

New Khmer Architecture: Iconic vernacular buildings under threat?

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New Khmer Architecture (NKA) is an architecture style from Cambodia combining modernism with elements of traditional Khmer culture thereby incorporating aspects of vernacular design. It became prominent after King Norodom Sihanouk declared Cambodia's independence in 1953. The New Khmer architecture movement created highly innovative and aesthetically pleasing pieces of architecture works and soon became an important tool of Cambodia's nation-building. Nowadays some of the major works of NKA are still intact, but others suffer from neglect and are in danger of demolition.

Introduction

New Khmer Architecture has its roots not only in the modernist architecture movement but also draws on vernacular and ancient Khmer styles as well as colonial heritage from Europe. The driving force behind the movement was King Norodom Sihanouk, who had the vision to modernize Cambodia after its independence in all relevant sectors. He promoted the design and construction of many new public buildings across the kingdom, bringing together talented young Cambodian architects and international experts. The Cambodian architects of the time were trained in France and influenced by the intellectual life of post-war Paris where they learned the importance of critical thinking. Back in Cambodia, they searched for their own roots and architecture style. They found it in the synthesis of modern architecture and Khmer traditions. The predominant colonial architecture style at that time simply copied designs from Europe

without consideration for the hot and humid climate of Cambodia. In contrast, the New Khmer Architecture took the spirit of the Cambodian culture and successfully integrated elements of tropical design.

The most famous representative of the New Khmer Architecture movement was the Cambodian architect Vann Molyvann (23/11/1926-28/09/2017), whose professional career lasted from the mid 1950s till the early 1970s before the Khmer Rouge took control of the country in 1975. Vann Molyvann was one of Cambodia's first licensed architects, and King Norodom Sihanouk took great care to nurture his talent. Immediately after his return from France, Vann Molyvann became responsible for enormous building and urban design projects where he could quickly show his skills and capacity.

The following information on some of his major works mostly comes from the excellent web site of the

Van Molyvann Project (<http://www.vannmolyvannproject.org/>).

Chaktomuk Conference Hall

The Chaktomuk Conference Hall is Vann Molyvann's first noteworthy building and was inaugurated in November 1961. This design reinterprets several indigenous Khmer elements, bringing them into a modern context. The conference hall has a triangular concrete structure that is suspended from beams. These beams are arranged in fan shape around one central point (Ross & Collins 2016: 15). Being a massive building for hosting events of up to 850 people, the suspended design gives the impression of lightness similar to the floating Khmer houses along the canals and rivers of the country. Beside the innovative structural design, the building integrates a number of vernacular Khmer features such as the pointed roof or the free space under the building. Vann Molyvann



Figure 1: Chaktomuk Conference Hall (Vann Molyvann, 1961)

reinterpreted such traditional elements in a way without looking like an imitation. Acoustic design, crucial for the functioning of the building, was given careful consideration (Ross & Collins 2016: 15). Bio-climatic features of the building can be seen in the elevated ground floor, high gable roof and the shading provided by the curved veranda.

Originally used as public conference and cultural event hall, the building was privatised and refurbished in 2000 (Ross & Collins 2016: 15). Therefore, the Chaktomuk Conference Hall is one of the few well preserved and actively used examples of New Khmer Architecture and, at the moment, in no danger of demolition.

The National Sports Complex

A Vann Molyvann-led team of international architects and engineers designed the National Sports Complex completed in 1964. Some experts regard it as his masterpiece. Overhanging concrete roofs provide shade and the whole complex is based on natural ventilation.

The unique structural design of the National Sport Complex would not have materialized without the genius ideas of the Russian engineer Vladimir Bodiansky. He brought Molyvann's idea to build a grandstand with a roof like a table standing on four legs into an exceptional structural solution with

only four columns supporting the canopy (Ross & Collins 2016: 95).

Nowadays the site is an extremely popular public place used for various leisure activities by thousands of urban citizens every day. However, the complex is being encroached upon as well as surrounded by high-rise condominium apartments. The exorbitant land values of this inner-city location put the whole site in immediate danger. Also, a new sports complex is currently being planned in the urban periphery making the use of the National Sports Complex potentially superfluous.

The Teacher Training College

The design for the Teacher Training College (today called Institute of Foreign Languages) began as early as 1965 but it was not inaugurated until after Vann Molyvann fled Cambodia for Switzerland in 1971.

Influences from Angkor Wat, in form, style and building design are referenced throughout the whole college complex. Features of bio-climatic architecture are implemented in terms of cross-ventilation, indirect lighting and water management. Concrete double roofs provide thermal insulation and screened skylights allow filtered day lighting.

The site is still very much in use and is regarded as another masterpiece of Vann Molyvann.

White Building

Originally called Municipal Apartments, the White Building is one part of the large Bassac Riverfront Project, an ambitious public urban development project located on reclaimed land of the Tonle Sap River (Henning 2015). It is part of a low-cost housing programme initiated by the Municipal Won Planning and Housing Department aiming to provide affordable living space to the average and small-income families in Phnom Penh (Ross & Collins 2016: 18).

The building was designed by Lu Ban Hap under the supervision of Vann Molyvann (Henning 2015: 16). The White Building has an elongated building layout of more than 300 metres. It consists of six different blocks that are joined by open staircases. The building users could walk through the whole building complex and easily access the landscaped park along the building. As a typical feature for climate-adapted design of New Khmer Architecture, the building's ground floor is elevated and all apartments are cross-ventilated (Sereypagna 2015: 102-103).

Although the White Building has an extraordinary and unique history of architecture and community life, preservation efforts were not successful. Demolition of the building began in July 2017; it will be replaced by a 21-story mixed-use development.



Figure 5: National Sports Complex, known as Phnom Penh Olympic Stadium (Vann Molyvann, 1964)



Figure 2: White Building



Figures 3+4: Institute of Foreign Languages (Vann Molyvann, 1971)



Sources: picture left: Waibel 2016, pictures middle & right: Chheav 2016.

Conclusions

The New Khmer Architecture movement should be considered as a magnificent contribution to the urban heritage of Phnom Penh. It made a major contribution to find innovative solutions for the challenges of rapid urban growth and experimented in the field of affordable housing. The movement deserves increased public attention and financial support for its preservation. Keeping those architecture moments in vivid use seems to be the most promising strategy to sustain those efforts.

Buildings erected nowadays should be inspired by the tremendous values of New Khmer Architecture and particularly grasp their implementation of bio-climatic design.

It should not be denied that most NKA buildings with representative character were built with an extensive budget making them difficult to replicate today. However, modern carefully planned adaptations of New Khmer Architecture promise long-term pay-offs for bio-climatic and energy-efficient design that will outweigh the initial investment costs.

References

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