Architectural Heritage and Cultural Identity: The Evolution of Indigenous Structures in Taiwan and Australia

Christian Draven Chung
Westminster School

Abstract

Architecture is a visible and physical representation of cultural identity, and reflects the values, beliefs, and histories of communities and their residents. Indigenous architectural practices have evolved over long time periods, deeply connected to the natural environment and cultural traditions for a people and their ancestors. This paper approaches the evolution of Indigenous structures in Taiwan and Australia, focusing on how they have helped in preserving cultural identity and influence modern architectural techniques. Through understanding these things, we can enjoy some insight into Indigenous people's relationship with Country, affecting both historical and modern architecture.

Considering Indigenous architecture is an important part of forming a connection between people, culture, and the land, this paper takes a look at the evolution of Indigenous structures in Taiwan and Australia, emphasizing the way in which traditional designs reflect cultural identity and how contemporary architecture goes on to integrate these principles. By looking closely at traditional housing, the impact brought by colonization, and modern architecture, we try to emphasize the continuing importance of Indigenous design in representing cultural identity and promoting sustainability.

Introduction

Before colonization, the communities of indigenous peoples in Australia came up with very complicated systems of settlement adapted to diversity in the environment on the continent. Many indigenous nations followed seasonal patterns of movement based on their knowledge of natural cycles, with some areas supporting more permanent or semi-permanent settlements. This is instead of the sometimes held view that all of the native peoples were generally nomadic. Coastal groups and those living along rivers often established more stable

places for living close to predictable food and water sources. Meanwhile, desert groups erected temporary shelters that were able to be quickly put up or taken down to allow for the possibility of relatively rapid migration (Memmott, 2007; Jones, 2007).

These patterns of settlement showed that these peoples had elaborate social structures and practices of land management. This included using fire-stick farming, or the burning of vegetation, to manage the plant and animal populations. For example, in a number of parts of Victoria and New South Wales, the available archaeological evidence points to semi-permanent stone dwellings and eel trap systems found at Lake Condah. This shows that there was fairly organized village life for those peoples (Gammage, 2011). In Arnhem Land, there has been found evidence of village-style living with spaces for ceremonies and rituals and separate housing, showing that permanent settlements were more common than what has been previously thought by early European observers (Donaldson & Kenyon, 2001).

The above evidenced behaviors and patterns not only served to support survival, but also reinforced spiritual and social responsibilities relating to the Country. Every element of settlement, including the placement and orientation of materials and communal structures, was within the context of a broader cultural framework connecting people with their land, ancestors, and their understanding of nature. The diversity present in these systems shows there is a need to avoid generalizations and to better appreciate the specific practices and behaviors found in different regions in terms of Indigenous architecture and land use.

The native populations of Taiwan built complex settlement patterns which adapted to the diverse geographical features of the island before European colonization. The Aboriginal peoples of Australia shared a similar settlement pattern with Taiwan's indigenous groups because they built both nomadic and permanent or semi-permanent villages based on resource availability. The Atayal and Bunun highland tribes practiced seasonal movement between locations for farming purposes yet the Amis and Tao (Yami) tribes built permanent settlements near reliable food and water resources (Shepherd, 1993; Chen, 2008).

The settlement patterns showed evidence of sophisticated social organization and land use practices. The indigenous groups of Taiwan practiced swidden agriculture together with terracing and hunting techniques to maintain ecological equilibrium. The Paiwan and Rukai

tribes constructed stone-slab houses in mountainous regions to demonstrate their long-term residence and architectural adjustments (Hsu, 1991).

The archeological findings of Tsang (2000) show that early farming and fishing activities led people to adopt either sedentary or semi-sedentary ways of life. The indigenous communities of Taiwan combined their spiritual practices to honor their ancestral lands with the practical needs of their society. The arrangement of villages together with the construction of homes and ceremonial spaces in the community reflected both social organization and cultural beliefs of the community. The diverse nature of indigenous societies during colonial times disproves the notion that these societies were either primitive or transient. The current understanding of Aboriginal Australian societies should be applied to Taiwan by recognizing their indigenous heritage's adaptive strategies which prevent generalizations and preserve regional uniqueness.

Traditional Indigenous Architecture

Indigenous architecture is known for showing a deep connection to Country, a word that includes land, water, sky, and all living things in an area or region. Traditional indigenous structural designs were made with a strong understanding of the environment, making use of local materials and responding to climatic conditions. For example, in northern Australia it is common to see lightweight shelters which are made from palm leaves which are good for providing ventilation in tropical climates. Meanwhile in southern regions, semi-subterranean huts, or huts that are underground, offered insulation in colder weather and temperatures (Memmott, 2007; Page & Memmott, 2021).

These structures were not simply shelters but also acted as important parts of cultural practices, storytelling, as well as community gatherings. Design and construction methods and strategies were different between one or another Indigenous group, being representative of diverse cultural expressions and adaptations to the environment. Furthermore, aboriginal structures such as the gunyah (temporary bark shelter), wiltja (Pitjantjatjara semi-permanent hut), and mia-mia (a small dome-like shelter) served as functional, transportable, and adapted

with respect to the seasons and local weather conditions (Australian Institute of Architects, 2020).

Impact of Colonization on Indigenous Architecture

The Japanese occupation of Taiwan from 1895 to 1945 implemented assimilation policies that destroyed traditional slate and bamboo and thatch buildings by enforcing standardized housing according to Shepherd (1993) and Chen (2008).

The indigenous architecture has experienced a revival during the last few decades because of sustainability and cultural preservation initiatives. The Paiwan and Tao (Yami) communities have reconstructed their traditional homes by combining their ancestral wisdom with modern building needs. The government along with grassroots organizations now use indigenous designs in urban planning because they understand their dual value for the environment and culture (Hsu, 1991). The current ecological crisis has led to this practical return while people work to reclaim their cultural identity.

Meanwhile, the arrival of European settlers during and following the late 18th century had a disruptive effect on Indigenous peoples on the Australian continent and their ways of life. This certainly included architectural traditions. The Colonial powers of the age came and implemented the Western building techniques and materials they were familiar with, often setting aside Indigenous knowledge and methods and the environmental suitability that is now generally acknowledged to accompany it. This led to a decline in the use of traditional practices and for the remaining indigenous population a growing separation from their cultural identity. As Indigenous communities were removed usually by force from their lands and placed into designated settlements, their ability to keep up their traditional architectural practices seemed to fall by the wayside (Memmott, 2007).

However, Indigenous communities have continued to try to preserve and revive their architectural heritage. Throughout the most recent decades, there has been a surge of interest in traditional designs that had previously fallen by the wayside. These appear to be motivated by a recognition in their sustainability and cultural significance, the latter being because of increased concern for climate-related matters. Efforts to include Indigenous perspectives and

concepts into urban planning and community housing projects spot a light on the ongoing struggle for cultural preservation as well as self-determination (Page & Memmott, 2021).

Contemporary Integration of Indigenous Design Principles

Modern architecture has begun to increasingly acknowledge the value of Indigenous design principles, shaping them into a way to include them in the designs and concepts of modern structures to promote cultural identity and enhance environmental sustainability thanks to the benefits indigenous architectural methods provide. This approach is one that includes collaboration with Indigenous communities, ensuring designs are culturally appropriate and actually bear the results, effects, or insights of traditional knowledge. Indigenous architects and designers advocate for co-creation, making it clear that buildings are extensions of what a country is and reflect a deep connection to the area or region one finds themself in (Page & Memmott, 2021).

Alison Page, a Walbanga and Wadi Wadi woman as well as an interior designer, emphasizes that Indigenous architecture is not a style but actually a culturally appropriate process. She advocates for co-creation with Indigenous Australians, stressing the importance of how buildings should respect traditional knowledge while also paying attention to contemporary needs. Incorporating Indigenous knowledge into urban and regional developments both fosters sustainability and strengthens cultural identity (Australian Design Review, 2021).

Case Studies in Australia

1. Koorie Heritage Trust Cultural Centre, designed in Melbourne by Lyons Architecture together with Indigenous architect Jefa Greenaway, this cultural center incorporates natural ventilation systems and uses locally sourced materials. The design reflects both Indigenous wisdom as it pertains to sustainable architecture that is harmonious with nature, along with contemporary sustainable practices, creating a space which acts to honor cultural heritage while fitting into the modern world and its functions (Australian Institute of Architects, 2020).

2. Tjuntjuntjara Remote Community School, Western Australia, which was Designed by Iredale Pedersen Hook Architects and the local community, is a school that reflects the Spinifex people's connection to Country. The design includes circular gathering spaces and integrates artwork into the building's fabric, fostering a learning environment deeply rooted in cultural identity (OpenExpert, 2022).

3. Brambuk Cultural Centre, Designed in Victoria by Gregory Burgess Architects as well as the local Indigenous community. The Bramburk center's shape and design is modeled after a cockatoo in flight, and offers natural shading and ventilation. This design stands as an important cultural symbol and demonstrates how traditional knowledge can inform sustainable architectural solutions (OpenExpert, 2022).

4. WugulOra Pavilion, Sydney Olympic Park

The WugulOra Pavilion is a solid example of indigenous architectural representation in the setting of a high-profile public space. Created together with artists and architects the likes of Alison Page, the pavilion’s curved form draws on traditional Aboriginal shelter designs and is made with recycled steel and wood. It serves as both a ceremonial and gathering space during Australia Day events, underpinning how architectural forms can be made to function in the interest of cultural celebration and identity in everyday urban settings (Australian Design Review, 2021). Designed by Officer Woods Architects and built with input from the Ngarluma people, this cultural center features a sizable communal hall, exhibition spaces, and outdoor areas that are well-shaded. The shape of the building is derived from traditional lean-to shelters and integrates passive design principles which are compatible with the Pilbara’s harsh climate. It acts as a contemporary cultural hub while keeping in with its strong links to traditional building philosophy and local identity (ArchitectureAU, 2018).

Case Studies in Taiwan: Pioneering both Old and New

Like the indigenous architecture of Australia, the built environment of Taiwan speaks volumes about the deep story of cultural survival and adaptation. The island's architecture is a living repository, where simple slate dwellings of the Truku people reside alongside Tao (Yami) bamboo houses and Taipei-style urbanism. This dynamic invites a dialogue and dialectic between tradition and modernity, a situation that mirrors the Indigenous architectural developments in Australia.

1. Roots in the Land

The 16 officially recognized Indigenous groups in Taiwan have created unique architectural styles that remain intimately related to their environments. The Rukai people's slate houses, constructed with metamorphic-rock slabs and found mostly in the mountainous south, demonstrate ingenuity in thermal regulation, with thick walls that keep interiors cool in the summer but also trap heat in winter. In contrast, the semi-subterranean houses of the Tao people of Orchid Island position these residents are constructed typhoon seasons in mind. Their low-profile design is able to survive pacific storms with sturdy frames that remain intact under virtually all conditions. With these design elements in mind, the Indigenous peoples of Taiwan have developed an architectural style that both reflects and embodies the surrounding terrain.

2. Colonial Erasures and Reclamations

The architectural narrative of Taiwan parallels that of Australia, with similar disruptions from colonial influences. Japanese occupation (1895–1945) had imposed wooden Japanese-style houses in Indigenous villages, and post-war urbanization brought concrete high-rises that frequently ignored traditional spatial values. But resistance also sprang from subtle acts of cultural preservation. Atayal elders reconstructed traditional beehive homes as community museums, while Paiwan artists etched ancestral motifs into modern structures. The 1990s saw a turning point when Indigenous-led movements motioned for the governmental protection of heritage sites like the Paiwan slate village of Tjuvecekadan. These initiatives attained cultural preservation for Taiwan while also sparking architectural revival.

3. Contemporary Synthesis

Today, Taiwanese architects are paying homage to Indigenous wisdom while they address contemporary needs. The award-winning Nantou County Indigenous Cultural Center, for example, reinterprets Truku weaving patterns through its latticed concrete facades to cast prismatic patterns of light and shadow that reflect the movement of the sun. This design emulates Australia's own Indigenous-designed buildings and their use of contemporary materials to articulate ancient ideals. In cities, there are projects such as Taipei's Indigenous Peoples Cultural Park that have adapted traditional ventilation techniques into green buildings and shown strategies for sustaining Indigenous architecture that existed long before the 21st century.

4. Lessons for Continuity and Preservation of Culture

There are three crucial insights we can glean from Taiwan's storied history with Indigenous architecture:

Adaptive Preservation. The renovated stilt houses of the Thao tribe located along the Sun Moon Lake show how forward-looking ideas can preserve a legacy. These homes combine ancient construction and contemporary waterproofing, illustrating the power of tradition and innovation together.

Community-Driven Design. The Smangus village has become an attractive destination for ecotourism thanks to its traditional communal design. Community building projects have incorporated insights from architectural advisors to ensure modern comforts for visitors while retaining the spatial values of the Tayal people.

Educational Integration. The introduction of indigenous construction techniques in universities has ensured an intergenerational transfer of knowledge that will continue for generations. For example, the Amis people's modular bamboo systems reveal how traditional architectural designs can contribute to lush and spectacular cityscapes.

At a time when Taiwan is facing similar challenges to Australia, including urban densification, its Indigenous architectural ethos has gifted us with the blueprint for an enduring future. Taiwan has shown how the traditional virtues of adaptability, environmental harmony, and community-centered design can co-exist with modern architectural developments. Taiwan's built environment demonstrates that cultural identity isn't a distant memory of the past but a living organism that must grow and evolve over time. Through conscientious negotiation between tradition and innovation, Taiwan's architectural journey reminds us that the most valuable designs aren't simply providing housing, but keeping cultures breathing.

Comparative International Perspectives: Taiwan, North America and Australia

Indigenous architecture throughout the world is a display of a shared commitment to stewardship for the environment, a strong spiritual connection to land a people inhabits, and cultural continuity, despite differing geographic, ecological, and colonial experiences. In North America, the native peoples have developed architectural practices that, similarly to their counterparts on the Australian continent, have a deep connection to cultural identity and ecological awareness. A comparison between the architectural structures in North America and Australia reveals a number of parallel challenges as well as common innovations in preserving their heritage amid modern reactions in terms of the structures both erect.

In North America, tribes such as the Navajo, Inuit, and Haudenosaunee (also known as the Iroquois) each developed very particular styles of buildings which make sense in their climates and in tandem with their lifestyles. For example, the Navajo hogan, a kind of circular or octagonal earthen building, is made using local timber and soil, oriented eastward so that each morning it is facing the rising sun. This serves as a way of aligning architecture with spiritual belief (Lafarge, 2013). In a similar fashion, the Inuit igloo, constructed using compacted snow, is a clear demonstration of ingenuity in both insulating a dwelling and being portable. It is optimized for the Arctic conditions that the Inuit find themselves in. Longhouses used by the Haudenosaunee served as communal dwellings, with wood and bark outsides insulated by overlapping layers, and an interior reflecting the clan-based social system they function under (Fixico, 2003).

These North American native structures, similar to Australia's gunyah or wiltja, were embedded heavily with cultural meaning and strongly linked to local ecologies. Both traditions put an emphasis on communicating orally building techniques, environmental responsiveness, and communal construction efforts to pass them on to successive generations. The idea of "building with the land" rather than on it, a concept which is a central theme in Aboriginal Australian design, has clear parallels in the North American concepts of living in harmony or balance with nature, rather than at odds with it (Watson, 2009).

In both of these regions, colonization disrupted these traditional ways of doing this architecturally. In North America, forced assimilation policies such as the Indian Residential School system and the division of land under the Dawes Act eroded Indigenous autonomy and was a key cause in the replacement of traditional homes in favor of Western-style buildings (Fixico, 2003). Meanwhile, in Australia, missions and government housing programs marginalized Indigenous techniques, knowledge, and practices in favor of Eurocentric planning in similar ways (Memmott, 2007).

Today, both Australia and North America are experiencing a revitalization of the uses of indigenous architectural methods and approaches. In the U.S. and Canada, architectural firms such as the Tawaw Architecture Collective and initiatives like the Indigenous Design and Planning Institute (IDPI) at the University of New Mexico are leading the way with such incorporation of culturally-sourced methods and techniques in their architecture. Examples include the Indian Health Service facilities that were made to include traditional healing spaces, or community centers like the Squamish Lil'wat Cultural Centre in British Columbia, which integrates both indigenous forms and materials (Idle No More, 2015). These efforts coincide with Australian initiatives, including the Brambuk Cultural Centre and Tjuntjuntjara School, which place emphasis on promoting indigenous values through use of their building techniques.

In both, as well, there is the tackling of taking these ideas to urban-centers and scaling them up to reap their benefits in larger ways. While Australia focuses on "Country-centred" design that views the land as a sentient or conscious being or entity, the North American discussion often brings up ideas of "sacred space" and "sovereign design", pointing to architecture as behavior that is synonymous with self-determination and nationality or the

idea of being a nation as the group (Wilson & Peterson, 2020). In both cases, incorporating Indigenous architectural heritage into modern infrastructure calls for not only design innovation but also systemic reform, including education, funding, and legal frameworks which act to support indigenous leadership in the built environment.

Drawing a comparison of these regions helps to bolster our understanding of iIndigenous architecture as both a cultural and political form of expression. Be it through the passive cooling effects of a wiltja or the solar orientation of a hogan, these practices seem to take issue with the mainstream, accepted ideas of how to do things by placing importance on sustainability, spirituality, and community in lieu of crude permanence or commoditizing structures or their materials. As global awareness of climate change and cultural loss grows and grows, inter-regional indigenous architectural knowledge offers up key strategies for ethical and sustainable design during the 21st century.

The native peoples of Taiwan developed unique architectural traditions which reflected their cultural identity and environmental connection in the same way as North American and Australian Indigenous communities. The Tao (Yami) people built their semi-underground houses on Orchid Island while the Paiwan constructed slate homes and the Atayal built bamboo dwellings which demonstrated advanced local climate and resource adaptation skills similar to Navajo hogans and Aboriginal Australian gunyahs. These structures served more than practical needs because they expressed spiritual values and community principles and sustainable land management practices (Hsu, 1991; Chen, 2008).

Colonization disrupted these traditions. Japanese rule (1895–1945) imposed foreign materials and layouts, while postwar urbanization further marginalized Indigenous housing practices. These policies which operated like the Dawes Act in North America and the missions in Australia cut Indigenous peoples' cultural connections to their land and their architectural heritage (Shepherd, 1993).

The Indigenous communities of Taiwan work to restore their architectural heritage in the present day. The Paiwan Cultural Village together with the Tao's restored traditional homes demonstrate how ancestral wisdom combines with contemporary requirements. The Indigenous Peoples Basic Law from the government supports culturally sensitive design which follows similar paths as North American and Australian movements (e.g., the

Squamish Lil'wat Cultural Centre). The initiatives focus on sustainability together with cultural preservation and self-governance which represent essential elements of worldwide Indigenous architectural revitalization.

The Taiwanese example demonstrates how Indigenous architecture functions as both a cultural preservation method and an answer to modern ecological problems which matches global design decolonization movements.

Challenges and Considerations

Actually enacting the integration of Indigenous design principles into modern architecture presents a range of challenges. These include making sure there is authentic engagement with Indigenous communities, maintaining a balance between traditional knowledge and real-world building requirements, and enhancing education within the architectural profession with regards to Indigenous design principles and their application in practical settings. Government policies and industry standards should certainly be reviewed and if necessary modified to provide Indigenous communities with greater involvement in the decision-making process of shaping their architectural environments. Beyond that, overcoming economic and political barriers also stands as highly important. Many Indigenous communities find it difficult to access the resources and funding necessary for developing culturally appropriate housing and infrastructure. Working to alleviate these inequalities in access calls for systemic change, giving priority to Indigenous voices in the decision-making process.

Discussion and Conclusion

The built environment of Taiwan can be transformed through Indigenous architecture as a solution to overcome its colonial past and achieve sustainable development goals. Taiwan needs to establish Indigenous leadership as the foundation for architectural education and practice and policymaking in the future. The preservation and innovation of traditional practices requires more Indigenous students to study design while traditional knowledge

should be integrated into fundamental curriculum content instead of being treated as optional subjects (Chen, 2018).

The policy framework needs to include support for Indigenous peoples' sovereignty to control their land and their freedom to determine their housing requirements. The sustainable development of Taiwan will emerge through architectural development that centers Indigenous voices to create practical solutions for ecological and social problems while preserving cultural heritage.

The contrast between Indigenous and modern architectural methods shows the continuing tension that stands between traditional cultural values and contemporary building practices. While modern architecture places a lot of emphasis on efficiency, long-lasting structures, and industrialized materials, Indigenous structures are focused on adaptability, sustainability, and continuing cultural identity and customs. The renewed popularity of Indigenous design principles in contemporary architecture is a sign of increasing cultural sensitivity, and approaches that are more environmentally sustainable (Page & Memmott, 2021).

The development of legal frameworks that require Indigenous community involvement in traditional land development projects represents an essential step for this process. Taiwan should implement "Design on Country" principles from Australia to combine traditional cultural protocols with modern planning methods. The Paiwan slate construction methods and Tao semi-subterranean house designs should serve as inspiration for climate-resistant architectural solutions that work in both rural and urban environments (Hsu, 2020).

While Australia deals with its legacy of colonization and the necessity of sustainable development, indigenous architecture puts forth a foundation to be able to reimagine the environment from an architectural viewpoint. Future directions from here should place high priority on Indigenous leadership in the areas of education, practice, and policy-making specific to architecture. Encouraging more students from Indigenous backgrounds to enter the design and construction fields can help to further expand the use of practices that are traditional and culturally sourced. At the same time, architectural curricula should include indigenous knowledge systems as core, not elective, courses and content (Watkin Lui et al., 2022).

Innovating technologically also puts forth an opportunity to further scale traditional principles. Digital mapping tools and virtual reality can be used to record, visualize, and communicate indigenous spatial knowledge in such ways that help to close cultural gaps and foster more widespread community participation. These tools can aid in co-design workshops and function as educational platforms that are usable by non-indigenous architects and planners.

Moreover, as the pace and intensity of climate change continues on, the low climate impact of indigenous design and techniques adapted in consideration of climate become more and more valuable. Expanding research funding to cover indigenous building science and piloting hybrid structures which combine traditional methods and materials with modern technologies could offer highly-scalable, climate-resilient models aimed at both urban and remote settings alike.

Last but not least, there is a strong need for policy reform at all levels of government to support land rights, housing sovereignty, and the cultural autonomy of native peoples through architecture. Indigenous communities must be able to shape not only their structures, but also the systems that govern how and where they build and use them. Through focusing on education, policy, innovation, and cultural leadership, the future of Australian architecture can become more inclusive, sustainable, and climate friendly.

References

Australian Design Review. (2021). Indigenous architecture is not a style, but a culturally appropriate process. https://www.australiandesignreview.com

Australian Institute of Architects. (2020). Belonging to Country – yindyamarra winhanganha. https://www.architecture.com.au

Donaldson, I., & Kenyon, A. (2001). Australia's Indigenous heritage: History, identity and culture. Australian Scholarly Publishing.

Gammage, B. (2011). The Biggest Estate on Earth: How Aborigines Made Australia. Allen & Unwin.

Jones, R. (2007). Fire-stick farming. In D. J. Mulvaney & J. P. White (Eds.), Australians to 1788 (pp. 307–326). Fairfax, Syme & Weldon.

Fixico, D. L. (2003). The American Indian Mind in a Linear World: American Indian Studies and Traditional Knowledge. Routledge.

ArchitectureAU. (2018). Ngarluma Cultural Complex by Officer Woods. https://architectureau.com

Australian Design Review. (2021). Indigenous architecture is not a style, but a culturally appropriate process. https://www.australiandesignreview.com

Australian Institute of Architects. (2020). Belonging to Country – yindyamarra winhanganha. https://www.architecture.com.au

Lafarge, O. (2013). Lost Pueblos, Living Traditions: Indigenous Architecture of the Southwest. University of Arizona Press.

Watson, I. (2009). Aboriginal peoples, colonialism and international law: Raw law. Routledge.

Wilson, A. C., & Peterson, J. (2020). Indigenizing the Built Environment: Spaces of Resistance and Resilience. Canadian Architect.

Idle No More. (2015). Designing Our Futures: Indigenous Architecture and Cultural Sovereignty. https://idlenomore.ca

Watkin Lui, F., Bodkin-Andrews, G., & Morrison, A. (2022). Reclaiming Space: Embedding Indigenous Knowledge in Built Environment Education. Routledge.

Memmott, P. (2007). Gunyah, Goondie + Wurley: The Aboriginal Architecture of Australia. University of Queensland Press.

OpenExpert. (2022). Incorporating Indigenous design principles in modern Australian architecture. https://www.openexpert.com.au

Page, A., & Memmott, P. (2021). Design: Building on Country. Thames & Hudson.