



JAPANESE ARCHITECTURE

+ Tracing Time Through Japanese Architecture: Sequence, Weathering, & Life Cycle

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[abstract]

Japanese architecture in respect to its culture has an innate sensitivity to time. This sensitivity must be analyzed in order to better understand how time plays a role within Japanese architecture. By analyzing time in respect to moments, days, months, years, and decades, one can begin to parcel out different design characteristics. At the minute temporal scale, spatial sequencing begins to describe how one moves through and experiences the space. Transformations at the monthly and yearly scale, are expressed through the weathering of the building and its details. Systemic shifts occurring over decades, may be analyzed in the impermanence of the construction methods used, as well as the economic factors ingrained into Japanese housing. These scales will begin to explain the impact of time on Japanese architecture as a greater whole. By analyzing projects in each of these categories, one can view different methods of design in response to each temporal scale. Each firm in Japan has their own methods of design in response to time, however, some of these aspects begin to cross-pollinate on a wider cultural level.

[Time I: Sequence as a Frame onto the Past]

SANAA - O Museum, 1999 - Nagano, Japan : 2010 Pritzker Prize Project

The smallest temporal scales begin with sequential process, the act of moving through and experiencing the space of architecture, second by second. Although minute and closest to the present, it is within these small moments that elements of the past or future may be framed, connecting these small experiences to a greater temporal web. This is especially important in Japanese culture where its past is held with a certain sensitivity. Instances of Japanese architecture form literal frames into the past. A prime example of this would be the O Museum by SANAA. A project conceived of as a literal frame in and of itself. The building is dedicated as an exhibition space



to art and history. The O Museum is floated above the ground plane so as not to disturb the site and ruins of the adjacent medieval castle. As visitors wander through the space looking at the exhibition projects, there are views to the surrounding ruins. They wander through the site, experiencing the ruins from a close perspective, then are led up into the gallery, which is a floating volume. Visitors are forced into a channel cut off from the outside initially, only to turn back around and reflect through the looking glass onto the ruins of the castle from an elevated position. Here, the patterning of the windows allow for a screening similar to that of the forrest, where one is separated but not completely visually disconnected from their surroundings. It is through this frame that visitors may reflect on the tradition and culture of Japan.

“The temporal structure of building can be compared to a person’s experience of time. At every moment in one’s life earlier times of infancy, childhood, youth, and all other stages up to now are still present, increasing in number yet unchanged and familiar, and subject to redefinition and appropriation. Never is one’s past not present, nor is the individual’s past ever cut off from the tradition of one’s culture and the time of the natural world. Duration invokes recollection in each of its advancing moments. The differentiation of the present presumes the reality of the past as the context from which it has emerged.”

- Mohsen Mostavi, On Weathering

[Time II: Weathering: The Life of the Building through Time]

Toyo Ito - The White U House, 1976 - Tokyo, Japan

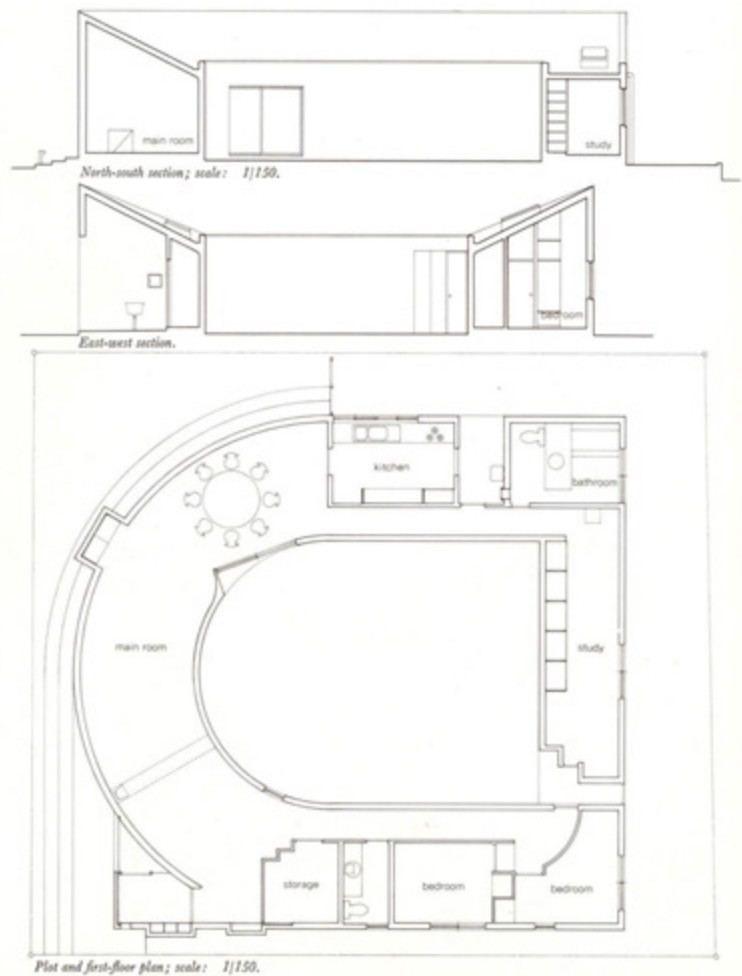
On a larger scale one can begin to look at time over months and years. The building’s physical appearance represents this shift in time, as all buildings decay due to weathering.

“Finishing ends construction, weathering constructs finishes.”

- Mohsen Mostavi, On Weathering

A delicate example of the nature of weathering is seen in Toyo Ito’s, White U House in Tokyo, Japan. The project itself is a story that takes you on a journey through the life of a family. Toyo Ito’s sister, who had recently lost her husband to cancer, was living in a high rise urban apartment. She decided to relocate and start anew in Tokyo with her two daughters. They moved into the lot adjacent

to Toyo Ito, and began their work on a house that would allow both a connection with nature and would strengthen family bonds, internally. The U House was designed around a courtyard that was intended to connect the family through views across. The continuum of spaces created a more open floor plan, not limited by orthogonal separations of rooms, but allowed those within to move about seamlessly within a unified space. The White U House consisted of two long corridors, one ending at the girls' room, leading through the kitchen, living room, and ending at the bathroom and mother's room on the opposite end. After twenty years, as the daughters grew old enough to start their own lives, the family began to move out. Reflecting back on the space, the eldest daughter referred to it as a coffin, and not a comfortable or inviting living space. The house slowly became overgrown with vines, and as it neared its end, it was demolished by Toyo Ito himself. The growth and overtaking of the building can be seen as a symbol of renewal of life for both the family and the site. The house is now preserved only in memory just as the memory of the father's passing was preserved by the family. The two, both father and house, passed from the present physical realm and into that of the past



North-south section; scale: 1/150.

East-west section.

Plot and first-floor plan; scale: 1/150.

through memory. Even this form of new life for father and house, weathers and fades with the passing of decades as the lives and records of those memories slip out of existence.

“The fact of weathering inheres in all construction. No architect can avoid this fact; it is never escaped in the past, nor can it be in the present. Weathering reminds one that the surface of a building is ever-changing. While a potential nuisance, the transformation of a building’s surface can also be positive in that it can allow one to recognize the necessity of change, and to resist the desire to overcome fate-an aspiration that dominated much of modernist architectural thought through its resistance of time.”
- Mohsen Mostavi, *On Weathering*

[Time II: Weathering: The Life of the Building through Time]

Shrine of Ise, 4 B.C.E. - Mie, Japan

By far, the most prime example of weathering through time would be the Shrine of Ise. Constructed around 4 B.C.E. as a tributary shrine to shinto Buddhism, in Mie Japan, the shrine undergoes a continuous act of weathering , one of life, death, and rebirth. As one shrine decays a new shrine is created in its image. Occupancy only occurs within the weathered shrine while the younger shrine is constructed and aged. Deconstruction occurs approximately every 20 years as the wood loses its strength; the cycle continues like that of a field in farrow. The finest Japanese carpenters are called upon from all over the country to collectively rebuild the Ise Shrine. Historically, the traditional Japanese carpenter has been architect and engineer as much as carpenter and joiner. Because their role has been so momentous, it is impossible to divorce discussion of Japanese joinery and carpentry from discussion of Japanese architecture itself.

“Most discussions of architecture in Japan argue that the carpenter was both builder and designer, just as in Western pre-industrial societies. Even today, temple, shrine and teahouse carpenters often maintain both roles. However, these carpenters work with little flexibility, constrained to only the most unavoidable modifications of an accepted model.”

-Dana Buntrick, Japanese Architecture as a Collaborative Process

One might say that the climate of Japan has shaped the conditions necessary for such talented carpenters. The volcanic soil of Japan restricted any research of masonry or stone construction, only



the endless variety of trees offered themselves for a variety of construction purposes. This restriction of natural resources made the Japanese craftsmen what they are today. The climate of Japan has also shaped the life cycle of buildings themselves, adding more challenges to the craftsmen. Timber construction and thatch roofs were replaced every few years because of the high humidity and heavy rainfall. The process of life and decay is ingrained into Japanese architecture even today with modern construction methods. Buildings are designed to age and weather and are eventually rebuilt, thus is the cycle of the life of the building. Instead of designing to prevent this, it is an accepted occurrence and becomes a certain aesthetic quality within Japanese architecture.

Tradition and culture in Japan have a firm hold on the modern day craftsmen. Change is not tolerated in traditional Japanese craft. What does it mean then to repeat a tradition throughout time? What does it mean to evolve a craft?

“The ancient Japanese sought their symbols and divine images in nature—in rocks, trees, and water. This way of looking at nature is still at the very core of the spiritual make-up of Japanese today. Ise came into being through the sublimation of symbols into a basic form... The form of Ise partakes of the primordial essence of the Japanese people. To probe this form and the way it came into being is to go to the very foundations of Japanese culture.”

- Kenzo Tange, Ise: Prototype of Japanese Architecture



[Time III: The Life Cycle and Commercialism of the Building]

Terunobu Fujimori - Tea Houses, Tokyo, Japan

However, commercialist Japan has begun to erode these foundations. In the suburban districts of Tokyo, modular concrete mid-rises stretch out in a vast sea of multiplicity, contradicting traditional construction techniques.

Traditional Japanese architecture is known for its extremely delicate use of natural materials. Since as far back as the sixth century, the Japanese have been building elegant wooden structures with straw roofs. The abundance of forests and a natural preference for wood, produced some of the most advanced wooden architecture in the world. Unlike Western architecture, which tries to keep the elements strictly outside, Japanese architecture exists harmoniously with nature. With their choice of materials they maintain or even enhance the natural state. Floors covered with rice-straw tatami mats, paper shoji windows, sliding paper-thin partitions, bamboo fence, bamboo furniture and hand laid

stone paths are key features of traditional Japanese architecture which can still be found in the thousands of well preserved temples and shrines. Although these aesthetics are still important aspects of present day Japanese culture, such sensitivity is no longer evident when one walks the streets of contemporary Tokyo. The city looks like a jungle of buildings built of concrete, steel, and plastic. What happened to the sensitivity with which the Japanese used to handle natural materials?

A number of factors contributed to this desensitization. A large number of homes were burned during WWII, causing a government push for homeownership to stimulate the economy. The growing middle class grew anxious about their ability to purchase single-family homes amid a rapidly growing economy. The tendency to rebuild every 20 years (also known as the Great Invisible Earthquake) has produced a shortage in high-quality urban residential complexes. As a result many home construction firms have sprung up, offering housing as a new type of commercial product. Both Tadao Ando and Toyo Ito began their careers designing small residences in the 1970s. However, in home building in Japan only 2% of all projects have an architect involved in the design process. Many modern Japanese architectural works have lost touch with what was initially most important to their culture, the tradition of craft and weathering as seen in Ise. They have switched to modern prefabricated concrete structures, with the main goal of capital gain.

“I think that most architects today are withdrawn. I don’t understand why they are withdrawn. At some point, architecture lost its mission to change society. It is largely because architecture has become the tool of capital. But I believe that, limited as it may be, architecture still has a power to propose something to society, or has some role to play in society. The expectation for such a potential is the primary motivation for me to design architecture.”

- Toyo Ito, Forces of Nature

Even with this drive for capital, influences of the past are still making their push forward. One of the best examples is the art of charred wood. Originally this aesthetic was something that occurred naturally, over time, as a house became sun bleached. The longer a home was within a town the more sun bleached it would become, exemplifying the age and stature of the family that lived there. Weathering then began to serve as a social symbol for a family’s stature while also serving as a physical record of the family’s establishment.

“Aging, then, can be seen as either benign or tragic-or as both. This raises a question: beyond the general category of weathering as a romantic form of aging are the other specific ways the unending process of deterioration can be understood, and intended?”

- Mohsen Mostavi, On Weathering



This act of weathering of course doesn't take place in current housing because modern houses only last 20 years, however, it is being replicated through construction methods. Charred wood is bringing back an art-form of traditional Japanese housing. Best seen through the works of Terunobu Fujimori, his tea houses often express this texture and relation to Japanese culture. He takes a unique stance on traditional design methods that is starting a new trend in Japan. The art of weathering, once taking decades, is now being replicated instantaneously. There are even pushes to make charred wood into a commodity, that can be prefabricated and inserted into modular Japanese housing. This innovative mixture of past traditions and present day needs, is what makes Japan what it is today. A folding of time from the past into the future through modern architecture.

Bibliography:

- + Bow-Wow, Atelier. *Pet Architecture Guide Book, Volume 2*.
World Photo Press, Japan. August 31, 2002.
- + Brownell, Blaine. *Matter in the Floating World: Conversations with Leading Japanese Architects and Designers*.
Princeton Architectural Press. March 9, 2011.
- + Buntrock, Dana. *Japanese Architecture as a Collaborative Process*.
Taylor & Francis. February 8, 2002.
- + Buntrock, Dana. *Materials and Meaning in Contemporary Japanese Architecture: Tradition and Today*.
Routledge. March 25, 2010.
- + Isozaki, Arata. *Japan-ness in Architecture*.
The MIT Press. February 25, 2011.
- + Ito, Toyo. *Forces of Nature*.
Princeton Architectural Press. October 3, 2012.
- + Koren, Leonard. *Wabi-Sabi: for Artists, Designers, Poets & Philosophers*.
Imperfect Publishing. November 1, 2008.
- + Mostafavi, Mohsen. *On Weathering: The Life of Buildings in Time*.
The MIT Press. March 22, 1993.
- + Nuijsink, Cathelijne. *How to Make a Japanese House*.
NAi Publishers. September 30, 2012.
- + Ruskin, John. *The Seven Lamps of Architecture*.
Dover Publications. December 1, 1989.
- + Sacchi, Livio. *Tokyo: City and Architecture*.
Universe. January 4, 2005.
- + Seike, Kiyosi. *The Art of Japanese Joinery*.
Weatherhill/Tankosha. June 1, 1977.
- + Tanizaki, Junichiro. *In Praise of Shadows*.
Leete'S Island Books. December 1, 1977
- + Tange, Kenzo. *Ise: Prototype of Japanese Architecture*.
The MIT Press. April 15, 1965.