JAPANESE MA REVISIT: IN-BETWEEN CONCEPT WITHIN KENGO KUMA'S DESIGN PROJECTS IN NORTH AMERICA

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Abstract

Ma, translated as interval, gap, negative space, etc. in English, is closely related to the concept of "in-between" relation, which is considered an untranslatable term. It has aroused intense interest and debates among scholars in recognition of differences in the notion of spatial culture in architecture between Japan and the West. This article reviews the Japanese concept of Ma in history and reinterrogates it by raising three questions (context, authorship, and presentation) on the design of Ma. It aims to better understand Ma and its application in practice beyond the Japanese context. This article chooses Japanese architect Kengo Kuma's nine completed design projects in North America with varied types and scales to explore the above questions. From the perspectives of three main themes ("people," "space," and "time" in relation to "public-private," "nature-artifact," and "past-present" respectively) and derived sub-themes in the construction of Ma, the research analyzes how Kuma's five tangible design strategies lead to the intangible concept of Ma. It brings Kuma's former writings on making the "place" and other commentators' critiques into a further discussion. The research argues that Ma is viable not only in the Japanese context but also in today's North American context by responding to cities' specific demands and challenges. Ma is the "relationship" between the time-space-people, and the way to realize it is through place-making. Ma's Japan-ness comes from the specific design techniques in the process of fulfilling it rather than the imported cultural concept itself.

Introduction of Ma

The Japanese concept Ma (間), which is translated as "interval," "gap," or "negative space," etc. in English, closely related to the concept of "in-between" relation, is one of the good examples that define the different spatial cultural in architecture between the West and Japan as unique Japan-ness (Isozaki, 2011).

It is Gunter Nitschke (1966) who gave the first expression of the Japanese notion of space to the West by introducing Ma based on a survey on Japanese urban space by *Toshi dezain kenkyū-tai* (1963). He interpreted Ma as a sense of place in English to address a synthesis of both subjective and objective perception of space through human experience in time; a "place" different from a sheer three-dimensional space physically perceived by the common Western understanding.

The word's obscure meanings make it difficult to find equivalent English vocabulary to respond to readers. In 1978, Arata Isozaki again brought Ma into the global architectural vision through a special exhibition in Paris he curated. The abstraction of the term to him is considered untranslatable. Therefore, installations were borrowed to further interpret Ma by not seeking a definition but to show how the term contains and presents. In Isozaki's (1978) theoretical explanation, Ma is a time-space continuum. Physically, it is a denoted void in-between objects and a lapse of period in-between two points of chronos. Phenomenologically, it is an experienced event between the outside physical world and inside people's perception. Ma, from Nitschke and Isozaki's descriptions above, and Ito Tenji's interpretation of "imagined space" (*Toshi dezain kenkyū-tai*, 1963) contains three main themes: "people (人間)," "time (時間)," "space (空間)."

A series of webinars held by JAPAN HOUSE Los Angeles (2021) reinterrogated the term once again after its debut 40 years ago. Surprisingly, both Japanese (Hitoshi Abe and Manabu Chiba) and foreign architects (Sharon Johnston and Mark Lee) found Ma unconsciously applied in their works. A similar situation occurred once in an interview with Kengo Kuma (Royal Academy of Arts, 2014). In the interview, Kuma confessed to the media that Ma ("void" as he defined it) is important in his architectural design without further detailed explanations. However, interestingly, Ma was never a keyword addressed by him as the main design theory in his written essays and books.

As such, questions emerge: Is Ma, as the representation of Japan-ness, unique in the Japanese context only, or is it viable in a global context? Does Ma appear only intentionally in design, or is it unconsciously applied today by Japanese architects? What is the form of Ma practiced in contemporary architecture under a global context today? Through the discussion of Ma from the perspectives of "context," "authorship," and "presentation," this research contributes to a better understanding of the Japanese wisdom of Ma and its expanded applications in practice today, as well as how the tradition of Japan-ness is preserved in modern Japanese architecture through Ma, especially in overseas projects in North America.

Methodology for Exploration of Ma

This article chooses Japanese architect Kengo Kuma's nine completed design projects with varied types and scales so far in North America (Table 1), in which no clue of Ma was found in those projects' descriptions from the official website. It aims to better understand his unspecified Ma by interpreting its applications to those projects beyond the Japanese context. Through the analysis of Ma from related three main themes ("people," "space," "time") that Kuma unconsciously applied in his design, the article builds the connections between his five tangible design strategies or methods (Kuma, 2018) in relation to the intangible concept of Ma. It further brings Kuma's former writings on making the "place" and other commentators' critiques into a further discussion.

Ma in Relation to "People"

In Kuma's design practice, Ma in relation to "people" is realized by generating POPS (Privately Owned Public Space), a concept that originated in North America in the mid-20th century through incentive zoning for exchanged bonus areas. Kuma's design traces this historical trend and borrows POPS from private capital in the global market to strengthen the bond of his architecture to the local community for the public good or in collaboration with public sectors in urban revitalization, providing space for pop-up events. Ma (void) deals with intimacy between the "public-private," gaining economic, political, and social value (Kuma, 2020).

No	Name	Year	Location	Type	Size
1	Glass/Wood House	2010	USA	House	M
2	Shizuku by Chef Naoko	2016	USA	Commercial	S
3	Vancouver Tea House	2016	Canada	House	M
4	Suteki House	2017	USA	Pavilion	S
5	Portland Japanese Garden Cultural Village	2017	USA	Culture	XL
6	Dallas Rolex Tower	2018	USA	Office	L
7	Moku-Yama	2023	Canada	Pavilion	S
8	1550 Alberni Street Tower	2023	Canada	Mix	L
9	San Jose Park Habitat	Ongoing	USA	Office	L

Table 1: Kengo Kuma's total nine design projects in North America. (Source: Author.)

1550 Alberni Street Tower is a project invested by the private developer Westbank Group in Vancouver. Ma is created through the design technique of "hole," which contributes to a meaningful city space for potential activities. Instead of demarcating a clear public-private boundary, the interface of the POPS on the ground level is defined by layers of bamboo and greenery for a porous enclosure, allowing an intimate connection with the outside streetscape (Figure 1), and potential space for diverse events to be held as to satisfy the city's development (City of Vancouver, 2023).

Similarly, San Jose Park Habitat, which the same private real estate developer invested in, provides POPS in the form of a sunken garden with planted vegetation on the ground floor. The sunken garden allows for a public gathering place and blends the project's entrance with adjacent programs (Figure 2).

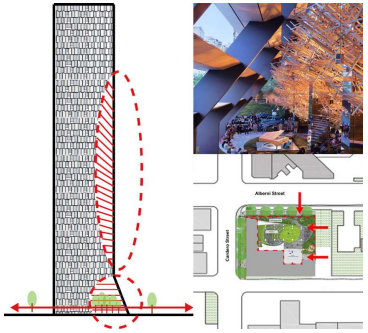

Figure 1: The tower meets the ground with a void dome that embraces the surrounding streets for passing through (left). Under the arching structures, an extensive garden defines three entrances and flows to a semi-enclosed amphitheater (bottom right). (Source: Author.) Events were held in the void of 1550 Alberni Street Tower (top right). (Source: westbankcorp.com.)

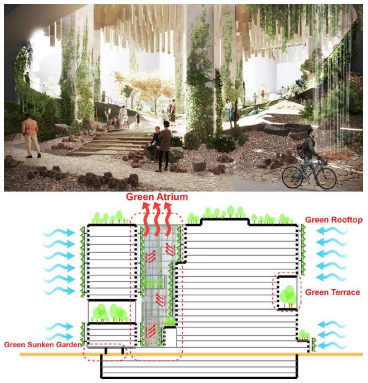

Figure 2: Activities proposed in the sunken garden of San Jose Park Habitat (top). (Source: kkaa.com.) "Void" in the form of gardens, atriums, and terraces create an air circulation system, which helps to bring in fresh air through its green façade and operable windows and cool down the building in the Bay Area's remarkable hot climate (bottom). (Source: Author.)

"Hole" continues as a design method to appear in Dallas Rolex Tower (a private office tower by Rolex) and Portland Japanese Garden Village (a public garden) to provide public space for engaging people outside those projects and users within those projects. In other words, Kuma opens his architecture through a "hole" to build a platform for social interactions and community building. Whether those projects are public or private, the interface's softness helps to blur the public-private relations instead of its rigid ownership boundaries, contributing to a balanced figure-ground relation on the ground level between the building project and urban space. This character is also well represented in Glass/Wood House and Shizuku by Chef Naoko.

Ma in Relation to "Space"

According to Nelson (2018), Americans spend about 90 percent of their time indoors and are glued to virtual and hermetically conditioned spaces away from the natural world. A biophilic design that brings nature (greens, winds, rains, air, and sunlight) back indoors or blurs the boundary between interior and exterior can help to release people from working stress, fostering a happier and healthier living for well-being (Kellert, 2018). Ma in relation to "space" is shown in the relationship between artifact and nature through "landscape," "terrain," "scale," "interface," and "environment." It thus provides ecological value in Kuma's design projects.

Pilotis in Glass/Wood House, spirally stacked stone walls in Dallas Rolex Tower, and steps in Suteki House underscore the feature of the sites' natural terrain vertically (Figure 3). The layout of the buildings in Portland Japanese Garden Cultural Village follows the contour of the surrounding natural terrain and landscape horizontally (Figure 4). In summary, Kuma's architecture is not constrained by plane and in an order under the cartesian grid system but adjusts itself to existing conditions. He regards architecture as not a freestanding object but a condition of place to "erase" itself and melt into the environment (Kuma, 2000; 2008). This may resonate with the belief of animism in Shintoism that respects everything around in Japan.

Ma is also presented in relation to the building and human scale. For the design project of 1550 Alberni Street Tower, San Jose Park Habitat, Dallas Rolex Tower, and Portland Japanese Garden Cultural Village that need to be big and tall enough to meet the demand of functional programs, through the design technique of "particle," those big building volumes are manipulated to be composed of many small volumes, same as small-scale pavilion Moku-Yama, forming a relative human-scale to the people who inhabit in it (Kuma, 2004; 2013) (Figure 5).

Besides the design methods of "particle," "hole" works to decrease buildings' volumetric pressure, creating a layered or porous interface to be connected with the environment outside buildings. Holes are in the form of setback balconies in 1550 Alberni Street Tower, roof terraces in San Jose Park Habitat and Dallas Rolex Tower, Japanese *engawa* (or veranda) in Portland Japanese Garden Village, Vancouver Tea House, and Suteki House.

Figure 3: Pilotis in Glass/Wood House (left) and steps in Suteki House (right) adjust the level change and maintain the original site terrain. (Source: kkaa.com.)

Figure 4: Portland Garden Cultural Village follows the natural terrain and landscape horizontally (top left) and vertically (bottom). (Source: Author, based on arquitecturaviva.com.) Individual buildings in group form to enclose a central village plaza (top right). (Source: Photo by kkaa.com.)

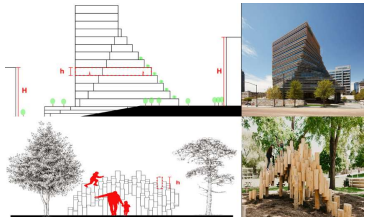

Figure 5: The volume of Dallas Rolex Tower (top) and Moku-Yama pavilion (bottom) are composed of small parts related to human scale ("h" in the diagram) instead of building scale ("H" in the diagram). (Source: Diagrams by author; photos from kkaa.com.)

Ma in Relation to "Time"

Ma in relation to "time" deals with the relationship between past and present through its application in "material," "technology," "history," "tradition," and "change" in Kuma's design projects in North America. Materials that own the quality of fragility, decay, and different degrees of transparency (for example, traditional Japanese paper, wooden latticework, and bamboo curtains) with softness and warmness are much used (Figure 6).

Through those materials, the change in light and sound environment is amplified for experiencing time lapse. Architecture breaks itself as a closed and hard box and is intimate to the environment, human body, and mind (Kuma, 2012). Moreover, adopting natural materials as an alternative to industrial materials like concrete and steel, especially wood from local resources, benefits the lower carbon footprint in transportation and construction, boosting a sustainable building and timber industry in North America.

For time expressed in technology, traditional and modern, old and advanced design skills are integrated into Kuma's building projects. In Portland Japanese Garden Cultural Village, the thatched gable roof is replaced by an updated green roof with advanced materials and detailed design for waterproofing and daily maintenance. The cantilevered wooden purlin is replaced by the metal purlin with a more structurally and economically efficient section without losing a connection with the traditional image. In the San Jose Park Habitat project, advanced technology is applied to the façade design to enhance the building's performance. The building skin with vegetation on planters as sun-shading louvers is finely tuned to create shading and reduce solar heat gain, improving building performance and decreasing energy in cooling.

While using advanced technology in design, Kuma's design projects in North America also inherit design wisdom from the past for cultural value. Time is expressed in his application of the traditional rain chain in Suteki House, veranda in Vancouver Tea House and Portland Japanese Garden

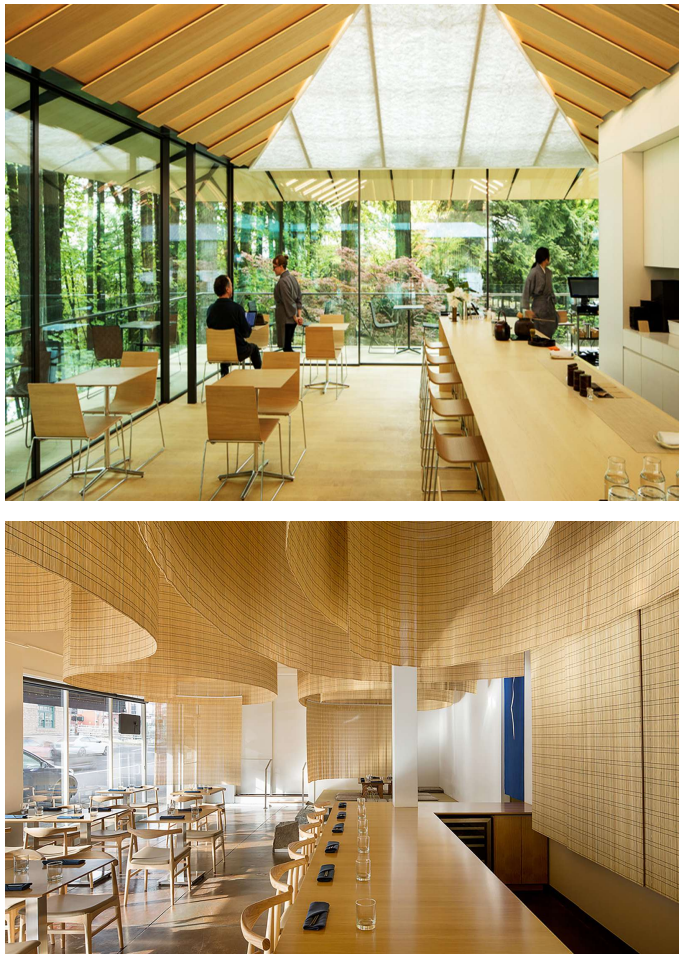

Figure 6: The interior material of Portland Japanese Garden Cultural Village (top) and Shizuku by Chef Naoko (bottom) create an intimate atmosphere between the inside and the outside. (Source: kkaa.com.)

Cultural Village, traditional shading of *sudare* (bamboo screen) in Shizuku by Chef Naoko, and *koshi* (lattice) in louver and masonry craftsmanship used in stone walls design applied in Dallas Rolex Tower. Time is also shown in adopting a traditional plan layout of goose flying formation based on the Katsura Villa in Portland Japanese Garden Village.

Discussion and Conclusion on Ma

Through the case study of Kuma's nine projects in North America, the article gives a further explanation of understanding Ma based on Isozaki's previous explicit "in-between" notion by addressing a balanced and harmonious "relationship" as the implicit core of Ma.

Although Kuma's practice does not explicitly mention Ma as his main design philosophy, Ma is a constant concept in Kuma's varied design projects in North America. Ma is adapted to North American cities' context through design according to their specific social, economic, political, ecological, and cultural demands and challenges. Kuma's design approaches of "place-making" drive his design to deal with seemingly dualistic situations between "public-private," "nature-artifact," and "past-present." Ma appears in the form of making an appropriate relationship in those seeming contradictions under certain sub-themes summarized in Table 2. The Japan-ness in Ma is expressed partly relying on the concept itself imported from Japan rooted in the past, but more comes from the process of fulfilling it by specific design techniques through "hole," "particle," "softness," "oblique," and "time."

Subject	Main Themes	Sub-Themes	Design Techniques/Methods					Objectives
			Softness (柔らか)	Hole (孔)	Oblique (斜め)	Time (時間)	Particle (粒子)	
Ma (間) In-Between	People (人間)	Public-Private (公私)		• {5,6,8,9}				Public-Private (公共) (個人)
		Figure-Ground (虚実)		• {5,8,9}				
		Inside-Outside (内外)	• {1,2,6,8,9}					
	Space (空間)	Landscape (造園)			• {1,4,5,6}			Nature-Artifact (自然) (人工)
		Terrain (地形)			• {1,4,5,6}			
		Environment (環境)		• {3,4,5,6,8,9}				
		Interface (境界)		• {3,4,5,6,8,9}				
		Scale (尺度)					• {5,6,7,8,9}	
	Time (時間)	Material (材料)				• {2,5}		Past-Present (過去) (現在)
		Technology (技術)				• {5,9}		
		History (歴史)				• {2,3,4,5,6,9}		
		Tradition (伝統)				• {2,3,4,5,6,9}		
		Change (変化)				• {2,5}		
Place-Making (場所)								

Table 2: Ma and related design themes and techniques in place-making applied by Kengo Kuma in his design projects in North America. Numbers refer to the specific design projects mentioned in Table 1. (Source: Author.)

Architecture that dwells in relation to the environment is inclined to be much recognized worldwide after the failure of the Modernism movement, which, in contrast, prioritizes architecture as a well-designed object positioned independently (Bognar, 2005; 2009; Frampton, 2018). Aldo van Eyck (2008) strongly suggested replacing the neutral and abstract concepts of 'time' and 'space' with humane and specific 'occasion' and 'place' in architecture. Moreover, the development of phenomenology and place-making in architectural theory and practice is popularly debated and engaged by scholars and designers, such as Christian Norberg-Schulz (1980), Steven Holl (Holl et al., 2007), and Peter Zumthor (2006). In this regard, in the West, Ma had already been established. Ma has become a shared design method not limited to the architects who know and intentionally use it; it unconsciously comes into being when architects pursue positive place-making in relation to the surrounding environment through space, time, and people.

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