

India

vernacular architecture

TEXT VON
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Indian Vernacular Architecture

Most of India's vernacular architecture can be found in rural areas. This kind of architecture concerns informal – but functional – structures which are built with local materials and designed to meet the needs of the local population. Often, the structures are built by people that did not enjoy a formal education into architectural design and construction and without the help of a professional architect. Therefore, their work reflects a rich diversity due to India's climate, the local available building material, a wide variation in local social culture and craftsmanship. This kind of architecture serves local, ordinary people in their day-to-day lives.



Toda hut is built as a Kachcha structure (Toda Tribe of Nilgiris)¹

Indian vernacular architecture has organically evolved over time through the skilful

craftmanship of the local people and a developing environmental, cultural and historical context. Even though there is a rich diversity, this kind of architecture can be broadly divided into three categories.

A KACHCHA is made of natural materials as mud, grass, bamboo, thatch or sticks, stone, lime, etc. Kachcha is Indian for non-permanent. Therefore is a short-lived structure with simple construction principles which often results in a modest formal language.

The materials are cheap and easy available but the structures does require constant maintenance and replacement as it is not made for endurance. This type of architecture appears in many villages around India and are often constructed by the house owner himself.

The structure varies according to location and the available material. Most of the time, earth and soil is used as primary construction material. Mud is afterwards used to plaster the walls. Possible methods of construction are cob, rammed earth, adobe, pressed bricks or the wattle and daub method.



Building technic Kachcha structure¹

¹Toda hut, Nilgiris, Tamil Nadu, www.wikipedia.org/wiki/Indian_vernacular_architecture (14.06.2017)

A Pucca structure is built of more resistant and durable materials as stone or brick, clay tiles, metal, using mortar to bind them. Though, these structures are more expensive to build due to material- and labour costs and thus the houses are owned by the wealthier people in the local society. The word ,pucca' literally means ,good' or ,permanent'. The buildings are constructed with masonry like brick or stone which are aligned to each other. Often, the façade is decorated with illustrations or motifs.



Pucca house: concrete, load-bearing brick walls and roofs²

Sometimes the construction principles of a Kuccha and a Pucca structure are combined in as SEMI-PUCCA building as villagers have acquired more resources. This

way, more durable materials and principles can be added to what used to be a Kachcha building. This is an illustration of how Indian architecture often evolves in an organic way. Construction of the walls happens with Pucca material such as brick in cement or mortar, stone, clay tiles but the roof construction is done by using Kuccha material like bamboo or thatch.

The project for the Indian Summer School will most likely focus on a Semi-Pucca structure as it is the aim to construct a storage area with bamboo as main structural element. It is known that bamboo is a strong and durable material. The material and its specific construction technique was recently used by Studio Mumbai for the temporary 2016 MPavilion in Australia. Although, the project itself is thus not located in India, the inspiration is found in Indian architecture and material-use, which resonates through the building. Bijoy Jain and his design team spent eight weeks building this Kuccha-like pavilion which is an 18 by 18 meter and 12 meter high structure built of bamboo, rope, earth and bluestone.

The sequence going from Kuccha, Semi-Pucca, to Pucca. Houses with brick walls but corrugated tin roof (i.e. roofs that cannot take another floor) are Semi-Pucca structures.³



²Pucca House, www.thehindu.com/todays-paper/tp-features/tp-propertyplus/the-kutchapucca-war/article4423582.ece (14.06.2017)

³www.architectureindevelopment.org/news.php?id=71 (14.06.2017)

The entire structure is based on a tradition Indian scaffolding technique “wereby a mix of cow dung and earth are tied to the bamboo structure and covered in a waterproof white lime daub”. The project does not deal with the climate difference between interior and exterior space as there are no hard climate barriers but it does illustrate the formation of space and the potential quality of bamboo constructions though age old crafts and building techniques.

Looking at the office working space of Studio Mumbai itself, it can be concluded that this structure is closer to a Semi-Pucca. The studio space consist of a concrete base and a steel structure. The facade and roof are covered in steel panels and bamboo is used as space shutters. It is a one level working space without a bearing roof construction. The space tries to keep out the strong Indian sun by not providing opening in the roof and allows an generous airflow as the sides can be opened up.



Application of traditional binding techniques⁴



Women are applying mud to a bamboo construction⁴



⁴Studio Mumbai, Melbourne, Australia, www.archdaily.com/office/studio-mumbai (14.06.2017)

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