

CULTURAL CHARACTER ANALYSIS ON ARCHITECTURAL ELEMENTS OF THE CHINESE TEMPLES' BUILDINGS BEFORE THE 19TH CENTURY IN CENTRAL JAVA

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Received: 09th February 2022/ Revised: 02nd February 2024/ Accepted: 02nd February 2024

How to Cite: Mildawani, I., & Darmawan, D. (2023). Cultural character analysis on architectural elements of the Chinese temples' buildings before the 19th century in central Java. *Humaniora*, 14(3), 257-264.
<https://doi.org/10.21512/humaniora.v14i3.8061>

ABSTRACT

The research provided an in-depth exploration of the architectural nuances of pre-19th century Chinese temples in Central Java, Indonesia, emphasizing their cultural significance and relevance. A detailed examination of a range of temples identified unique architectural features that reflected a sophisticated synthesis of Chinese cultural elements and local Javanese traditions. Applying a qualitative method, the research integrated historical scrutiny with architectural analysis, meticulously examining stylistic attributes, construction methodologies, and decorative patterns typical of these temples. The key discoveries highlight an intricate amalgamation of traditional Chinese architectural principles with native materials and craftsmanship, culminating in a distinctive, hybrid architectural form. This fusion not only symbolizes the cultural convergence and assimilation between Chinese immigrants and the indigenous Javanese during the pre-colonial era but also underscores the role of these temples as pivotal preservers of Chinese cultural heritage in Java. Furthermore, the research contributes to a deeper understanding of the diversity within architectural practices and offers insightful perspectives on the historical and socio-cultural dynamics in Central Java. The novelty of the research is anchored in its focused examination of a historically and geographically specific context, its interdisciplinary and thorough approach, the revelation of a unique hybrid architectural style, and its significant insights into the cultural and sociological dimensions of Central Java's architectural legacy.

Keywords: architectural design, Chinese temples, Sino-Indonesian cultural heritage

INTRODUCTION

Traditional Chinese architecture has made its mark in various regions across Indonesia, including the focus of the research, which explores the influence of ethnic Chinese communities on the island of Java. The migration of these communities to Java is primarily driven by trade initiatives and the necessity to escape the oppressive regime of the Qing government, leading to the establishment of settlement colonies (Wijayanti, 2021). Notably, in the 14th century, the northern coastal area of Java witnessed the development of a distinct Chinese architectural style predominantly influenced

by immigrants from South China (Wu, 2020). Many Chinese settlers married local Javanese women and, with the consent of native rulers, formed integrated communities. This architectural and cultural diffusion is evident in several regions, including Semarang, Beyaran, Demak, Kudus, Pati, Juwana, Rembang, Lasem, Welahan, Jepara, and Tayu.

Chinese culture in Indonesia has experienced both highs and lows, particularly during key historical periods such as the Dutch colonial era, the post-independence era starting in 1965, and the onset of the reform era in 1998. These times were often marked by racial tensions, exemplified by riots targeting the

ethnic Chinese community, largely fueled by social envy (Chong, 2018). Interethnic marriages between Chinese immigrants and indigenous Javanese people led to the emergence of the Peranakan Chinese community, descendants of Chinese settlers who have lived in Java for generations. The cultural practices of the Peranakan Chinese represent a fusion of Chinese and Javanese traditions. Notably, they have integrated aspects of both cultures into their daily lives, such as blending the Chinese and Javanese calendars. Furthermore, the Peranakan Chinese have largely adopted the local language over time, moving away from using Chinese in everyday conversations.

Chinese-Indonesian ancestors immigrated to Indonesia well before the nation's formation, primarily driven by trade activities that predated Western arrival in the region. These early Chinese settlers established themselves along the northern coast of Java Island, a pattern of settlement that has been documented since ancient times (Rukayah & Abdullah, 2021). Historical records, including Javanese inscriptions and accounts of Chinese voyages, testify to the long-standing relationships between the Javanese kingdoms and China. Such interactions date back to periods long before the modern era, indicating a deep and enduring connection between these cultures (Kwanda, 2020).

The Chinese community represents one of the many ethnic groups in Indonesia, with ancestral roots traced back to China. Predominantly originating from Southern China, many in this community identify themselves as 'Tang' or 'Tangren', a reference to the Tang dynasty, symbolizing cultural heritage (Fukuoka & Verico, 2016). In Indonesia, individuals of Chinese descent are commonly called 'Chinese' or 'Tionghwa'. The term Chinese itself is derived from 'Zhonghua', a Mandarin word. Interestingly, 'Tionghwa' is the Hokkien dialect's interpretation of 'Zhonghua', reflecting the linguistic diversity within the Chinese Indonesian community.

The Chinese community has historically held a deep reverence for heaven, earth, and ancestors. This reverence manifests in their respect for *Tian*, symbolizing the heavens, and their veneration of the Earth God, referred to as 'Do Dikong'. Moreover, ancestor worship is considered a sacred practice. Ancestors or holy spirits are known as *Shen-ming* or *Sinbeng*, a term denoting the revered spiritual beings. To aid in worship and provide a focal point for devotion, it is expected to create sculptures or statues representing these entities, often referred to as *Jin-shen* or *Kimsin* (Astutik & Ramadhon, 2020). These visual representations play a crucial role in the rituals and practices of the Chinese community, symbolizing their deep spiritual connections.

The *Tridharma* teachings, also known as *Sam Kauw*, are an integral part of spiritual life in the Chinese community. The term *Tridharma* is derived from two words: *Tri*, meaning 'three', and *Dharma*, signifying 'teaching of truth'. This philosophy is a synthesis of three major religious traditions: Taoism, Confucianism, and Buddhism. Each of these teachings

contributes to the comprehensive spiritual framework that defines *Tridharma*, offering a unique blend of wisdom and principles from these distinct yet interconnected belief systems.

In Chinese society, the term 'temple' or 'bio' refers to more than just a place of worship; it represents a multifaceted community hub. Historically, these temples have served various social functions beyond religious practices. They have been venues for negotiating solutions to communal issues, managing funeral arrangements, operating as nursing homes and educational centers, conducting economic transactions, and even addressing security and defense matters.

Over time, while the focus of temple activities has shifted predominantly towards religious observance, these places remain central to the lives of many in the Chinese community. Temples are rich with cultural elements, each symbol and image imbued with moral significance. These symbols, along with oral and textual traditions, convey moral values. Thus, temples hold universal religious significance, extending beyond the confines of the Chinese community (Zhu et al., 2019).

Historically, the term 'temple' as a designation for Chinese places of worship is primarily recognized in Java, where it originated as a Javanese nomenclature for these religious sites. In this context, the exact genesis of the term 'temple' remains uncertain, with several theories attempting to trace its origins. As noted by Nio Joelan, one perspective suggests that the term evolved from *Guanyin ting* (觀音亭), pronounced *kwan im teng*, referring to a pavilion dedicated to the deity Guanyin. Another hypothesis, proposed by Li Zhuohui (李卓輝), posits that the term is derived from *jiaorentang* (教人堂) or *kaulangtang*, Mandarin words for a place of learning or school. A third viewpoint associates the term with the sound of *genta* or bells commonly heard in Chinese temples (Li, 2020).

Between the 5th and 3rd centuries BC in China, a proliferation of philosophical schools emerged. It was Ssu-ma Tan, a pioneering Chinese historian, who first endeavored to categorize these diverse schools of thought. He passed away in 110 BC. His seminal work, *Shih Chi*, translating to 'Historical Records', is a comprehensive compilation of this effort. In *Shih Chi*, Ssu-ma Tan organized philosophers from several centuries prior into six principal schools: *Yin Yang*, *Ju* (Confucianism), *Mo* (Mohism), *Ming* (School of Names), *Fa* (Legalism), and *Tao-te* (Taoism). Among these, the Yin Yang school has significantly influenced temple architecture.

The Yin Yang school, known for its cosmological perspectives, draws its name from the fundamental principles of Yin (the female principle) and Yang (the male principle). These concepts are central to Chinese philosophy, representing a dynamic interplay of complementary forces. According to this school, Yin and Yang are not only interconnected but also influence each other continually, symbolizing the intrinsic link

between human nature and the natural world. The Yin Yang school is founded on three core concepts: firstly, the concept of balance, encapsulated by the interplay of Yin and Yang; secondly, the concept of energy and flow, represented by *Chi*, which refers to the vital life force or energy flow; and thirdly, the concept of the 'Five Elements' or *Wuxing*, which outlines five types of energy in constant interaction (Hou, Li, & Mei, 2021).

The Yin Yang concept represents two fundamental and opposing forces governing the universe and life. These forces, though contrary, are complementary and together symbolize the essence of perfect harmony. Yin is associated with qualities such as darkness, cold, femininity, passivity, the moon, and weakness, while Yang represents light, heat, masculinity, activity, the sun, strength, and hardness. The interaction between Yin and Yang is dynamic and continuous, leading to the natural progression of changes in the world, for instance, the transition from summer to winter or day to night. This concept of balance is visually symbolized by a circle divided into two contrasting halves, typically depicted in black and white, each containing a small element of the other color to signify the interdependence of Yin and Yang.

The concept of '*Chi*' encompasses several interpretations, all of which highlight its importance as a fundamental life force. According to Shen et al. (2020), *Chi* is the energy that sustains human existence. It is often described as the breath of life, encompassing one's aura, energy, and soul, as noted by Wei and Jiang (2020). Hagra (2020) expands on this, suggesting that *Chi* is active energy, omnipresent in all forms, and responsible for the various processes of change inherent in all living things, including the land itself. Integrating these perspectives, *Chi* can be understood as a dynamic force or vibration emanating from everything in the world, influencing and interconnecting with all forms of life. This force can be generated, amplified, diminished, and channeled for human benefit, playing a pivotal role in the vitality of the natural world.

The concept of *Wuxing*, often translated as the Five Elements or Five Phases, refers to a dynamic interplay of forces represented by five basic elements. The term *Wuxing*, meaning 'five actions' or 'five processes', first appears in the ancient text 'Book of the Great Rule' or *Hung Fan*. These elements are wood, earth, fire, water, and metal, each interacting and influencing the others in a continuous cycle. According to *Wu Xing's* concept, all natural phenomena can be categorized under these five fundamental elements. In the realm of architecture, these elements are crucial as they influence key aspects such as the form, orientation, and color of a structure. The harmony and compatibility between these elemental forces and the architectural elements are believed to significantly impact the comfort and well-being of the inhabitants of a space.

METHODS

The research applies a qualitative research paradigm to elucidate the influence of Chinese philosophy, particularly the Yin Yang concept, on architectural design. The aim is to comprehensively understand how this philosophy shapes and informs the creation of architectural elements in buildings. Central to the research are well-defined steps that provide clear direction and facilitate the progression of the research. A crucial aspect of this investigation is to establish a connection between the principles of the 'Yin-Yang' school and the architectural elements and layout patterns of temples. This approach is essential to unraveling the intricate relationship between these philosophical teachings and architectural practices, which are integral components of cultural expression.

The selection of samples for the research aligns with the adopted methodological approach, which is qualitative phenomenology. This approach prioritizes an in-depth exploration of the subject matter rather than the quantity of samples. Therefore, the method of data collection employed is purposive random sampling. This technique involves choosing samples that are not only representative but also meet specific criteria crucial to the research. These criteria include the architectural style of the temple, constructions that occurred before 1900, and the authenticity of the buildings in question. By focusing on these aspects, the research aims to gain a comprehensive understanding of the architectural phenomena under research.

RESULTS AND DISCUSSIONS

The research encompasses two distinct disciplines: philosophy and architecture. In philosophy, it delves into Yin Yang, *Chi*, and *Wuxing* concepts, which are integral to Chinese societal beliefs and practices. Architecture, on the other hand, focuses on the structural elements of buildings, specifically the lower, middle, and upper sections. Based on these two facets, the variables in the research are categorized into two types: the independent variables, which include the philosophical concepts of Yin Yang, *Chi*, and *Wuxing*, serving as principles and guidelines within Chinese society; and the dependent variables, which pertain to architectural elements and spatial patterns observed in temple design.

Data constitutes the fundamental component of research: without it, conducting research is unfeasible. Generally, the data gathered can be categorized into two types: literature data and field data. The research details the collection methods and specifics for literature and field data: library data are essential for establishing a theoretical foundation pertinent to the observed field phenomena, particularly in the context of Chinese philosophy and temples within the Chinatown region. The library research conducted aims to explore variables that are significant to understanding and supporting research in the Chinatown area. This

includes an in-depth historical analysis of Chinese philosophy, examining its origins, core principles, and underlying concepts, with a specific focus on the Yin Yang, *Chi*, and *Wuxing* theories.

Observations focus on the architecture and spatial patterns of temple buildings in Central Java constructed prior to the 19th century. This examination of field data aim to analyze the theories of spatial arrangements in these temples, correlating them with the fundamental concepts of Yin Yang, *Chi*, and *Wuxing*. Additionally, the study delves into the construction features of these temples, emphasizing those built before the 19th century that have undergone minimal alterations (Cheng & Worrall, 2021).

Field data collection employs a purposive random sampling technique, targeting a selection of temples constructed before the 19th century, with samples chosen randomly. This approach is anticipated to effectively capture and describe the characteristics of the temples under investigation. Data collection encompasses several methods. Preservation and observation are utilized to discern the architectural features and layout patterns of the temples. Interviews form a critical part of the data-gathering process, involving discussions with temple administrators, elders, and community leaders to gain deeper insights. Additionally, the research employs documentation techniques, including the collection of sketches, maps, diagrams, and photographs. These materials serve as vital analytical tools to further understand the Chinese architectural and spatial concepts in these historic structures.

This phase involves the processes of selecting, simplifying, and transforming literature data (pertaining to Chinese culture, philosophy, the Yin Yang school, architecture, and design) and field data acquired during the collection stage. In this context, data transformation is achieved through summarization or concise descriptions, subsequently categorizing it into broader patterns. This can be interpreted as the compilation and presentation of information about the architectural features and spatial layout patterns of temples before the 19th century, thereby facilitating the derivation of potential conclusions.

The presentation of this data is articulated through an expository narrative, designed to be clear and easily comprehensible. Conclusions are formulated based on the interpretations of Chinese philosophy and pre-19th century temple architecture derived from data on Chinatown settlements. These conclusions are rigorously analyzed for their truthfulness, robustness, and compatibility, essentially assessing their validity. The insights from the research, which interconnects philosophy, architecture, and spatial patterns in temple design, can provide valuable recommendations for architectural education (Li & Nishizawa, 2021).

Temples can be categorized based on the primary deity they worship, distinguishing them into Taoist, Buddhist, and Confucian temples. In Central Java, temples constructed before 1900 predominantly venerate the main deities of Buddhism and Taoism.

Notably, no temples dating back to before the 19th century in Central Java are dedicated to Confucianism's main deity. Buddhist temples are typically identifiable by names that include *Sie*, while Taoist temples are often marked by names containing *Bio* or *Kiong*.

Temples can also be categorized based on their function and founding purpose, leading to two primary types: general and clan temples. General temples are established through community initiatives and are accessible to the public. In contrast, clan temples are constructed by specific clans as a tribute to their ancestors.

Furthermore, temples can be classified based on their architectural layout, particularly the presence or absence of an atrium. This distinction leads to two types: temples without an atrium and temples with an atrium. Among the temples with an atrium, a further subdivision exists based on whether they include an Ash room, leading to temples with an Ash room and those without one.

The concept of *Chi* places significant emphasis on form, with simplicity being valued over complexity. The Yin Yang school particularly recommends quadrilateral shapes, as orderly forms are believed to cultivate harmonious *Chi*, which in turn is considered beneficial for the inhabitants. Additionally, symmetrical or simple forms indicate a balanced state, symbolizing the harmonious interplay of Yin and Yang elements. This balance is deemed crucial in maintaining a space's equilibrium and positive energy.

The layout patterns of temples prior to the 19th century can be broadly categorized into two types: temples without atriums and those with atriums. An atrium is defined as a spacious, open area within a building. Temples lacking an atrium typically feature a distinct spatial arrangement that includes a transition room or foyer, a main worship room, and a room dedicated to the deity's altar, as illustrated in Figure 1.

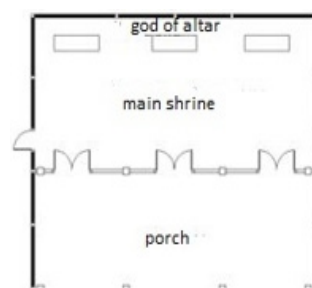


Figure 1 Temple Layout Pattern without Atrium

Temples with atriums can be classified into two categories: those with a single atrium and those with multiple atriums. Figure 2 depicts temples with one atrium. Typically, a temple will have more than one atrium if it includes an ash chamber at the rear, as shown in Figure 3 for temples with two atriums. The central atrium, an open space, is commonly referred to as the 'sky well' (*Zhong Ting* 中庭 or *Tian Jing* 天井), symbolizing the direct connection between humans

and *Tian* (heaven).

Architecturally, the atrium in a temple serves the critical functions of facilitating light entry and air circulation, which prove especially useful when incense smoke fills the worship space. Flanking the atrium on both sides are structures known as deep syr or *Lang Wu* 廊屋. These are connecting buildings that bridge the main temple structure and the foyer. The *Lang Wu* is typically utilized for housing additional altars and is also a designated area for devotees to light incense and pray.

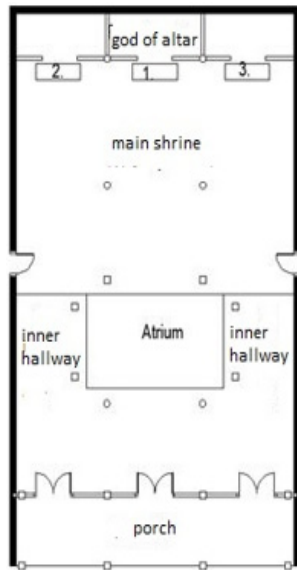


Figure 2 Temple Layout Pattern Featuring a Single Atrium

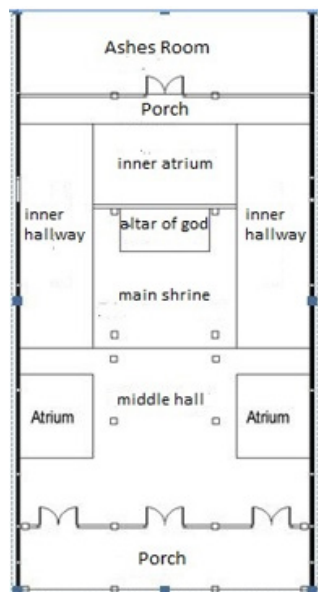


Figure 3 Spatial Pattern Incorporating Two Atriums

The base of the temple structure consists of the *umpak* foundation and flooring. The *umpak*, positioned at the very bottom of the building, functions as the foundational element that supports the entire load

of the structure. This is illustrated in Figure 4. The design of the *umpak* varies in the temple, contingent upon the shape of the columns. For instance, a square *umpak* corresponds with square columns, whereas a cylindrical column is paired with a circular or doughnut-shaped *umpak*. Figure 6A shows that the Wie Whie Kiong temple in Semarang features a *umpak* beneath its cylindrical columns, while Figure 4B shows that the Ling Hok Bio temple in Semarang is characterized by square columns, each supported by a square-shaped *umpak*.



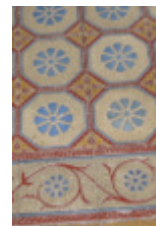
A



B

Figure 4 The Shape of the *Umpak* in the Temple

In many ancient temples, the original flooring has been replaced with ceramic tiles. However, some temples retain their traditional flooring, which includes either gray or patterned tiles, as well as 'selad' stone - a type of square-shaped, smoothed stone. This is depicted in Figure 5. Figure 5A shows the flooring of the Gie Yng Bio temple, Figure 5B shows the flooring of the Cu An Kiong temple, and Figure 5C shows the flooring of the Tay Kak Sie temple.



A



B

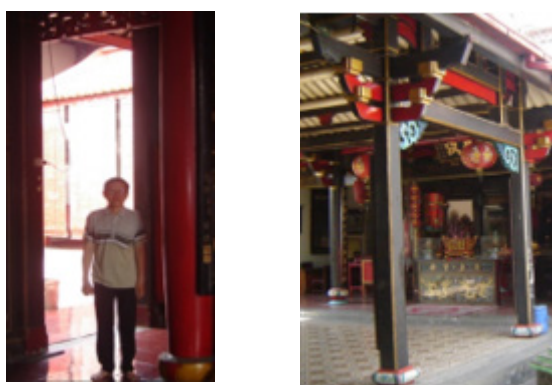


C

Figure 5 The Flooring within the Temple

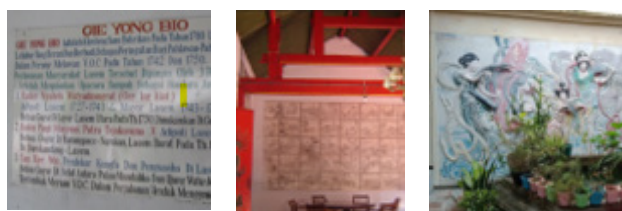
The central section of the temple building comprises walls and columns. The temple walls are often adorned with murals depicting stories of virtue and paintings of dragons or tigers. Typically, a dragon is depicted on the left wall, while the right wall features a tiger. Regarding the columns in ancient temples, there are generally two types: square-shaped columns, known as *fang zhu* 方柱, measuring 20x20 cm, and cylindrical columns, referred to as *zhu ying*, with diameters of 30 cm or more, usually crafted from teak wood. This is illustrated in Figure 6. Figure 6A

shows the cylindrical columns, or *zhu ying*, of the Wie Whie Kiong temple in Semarang, and Figure 6B shows Square columns, or *fang zhu*, at the See Hoo Kiong temple in Semarang.



A B
Figure 6 Columns in the Temple

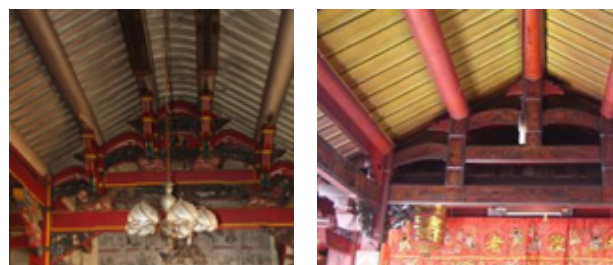
Upon entering the porch of this temple, one can observe that the left and right walls of the porch are adorned with paintings created using the mo pit technique with black tub ink. This is depicted in Figure 7. These wall paintings, known as *bi hua* 壁画 or murals, often narrate the famous story of the Three Kingdoms, known as Sam Kok. Additionally, these walls serve a dual purpose, being used to display inscriptions of the names of individuals who contributed to the construction or renovation of the building or as a space for announcements. Figure 7A shows the announcements displayed on the walls of the Gie Yong Bio temple in Lasem, Figure 7B shows the mural displayed on the wall of the Poo An Bio temple in Lasem, and Figure 7C shows the mural displayed on the wall of the Wie Whie Kiong temple in Semarang.



A B C
Figure 7 The Interior Walls of the Temple

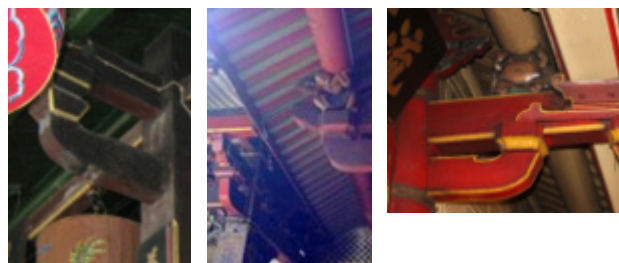
In ancient temples, the *che shang ming zao* 徹上明造, or exposed roof construction frame, comes in two main types: the queen beam system and the king beam system. The queen beam system is typically employed for porch roofs, characterized by a curved peak. Conversely, the king beam system, resembling a

nok in structure, is commonly used in the main worship room. Figure 8A shows the Tjoe Wie Kiong temple in Rembang, which features the *che shang ming zao* with a queen beam system in its architectural design, and Figure 8B shows the Tay Kak Sie temple in Semarang incorporates the *che shang ming zao* with a king beam system in its structural framework.



A B
Figure 8 Roof

The *skoor* or *dougong* 斗拱 in the temple represents a wooden structure that is a crucial support for the temple's architecture and an aesthetic element. This is depicted in the following Figure 9. Figure 9A shows *dougong* featured in the Gie Yong Bio temple in Lasem, Figure 9B *dougong* in the Cu An Kiong temple in Lasem, and Figure 9C *dougong* in the Cu Wie Kiong temple in Rembang.



A B C
Figure 9 Dougong Featured in the Temple

The temple features a saddle-shaped roof, known as *yingshan ding* or 硬山顶, with ridges that curve upwards at both ends, embodying the *yanbue/yanwei* style 燕尾形 (resembling a swallow's tail) or *wenshou*. This design is illustrated in Figure 10. This roofing style is utilized both for the porch and the main worship room. The primary roof, particularly at the front, displays a significant ornamental composition: a pair of dragons in *xing long* 行龍 formation flanking a qilin carrying a *huo zhu* or a pearl of fire, symbolizing a Buddhist pearl in the shape of a fireball. Figure 10A shows the roof of the Sio Hok Bio temple in Semarang, while Figure 10B shows the roof of the Sie Hoo Kiong temple in Semarang.



A B

Figure 10 The Structure on the Roof

CONCLUSIONS

The findings of the research lead to several key conclusions, notably that Chinese architecture is intricately linked with the culture and beliefs of its people. The foundations of Chinese culture are deeply rooted in ancestral teachings and beliefs, which is particularly evident in the distinct architectural identity of religious buildings. In contrast, residential and commercial structures like shophouses exhibit less pronounced cultural influences, as they are more adaptive to functional requirements. However, even in these buildings, the underlying principles of traditional beliefs continue to play a guiding role in their design.

The key distinction arises from the fact that residential buildings or shophouses are private structures, each with varying spatial requirements. This contrasts with religious buildings, which generally have uniform spatial needs, with differences arising only in terms of landscape design and environmental context. In the case of temples as religious structures, their layout can be categorized into two types: those with spatial patterns that exclude atriums and those that incorporate atriums. Furthermore, the presence of an inner porch is exclusive to temples that feature an atrium.

Moreover, in the design of temples, different structural elements are utilized for specific areas. The main worship room often features a box-shaped *umpak* or a torus (doughnut) design, complemented by cylindrical/*zhu ying* shaped columns. In contrast, the porch typically employs square columns, known as *fang zhu*. The use of wood as a material for columns, beams, doors, and windows is a hallmark of ancient architecture and often remains in its original form. The roof construction incorporates the king or queen beam systems, depending on the architectural requirements. Additionally, the doors of these temples exhibit a unique characteristic: their number is always odd, with configurations of 1, 3, or 5 doors being standard.

In the main worship room of these temples, there are invariably three altars: the central altar dedicated to the main deity or host, flanked by altars for the companion deities on the left and right. Artistically, the dragon motif is consistently found on the left wall or side, while the tiger image is invariably placed on the right wall. The structural support, known as *skoor* or *dougong*, features a distinctive design, and the roof typically adopts a saddle shape (*yingshading* or 硬山

顶). Additionally, the presence of a *Pailou*, or temple gate, is not a standard feature in all temples.

Although the research comprehensively explores traditional materials and construction methods, such as the use of wood and specific roof construction techniques, it does not delve into the contemporary adaptations or developments of these techniques in modern architecture. Furthermore, the research is geographically focused on a specific area, which could limit insights into how these architectural elements and styles are interpreted or integrated in different regional contexts.

The conclusion of the research outlines future research directions based on the study of architectural elements in Chinese temples, such as comparative studies with different architectural styles in Indonesia and Southeast Asia to understand regional diversity. The conclusion also recommends future research on how traditional architectural elements and styles have evolved in modern architecture, focusing on the integration of cultural heritage. Finally, it is important to broaden future research to include various building types like public buildings, homes, and urban layouts to gain a more extensive view of the region's architectural practices.

REFERENCES

- Astutik, J., & Ramadhoan, R. I. (2020). Shared identity as social capital in Tte Chinese-Javanese relations in Malang city, Indonesia. *Journal of Social and Political Sciences*, 3(3), 922-939. <https://doi.org/10.31014/aior.1991.03.03.224>.
- Cheng, H., & Worrall, J. (2021). Unfolding China's urban development: The implementation of public art in Beijing and Shanghai. *Journal of Chinese Architecture and Urbanism*, 3(1), 1-14. <https://doi.org/10.36922/jcau.v3i1.1025>.
- Chong, W. L. (2018). A short history of the ethnic Chinese in Indonesia. In *Chinese Indonesians in Post-Suharto Indonesia*, pp. 25-40. <https://doi.org/10.5790/hongkong/9789888455997.003.0002>.
- Fukuoka, Y., & Verico, K. (2016). Indonesia – China economic relations in the twenty-first century: Opportunities and challenges. In Y. C. Kim (eds), *Chinese Global Production Networks in ASEAN, Understanding China*. Switzerland: Springer, Cham. <https://doi.org/10.1007/978-3-319-24232-3>.
- Hagras, H. M. (2020). The functions and symbolism of Chinese minarets: A case study of the Huaisheng Guangta. *Journal of Islamic Architecture*, 6(2), 68-76. <https://doi.org/10.18860/jia.v6i2.10209>.
- Hou, Y., Li, A., & Mei, S. (2021). Learning from Chinese traditional architecture: Field test and CFD modelling of ventilation enhancement techniques in southern Chinese houses. *International Journal of Ventilation*, 21(1), 1-18. <https://doi.org/10.1080/14733315.2021.1876406>.
- Kwanda, T. (2020). Adaptive reuse and interventions of Chinese architectural heritage in the city of Lasem,

- Indonesia. *International Journal of Environmental Science & Sustainable Development*, 5(1), 68-79. <https://doi.org/10.21625/essd.v5i1.718>.
- Li, M. (2020). Looking back to quiddity between traditional Chinese architecture and ancestor worship. *Journal of Chinese Architecture and Urbanism*, 2(1), 1-14. <https://doi.org/10.36922/jcau.v2i1.908>.
- Li, F., & Nishizawa, Y. (2021). A study on the actual studying condition of Chinese architecture students coming to Japan in the first half of the 20th century. *Journal of Architecture and Planning (Transactions of AIJ)*, 86(780), 637-647. <https://doi.org/10.3130/aija.86.637>.
- Rukayah, R. S., & Abdullah, M. (2021). In searching architecture and city pattern as the mark of old coastal Semarang, Indonesia. *Journal of Architectural Design and Urbanism*, 3(2), 72-83. <https://doi.org/10.14710/jadu.v3i2.10687>.
- Shen, Y., Zhang, E., Feng, Y., Liu, S., & Wang, J. (2020). Parameterizing the curvilinear roofs of traditional Chinese architecture. *Nexus Network Journal*, 23(2), 475-492. <https://doi.org/10.1007/s00004-020-00512-1>.
- Wei, H., & Jiang, W. (2020). Translation of the 'Landscape Architecture' into Chinese and how to build the discipline of landscape architecture in China? *International Research in Education*, 8(1), 104-111. <https://doi.org/10.5296/ire.v8i1.1631>.
- Wijayanti, R. (2021). The influence of traditional Javanese architecture in Chinese-style house in Lasem. *IOP Conference Series: Earth and Environmental Science*, 778(1), 12033. <https://doi.org/10.1088/1755-1315/778/1/012033>.
- Wu, Y. (2020). On the inheritance strategy of excellent Chinese traditional culture of overseas Chinese under the background of network teaching. *Education Reform and Development*, 2(2), 21-23. <https://doi.org/10.26689/erd.v2i2.2054>.
- Zhu, H., Liu, S., Jia, X., & Chang, J. (2019). Urbanization mechanism study under the dynamic of state capital: A case study about Northeast China with the construction of the Chinese Eastern railway in the early of 20th century. In *Proceedings of the 55th ISOCARP World Planning Congress*. <https://doi.org/10.47472/lqzu4940>.