

The Development of Modern Landscape Architecture in Thailand

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ABSTRACT

The profession of landscape architecture has been firmly established in Thailand and has continued to flourish for over 40 years. Throughout this time, landscape architecture has made important contributions in improving environments, the people's quality of life, and the aesthetics of Thailand's cities and communities. This research discusses the development of the landscape architecture profession and design concepts in Thailand from the beginning to present to understand how landscape architecture has been cultivated through the processes of adaptation and appropriation.

The major contents of this research were obtained from the analysis of interviews conducted with 20 practitioners of landscape architecture firms in Thailand. The topics of discussion include multiple factors affecting the concepts, styles, and typologies of landscape architectural design.

The results show that landscape architecture in Thailand has developed in parallel with global design trends since the beginning of this profession. However, contextual factors, particularly socio-economic, political, and environmental issues, also affected the variation of project types and detailed designs. These trends and factors help foster the richness of landscape architecture in Thailand.

Keywords: landscape architecture, landscape architecture profession, modern landscape architecture, landscape architecture in Thailand

INTRODUCTION

Landscape architecture in Thailand has been undergoing development for over 40 years, playing a significant role in improving quality of life and enhancing the aesthetics of its cities. Over time, the profession has faced various difficulties and challenges. Until recently, Thai landscape architects have been widely recognized due to their growing regional influence. Many of them were appointed to design numerous projects in Asia, and most of their works received international design awards.

This study analyzed interviews with 20 well-established and influential practitioners from different generations, focusing on the development of the landscape architecture profession in Thailand and the evolution of design approaches from the beginning to the present. The interview synthesis reveals the international and contextual influences as well as the process underlying professional development. Ideally, this study contributes toward a better understanding of how landscape architecture in Thailand has been cultivated through time.

BACKGROUND

Development of the Western Model

Although the term “landscape architecture” was coined in Europe, it was in the US that modern landscape architecture emerged (Antonetti, 2012; Thompson, 2014). Arguably, the first effort to study modern landscape architecture was the work, *100 Years of Landscape Architecture: Some Patterns of a Century*, in which Simo (1999) described the people and factors that influenced the dynamics of landscape architecture over the course of 100 years (A.D. 1899–1999). Later, Baird and Szczygiel (2007) analyzed the development and changes of the landscape architectural profession in the US from post-World War II to the present. They portrayed how ideas from prominent landscape architects influenced public views toward the landscape architectural profession in the American society.

The study concluded that over the past 60 years, landscape architecture has developed into a highly multidisciplinary field, with a very broad scope that has caused confusion in public acknowledgment. Meanwhile, Berrizbeitia (2016) studied the evolution of landscape architectural design in the US in relation to cognitive and socio-cultural changes from 1938–2012. The article focused on design concepts that are not solely based on practicality, but also on other design factors, such as ecology, culture, technology, and so on.

Based on the studies mentioned above, the global design trends in landscape architecture were analyzed, as shown below. These provide the basis for comparative analysis with the development of landscape architecture in Thailand.

Pre-Modern Period (Late 19th Century–pre-World War II)

In this period, landscape architecture was widely considered as a succession of English landscape gardens (Thompson, 2014, p. 8). In 1899, the American Society of Landscape Architects (ASLA) was established, with the aim of distinguishing landscape architecture from typical English landscape gardens by highlighting the issue of spatial composition. The Central Park in New York City, which was strategically planned with a combination of function and aesthetic, focusing on visual sequence and a systematic arrangement of various features in the park, was presented as an example to demonstrate the differences between landscape architecture and landscape gardens (Deming & Swaffield, 2011, p. 58).

Modern Period (1941–1970)

The decade following World War II was a period of economic expansion. An increase in population and urbanization sparked a growing demand for landscape architecture profession. Housing projects and gardens were among the prevalent project types that made landscape architects more well-known in society. The recognized leaders in landscape architecture in this era included Dan Kiley, Garrett Eckbo, James Rose, and Thomas Church. This group of

landscape architects was influenced by abstract art, and their design was also related to architectural forms and patterns. The thinking process in the modern period was generally geared toward rationalism and functionalism. However, to some extent, the emphasis on function made the design overlook natural and ecological factors.

In the late 1960s, Ian McHarg, a Scottish landscape architect, introduced a new concept of landscape architecture that focused on ecological process. This concept was in line with the global trend in environmentalism at that time. Therefore, landscape architecture in this period was expanded to include planning for ecological conservation. However, McHarg's approach was considered suitable only for large-scale projects (Berrizbeitia, 2016, pp. 21–22).

Postmodern Period (1971–2000)

During the 1980s, Peter Walker, an American landscape architect, took the lead in promoting the idea that made landscape architecture stand out from the other fields of architecture and ecosystem. In this period, landscape architecture comprised a design extravaganza characterized by bold patterns and the use of complex shapes, spaces, and materials. These features were primarily influenced by postmodern art. Examples include Harlequin Plaza, IBM Solana, and NCB Plaza. However, at the turn of the millennium, efforts to balance art and ecological preservation started showing changes, and spectacular designs were replaced by ecologically processed forms. This approach aims at creating sustainable landscape architecture, which can be carried through to the next decades (Treib, 2015, pp. 6–16).

Contemporary Period (2001–the Present)

Most landscape design projects in this period focus on improving quality of life and restoring ecological degradation. At the same time, the landscape architecture profession has gained more public recognition and played a key role in incorporating the concepts of "sustainable design" and "resilient design" into a number of public projects. The design process focuses on generating a conceptual framework that involves social and ecological dynamism. In this era, digital technology has become an important tool

for all landscape designs. The shapes and lines generated by computer program are dynamic and sometimes similar to natural processes.

In addition, there has also been an effort to restructure ecosystems in the cities by creating more green spaces, such as ecological parks, green roofs, and vertical gardens, as an integral part of urban structure. These reflect the influences of landscape ecological urbanism, which is the concept known among landscape architects in the US since the beginning of the new millennium (Waldheim, 2016).

Regional and Local Contexts

In Southeast Asia and Oceania, modern landscape architecture was introduced to Australia, Singapore, Malaysia, and Indonesia during the 1950s–1970s. The milestones were urban development policies initiated by the government of each country (Saniga, 2013; Shuib, 2013). These included new town projects, international sporting parks, international airports, and urban transformation plans. Such megaprojects resulted in a growing opportunity for landscape architecture profession, followed by the establishment of educational and professional institutes. The initial progress of landscape architecture profession depended upon two different models. Australia, Singapore, and Malaysia seemed to be influenced by British schools, while Indonesia was patterned after the US (Mildawani, 2015). At present, the landscape architecture of these countries has shared similar concepts that are related to ecological sustainability and the coexistence between humans and nature. These can be seen from the National Landscape Policy in Malaysia and Biophilic Urbanism in Singapore, among others (Newman, 2014).

Previous Studies

The development of landscape architecture profession has already been studied in many parts of the world, including the US, Europe, and Asia-Pacific (Holden, 2008; Mildawani, 2015; Moen, 2014; Pike, 1979; Roe, 2007). These studies rely on archival materials, informal interviews, and focus group discussions. The

analyses focused primarily on the role of landscape architects in different contexts.

Landscape architecture in Thailand has not yet been academically studied in terms of its development. In 2009, the Thai Association of Landscape Architects published *The Passage to Thai Landscape Architecture*, on the 30th anniversary of the Department of Landscape Architecture, Chulalongkorn University. It was the first and only book that shed some light on the emergence of the landscape architecture profession in Thailand. The book focuses on the typological classification of design projects and the description of outstanding works in merely a broad picture.

RESEARCH DESIGN AND METHODOLOGY

This article is historical research that employed an interpretative phenomenological analysis. Most of the contents were analyzed from the interview data by the owners or senior landscape architects of landscape architecture firms registered with the Thai Association of Landscape Architects. A large part of this study relied mainly on the memoirs, experiences, and perceptions of the informants. Additional data were obtained from relevant books and articles.

The selected landscape architecture firms must be already established for over 10 years so that the informants could provide the information regarding changes over past decades. In addition, the firms should be widely recognized in professional fields at both the national and international levels and have experiences in multiple types of projects. Based on these criteria, 20 design firms were chosen by their year of establishment between 1974 and 2008.¹ The participants can be broadly classified into three groups according to age. The founder generation (2) included companies established before the first graduates of landscape architecture program in Thailand were produced. The older generation (12) denoted a group of

landscape architects who founded design firms by the end of a millennium, and the younger generation (6) included the companies established after the year 2000. Most participants have educational and working backgrounds in other countries aside from Thailand, such as the US, the UK, Hong Kong, and Singapore.

Semi-structured interviews were conducted, and all of them were recorded and transcribed. Nine open-ended questions were designed to encourage interviewees to share their thoughts on the various factors and inspirations that affected design concepts and styles. The questions included the following:

1. What types of projects are most often hired to design at any given time?
2. What was the design inspiration for each project?
3. Who are the international landscape architects influencing the concepts and styles of work in your company at different times?
4. How do natural disasters and economic and political crises affect the design of your projects?
5. How do you professionally manage all the impediments encountered during the past years?
6. What signature projects have been completed by your company?
7. What is the most influential factor determining the design concepts?
8. What are the pros and cons of the design style in each era?
9. What characteristics of landscape design are most suitable to Thailand?

The substance of this study mainly derived from the synthesis of the interviews. All responses from the informants were analyzed using content analysis techniques to group comments reflecting similar attitudes. Particular responses, however, were also pointed out. The data were organized according to periods. The periodization was based on socio-economic changes and the alteration of design approaches.

The information on early developments derived particularly from the interview with Professor

¹ This research was funded by the Department of Landscape Architecture, Chulalongkorn University in 2019. The companies selected have to establish before 2009.

Emeritus Decha Boonkham, the pioneering landscape architect and the founder of landscape architecture education in Thailand. It also included the development of works by the design firm founded by Boonkham, which operated between 1974 and 2007. The development of the following periods was analyzed from the interviewing data of the selected firms. The participants, excluding Professor Boonkham, were informed at the beginning of the interviews that their identities would be separated from their responses to maintain privacy and avoid professional conflicts. Thus, their thoughts were broadly referred to as those of the "older and younger generations."

RESEARCH OUTCOMES

Below is an overview of the development of landscape architecture profession and design concepts based on the interviews. The data were arranged according to periods, and the projects cited were chosen by the interviewees to represent each style and period.

The Emergence of a Profession (1940s–1970s)

Landscape architecture in Thailand originated in an academic institution. In 1942, M.L. Sopit Noppawong Na Ayudhya, a former civil servant of the Department of Public Works and an architecture graduate from Massachusetts Institute of Technology in the US, taught landscape architectural subject that focused on the Beaux Arts style for 3rd year students of an architecture program at Chulalongkorn University. While Noppawong Na Ayudhya studied in the US, architecture and landscape architecture had emphasized the Beaux Arts and Neoclassical styles. These styles were popular in the US from the late 19th century to the 1940s (Treib & Imbert, 1997).

In 1956, Chanladda Boonyamanop, who held a master's degree in landscape architecture from Cornell University and served as an architect at the Architecture Division, Fine Arts Department, took over Noppawong Na Ayudhya's position. Boonyamanop brought her knowledge of modern

landscape architecture to educate students and the general public, firm in the belief that landscape architecture is mainly for functions and aesthetics. Furthermore, knowledge of plants alone is not enough for landscape architecture because it requires a comprehensive knowledge and understanding of many aspects, such as natural system, human behavior, planting, materials, and art. Boonyamanop's perspective in landscape architecture indicated the first attempt to distinguish landscape architects from gardeners (Boonyamanop, 1964).

Aside from Boonyamanop, Professor Emeritus Decha Boonkham played a very important role in the development of landscape architecture in Thailand in the early days both academically and professionally. Boonkham was an architecture graduate from Chulalongkorn University and served in the Public Works Department, Ministry of Interior, from 1964 to 1968. In 1970, Boonkham received his master's degree in landscape architecture from Harvard University in the US and returned to the Department of Public Works as a landscape architect.

During 1960s–1970s, Thailand was under the 1st and 2nd National Economic and Social Development Plans, which focused on developing public utilities and the education system and on supporting private and foreign investments. For this reason, various projects were created to reinforce the development plans and, as a result, professional designers and planners were in high demand. However, the projects owned by the private sector often hired foreign designers, because there were very few professional landscape architects in Thailand at that time. For example, prior to the completion of the Siam Intercontinental Hotel in 1966, a design team from the US was appointed to design buildings and gardens. Especially in the garden area, the design emphasized the tropical garden style with large trees providing shade, along with a central pond that was connected to a nearby natural canal via a meandering stream.

As were the cases in other countries in Southeast Asia, the official acknowledgment of the landscape architecture profession in Thailand started with governmental projects in urban development. In 1972, the US government offered financial aid to the Thai government by allowing funds from the World Bank for the development of education. The first project was

the planning and design of Kasetsart University at Kamphaeng Saen Campus. This was considered by Boonkham as the first official practice of landscape architecture in Thailand, as the terms of reference stated that the project had to consist of professional architects, engineers, and landscape architects. Although Boonkham did not play a major role in planning, it nevertheless served as a turning point for landscape architecture profession in Thailand to gain public acknowledgment. Upon the completion of Kamphaeng Saen Campus, Boonkham was hired by both government and private sectors to design many projects. As a result, he decided to establish a landscape architectural design firm in 1974—the first in Thailand—and named it D.S.B. Associates Co., Ltd. This was followed by the launch of a first professional degree in Landscape Architecture at the Faculty of Architecture, Chulalongkorn University, in 1978 (Boonkham, 1995).

The Foundation of Modernism in the 1980s

The early 1980s was the period in which D.S.B. Associates Co., Ltd. took an active part in landscape planning and design in Thailand. Hotels, resorts, and residential projects became major projects in which landscape architecture played an integral role. The tropical garden style at the Siam Intercontinental Hotel was one of the prototypes that inspired Boonkham to design hotel landscapes. Furthermore, the abstract surrealism seen in Roberto Burle Marx's tropical gardens also influenced the plant-related designs and styles of hotels and resort gardens throughout Thailand. The Rama Garden Hotel (1981), Nai Lert Park Hotel (1983), Hilton Phuket Arcadia Resort & Spa (1983), and Shangri-La Hotel (1986) were among four outstanding hotels designed by Boonkham. Apart from focusing on functional requirements, the designs of these

three hotels also considered the country's tropical climate, especially in terms of flood protection technology.

The style of Boonkham's landscape design laid the foundation of modern landscape architecture for the next decades. The use of free-form shapes and lines, as well as the creation of main open spaces delineated by tropical plants comprised the major style that reflected modernist landscape architecture. Boonkham was also appointed to design various types of projects that responded to the government's National Economic and Social Development Plans at that time. The industrial sector was also promoted to stimulate the country's economy. One of the strategies was to construct industrial estates featuring factories and housing facilities. In relation to these projects, the landscape architecture profession was required to conduct planning and design because industrial estates involved both functional and environmental aspects. The design principles included increasing green spaces, providing easy access to each plot, and incorporating flood protection and wastewater treatment features.

During 1978–1987, rising public awareness on the importance of urban parks resulted in the first Park Movement in Thailand. This was due to the demand for recreational areas and improved environments amid the increasing urban expansion. The Park Movement urged the government to support park constructions across the country, as a result of which, 13 parks were built to honor the Princess Mother Srinakarin of King Rama IX. The construction took more than a decade to complete, and Boonkham played an important role in designing many of these parks. In 1986, Boonkham was also assigned to design the Rama IX Park, which has become the largest park and botanical garden in Bangkok. The planning and design concepts of the park focused on preserving the existing vegetation and lowland areas for water catchment.

Figure 1

Free-Form Designs in the Landscapes of the Rama Garden Hotel (Left) and the Oceanside Place (Right)



Note. Copyright 1981 (left) and 1988 (right) by Decha Boonkham.

The Era of Uncertainty: late 1980s to 1990s

This period represents volatility and change and includes the “beginning,” the “flourishing,” and the “crisis.” The “beginning” refers to the era when graduates from the Department of Landscape Architecture of the Faculty of Architecture at Chulalongkorn University established their own landscape architectural design firms. Although Boonkham had paved the way for the next generations, public acknowledgment remained the main obstacle for new design firms. According to the informants who established their design firms during this period, landscape architects in Thailand had been viewed as designers for empty spaces left by architects. This perception hindered landscape architects in their efforts to display their planning and design abilities. Meanwhile, Thai gardeners worked on empty spaces that surrounded buildings and focused primarily on aesthetics, which were characterized by ornamental plants, water features, and European-style sculptures.² Therefore, it was generally understood that gardeners and landscape architects were interchangeable.

For this reason, landscape architects had to make an effort to distinguish their designs from those of gardeners. In 1988, the TALA was established (Thai Association of Landscape

Architects, 2009), and one of its objectives was to promote public recognition in the actual roles of landscape architects. All these efforts eventually bore fruit, and the differences between landscape architects and gardeners became more noticeable. Henceforth, landscape architects were able to demonstrate their expertise in efficient planning, designing practical yet scenic places, and selecting low-maintenance materials and plants.

Landscape architecture in Thailand reached its first peak by the mid-1990s, as economic expansion in this period made real estate developments for middle- to high-income earners a booming business. Residential projects with golf courses and agricultural land plots were among the most popular project types at that time. Furthermore, most of the residential projects were opened for sale before the projects were completed. Generally, the entire project site was usually larger than 160,000 square meters, with a relatively large plot size of 1600 square meters. The role of landscape architects in these projects was quite comprehensive—ranging from planning to designing streetscapes, entrance, and common areas.

The tourism industry was also growing rapidly in major cities of Thailand. The style of modernist landscape architecture, including tropical gardens with curvilinear lines, continued to be influential in hotel and resort design. Until the mid-1990s, the Balinese garden style was used

²This statement was based on the scanning of garden design published in *House & Garden*, a Thai magazine in home living and garden design, from 1976 to 2020.

throughout Thailand and gradually became more prevalent than the earlier style. The main features of Balinese-style gardens that were adopted included tropical shrubs combined with decorative elements, such as stone sculptures, vernacular architecture, small ponds with lotus, etc. Toward the end of the 1990s, the Balinese-style landscape in Thailand embraced both the cultural and ecological characteristics of the site.

The style of landscape architecture in this period and earlier was influenced by modernist design with naturalistic forms. Free curves were predominantly featured in the landscape design of parks, housing estates, and resort projects. Tropical plants, including perennials, shrubs, ground covers, and vines, grew in their natural forms but were framed in curvilinear lines. Though this planting design required high maintenance at the beginning, many participants who were part of the older generations claimed that, in the long run, it gave a lasting effect of greenery with a timeless sense.

Unfortunately, the profession of landscape architecture in this period flourished only until 1997. With the soaring growth rate of real estate business, there was an exponential increase in land prices as well. As a result, high rates of real estate speculations emerged. This related to the financial crisis that was primarily caused by the capital account liberalization, credit bubbles, and speculative attacks on the Thai baht (Leightner, 2007). The Asian financial crisis or the "Tom Yam Gung" crisis vastly affected many landscape architecture firms in Thailand. Each firm took steps against this economic downturn in various ways, including shrinking down staff size, trimming salaries and work time, temporarily closing down, and so on.

In the Age of Adaptation: late 1990s'

After the Tom Yam Gung crisis, many design firms sought various ways to recover from the economic recession, such as handling new

overseas or government sector projects instead of those coming from the local private sector. They also offered a broad range of services aside from landscape architecture, such as architecture and interior design. Moreover, there was also a shift in the role of landscape architects in that they became key persons to determine the images of the project and played a significant role in formulating the overall concept of the project. Furthermore, landscape architects had to work in close collaboration with the marketing department and professionals in relevant fields, including architects and engineers.

The style of landscape design in this period reflected the industry's adaptation to new circumstances. In particular, it focused on simple geometry instead of nature-like design. Lush tropical plants and meandering streams or ponds played a less important role so as to reduce construction and maintenance costs. This style corresponded to the contemporary vernacular architecture developed in Thailand after 1997 and was characterized by a geometric combination of elements of traditional Thai and modern architecture (Tiptus et al., 2006). Landscape design thus emphasized openness and reduced details of both planting and garden features. Lines and forms were more geometric, while the previous free-form shapes were gradually diminished. More hardscapes and limited uses of shrubs also characterized the style during this period.

As real estate projects were more affected by Tom Yam Gung crisis than other project types, this resulted in a strategic adjustment to survive after the crisis. In contrast with previous practices, developers completed the project before selling so that the budget could be controlled, and the potential customers could experience the overall landscape design of the project. Thus, landscape architectural designs, such as streetscapes, entrances, and common areas became the main selling point for real estate projects during this period.

Figure 2

Landscape Planning for Real Estate Projects at Sarin City (Left) and Blue Canyon Country Club (Right)



Note. Sarin City, copyright by KTGY Inter-Associates Co., Ltd and Blue Canyon Country Club, copyright by Group Three Design Co., Ltd

Figure 3

Geometric Design in Vernacular Style at Trisara Resort (Left) and Evasion Huahin (Right)



Note. Trisara Resort, copyright by P.L. Design Co., Ltd. and Evasion Huahin, copyright by Green Architects Co., Ltd.

The New Millennium: The New Paradigm

As stated above, the movement from earlier period to contemporary period caused changes in the design approach. The concept of “sustainable design,” which aims at ecological restoration and minimizing human impacts on natural resources, has been considered. Numerous landscape architecture projects focused on preserving natural water bodies, growing more trees to mitigate the effects of global warming, reducing run off, improving soil, and preventing flooding and topsoil erosion.

Resort and residential projects primarily featured ecological-oriented designs that were combined with artistic contents. Landscape architecture became a major mechanism for defining the images of the projects, while many landscape architects focused on restoring the ecosystem of the sites. This idea was manifested in a number of ways. For example, the landscape of Rosewood Hotel in Phuket is a prime example of ecological restoration. The concept is based on the notion that tourism development affects the deterioration of nature. Thus, the main goal is to bring back nature to the site. The designers conducted a survey and collected native plants

found in the site before the construction began, and a selection of vegetation was later replanted on the site. Another ecological-oriented design is that of Jin Wellbeing County, a residential complex created to support an increasingly important aging society in Thailand. As this project combined the concepts of universal design and sustainable design, the landscapes thus provided 50% of green spaces and micro ecosystems that encouraged the creation of natural habitats, water retention for flood prevention, and green roofing for reduced energy consumption.

Public park design in a second decade of the new millennium is different from the previous model, as it reflects a global trend that values the restoration of ecology and urban environments. In addition to serving as a place for recreation, parks also act as a classroom where users can learn about the conservation and restoration of the area's ecosystem. The role of parks is more than just active and passive zones; rather, they incorporate the areas for water catchment, soil rehabilitation, natural habitat preservation, and so on. These concepts are exemplified by the Sireeruchachati Nature Learning Park and Ming Mongkol Park.

Figure 4

Ecology Comes First at Rosewood Hotel, Phuket (Left) and in Jin Wellbeing County, Pathumthani (Right)



Note. Rosewood Hotel, copyright by P Landscape Co., Ltd. and Jin Wellbeing County, copyright by Shma Co., Ltd.

Figure 5

Public Parks With New Concepts: Ming Mongkol Park, Saraburi (Left) and Sireeruchachati Nature Learning Park, Nakhon Pathom (Right)



Note. Ming Mongkol Park, copyright by Landscape Architects 49 Co., Ltd. and Sireeruchachati Nature Learning Park, copyright by Axis Landscape Ltd.

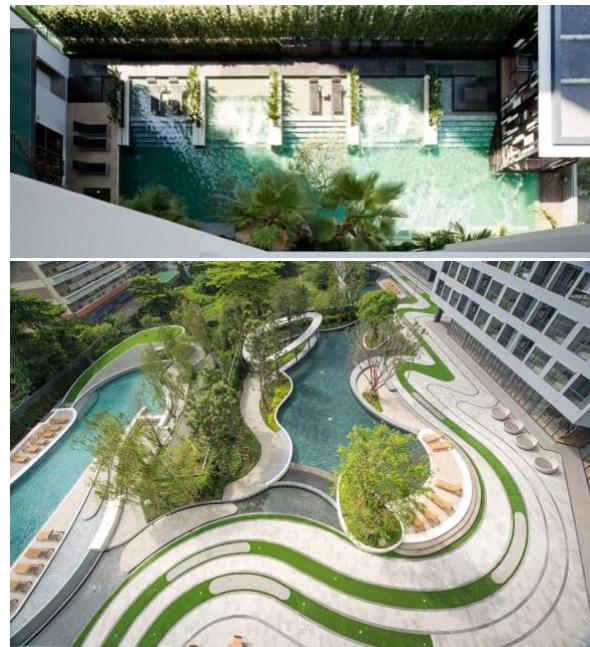
There were also contextual factors affecting the landscape design in this era, which include political unrest, natural disasters, air pollutants, and changes in social structure. Landscape architects had to adjust their design approach to prevent problems that may arise in the future. For example, the 2011 Thailand Flood resulted in a significant damage to urban and suburban areas. Thus, to reduce the impact of flooding, which may recur in the future, landscape architects had to design ways for maneuvering natural hazards. Thus, according to one of the interviewees, the construction of flood gates or flood barriers became necessary features for many residential and condominium projects located adjacent to watercourses.

The presence of small particulate matter (PM 2.5) also raised an awareness regarding environmental issues, and in relation to these, landscape architects became involved in increasing green spaces and the use of air purifying plants. Apart from environmental problems, political conflicts and the resulting safety and security concerns also emerged. As mentioned by an informant, the impact of two political demonstrations in 2010 and 2014 led to a further setback of public buildings from streets and pedestrian walkways with landscape design. This can be seen at, for example, the head office of National Anti-Corruption Commission and the head office of Ratch Group, an electricity generating company.

There are two distinct forms found in this period: geometric and dynamic. The dynamic forms were inspired by either one of these two options. The first is the design based on natural phenomenon, ecological process, and local topography, thus characterizing an approach that reflected the harmonious blending of art and nature. The second approach is parametric design, which involves computer-generated forms. Parametric design exhibits the combination of geometry and free forms, which is highly dynamic. Their forms are mainly generated by SketchUp and Rhino 3D programs. This is distinct from free curves in the modern period, which were influenced by abstract art. The parametric design can be found in the landscape design of residential, hotel, and resort projects in Thailand.

Figure 6

New Forms for the new Millennium at Two Condominium Projects: Geometric Design at Quattro by Sansiri (Above) and Parametric Design at Ideo O2 (Below)



Note. Quattro by Sansiri, copyright by Trop Co., Ltd. and Ideo O2, copyright by Redland-scape Co., Ltd.

DISCUSSION

This section presents our analysis of the interview data we have collected. It discusses the process underlying the development of profession and design concepts. Four emerging themes were highlighted.

Generational Differences

Different generations have different approaches and attitudes toward design and concepts. Global design trends influence the younger generation more than the older one. Thus, it is likely that younger generation have had more international connections. Many of them returned to Thailand after working abroad, established their own design firms, and went on to design many projects throughout Asia. Therefore, they have to follow the concepts and styles of contemporary design trends, particularly sustainability and

green design.

However, contemporary design mainly focuses on creating unique and memorable images by applying complex shapes and forms, such as organic, topographic, or abstract geometrical forms. New materials and non-native plants are also used. Naturally, this has raised criticisms from the older generation. As one informant stated, the contemporary design that merely focuses on forms and visual appealing may bring about problems related to function and maintenance.

The Changing Roles of Landscape Architects

The development of landscape architecture in Thailand during the early years of the profession shared similarities with Western countries. Thai landscape architects struggled to gain public understanding regarding their role and the scope of their profession. Older generations, whose companies have been established for over 20 years raised this point when they recalled the early stage of their profession. They had to spend several years distinguishing themselves from gardeners by creating the design that incorporates aesthetic, functional, and maintenance concerns.

At the turn of the century, ecological restorations have become a design challenge for Thai landscape architects. In this sense, nature and art are combined to create the design that clearly distinguishes landscape architecture profession from gardeners. As a result, landscape architecture became a highlight for many types of projects in Thailand in subsequent years.

Design Influences

Numerous factors influence architectural design concepts, such as owners, marketing, architectural styles, site conditions, and global landscape design trends. Forty percent of the informants indicated that although project owners played the most important role in generating design concepts, landscape architects took the lead in conceptual evolution and materializing the ideas. However, according to one interviewee,

after the financial crisis, the project owners became more educated and scrupulous; they also began to consult more with the marketing team and consider global design trends.

The designs of world-renowned landscape architects have also influenced the design ideas of Thai landscape architects. A list of inspiring designers has changed according to time and global design trends. Examples of artists, architects, and landscape architects who influenced the design of landscape architecture in Thailand from the beginning up to the present include Robert Smithson, Lawrence Halprin, Peter Walker, Roberto Burle Marx, Martha Schwartz, George Hargreaves, Luis Barragan, Richard Meier, Tado Ando, Kathryn Gustafson, Cicada, WOHA Architects, and James Corner's Field Operation. Interestingly, two informants insisted that international designers have no influence on their design and that their ideas derived from their own experiences and their contemplation of existing site conditions.

Developmental Process: Adaptation and Appropriation

Based on the interview synthesis, modern landscape architecture in Thailand has been cultivated through the process of adaptation and appropriation. These techniques are part of a creative process that form a distinctive development. According to both founder and older generations, adaptation to tropical environment is a key component of their success, and this is an important praxis that continued throughout the development. The natural context of the site is a primary concern regardless of the design concept employed. In early projects, landscape architects gave priority to preventive measures for a site's disadvantages, such as flooding, soil erosion, water shortage, and so on.

During the 1970s, Balinese-style gardens spread throughout Thailand and other parts of the world (Wijaya, 2003, pp. 47–49). Thai landscape architects adopted the essence of Balinese design, which was mainly characterized by geometric spaces and a variety of tropical plants. However, ornamental features and pavilions were modified to incorporate Thai vernacular art instead. The fusion of Balinese and local Thai

design had developed into a simplified style unique to Thailand. These can be seen in many hotel and resort projects since 1980s.

Contextual factors, including the financial crisis in 1997, the Tsunami in 2004, political rallies in 2010 and 2014, the Great Flood in 2011, and the ongoing PM 2.5 crisis, all had an impact on the development of landscape architecture.

Adjustments of design and management were successfully employed to get through difficult times. One case that exemplifies an effective design adaptation is the use of simple and geometric design for low-maintenance landscapes as replacement to naturalistic design.

The design styles of international artists and designers, as mentioned in Section 9.3, are not mere copies from the original sources. On the contrary, they are reinterpreted and adapted to tropical environments. This process has continued to the present. Since the second decade of the new millennium, Thai landscape architects have paid much attention to detail design that bare both aesthetic quality and ecological sensitivity. Some informants believe that this is the reason as to why landscape architects from Thailand distinguish their works from those of other countries, thereby winning many international design awards.

CONCLUSION

The landscape architecture profession in Thailand has evolved in tandem with conceptual and stylistic developments in the local and international architecture industries. This study also illustrates the attempt made by Thai landscape architects to develop effective design solutions to resolve various challenges. We have also learned many factors and conditions that influenced design and management decisions. In the past forty years, while the profession gradually gained recognition and played an increasingly significant role in any development project, design concepts, styles, and aesthetics reflected the global design trends that advanced through the decades. Therefore, the focus was transformed from functional and naturalistic schemes to a combination of artistic and ecological designs. The design inspirations largely derive from the works of iconic architects

and landscape architects of each era, but the outcome has been clearly an adaptation to the environmental (tropical climate) and cultural contexts of Thailand. Finally, a number of local factors have also influenced the variations of project types and design solutions.

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