should begin to try and acquire knowledge about the Western people so as to be prepared for future eventualities¹⁶



Figure 8: On the right-hand side wall above the entry door of Kanlayanamit's Temple is a historical wall painting of a Thai house during the time of King Rama III (1824-1851)

To avoid being colonized by the British empire or other European countries, re-establishing Western civilization and wisdom was the approach to survival. As a result, After the Rama IV of the Siam from 1851 to 1868, there was an intensification of western implantation among the royal family and the elite, notably in learning foreign languages and living culture (i.e., English, French). It significantly increased the excellent relationship between Westerners and Siamese privilege in their working engagements. In the middle of the *Sakdina* (feudal) system, The Siamese elite or *Khung Nang* presumably intended to achieve political position by physical and intellectual superiority. They presumed that Western expertise was the source of progress, development, and civilization for them. Also, the western model was a symbol of power that has undoubtedly influenced their residential areas. These ideals are like *Ruean Thai* but come with additional material and construction alternatives, utilizing architecture as an object to respond to their social status. The more decoration and unique materials, the higher social class and affluence they could reach.

¹⁵ Peter A. Jackson and Rachel V. Harrison. *The ambiguous allure of the west: traces of the colonial in Thailand*. (Cornell University Press, Southeast Asia Program Publications at Cornell University, 2010), 65.

¹⁶ Peter A. Jackson and Rachel V. Harrison. *The ambiguous allure of the west: traces of the colonial in Thailand*. (Cornell University Press, Southeast Asia Program Publications at Cornell University, 2010), 65.

Thai Colonial House.

Housing design had changed drastically after the importation of Western culture. It sparked a demand among upper-class inhabitants to construct their residences in Western design. The House on Sathorn is a colonial-style case study that corresponds to how *Ruean Thai's* configuration and décor have remained and changed. In 1899, the House on Sathorn had constructed in the Sathorn district near the Sathorn canal. It belonged to the *Luang Sathorn Rajayuk (Yom Phisolyabutr)*, who was in the fourth from the eighth rank in *Sakdina*. He gained authorization from King Rama V to supervise the excavation of canals and ditches in the year 1888. Expand development in Bangkok's southeast suburbs, including the Sathorn district, where *Yom Phisolyabutr* built this dwelling.

As mentioned in chapter one, Siamese people are aware of the "head." Thus, they did not typically build houses more than one story. Yet, this building was constructed on three levels that opposed the Ancient Thai culture. The assumption could be because cultural beliefs can change through time, the same as people follow society's tendencies. The most noticeable difference is the impression of the building. The ornamentation inside and outside of this building was completely influenced by the neo-classic architecture (Figures 9 and 10) and the Victorian era decoration (Figure 11) —material altered from wood to brick and cement. The building scale is also different from the total area in the first case study. The total floor area of the first case study was around 464.51 square meters, but the houses on Sathorn's total floor area were almost six times bigger, approximately 2,823.4 square meters. Because of its more extensive area than a typical Thai house, it served as the Hotel Royal in 1924, the Russian Federation's Embassy in 1947, and as a restaurant and entertainment facility for the W Bangkok in 2015.



Figure 9: The top view of the house on Sathorn Source: The Embassy of the Russian Federation in Thailand, <https://thailand.mid.ru/en/embassy/old-embassy>.



Figure 10 (Left) and 11 (Right): The exterior and interior of the house on Sathorn
 Source: The Embassy of the Russian Federation in Thailand,
<https://thailand.mid.ru/en/embassy/old-embassy>¹⁷.

Planning arrangement is the only remaining feature identical to Ruean Thai (Figure 12). In 2000, The Fine Arts Department measured and registered this house as a heritage site. Leading the researcher can gather quantitative data with the reliable scale of this drawing compared to the previous case study (Table 2). The plan illustrates that the four cardinal directions were still adapted with the four main functions (Figure 13). Whereas the services function was no longer located in the corner of the rectangular planning but spreading around the land ownership. In Ruean Thai, bedroom used to be the largest unit, followed by the hall and living room. The living area of the House on Sathorn appeared to be the most extensive area of the building, with 1,278 Square meters. Another substantial modification of the Traditional house is the disappearance of the *Chan* or terrace area that connects between functions. It was replaced with the enormous inner courtyard, which accounted for about 37 percent of the overall space.

To conclude, the foremost process of westernization, together with the remaining federalism in Siam. After analyzing the two case studies, the significant dissimilarity in housing design completely changed from the 1500s to the 1800s. There is no single ornamentation in *Reaun Thai* left in this colonial-style building. The loss of Siamese identity in the domestic building sector by adopting Western civilization has steadily increased and continues to obey modern society's direction.

¹⁷ "History of the old building of the Soviet (Russian) Embassy in Bangkok," The Embassy of the Russian Federation, accessed March 12, 2022, <https://thailand.mid.ru/th/embassy/oldembassy-th>

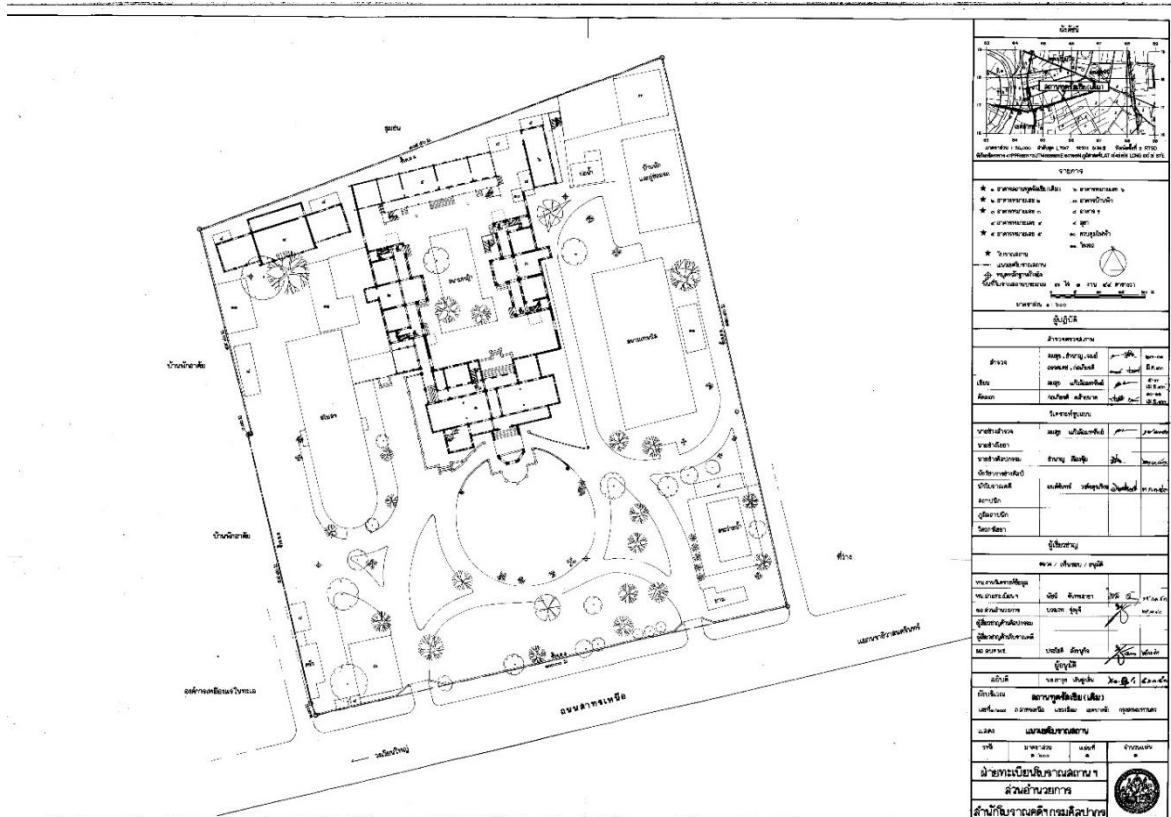


Figure 12: The planning of the house on Sathorn. the building was registered as a historical building in 2000 by The Fine Arts Department, Source: The Fine Arts Department Thailand, 118, พิเศษ ๒๔ ๖,2.

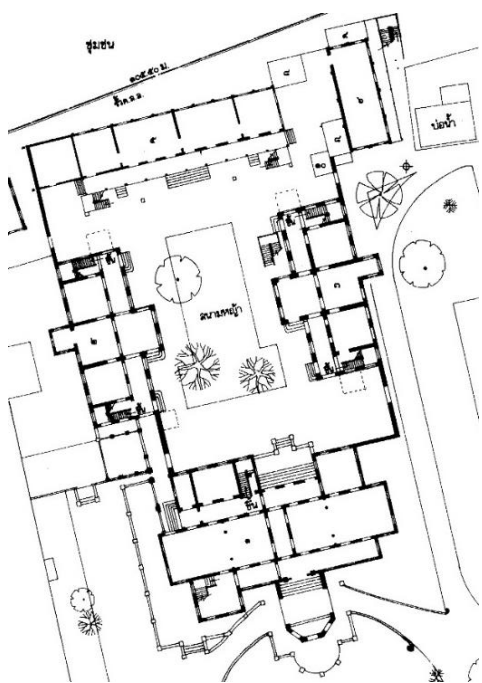


Figure 13: The planning of the house on Sathorn, Source: The Fine Arts Department Thailand, 118, พิเศษ ๒๔ ๖,2.

The House on Sathorn		
Thai Number	Room name	Area (square meter)
๑	Hall and Living area	426 Sqm/floor (1,278 Sqm)
๒,๓,๕	Bedroom or Guestroom	330 Sqm/floor (990 Sqm)
๔	Kitchen or Storage	219 Sqm
๖	Servant's room or Storage	63.4 Sqm.
Corridor Area Inner courtyard area (37 percent of total floor area)		273 Sqm. 954.88 Sqm.
Floor Area (per floor) Total Floor Area (3 Floor) Title deed area		1,313.77 Sqm. 2,823.4 Sqm. 11,200 Sqm.

Function in this table is only an assumption of the room and location in 1889

Table 2. The House on Sathorn function area analysis in a square meter.

Chapter III The destination of Western-style development.

The reforms of King Chulalongkorn (King Rama V) and the falling of feudalism. (1868-1910)

Siamese-Westerner relations and the westernization process expanded widely, especially in King Rama V's reign from 1868 to 1910. Nevertheless, only learning a language or adopting a Western way of life is insufficient to defend the country against invasion. Because Thailand often had to be at a disadvantage in terms of contracting to prevent the conflict, for example, the Bowring Treaty with the British empire on 18 April 1855. According to the agreement, Thailand is only entitled to collect a 3% import tax¹⁸ and has lost the right to extraterritoriality.

During King Rama V's reign, He launched numerous policies to strengthen national defense measures. Dr. Pensri Duke, the author of Foreign Affairs and Thailand's independence and Sovereignty book, mentions the international policy under King Rama V's reign. In 1874, This policy was known as the "Balance of Power Policy, "a nation's strategy and policy for defending itself against another country by matching the nation's power against the opposing side's power. King Chulalongkorn started his first voyage to cultivate goodwill with other states and developed a strong bond between Thailand and powerful countries. The first royal voyage to Europe in 1897 and the second journey in 1907. The nations he had visited were England, France, Belgium, Germany, Italy, Austria-Hungary, Denmark, Czechoslovakia, Switzerland, and Russia (Figures 14,15). He also returned with knowledge and civilization to help the country prosper.

On 1 April 1905, King Rama V proclaimed "Slave Act R.E. 124" the abolition of slavery and corvee (state labor service), an epoch of political transition that had prolonged over 400 years. The first reason behind this abolition was after King Chulalongkorn of Thailand voyaged and understood social and political aspects from predominantly European nations, such as the equitable regime's implications or human rights. Secondly, the power in the hand of *Khung Nang* grew along with the country's evolution by obtaining a high number of proletarians and enslaved people under their custody. Hence, his Majesty King Chulalongkorn is spearheading a government reform initiative. His sights determined to drive Siam into an Absolutist State to alleviate the problem of masters, lords, and nobles having excessive authority and control over resources, centralizing power back to the King. The abolition of slavery and corvee led to feudalism's gradual fall from the Thai political system.

¹⁸ Britannica, T. Editors of Encyclopaedia. "Bowring Treaty." *Encyclopedia Britannica*, November 29, 2016. <https://www.britannica.com/event/Bowring-Treaty>.



Figure 14 (Left): The Illustrated London News publishes the headlines of King Chulalongkorn of Siam, King Rama V, giving a speech in front of Lord Mare at the Mansion House, which is the office of the Department of Public Administration in charge of the "City of London"

Source: The British Newspaper Archive, Illustrated London News, 9 October 1897.¹⁹



Figure 15 (Right): Photograph of King Chulalongkorn of Siam, King Rama V (Left), and Tsar Nicholas II of Russia (Right) in St. Petersburg in 1897, During King Chulalongkorn's first Grand Tour.

Source: L'illustration archive, France, 11 September 1897, 4.²⁰

The Journey to Equality. (1884-1932)

Behind the gradual demise of feudalism, the authority was transferred from feudal nobles to monarchs and ordinary folks. Although it was not entirely disappeared, *Khung Nang* and Siamese aristocracies still have political, social, and economic power through connection and partisan. There was considerable disagreement during the abolition of slavery because many

¹⁹ Illustrated London News, "King Chulalongkorn of Siam, King Rama V giving a speech in front of Lord Mare at the Mansion House", *The British Newspaper Archive*, October 9, 1897,1.

²⁰ "King Chulalongkorn of Siam, King Rama V (Left) and Tsar Nicholas II of Russia (Right) in St. Petersburg in 1897", *L'illustration archive*, September 11, 1897,1.

nobles lost their advantages from the enslavement. However, social equality is progressively established and grew. Various regulations encourage this; for example, in 1884, a royal school for the citizens was established, known as the *Mahanaparam Temple School*. The purpose of education administration was to generate employees for government service. The aristocracy started losing their dominance due to this systematic schooling, and ordinary citizens had the opportunity to elevate their social position.

Enlightenment values of justice rose to prominence to challenging Thai regulation, including the modification of legislation. Thai male permit to have only one legitimate wife after 1932, during King Rama VI's reign. In contrast, according to Surachet Suklarpkit²¹, the author of the book *Monogamy in modern society*. The Siamese aristocracy began to disagree with the Western notion of monogamy, transmitted down by missionaries. Simultaneously, there has been a considerable measure of Western criticism of the family structure. Because of western imperialism's ideology regards kinship and family structures as indicators of a country's level of civilization. The essence of the notion from literary work by King Rama VI²² stated that

It is not unreasonable, in my opinion, to state that having a mistress is a centuries-old tradition. Likewise, it is not preferable for educated Young Thai folks who studied in the western educational systems prototype to have several spouses. They also understood a new word of 'secret wife,' which they consider appropriate for modern 'civilized' people who have just one official wife, like a Westerner²³.

The appropriateness of housing scale.

The reformation of the Thai regulation, which began in 1932, was a turning point in the design of residential architecture, particularly in the building layout. There was no longer a need for expanded space to accommodate enslaved people, proletarians, and several wives. Additionally, the reduction in the proportion of the house eliminated the unnecessary functions. No massive connecting terrace left, only the narrow circulation. Whereas in terms of materiality and adornments, remaining as a symbol of social status. With the import of western knowledge and technological advancement, combining local and imported materials, the construction methods were typical from Thai architecture. For example, the adaptation of brick and mortar on the first level and timber on the second. Because of the appropriateness of the brick-and-mortar properties for water-resistance than timber and the lengthy duration of material life expectancy. Based on the existing expertise and additional new understanding, the design of a Thai dwelling altered correspondingly.

²¹ Surachet Suklarpkit, "Monogamy in modern society," 1870s-1940s, (Matichon, 2018), 35-36.

²² "The point of system degradation "One husband, many wives" What was Thailand like before the law? "One husband, one wife", " Silapawattanatham, accessed March 15,2022, https://www.silpa-mag.com/history/article_28423.

²³ All the translation in this part is by the researcher.

Château William or *Baan Na Navee* in 1887²⁴ illustrates this hybridity of residential architecture (Figure 18). This house belonged to *Phraya Wichitnawee* from 1895 to 1923, the fifth chief of the naval dockyard department. *Phraya* is the second from the eighth rank in *Sakdina* in the King Rama V era. The uncommon L Shape planning contrasts with the two previous case studies that Thai houses usually apply only the rectangular plan. Both floors utilized the fashionable Neo-classical style and a wall-bearing structure. The hybridity in the material such as traditional timber with new joinery for the second floor, brick-cement for the first floor, and imported red marble stone for the interior.

To analyze the building further by interviewing the inheritor and owner of *Baan Na Navee*, Pim Wanaprapa. As an architect and the director of Studio Spacematter in Thailand, she researched and gathered information about this building. Her collective sketch plan (Figure 16) portrays that *Chan* was no longer a massive space connecting all the rooms but rather a narrower circulation with a width of around 3 to 3.5 meters (Figure 17). After measuring the area from Pim Wanaprapa's sketch and turning it into quantitative data (Table 3). While the transitions area in *Ruean Thai* used to reach around 40-60%—this building was reduced to approximately 28% of the total area. More than 53% of the overall space is dedicated to the Hall and Living room instead of the bedroom area. Including the *Tabernacle*, the room is more extensive than any other function, with 68.9 square meters, while the first case study contains just 14.25 square meters. While the building's size is comparable to the first case study, the proportion of the function is more similar to the second case study. These have demonstrated the evolution that progressively combines and implies in the third case study.

As a summary of three case studies (Table 4), the second and third case studies have shown that the traditional belief in establishing a house has practically vanished over time. Such as the position of the bedroom is not toward the north or whether the one-story building is no longer in use. Although the third case study applied the material from *Ruean Thai*, the building has a combination of various cultures, which makes it challenging to tell which parts are from with culture. Also, the adjustment of building orientation and ornament depended on what the homeowner considered was suitable or trendy at the time. Since culture and belief are not a regulation, it is changeable. If no one overlooks preserving the original identity, everyone anticipated the aim for development using Western countries as a model. Undoubtedly, the traditional Thai style in domestic architecture would progressively become extinct.

²⁴ Load Nuntivacharin, "Baan Na Navee or Château William," *The cloud*, August 25, 2021, <https://readthecloud.co/baan-na-navee-chateau-william/>

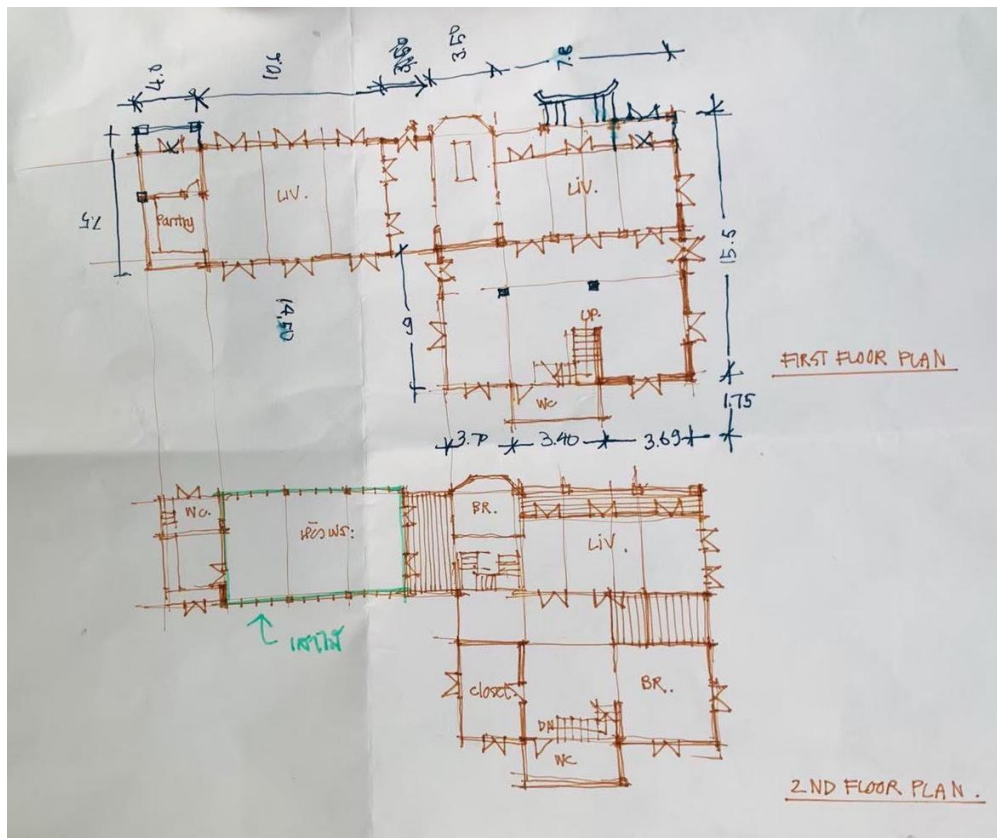


Figure 16: Sketch plan of Baan Na Navee by Pim Wanaprapa, the heir of Baan Na Navee
 Source: Pim Wanaprapa, the heir and owner of Baan Na Navee,
 Facebook message to the owner, February 12, 2022.



Baan Na Navee or Château William		
Symbol	Room name	Area (square meter)
Br.	Bedroom	54.79 Sqm.
Liv.	Living area	244 Sqm.
Wc.	Bathroom	37.9 Sqm.
Pantry	Kitchen	12.6 Sqm.
ห้องพระ	Tabernacle	68.9 Sqm.
Corridor Area (28 percent of total floor area)		132.5 Sqm.
Total Floor Area (2 Floor)		458.35 Sqm

Function in this table is only an assumption of the room and location in 1887

Figure 17: The Chan's narrowness, connecting between rooms. Source: Thitiwoot Chisawatree,
 photographer, August 25, 2021.

Table 3: The analysis of Baan Na Navee or Château William function area in square meters.



Figure 18: Baan Na Navee Source: Thitiwoot Chisawataree, photographer, August 25, 2021.²⁵

Room name	Thub Kwan Royal Residence Area (Square meter)	The House on Sathorn Area (Square meter)	Château William Area (Square meter)
Bedroom	73.80	990	54.79
Hall and Living area	53.85	1,278	244
Kitchen and Storage	31.33	219	12.6
Tabernacle	14.25	-	68.9
Servant's room	12.16	63.4	-
Room Area	125.39	2,550.4	380.29
Corridor Area	75.59	273	132.5 (28%)
Terrace Area or inner courtyard	203.56 (43%)	954.88 (37%)	-
Total Floor Area	464.51 (1 Floor)	2,823.4 (3 Floor)	458.35 (2 Floor)

Table 4 The summarized of the alteration area in between three case studies.

²⁵ Asst. Prof. Thitiwoot Chisawataree, photographer. "Baan Na Navee," *The cloud*, August 25, 2021, <https://readthecloud.co/baan-na-navee-chateau-william/>

Conclusion

This research analyzes the changing three characteristics of Thai housing before the 1930s, depending on the Siam/Thailand historical context. Based on both a quantitative study of the shifting of the functional area between three case studies (Table 4) and qualitative research of the collective literature in response to the relationship between the King, Siamese privileged, and Westerners. This research has shown how social and political aspects can, directly and indirectly, shape the architectural identity in the domestic sector. The results indicate that external factors such as western influence and internal factors of feudalism and patriarchy are critical parts that lead to the devaluation of Thai traditional culture dwelling.

Furthermore, this research reveals the process of *Ruean Thai* extinction throughout history. The idea that Westernization was the main force of this circumstance would not be 100% accurate. Nevertheless, it is also associated with internal forces such as the hierarchy in feudalism and the patriarchal system. Of which has been embedded in Thai politics and society for more than 400 years. Despite Thailand's status as a non-colonized country, there is no denying that Thailand is colonial in an informal sense. It is never-ending if the folks of Thailand do not rehabilitate and revalue traditional Thai architecture. The occurrence of this crisis also encloses the former regime that drives individuals to pursue power as if it were a competition and the conqueror would be superior to others. Such a governance condition has also progressively devalued the country's fundamental identity. It interprets the sentiments of the nation's people and the architecture adjacent to those people, such as a residential area.

Why *Ruean Thai* has nearly extinct in Thai society, this research clearly illustrates this reason. However, it also presents the issue of what if, apart from Westernization, Siam/Thailand would still be able to develop and preserve the Thai value in a different way? Although many European countries intentionally traded with Siam because of the colonial possession. It is indisputable that westernization was one of the essential aspects in propelling Thai politics ahead in the positive direction and ensuring equality among Thai citizens.

The difficulty of this research is the collective evidence from the 1500s to the 1900s. Accordingly, to fill the knowledge gap about traditional culture, it is necessary to compare historical facts and conditions that transpired in Ayutthaya before the 1930s. Concurrently, with the European people's arrival after the 1500s, they documented and interpreted valuable evidence for Thai history in many aspects. Also, Thais first initiated to chronicle national historical narratives during King Rama I's reign (1782-1809), straight behind the European historical record for more than 100 years. Thus, it is fundamental to value not only the national archives of Thailand but also the international archives such as *Engelbert Kaempfer's* travel diary, *The Illustrated London News*, and *L'illustration* archive from France that they accumulated the event corresponding with the history of Thailand.

Besides that, two ancient books preserved in the Thai national archive equip insight into the ancient *Ruean Thai*. Likewise, provide a considerable benefit for the housing analysis part, the Thai culture and Buddhism faith background behind each part of the dwelling design and

construction. The next step of the difficulty in this research is the missing written documentation about Thai houses during the early Rattanakosin era from 1782 to 1851. Future research could uncover other evidence from other specializations that represented different ways of recording history, such as mural paintings or timber carving.

Ultimately, Human beings are a social species that relies on collaboration to survive and develop. When society's tendency goes in which direction, people will change accordingly. Social influence also affects the domestic sector, directly related to individuals. After reviewing all the case studies, it obviously appeared that this presumption is accurate. Like, the original design of *Ruean Thai* connects to the traditional way of living. The colonial house design correlated to life with considerable contact with foreigners. Including a house that combines Thai and other countries' knowledge. All these aspects are associated with national and international tendencies. If everything evolves according to global trends as it has in the past, doubtfully, the near extinction of *Ruean Thai*. In the future, this identity may be gradually established and orbited back to become a part of contemporary Thai architecture one way or another.

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