

Materialism as A Cultural Medium

Three Projects by Finnish Architects in China

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Abstract

In an era of globalization, Finnish architects have developed a series of projects in China in recent years. These Chinese projects continue and expand the tradition of international practice of the Finnish architectural community and provide new perspectives for the observation and study of Finnish architecture. Finnish architecture is connected with Finnish national imagination and identity construction. Yet, in China, Finnish architects inevitably deal with their own cultural identity concerning their work context in various ways. This study attempts to combine the historical facts of Finnish architects' entry into China with an in-depth analysis of cases, showing how building materials can become carriers of design thinking and cultural mediators. Thus, the study can further demonstrate the reconciliation process between the expansion of architectural internationalism and its interactions with local conditions in the globalized practice of architecture. The choice of building materials carries the design ideas of the Finnish architects. Also, it serves as a cultural intermediary to explain the architects' identity and relationship to the Chinese context. Based on three specific cases, this study retraces the Finnish-based architect's design process and material considerations through interviews and a review of a large number of design documents, including drawings and models.

Keywords: Finnish architects, China, materialism, international practice

Introduction

Finnish architecture has been deeply involved in the national imagination and identity construction (Wickberg 1965; Mikkola 1978; Peltonen 2000; Čeferin 2003). Finnish architects' works are also seen as distancing themselves from internationalism and having regional characters, while Finland's well-run architectural education has led to the emergence of remarkable architects (Frampton 1983; 2007). Likewise, Finnish architects' works were not limited to the Finnish territory; Finnish architectural exports were already present even before Finland's independence during the National Romanticism period (Vesikansa 2017; Laakso 2017). For a long time, Finnish architects' international practice was mainly concentrated in other European countries, and the practice

of Finnish architects in Asia has been less studied. At the same time, this materialism in Finnish architectural tradition focuses on the cultural properties of materials, the creation of spatial atmosphere, and the highlighting of human perception of materials.

With the economic reforms of the late 1970s, China opened its doors and entered a period of rapid growth and became the second-largest economy in the world after the United States. Since the 1980s, international architects have also arrived in the mainland Chinese market to undertake projects (Xue 2006; 2012). The first architects to enter the Chinese market came from China's Hong Kong, Japan, and the United States. Many of them were of foreign Chinese descent, and a representative example of this period is the Xiangshan Hotel, designed by I.M. Pei in the outskirts of Beijing. As we enter the 21st century, more European architectural firms are entering China, signaling that more public buildings requiring architectural thinking and design quality are happening in China (Xue 2012). A variety of iconic buildings designed by international architects dominate the urban skyline in China and have become one of the Chinese cities' signatures. Finnish architects have also completed several types of projects in China in the wave of architectural practice, including both large iconic projects and small-scale buildings.

By analyzing the interviews, discourses, and literature of contemporary Finnish architects' projects in China, this study will focus on how Finnish architects perpetuate materialism in their design thinking in a different context and combine the expression of materials with the construction of design discourse. Therefore, the research question posed in this study is how Finnish architects entered China and how the particular conditions and environment in China have influenced the architects' designs on three specific cases? Furthermore, the specific pair of Finland-China relations from the larger picture of the globalized architectural design process provides more essential details for worldwide cultural communication. Our research points out that architects' transnational practice is not a one-way export process but a two-way communication process. On the one hand, Finnish architects have the expertise and media influence to participate in the transformation of China's habitat spaces or even reshape China's cityscape. On the other hand, Finnish architects are also inspired by the actual context of the building and develop their designs in a dialogical way. And their design process and results are conditioned and constrained by local cultural, economic, and social relations.

Literature Review

In an era of globalization, globalized architects have developed extensive international practices. On the one hand, the Western world still occupies an upstream position in cultural production; and its architectural forms and urban spatial organization have influences on the rest of the world (Mathews 2007). Public buildings in many cities, such as airports, commercial spaces, etc., have become highly homogenized (Augé 1995; Ibelings 1998). On the other hand, local social forces and continuous national ideology inevitably constrain a cosmopolitanism paradigm in its total realization (Dirlik 1999; 2007). This internationalized mode of work, represented by the "star architects," influences the working habits of the architects themselves (McNeill 2009), how architectural firms allocate their resources on a global scale (Tombesi 2001; 2015), and reflects the direction of international capital flows and the distribution of power (Olds 2001; Sudjic 2005; Sklair 2017). From a Chinese perspective, international architectural firms in mainland China began with Hong Kong, Japanese and American firms, and from the early 21st century onwards, European firms slowly came on board (Ren 2011; Xue 2012). Chinese architects have also shown two attitudes when dealing with these buildings imported from abroad. Firstly, there is the view that working with international architects is a valuable learning

opportunity (Shao, 2015; Fang, 2021). Secondly, there is also the view that many foreign designs are not suitable for the Chinese context and damage the original urban fabric and city skyline (Zhuang 2004; Xue 2006).

In a broad sense, the Nordic design as an idealized lifestyle and quality still has considerable appeal in China. The human attention for people and the measured satisfaction of the basic needs of everyday life represented in the Finnish design philosophy is attractive to the new urban middle class in China. Finland has a positive national image in China and has extensive experience in eco-technology as well as wooden construction (cf. Franzini, Toivonen & Toppinen, 2018). Against the backdrop of China's already promising commitment to energy and carbon reduction, the use of wood in building design can be expected to be a potential growth area. Likewise, since the Finnish architects who have worked on Chinese projects do not have the same projects as Rem Koolhaas in taking on controversial projects (e.g., CCTV Tower), no Finnish architects have been at the center of public opinion events in China so far. Therefore, Finnish architects in China is an area that has been relatively little addressed in the existing literature, and discussion from a design thinking perspective is extremely rare.

However, engineers from large Finnish construction companies also have rich experience in infrastructure and building exports (Murole 2012). Laakso covers China in his book on Finnish construction companies' international practice, which includes one of the earliest projects in China, the Prime Hotel in Beijing (Laakso 2014). Kettunen, Oinas, and Kalliomäki examined the achievements and opportunities of Finnish architecture and urban planning (AUP) firms in international markets, including China, from the perspective of global markets and the size and competitiveness of architectural firms (2021). However, neither of these studies is conducted from an architectural perspective. In the retrospective literature on Finland's architectural achievements in the centenary of independence, its last chapter briefly reviews the export of Finnish architecture (Vesikansa 2017; Laakso 2017). These studies focus on the empirical level and less on how Finnish architects respond to a local environment that is rich and very different from Finland. At the same time, Finnish architecture firms are generally small in size; and even if there are firms with significant international practices, they are still largely dependent on the domestic market from the perspective of firm operations (Savolainen 2010; Euro 2021). The Finnish architectural community also holds a diverse view on exporting architecture, ranging from supportive and encouraging voices who believe that Finnish architects should compete internationally and capture the benefits (Vartola 2014; Euro 2021), to those who think that Western architects, including Finnish architects, should not be self-important and subjective in imposing their views on the rest of the world (Kaipia 2010), and the caution that consumerism can prevent Finnish architecture from achieving higher artistic achievements (Pallasmaa 2011).

Methodology

This article uses a combination of interviews, case studies, and a literature survey as the primary research methods. It is difficult for researchers to rely on theoretical predictions in social phenomena, while case studies can provide nuanced views of reality (Flyvbjerg 2006). The case-based analysis approach includes small-scale architectural exhibition installations, residential villas, and large-scale public buildings. The differentiated selection of cases reflects the inherent richness of Finnish architects' Chinese practice cases in general. We have mainly selected the following cases, CIPEA No.20 Villa by Sanaksenaho Architects, Moganshan Resort Villa Complex by Gemoetria and Viiri-Ylinenpää-Architects, and Wuxi Grand Theatre by PES Architects.

The three projects were selected as study cases with the following primary considerations. First, the clients of these projects are all native Chinese. Finnish architects have been awarded these projects in various methods, including competitions, invitations to events, and direct commissions. From a Finnish architect's point of view, these works are designed on foreign soil for foreign clients. Therefore, they are distinguished from the active export of architecture, such as international exhibitions of Finnish architecture, the Finnish pavilions at the Expos, or the Finnish embassies. Secondly, the selection of these three cases also reflects the diverse nature of Finnish architecture offices' practice in China, including small-scale buildings designed by relatively small teams and large-scale public buildings designed by established design firms. The means by which Finnish architects obtain these projects also vary, from commissions to winning projects through open competitions. Finally, all three cases have a localized exploration of materials in their design, articulating the relationship between architecture and its environment through materials.

We are concerned with the empirical process of these design cases rather than evaluating their design results. At the same time, establishing design networks that include actors from different countries is an indispensable part of transnational architectural practice. Most international architects are not qualified to produce construction drawings in China due to Chinese regulations⁶, so these Finnish architects have also gone through cooperation and coordination with Chinese local design institutes (LDI) to varying degrees.

Interviewee	Interviewee's Position and Affiliation	Projects Involved
Matti Sanaksenaho	partner in Sanaksenaho Architects	Villa No.20 in CIPEA
Pirjo Sanaksenaho	partner in Sanaksenaho Architects	Villa No.20 in CIPEA
Markus Wikar	partner in Geometria	Moganshan Joe Lalli Resort Hotel
Wu Hao	then architect in Geometria	Moganshan Joe Lalli Resort Hotel
Pekka Salminen	partner in PES Architects	Wuxi Grand Theater
Martin Lukasczyk	project architect in PES Architects	Wuxi Grand Theater

Figure 1. List of interviewees, these interviews were conducted by Yizhou Zhao

For case studies, semi-structured interviews were the primary way we collected data for the case studies, providing first-hand knowledge. This type of interview maintains flexibility, allowing the interviewer to adapt to different project characteristics and contexts while putting the various cases in essentially the same question framework and allowing for comparisons on specific topics (Smith 1995). Also, the researchers were not fully aware of the design process before starting the interview, so the follow-up questions allowed the researchers to understand the process in more detail in the face of unforeseen issues (Adams 2015). We interviewed six architects, including the principal architects, project leaders, and key contacts. The interviewees had received questions for

⁶ According to the "Notice of the Ministry of Construction about Issuing the Interim Provisions on the Administration of Foreign Enterprises Engaging in Construction Project Designing Activities within the People's Republic of China (PRC) (关于外国企业在中华人民共和国境内从事 建设工程设计活动的管理暂行规定)" published in 2004, where a foreign enterprise is to undertake construction project designing business within the PRC, it shall select at least one Chinese designing enterprise with a construction project designing qualification certificate issued by the administrative department of construction to carry out Sino-foreign cooperative designing activities, and shall undertake designing business within the scope of the qualification certificate of the said Chinese designing enterprise(s).

the interview in advance, while some of the follow-up questions were not planned. These discussions have been recorded and transcribed. The interviewees have received transcripts and had the opportunity to correct misunderstandings and remove some sensitive information about the company's business operations. Some interviews were conducted in Chinese, and the transcripts were then carefully translated into English.⁷

Also, in the case of Villa No. 20 in CIPEA, the schematic design occurred in 2004, and the deepening coordination occurred in 2012, so respondents may not recall all the design details from the conversation. Still, we can primarily supplement the data collection by reviewing the design documents. These interviews did not only conversationally take place, but the interviewees also showed bound collections of drawings, models, and material samples while being interviewed (Villa No.20 in CIPEA and Wuxi Grand Theater), or the slides from the presentations of the design results at the time (Moganshan Joe Lalli Resort Hotel). While reviewing these primary sources, the interviewer had the opportunity to ask additional questions. To ensure factual accuracy, the researchers could compare the verbal narrative with design documents.

Finally, we had access to original design documentation and drawings, email correspondence, meeting minutes, site photographs, etc., generated as the design project progressed. We also reviewed a large amount of available literature, including published journal articles, past interviews with architects, etc. We have researched the literature in several languages, including English, Finnish, and Chinese, to enrich the corpus sources. As a complement to the case studies, an extensive literature survey can help develop a generalized analysis that bridges with the existing theoretical framework and provides a more macro perspective for the study.

The brief history of Finnish architectural export

Finland already has a history of exporting many buildings, and its architectural exports can be divided into several historical phases. Firstly, during the National Romantic period, Gesellius, Lindgren, and Saarinen's design for the Finnish pavilion at the Exposition Universelle in 1900 in Paris sought to create a nationalistic style in Finland. In the following years, Eliel Saarinen completed several buildings in Estonia, including the Estonian Credit Bank (1912), St Paul's Church (1917), and Saarinen's entry for the Chicago Tribune competition in 1922 further promoted his international popularity (Hausen 1990). The second period of Finnish architectural exports was the Internationalist period, represented by Alvar Aalto and Viljo Revell. After becoming an internationally known modernist mastermind, Aalto received a wide range of design commissions from across the United States and Europe (e.g., Anderson, Fenske & Fixier 2012). On the other hand, Revell won the Toronto City Hall competition, becoming an important ionic project left by Finnish architects on the other side of the Atlantic. In a sense, Aalto and Revell represent two kinds of internationalism in Finnish architecture, one organic and warm, the other more modern and urbanistic (Connah 2005). And both styles appear in the overseas practice of Finnish architecture. Aalto's architectural achievements have also led him to argue that Finland has gone from being a country that received and followed foreign buildings in its early years to being a country that exports design (Schildt 1997, 275).

The third period was accompanied by a series of projects of Finnish construction companies in oil-producing countries in the Middle East. Finnish architects also have a series of practices there. Reima and Raili Pietilä completed the design of the Seif Palace complex in Kuwait, which includes the Emir's Governmental

⁷ The interviews and data collection, in general, have been done by the author as part of the process of his doctoral dissertation at the Aalto University Department of Architecture.

Offices and the Council of Ministers, and the Ministry of Foreign Affairs. Raili and Reima Pietilä point out that their design was inspired by the total impression of the particular site environment and the constant search for the 'genius loci' that belong to Kuwait in the design process (Pietilä and Pietilä, 1983). Another Finnish couple of architects, Kaija and Heikki Siren, were awarded a project in Iraq. Impressed by their design for the Linz Concert Hall, in the spring of 1978, the Ministry of Planning in Iraq invited Kaija and Heikki Siren to participate in the competition for the Conference Palace in Baghdad (Siren 1974). Even being interrupted by the war between Iraq and Iran, the Finnish construction consortium could still accomplish the demanding task in a tight schedule of 4 years (Laakso 2017). The architects considered the local climate by embedding the glass facade in concrete ribs and shielding it from view by horizontal concrete slabs. In the desert climate, the building displays a solidity and closure that contrasts with the transparency that can be seen in Finnish domestic architecture. Due to political unrest and plummeting oil prices, Finnish architects gradually withdrew from the Middle East and North Africa. The wave of Finnish construction and architecture exports in the region came to a halt.⁸

From the 1990s to the present, the international practice of Finnish architects has entered a more diversified phase. On the one hand, Finnish architects continue to gain significant practice in countries like Denmark, Germany, Norway, Estonia, and Poland, where they have built a series of influential works. On the other hand, Finnish architects have started to explore new areas, and several design works have been completed in China. Before that, there were few works by the Finnish architectural community in East Asia, except Kaija and Heikki Siren's log buildings in Japan (Bruun & Popovits 1977) and Pekka Helin's Pan-Gyo Housing in South Korea (Mukala 2010). As China's urbanization deepens, the country's construction market will gradually move away from the brutal expansion of the first two decades of this century. International architects will also face competition from the growing local Chinese design firms. On the other hand, some Finnish architects have entered China and institutionalized their operations, and there is still a younger generation of Finnish architects trying to undertake projects from China. Finnish architecture firms are still mostly small and medium-sized and are likely to face financial pressure when undertaking projects in China.

Finnish architects in China

Finnish architectural media has followed China in sporadic reports since the early days of China's reform and opening up (Lukkarinen, Annila & Tegelman, 1978). And it was the Finnish construction company Puolimatka that first started practicing in China. In the 1980s, as China's economic reforms proceeded, there was a growing demand for modern hotels in key Chinese cities. The Finnish construction company, Puolimatka, collaborated with the Beijing Institute of Architectural Design (BIAD) on the design of the new Prime Hotel⁹ in the city center of Beijing. However, it was not only the design that was exported, but Puolimatka itself became one of the investors when China was desperately short of capital at that time (Laakso 2014). In terms of its design, the Prime Hotel exhibits an eclecticism that combines a functional modernist plan with decorative Chinese elements on the façade. With the subsequent acquisition of Puolimatka by NCC, the Finnish company withdrew from the high-risk Chinese market

⁸ As late as the 1990s, Finnish construction companies still had projects in the North African region. In 1992, as the design consultant of Devecon's planning and infrastructure project in Libya, architects Daniel Bruun and Jussi Murole received a commission to design the Al Jufrah Administration Centre and Congress Hall in Hun is an oasis town about 300 kilometers away from the Mediterranean Sea. The project was finally completed in 2002 after delays. Again, this case demonstrated how architects manipulated forms and materials in different climates (Murole and Bruun, 1993; 1998)

⁹ In the book by Laakso Mikko and Tamminen Seppo, the name of this hotel was written Sara Hotel. SARA (Sveriges Allmänna Restaurangaktiebolag) was the Swedish hotel management company that operated Prime Hotel at that time. The hotel's name is Prime Hotel in English, or Hua Qiao Fan Dian (华侨饭店) in Chinese, literally meaning is "Overseas Chinese Hotel."

(Laakso 2014). At the beginning of the 21st century, Finnish architects came into contact with China again and gradually developed a multidimensional interaction with China.

In this new period, Finnish architects have approached China in two main ways, either by invitation or actively participating in architectural competitions. In 2003, Matti and Pirjo Sanaksenaho were invited to participate in the Chinese International Practical Exhibition of Architecture (CIPEA) in Nanjing to design an 800 square meter villa. In 2009, Finnish architect Marco Casagrande and two Taiwanese architects, Hsieh Ying-Chun (謝英俊) and Roan Ching-Yueh (阮慶岳), collaborated to produce Bug Dome installation for the Bi-City Biennale of Urbanism/Architecture (UABB) in Shenzhen. The structure, situated in a rapidly developing urban space, is made of bamboo, a local Chinese material commonly used for scaffolding on construction sites in China. The work focuses on China's migrant workers and aims to provide a public space for this often overlooked group (Casagrande 2009). A few years later, another Finnish architect Anssi Lassila created two huts for the 2013 UABB exhibition, one a Finnish version of the hut and the other a Chinese version. Both are derived from the same spatial prototype but are constructed differently depending on the materials used. The Finnish version is wood, while the Chinese version is bamboo. Although Lassila designed both huts, the Chinese version is in part a reflection of his conception of China. It suggests using materials as a means for architecture to respond to the change of the locations. In this architect's mind, bamboo once again becomes the Finnish equivalent of wood in China (Lassila 2014). In 2010, the World Expo opened in Shanghai, and it became a year of intensive cultural exchange between Finland and China (e.g., Toivonen 2010). The Expo attracted the Finnish government's attention and the business community, and JKMM-Architects' design for the Finland Pavilion was selected as the final winner.¹⁰ The architectural prototype is based on the concept of an "island," suggesting the architect's desire to escape the hustle and bustle of the city and find peace in nature (Kurkela 2010). The Finland Pavilion at the Expo received a large number of visitors, with the total number of visitors even higher than the total population of Finland (Yang & Pu 2010).

On the other hand, some Finnish architects have gradually gained a foothold in China through competitions. PES-Architects entered the Chinese market in 2003. Still, in the first few years, not many works were completed, and the office was tempted to withdraw from China (Salminen 2010). An important turning point came in 2008 when PES won the competition for the Wuxi Grand Theater (WGT). In 2009, as another of PES's principal architects, Tuomas Silvennoinen led the team to win the architectural competition for the Chengdu ICON Tower. The tower, also known as the Business & Innovation Centre for China-Europe Cooperation (CCEC), provides space primarily for European business activities in China. Also, the high-rise tower implied that Finnish architects could acquire the opportunity to design building types that were difficult to realize in Finland. In late 2013, the Strait Culture and Art Center (SCAC) became PES's second performance complex in China. PES has also established a wholly-owned subsidiary in Shanghai. Likewise, the widespread use of mobile internet and social networking platforms has further removed geographical barriers to disseminating information and images. The new generation of Finnish architecture firms, such as ALA and JKMM, with essential projects in the center of Helsinki, such as the Helsinki City Library (Oodi) and the Amos Rex Art Museum, can get a lot of attention on the Chinese internet community. With the media impact of the new project, ALA and JKMM have also participated in several architectural competitions in Nanjing and Shenzhen in recent years (ALA-Architects 2019; JKMM-Architects 2020).

¹⁰ JKMM-Architects' another entry, "Riichi," won the third prize.

In addition to the architectural practice, Finnish architects have exchanged ideas with their Chinese counterparts through exhibitions, academic outputs, and design events. The work of Finnish architects has also been introduced to China, both through articles written by Finnish architects in Chinese journals (e.g., Heikkinen 2005; Mukala 2012; Lahti 2012) and through the introduction and presentation by Chinese scholars with Finnish academic backgrounds. The Chinese academic community has launched a study on Finnish architecture, including the best-known Finnish architect Alvar Aalto (e.g., Liu 1998; Fang 2005; Jin & Huang 2013). Some theoretical books on Finnish design culture, such as Pallasmaa and Korvenmaa's work, have been translated into Chinese (Korvenmaa 2012; Pallasmaa 2016). Finland's focus on design as a national development strategy has also received attention from China (e.g., Chen 2021).

Next, we will analyze how Finnish architects interact with the local context and drive design through the language of materials, using specific case studies. We will approach the cases from three perspectives: 1) the context and process of the case, 2) the architect's thinking about the materials and how architects used them to create a cultural connection, and 3) a brief review of the project from the perspective of commercial reality.

Villa No.20 in CIPEA

At the beginning of the 21st century, there were several examples of Architectural Cluster practices in China, where internationally renowned architects were invited to pool their designs on a site, resulting in a collection of works. Some of the better-known examples include the Commune by the Great Wall (CGW, Beijing), the Chinese International Practical Exhibition of Architecture (CIPEA, Nanjing), and Ordos 100 (Ordos, Inner Mongolia, not built). This clustering model combines the value of design, the visibility of the architect, and the development of the property. In 2003, the Finnish architects Matti and Pirjo Sanaksenaho were invited to participate in CIPEA in Nanjing, China, curated by the renowned Japanese architect Arata Isozaki. The project is divided into two parts: a cluster of villas and three public buildings. Isozaki invited 20 young architectural offices to design the villa section, while three more prominent and established architectural offices would design the public buildings (Mei 2004). The Finnish architectural team Sanaksenaho Architects is responsible for creating one of the villas. The allocation of sites was made by lottery, and Sanaksenaho-Architects drew Plot No. 20, located at the end of the entire complex. However, according to the interviews, the Canadian planning firm Ekistics responsible for the master plan subsequently adjusted the master plan so that this site became the first lot for the entrance (Sanaksenaho & Sanaksenaho 2013; 2021). Because of the importance of this location, the Finnish design team's villa became a VIP villa, and the overall floor area grew from 600 to 800 square meters. According to the Finnish architects, the entire design process went smoothly, and the architects were given considerable freedom from the exhibition organizers to carry out the design (Sanaksenaho & Sanaksenaho 2021).



Figure 2. Villa No.20 in CIPEA, image credits: Tuomas Uusheimo, Sanaksenaho Architects

The surrounding landscape inspired the architectural concept. The site was originally a portion of land protruding into the lake; the architects decided to continue this gesture by placing the building as close to the water as possible, connecting the waterscape and the hill. (Sanaksenaho & Sanaksenaho 2013; 2021) The distinction between interior and exterior materials is common in modern Finnish architecture and is also evident in the case of Villa 20. On the one hand, because of the context, the green copper cladding on the façade comes from a very early conceptual stage. According to the interviews, the architects sought to continue the building's environment - a natural landscape full of greenery - into the villa itself. The architects insisted on using pre-patinated copper panels because this material gives the building a uniform and homogeneous green texture. Also, the architects felt that the sloping shape of the building made it impossible to do the patina in natural conditions (Sanaksenaho & Sanaksenaho, 2021). On the other hand, the architects set up the building interior as a space entirely composed of wooden surfaces, like a "cigar box." The architect selected a reddish cherry wood from the local building materials market in Nanjing as the primary material for the interior (Sanaksenaho & Sanaksenaho, 2013; 2021). The interior and exterior materials are thus contrasted in texture and color in multiple senses (Sanaksenaho & Sanaksenaho, 2021). The copper panel is a common material found on the roofs of traditional churches in Finland, and one can easily find green copper roofs in Finnish city skylines. In this project, the architects give the copper facade a cultural identity from Finland. At the same time, materials from Finland and local China are organically combined, echoing the multicultural context in which the building was born. The architects expected to introduce local materials into the space, so the native Chinese cherry wood is also seen as a symbol that takes on a meaning beyond its function.

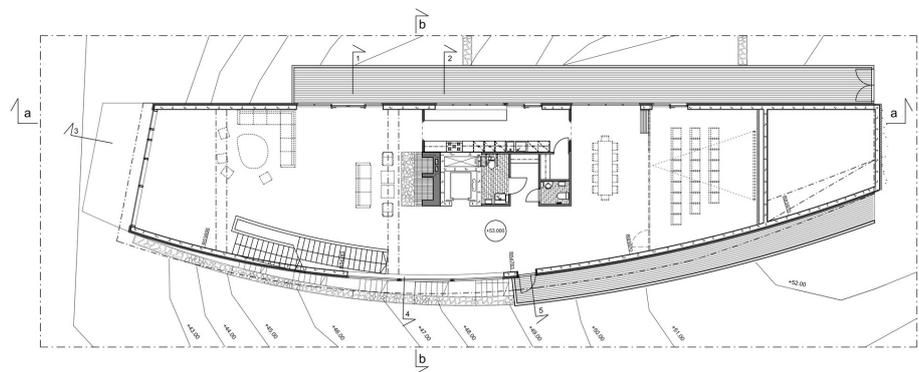


Figure 2. The floor plan, Villa No.20 in CIPEA, image credits: Sanaksenaho Architects

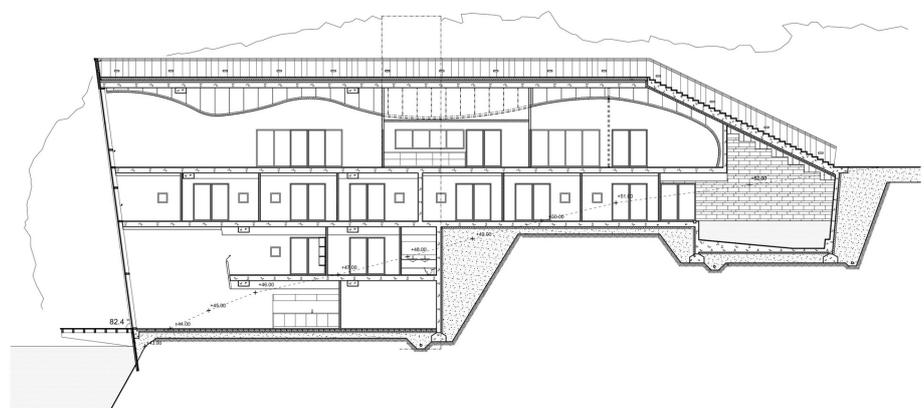


Figure 3. The long section, Villa No.20 in CIPEA, image credits: Sanaksenaho Architects



Figure 4. Villa No.20 in CIPEA, image credits: Tuomas Uusheimo, Sanaksenaho Architects

Sanaksenaho Architects completed the detailed design and technical coordination with Southeast University Architecture Design and Research Institute (LDI) in 2005. Then, the LDI drew all the working drawings with only minimal modifications based on Chinese building codes according to the original design (Sanaksenaho & Sanaksenaho 2021). After several years of inactivity, the project began construction in 2010 and was finally completed in 2012. According to the interviews, The design fees paid for this project were significantly lower than Finland's then prevailing domestic design fees. At the same rate, only a small or medium-sized family house could be designed in Finland (Sanaksenaho & Sanaksenaho, 2021). However, as the architects mentioned, it was predictable that the project would receive a lot of media attention; and the fact that it was part of an architectural initiative involving several internationally renowned architects made the architects willing to devote time and effort to the project. (Sanaksenaho & Sanaksenaho 2021) In Nanjing, the Finnish architects first encountered a distant country like China through their architectural practice. After that, Matti and Pirjo Sanaksenaho also participated in the Ordos 100 project, but the organizer canceled the whole event, and their designs did not have the opportunity to be realized. In contrast, the success of the Nanjing project after many years of delays was a precious experience for the architects (Sanaksenaho & Sanaksenaho, 2021).

Moganshan Joe Lalli Resort Hotel

The town of Moganshan, under Deqing County in Huzhou City, Zhejiang Province, China, has scenic and high-quality ecological resources and has gradually become a well-known tourist attraction in China since the 1930s. Since the beginning of the 21st century, B&B (Bed & Breakfast, “Minsu 民宿” in Chinese) resorts run by foreigners or featuring exotic buildings have appeared in the Moganshan area. In 2014, the development of the tourism industry became an official policy of the local government, and the existing B&B sector gradually transformed into high-end resort hotels. At the same time, the planning and design of new tourism and resort areas were also on the agenda. In 2015, Markus Wikar, the principal architect of Helsinki-based architecture studio Geometria, was introduced by his Chinese friend to a commission to design a resort hotel in the Moganshan scenic area of Zhejiang Province, China (Wikar 2021). According to the interviews, the entire project includes the design of several different building types, including single-family villas, row villas, collective resort apartments, etc. The total number of individual buildings is 60, with a total floor area of approximately 20,000 square meters. According to Wikar and Wu,

another small Finnish architectural firm, Viiri-Ylinenpää-Architects, was also invited to work on the project as a co-designer (Wikar 2021; Wu 2021).



Figure 5. Moganshan Joe Lalli Resort Hotel, image copyright: Geometria



Figure 6. Long section, Moganshan Joe Lalli Resort Hotel, image copyright: Geometria

The entire resort is intended to take full advantage of the local landscape, offering people from its nearby major cities, such as Hangzhou, Nanjing, and Shanghai, the opportunity to relax and get in touch with nature. The architects have set up the villas among the hills and the apartment-hotel at the top of the highest hill, based on the principle of undulating terrain and obtaining good landscape views. The architectural design was kept in a state of simplicity and focused on functionality. According to the interviews, in the choice of materials, the Finnish architects took into account the client's need for "a Finnish style" by envisioning a cross-laminated timber (CLT) structure for the main buildings while at the same time choosing materials that are adapted to local climatic conditions for some of the materials. Compared to Finland, Zhejiang province, located on the southeast coast of China, has hot and humid summers, so the architects set the facade material to be more weather-resistant bamboo-molded fiber concrete. The design has been kept as modern and concise as possible, from the architectural exterior to the interior design. At one point, According to the interviews, the architects also tried to incorporate traditional Chinese wooden structures into the design, but the client insisted on an original Finnish style (Wikar 2021). Likewise, the Finnish architects coordinated intensive technical with Crownhomes, one of the few major Chinese wood structure design companies, to ensure the design implementation. According to the interviews, the process went smoothly, and the Finnish architects were delighted with Crownhome's work (Wikar 2021; Wu 2021).



Figure 7. The "Super Villa", Moganshan Joe Lalli Resort Hotel, image copyright: Geometria

However, Crownhomes ended up being the client's structural design consultant only; and the final construction company was less than competent and made unauthorized changes to the original design (Wikar 2021). To add to the frustration of the Finnish architects, just as they completed the design and coordination work and the foundations of the building were finished and ready for construction to begin, the original company responsible for the development of the project was acquired, and the entire project changed dramatically (Wikar 2021). Due to cost considerations, the villas were not built according to the Finnish architect's designs, and the six multi-story apartment hotels were eventually built (Wikar 2021; Wu 2021). This whole project is still regrettable for the Finnish architects. Although the Finnish architects were reasonably paid for their design, several architects worked on it for years, and the client only partially realized the design (Wikar 2021). At the same time, the Finnish architects could not control the details and quality of the building.

Wuxi Grand Theater

With the emergence of a growing urban middle class in Chinese society, the demand for cultural consumption continues to grow. Meanwhile, planning large public buildings has become China's urban development strategy, and the "grand theater" has become a signifier of urban expansion and renewal (Xue 2019). Therefore, the involvement of international architects in China's "landmark" buildings has continued to appear in the last 20 years. In 2007, the city of Wuxi began the construction of its Taihu New City, and the international competition for the Wuxi Grand Theatre (WGT), the most important landmark project in the region, was launched at the same time. In 2008, a joint team of Finnish architectural office PES and local design institute United Design Group (UDG) won the first prize in the competition against their German, French, and Japanese counterparts. This is the first time Finnish architects have won an open competition to create an important public project in China. Once the project started, the Finnish architectural team, led by Pekka Salminen, began to work intensively. As the project progressed, the partner company working with PES was replaced by the client with the Shanghai Institute of Architectural Design and Research (SIADR). According to the interviews, the local authorities in Wuxi originally planned to complete the massive project in two years; however, many participants, including the architects and the project managers from the client's side, soon realized that it was almost an impossible project. Therefore, the local decision-maker extended the project to the third year at Salminen's strong

suggestion (Salminen 2021). In 2012, after four years of intensive design and construction, WGT was completed and held its first performance.

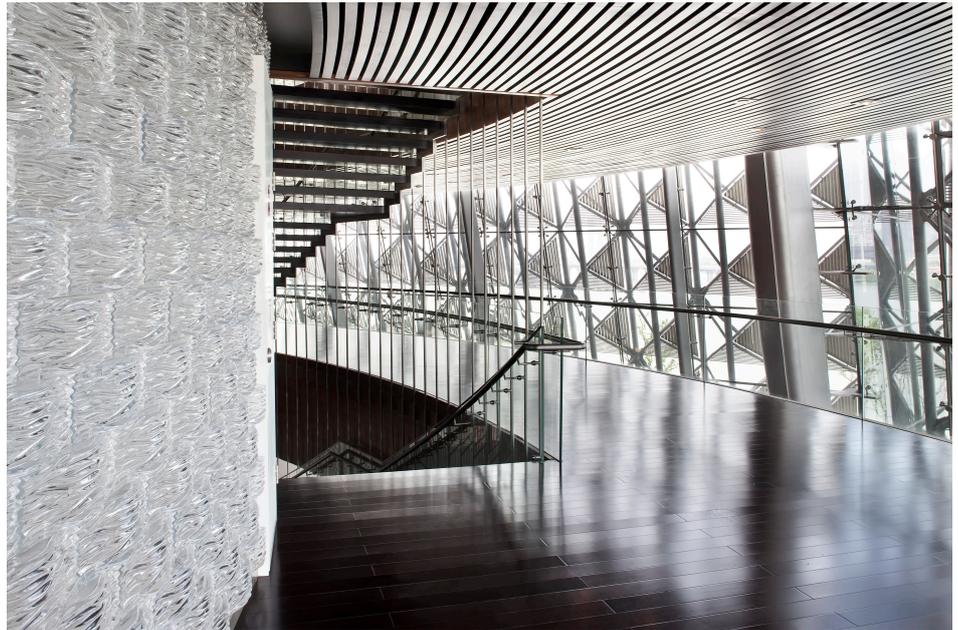


Figure 8. Wuxi Grand Theater, image credits: Kari Palsila

The architects built a rich material expression and perception into the WGT project, including the iconic steel wings covered with perforated steel panels, the stone on the façade, the glass blocks in the foyer, and the strand-woven bamboo blocks used in the main auditorium. In WGT, we can notice that the architects have organized a juxtaposition and dialogue between a material representing Finland and a material depicting China. According to Salminen, he used glass blocks with a water pattern designed by Finnish glass artists Tapio Yli-Viikarilla and Kirsti Taiviola in the foyer. The glass block walls that form the texture of the water waves are constructed in the architect's discourse to represent an abstract image of Finland. The glass blocks were held together by a sophisticated steel cable structure and deepened during the construction design phase with a local Chinese interior design partner, Gold Mantis, to ensure that the entire concept was completed to a high quality. According to the architects, they originally envisioned a red glazed brick material in the foyer, which the architects later replaced with a calmer glass wall at the client's suggestion (Salminen 2015). Nevertheless, the cultural properties of the wall material in the foyer remain unchanged, and the water-rippled glass bricks designed by Finnish artists become a marker of cultural identity, echoing the bamboo material that represents Chinese identity.



Figure 9. Wuxi Grand Theater, image credits: Jussi Tiainen



Figure 10. The bamboo samples of the Wuxi Grand Theater in PES Architects' office, image credits: PES Architects

At the same time, the opera auditorium uses large areas of bamboo as the interior material forming one of the most distinctive features of the entire building. According to the acoustic requirements, these bamboo blocks must be hard enough to generate enough reflections. So, they need to be processed mechanically to achieve a reasonably high density. The architects considered two options for modern industrially processed bamboo materials. The first was the more common “glue-lam” bamboo, which retains the original color and texture. The other was strand-woven bamboo, which has a more homogeneous pattern and a higher density than the acoustic standard. After many comparative tests, the architects chose strand-woven bamboo, which is denser, and more acoustically effective, for the auditorium and the floor. and has become the main character in the PES material palette. PES has used bamboo in its following projects in China due to the sustainability, mechanical properties, aesthetics, and cultural localization of industrial bamboo materials (Salminen 2015). Industrial bamboo was still a relatively uncommon material in China at the time and, according to the architects, was not initially considered a “high-end” material by

clients in Wuxi (Salminen 2013, 2015). With WGT and its distinctive bamboo auditorium, Salminen hopes to bring bamboo to a new level of development and attention in China (Salminen 2015).

In short, we discussed the application of two materials in WGT. Faced with such a complex project, in addition to its own design team, PES contracted several professional consultants, including acoustics, stage and theater management, landscape, etc. And without the efforts of the Chinese design partners in technical equipment design, complex steel structure design and fabrication, and interior construction design, this large building could not have been completed in four years. PES invested twice as many working hours as initially planned to complete the design with the highest possible quality (Salminen 2021). As a result, the project was a severe loss from a business standpoint (Salminen 2021). However, PES also used this project to gain a foothold in China, establishing a stable team with Chinese design experience and creating the possibility of winning several significant projects later on. The development of high hardness carbonized bamboo materials has significantly expanded the potential of bamboo in the architectural field. Its interior design became an essential reference and study case for the Chinese interior design community at the time.

Findings

The international practice of Finnish architects began at the beginning of the last century and continues to this day, a process that is continuous and has resulted in many remarkable examples. This study shows that Finnish architects' Chinese practices and the design culture they represent exhibit several features. We try to summarize our analysis from both design culture and design practice perspectives.

1) The range of Finnish architects' practices in China is part of the export of Finnish architecture and its extension in new territories. Finnish architects have been involved in different scales and types of architectural projects in China, including system solutions from architectural design to interior design. The cases of Finnish architects in China provide a window into the Finnish architectural tradition and its developments.

2) For Finnish architects, materials are not just a functionalist decision but serve as one of the architectural themes and can be a starting point of creation. The Finnish architects use materials as a cultural medium in their Chinese projects, embodying architecture in a culturally neutral zone of contrast between multiple material identities. Therefore, the materials carry the design thinking of Finnish architects and, at the same time, become a cultural mediator to interpret the architects' own identity and its relations with the Chinese context. Finnish architects have also tried to represent what they see as China in architecture in a symbolic way. Finnish architects tend to set these materials in a dialogical relationship in the space and use the materials as a design motif. At the same time, building material has become a piece of discursive equipment for Finnish architects to connect with the local cultural context and turn the design into an in-between state.

3) In the Chinese projects, many external factors, including cost and client preference, can influence the architect's design process and choice of materials. The Finnish architects' choice of materials underwent a process of comparison, experimentation, and negotiation. When materials became the subject of the space, the Finnish architects working in China needed to carefully track the process from initial concept to final implementation, working with material suppliers, artists, and local Chinese partners to achieve the desired result. The materialism expressed by the Finnish architects is not only culturally based on

the architects' design concepts and discursive constructions but also relies on the multi-participant design networks behind them.

Discussion

Finnish architectural design has a coherent tradition of materiality, tectonic thinking, using local materials (e.g., Suhonen 1993). Materials are designed to convey the sensibility of natural textures, in which Finnish architecture reveals its features of humanities and the appreciation of mundane pleasures in everyday life (Pallasmaa 2007). And Finnish architects have traditionally focused on establishing a connection between the perception of materials and identity (Griffiths 2004; Pallasmaa 2007). On the one hand, we can observe this design approach in Finnish domestic projects. For example, designed by Heikkinen and Komonen, the Flooranaukio residence reflects the history of ceramic production in Helsinki's Arabianranta district using recycled ceramic pieces on the exterior walls (Koivisto 2012). On the other hand, this design method of forming a link between culture and memory through materials has been born elsewhere with the export of Finnish architecture. By examining a range of Finnish architects' works on different scales in China and the architects' discursive expressions, we can observe the continuation and expansion of this materialist thinking. The context in China has significantly enriched the materialism of Finnish design.

However, Finnish architects need study, comparison, and communication to utilize localized material successfully. By using the case of the WGT, we can further discuss how Finnish architects see bamboo as a medium to continue the Finnish wood tradition in China. Bamboo is a part of Chinese culture, and it has a symbolic meaning that represents a spirit of resilience and nobility, especially in China's traditional painting and poetry. And China has a tradition of making bamboo furniture (Fang 2004). Yet, Chinese architects have not widely experimented with industrial bamboo materials in the construction of large public projects in China. Though Chinese engineers and material scientists have developed modern bamboo materials with stable mechanical properties, some companies can produce the new material industrially in recent decades.

In WGT, the client initially saw bamboo as a low-end and temporary material that was not suitable for use in cultural venues like an opera (Salminen 2013). Moreover, as the auditorium is a core space with many people, the fire resistance of bamboo is also a concern for the client. PES's design team examined the entire production process of high-density strand woven bamboo from raw material to finished product. And they also proposed detailed construction solutions and many technical inspections data, including different specialties such as acoustics and fire protection, which finally allowed the design to be successfully realized (PES Architects, 2009). In a way, Finnish architects have led to the local promotion of modern industrial bamboo in China, bringing to light the qualities that this material can achieve and its potential. Through this series of material experiments, the accomplishment of WGT has provided an example of the reinvention of local materials and broadened the material palette of contemporary architecture in China.

Furthermore, the choice of materials is closely linked to the construction of the architect's discourse, especially in transnational architecture, where design seeks to be understood or interpreted in a localized context. Finnish architects use the material to respond to the cultural difference in China. However, the discourse employed by the architects would be better further investigated by adopting a Foucauldian (1971) approach of discourse analysis, grounded in the knowledge-power relationship.

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