

Patterns Redefinition in Beijing East Qianmen Kengo Kuma Office in Damochang 220 Courtyard House

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“The individual is not an autonomous, solitary object but a thing of uncertain extent, with ambiguous boundaries. So too is matter, which loses much of its allure the moment it is reduced to an object, shorn of its viscosity, pressure and density. Both subject and matter resist their reduction into objects. Everything is interconnected and intertwined.”¹

Kengo Kuma is one of Japan’s leading architects and a key figure in contemporary architectural culture; he runs his practice, whose designs are widely published. From this position, he leads an international office whose projects and work have received widespread recognition and acclaim, establishing him as one of the most influential architects of his generation, renowned for his clarity and unwavering attention to detail.² One of the key points of his design approach is the relationship between his buildings and their surroundings; Kuma often starts from the idea of establishing a confrontation with the immediate context, often pursuing the idea of a mediated merging with the context itself, a strategy often implemented through the repetition of textures and permeable materials that filter air and light to create a translucent or porous envelope.

East Qianmen, Beijing, China

East Qianmen, this particular area of Beijing, has flourished for centuries thanks to the craftsmanship that dates back to the Ming dynasty, even if the urban grid layout dates back to the Yuan era (1279-1368), with streets of standard width: about 9 meters for the *hutongs*, oriented from east to west and where the residential and commercial functions were clustered, about 18 and 36 meters wide for the secondary and primary streets, oriented from north to south; it is along the *hutongs* that these single-story buildings, typical of Beijing, are located, and where a specific dialect has long been spoken.

The *hutongs* are defined by rows of *siheyuan*, with the typical wooden structure painted red, with the main part of the building on the north side, facing south to welcome the sun in the cold local winter, flanked on two sides by smaller rooms, with the entrance to the courtyard overlooking the *hutong* on the south side.³

The urban heritage of historic Beijing has suffered several challenges to its integrity, starting

¹ Kengo Kuma, *Anti-Object: the Dissolution and Disintegration of Architecture*, trans. Hiroshi Watanabe (London: Architectural Association Publications, 2008), 34-35.

² See, among others: Kengo Kuma and Associates, *Kengo Kuma: Materials, Structures and Details* (Basel: Birkhauser, 2004). Botond Bogner and Kengo Kuma, *Kengo Kuma: Selected Works* (New York: Princeton Architectural Press, 2005). Kengo Kuma and Associates, *Studies in Organic* (Tokyo: Toto Publishing, 2009). Botond Bogner and Kengo Kuma, *Material Immaterial: the New Work of Kengo Kuma* (New York: Princeton Architectural Press, 2009). Kenneth Frampton and Kengo Kuma, *Kuma Complete Works* (London: Thames and Hudson, 2012). Kengo Kuma, *Natural Architecture* (London: Architectural Association Publications, 2015). Kengo Kuma, *Small Architecture* (London: Architectural Association Publications, 2015).

³ Tim Heath and Yue Tang, “Beijing’s Hutong and Siheyuan: Conservation of an Urban Identity,” *Municipal Engineer* 163 (September 2010): 156.

in 1949 and throughout the 50s,⁴ when many streets were widened. New monuments were built, and again during the Cultural Revolution,⁵ from the mid-60s to the mid-70s, when these historic neighborhoods were considered remnants of the feudal system and the existing buildings were often replaced by small socialist apartment blocks.⁶ By the end of the 70s, when the government began to protect the city's cultural heritage actively, there were only about 4,000 alleys left, about half of the original number, a situation that worsened in the 90s when the processes of regeneration and real estate speculation accelerated with the aim of transforming the capital into an international metropolis⁷; between 1949 and 2009 88% of *hutong* were demolished, now only about 1,000 remain, according to the Beijing Cultural Heritage Protection Center.

In the context of the rapid urbanization process of the rural population in the big cities, the old houses in this neighborhood suffered rapid overcrowding and were occupied by families of new city dwellers; they began to change their form and function, inevitably transforming them into overcrowded slums. It was a process that had begun decades earlier when traditional houses originally designed for single-family use were subdivided to accommodate up to 15 families. This first replacement phase was followed by a particularly difficult period, during which the entire Qianmen district fell into ruin despite being located in an important area of Beijing. From a historical point of view, the entire Qianmen district remained in a state of widespread decay for a long time, and the classic late Qing *siheyuan*, the traditional low courtyard houses typical of the area, earned the nickname *da-zayuan* (messy dwellings). In 1990, the Beijing municipal government launched the Old and Dilapidated Housing Redevelopment (ODHR) program,⁸ which eventually became an accelerator of speculative development characterized by extensive demolition, resulting in a significant loss of social and cultural value of the hutongs.⁹ Soon, however, both local and national politicians, residents, and many critics began to recognize the cultural and economic value of the small *hutong* houses; this led them first to formulate hypotheses and then to initiate long and difficult negotiation processes for the functional and typological renovation of the buildings.

Figure 01

After its gradual loss of centrality and importance, a strategy for its recovery was adopted beginning in the year of the Beijing Olympics, 2008, when special design attention began to be paid to smaller design processes, not only to large-scale urban processes,¹⁰ a focus on construction details that had previously been almost ignored, a consequence of the rapid modernization that has been underway in China for about a century, and which relied on a certain general and autonomous persistence of traditional culture. Indeed, the responsibility

⁴ The cause of conservation has often been at odds with Maoist urban priorities and policies since Liang Sicheng and Chen Zhanxiang's famous 1949 urban plan. See in: Geremie Barmé, "Introduction," in *In Search of Old Peking*, Lewis Charles Arlington and William Lewisohn (New York: Oxford University Press, 1987), vi.

⁵ Shuishan Yu, "Courtyard in Conflict: the Transformation of Beijing's Siheyuan During Revolution and Gentrification," *The Journal of Architecture* 8, vol. 22 (2017): 1337-1365.

⁶ Daniel Abramson, "Beijing's Preservation Policy and the Fate of the Siheyuan," *Traditional Dwellings and Settlements Review* 13, no. 1 (Fall 2001): 8.

⁷ "In the late 1980s, primarily due to urban land reforms and housing reforms, real-estate markets began to emerge in cities across China [...] Consequently, once the land sales demonstrated considerable revenue generation potential, local governments had substantial incentives to pursue local prosperity by promoting the real-estate industry." In: Zhang Yan, and Fang Ke, "Politics of Housing Redevelopment in China: The Rise and Fall of the Ju'er Hutong Project in Inner-City Beijing," *Journal of Housing and the Built Environment* 18, no. 1 (2003): 76.

⁸ Junhua Lü, "Beijing's Old and Dilapidated Housing (Part II)," *China City Planning Review* 9, no. 4 (December 1993): 28.

⁹ Yan, and Ke, "Politics of Housing Redevelopment in China: The Rise and Fall of the Ju'er Hutong Project in Inner-City Beijing", 77.

¹⁰ Although already in 2004 Vice Premier Wen Jiabao had already begun to recognize the existence of an issue that was beginning to be of some importance, in his speech at the Third Representative Conference of China Mayors' Association: "Some city leaders simply deem the constructions of high-rise buildings as urban modernization while paying insufficient attention to protection of natural scenes and historical and cultural relics. Their large-scale dismantling and building during old city reconstruction have damaged many traditional districts and buildings with historical and cultural values [...] We must resolutely correct such wrong practices." See in: Tibet Heritage Fund and Tsinghua University Architecture Department, *Beijing Hutong Conservation Plan* (Beijing: Tsinghua University, 2004): 3.

for the conservation of the historic district is divided between various bodies, making its effectiveness particularly cumbersome: the Capital City Planning Committee, the Beijing City Planning Committee, the Beijing City Cultural Relics Office, the Housing Office, and the Beijing City Construction Bureau, although it is the local Cultural Relics Bureau that is locally responsible for the management and conservation of protected sites.¹¹

Both planning and execution, based on the concepts of balanced order and natural flow, thus quickly became an active and present part of the modernization process itself, a strategy that would later be developed in the Chinese Pavilion at the 2016 Venice Biennale, when the China International Exhibition Agency, the organizing committee of the pavilion itself, announced the title of the exhibition, 'Back to the Ignored Front,' confirming the strategy of wanting to focus on the themes of 'things and designs that embody traditions of the past and have a lasting presence,'¹² as stated in the catalogue.

The Damochang 220 Project

In this context, the Damochang 220 project, being a challenging example of the urban regeneration of East Qianmen district,¹³ Kuma has designed the Chinese headquarters of KKAA (Kengo Kuma and Associates) offices as part of an overall renovation of the traditional *siheyuan* planned by local authorities.

In recent years, Beijing's *hutongs* and *siheyuan* have been changing rapidly, hosting new functions after often undergoing renovation and refurbishment, including the materials with which they are renovated; in this case, Kuma offers its own version of both functional and material renewal, opening up the building to new functions and designing the detail of the new external aluminum canopy. To preserve the original structural materials, the project requires that every column and beam of the original wooden structure be dismantled, repaired, and reassembled by local carpenters where possible.

Kuma then designs the new exterior walls as a combination of brick walls and glass curtain walls, partially covered by the aluminum screen made from two simple types of extruded pieces, designed and used like puzzle pieces, which Kuma designs as a pattern created to re-establish a particular type of boundary between interior and exterior spaces; a use of the pattern that is part of a long tradition of Chinese cultural influence on its development, which in turn has long influenced Japanese tradition.

At the heart of Kuma's design philosophy is an emphasis on the symbiotic relationship between his designs and the environment; affirming the concept that buildings are anti-objects, he understands them as derivatives of a conscious engagement with their immediate built environment.¹⁴

This approach always implies an initial comparison with the surroundings, resulting in projects that relate to both the natural and built environments in which they are located rather than imposing themselves as autonomous and separate entities.

Kuma's design practice is always concerned with using concepts such as 'dissolution'¹⁵ and 'integration' in the urban context, which he also achieves through using natural materials. His approach involves the selection of textures and permeable materials that not only filter air and light but also create a series of repetitive elements that culminate in a translucent or porous shell. This design philosophy allows his structures to become an integral part of their

¹¹ Heath, Tang, "Beijing's Hutong and Siheyuan: Conservation of an Urban Identity," 156.

¹² Commissioned by the China Arts & Entertainment Group and curated by Liang Jingyu of Approach Architecture Studio, the Chinese Pavilion was titled *Daily Design, Daily Tao. Back to the Ignored Front*.

¹³ About the redevelopment of this area, see in: Fu Pingchuan 傅平川, *Beijing Qianmen Daijie kongjian yanjiu* 北京前門大街空間研究 (Beijing: Tsinghua University, 2009).

¹⁴ Kengo Kuma, *Anti-Object: the Dissolution and Disintegration of Architecture* (London: Architectural Association Publications, 2008). Or, by same author, *Good-Bye Postmodern — 11 American Architects* (Tokyo: Kajima Institute Publishing, 1989) in Japanese, not translated in English: 11 interviews made while being in Columbia as a Research Fellow, funded by the Asian Cultural Council.

¹⁵ The subtitle itself of his most known book *Anti-object is Dissolution and Disintegration of Architecture*.

environment, constantly seeking to create a symbiosis between architecture and nature.

Figure 02

Kuma undertook this restoration project in this prominent location, just a five-minute walk from Beijing's most famous landmarks, in 2015 when the studio was commissioned to design its own office and a bar on the site. The project was completed the following year and became a central element of a wider restoration effort to preserve and revitalize traditional courtyard houses, the *siheyuan*.

He demonstrates the potential for his approach to be integrated into heritage conservation as part of his broader compositional strategy, with the ultimate goal of transforming the area into an open and inclusive community zone. This architectural space has become part of an urban landscape that is now able to accommodate a diverse and mixed range of functions, including offices, residences, shops, hotels, and restaurants, giving new life to the entire block.

By combining these elements, Kuma has created an environment that fosters connection and interaction for all those who live and visit the area, known as the Xidamochang Hutong, where other architects worked at the same time. In 2014, MVRDV designed The Next Hutong, a 3,400 square meter project; MAD Architects restored Hutong 218; and several Chinese practices, including Arch Studio, Neri&Hu Architects, and the Beijing Institute for Architectural Design, also completed projects here. In particular, Urbanus designed Luanqing Hutong 37, Caochang Heng Hutong no. 4, and part of the masterplan itself.

Figure 03

Despite the transformation of Beijing's urban landscape, a metropolis of around 22 million inhabitants, where modern skyscrapers have often replaced *siheyuan* and *hutongs*, Kuma is repurposing one of the district's remaining *siheyuan* and incorporating a variety of functions within it (what Kuma calls a 'courtyard sharehouse'), combining the reuse of original elements of traditional design with technological details. The site, Kuma writes, "retains most of its historical characteristics, consisting of *hutong* (alleyways) and *siheyuan* (courtyard houses)."¹⁶ The *siheyuan* is thus integrated with the *hutong* in a new way, in which the project aims to create the effect of controlled transparency without distorting its material nature.

Figure 04

In his introduction to the English version of 'Small Architecture/Natural Architecture,'¹⁷ Kuma consolidates his design formula. The aluminum screen designed by Kuma is a combination of just two types of extrusions that can be assembled in various combinations, like simple interchangeable elements of a game. Using these two simple types of extrusions, Kuma has created a repetitive pattern that pays homage to the classic Chinese latticework pattern known as *huagechuang* - often found in traditional buildings and adorning windows and doors; the result is a contemporary reinterpretation of traditional uses, techniques, and design.

Figure 05

¹⁶ Kengo Kuma, Jeffrey Kipnis, Mario Carpo, and Richard Scoffier, "Kengo Kuma: a LAB for materials," *The Japan Architect* 109 (Spring 2018): 183.

¹⁷ Kengo Kuma, *Small Architecture*, 5.

Throughout history, Chinese culture's profound influence on the evolution of patterns has significantly shaped Japanese tradition. This retrofit seamlessly integrates into that legacy; now, these influences come full circle, returning to the source of their inspiration after a century of mutual exchange and inspiration between the two cultures.

With this project, Kuma returns to one of his most famous approaches, that of a non-self-centered or self-affirming idea of architecture;¹⁸ within this approach, using his tools in his typical way, he reinvents the typology of these traditional Beijing buildings with contemporary technologies and materials.

The result is a redefinition of the boundaries between interior and exterior spaces; through his design, Kuma's aim seems to be to nuance them, creating a symbiosis that relates private spaces to public ones, demonstrating a commitment to transforming the existing character of the building while preserving its original nature.

Figure 06

In response to this challenge, Kuma's vision aims to revitalize the community and restore the character of the neighborhood, helping to breathe new life into the entire area, imagining it as an open community and transforming it into an urban landscape that integrates a wide range of functions: the office of Kengo Kuma & Associates itself finds its place here, becoming an integral part of this renewed urban landscape.

However, Kuma's version of the *siheyuan* has undergone a transformation, opening up to the street through a transparent version of the exterior wall with large windows. The aluminum extrusion, a composition of two simple extruded pieces, plays a key role in the realization of this project, only partially covering the windows and guaranteeing the initial objective; the result is a synthesis in which the *siheyuan* thrives in a contemporary context.

Figure 07

Because of the desire to preserve the existing architecture of the region, the site is part of the planning and renovation on an urban scale within East Qianmen. Although other architectural firms have contributed to the restoration in recent years, it remains to be seen whether the collective goal of creating a mixed-use atmosphere will be fully achieved, not only as a tourist attraction but as a general retrofit of the area's vitality despite the economic and social changes of recent decades. At the heart of this overall urban regeneration objective is a commitment to revitalizing and redeveloping these neglected Qing/Ming courtyard houses. Rather than opting for a taller building, the design priority was to pay homage to the original typology of low-rise buildings that were prevalent in the area; in doing so, the project maintains a definitive connection with the historical heritage of the site, and the design goes beyond simple construction to celebrate the architectural heritage of the region.

For the renovation of the building's façade, Kuma proposes a layered approach, where the innermost barrier is the glass screen, which acts as a boundary between the interior and the outside world, while above this layer, the aluminum structure reveals the original bricks of the building. This integration highlights the sections of brickwork that were left unfinished or that have withstood the test of time, a kind of testimony to the building's historical link with the site, adding another level of meaning to the choice of this historical typology.

¹⁸ "My purpose in writing this book is to criticize architecture that is self-centered and coercive", in Kuma, *Anti-Object*, 3.

The Aluminum Canopy

The aluminum components of the façade have an interlocking design made up of two key elements: an L-shaped section and a single linear element. These intricately articulated sections create an in-between space that allows a simple, seamless connection to the next row of aluminum pieces. This ingenious arrangement creates a play of transparency and irregularity, allowing some pieces to be deliberately missing.

The choice of aluminum as the material for this external extension is a testament to its carefully selected properties: its lightness ensures that the load on the building remains minimal, while its inherent durability guarantees longevity and strength. This fusion of lightness and strength makes aluminum the ideal choice, balancing functionality, and design, ultimately contributing to the original design of the building's façade.

In the process of reinventing the office typology within these design constraints, another strategic innovation was also at play. Traditionally, Chinese courtyards were designed to provide complete privacy, but this approach often resulted in plain, blind exteriors that obscured the lives of the people within. In response to this limitation, Kuma's design sought to break free from the constraints of this typology and adopt a perspective that celebrates openness and connection while preserving the essence of the courtyard concept.

Figure 08

As a result, the Qianmen office in Beijing gives the exterior a new meaning, while the interior evolves into a space that encourages connection and interaction. Rather than taking a privacy-first approach, the design reinvents the overall purpose of the building to meet changing social needs, emphasizing the restoration of social connections. By embracing openness and inclusivity, the building becomes a center where people can gather, share, and collaborate. Once enclosed spaces are now filled with a mix of people and activities, reflecting an understanding of the evolving fabric of society.

The office design is also exemplary in its commitment to local sourcing of materials, focusing on a key element in terms of the restored wooden interior. In terms of structural use, the project features a mix of materials, and the restoration of the original wooden elements allows their reintroduction into the structure, preserving the essence and historical connotation of the building.

Although aluminum is not used as a structural material, its inclusion in the perimeter raises the level of innovation of the project, where the creation of the aluminum facade demonstrates an understanding of the unexpressed potential and functionality.

Furthermore, the concept of developing a mixed-use functional program introduces a wide range of activities into the urban fabric, increasing its potential to benefit users.

However, it is somehow essential to recognize that an office typically requires a degree of privacy, which can present potential challenges when co-existing on the same level as a coffee shop. The mix of noise and pedestrian traffic within the narrow openings to the courtyard may indeed prove problematic and require some form of mitigation. Therefore, balancing the functions of an office and a café required careful design considerations to ensure that both aspects of the building could co-exist without compromising the desired atmosphere of the functional mix.

The flat terrain of this part of the city allows the integration of the courtyard with the neighboring buildings without the need for vertical connections, making the relationship even more immediate. However, perhaps due to the fragmented property regime, there seems to be room for improvement in terms of overall integration with the other buildings, even though the project shows a general and evident consideration of both typology and material of the

surrounding context.

Figure 09

The restoration process involved the meticulous removal, repair, and replacement of all the wooden columns and beams by local carpenters. The project then took shape through the coexistence on the façade of traditional brick with modern glass walls, creating an access within the external wall that opens the internal courtyard of the courtyard house to the street, where the aluminum screens installed on the external walls form an organic diagram: as you enter the cobbled courtyard and approach the heavy wooden door, this geometric grid, almost like a net, extends along the new internal façade of the building. This design allows the brick façade to give way to glass walls - creating a visual relationship for passers-by looking through the grid into the office and café spaces. The same principle applies to those working or socializing inside, whose view of the courtyard is not interrupted but shielded by the effect of the transparent glass blocks.

The project to restore the area's *hutongs* and *siheyuan*, as part of the Qianmen Beijing Centre for the Arts, involves the transformation of the entire community into an open urban landscape of mixed-use buildings and a contemporary celebration of Chinese architectural history hidden in the alleys at the edge of the neighborhood; therefore, the design strategy extends well beyond the individual Kuma project, as the intention is to bring new functions to the local community.

Figure 10

The Use of Geometric Patterns as a Design Strategy: a Chinese/Japanese Mutual Exchange

“His design formula is by now well established: select a single material, shape it into a small module, then multiply that to produce the entire building. [...] it is the distilled simplicity of his architecture that produces its seductive beauty.”¹⁹ This is what Kuma does here, too: he chooses a material, uses it to create a pattern, designs a way to assemble it mechanically, and multiplies it as a design solution. But geometric patterns with simple lines exist all over the world, instinctively used to decorate a wide range of objects, from the mundane to the artistic, in everyday life as well as in grand imperial settings.

This use of simple lines in patterns has been widely adopted and developed throughout Japan's history and has endured, embodying a profound significance in defining the Japanese aesthetic sensibility. The beginnings of geometric forms date back to the early Jomon period (13,000 to 300 BC), where they adorned pottery and began to take shape. Over the centuries, these compositions flourished and evolved, reaching their peak during the Edo period. During this period, there were a myriad of traditional patterns, each defined by unique shapes and silhouettes. Among these, the geometric pattern emerged as a type of non-figurative decoration that lent itself to a wide range of universal and common applications, from architecture to clothing decoration.

The respect for nature of the Jomon period influenced the development of Japanese aesthetics and led to the inclusion of many floral and botanical motifs in artistic expression. In addition to these nature-inspired forms, geometric designs have also found their place in Japanese cultural history. In fact, it has been shown that even in primitive societies, it was common to

¹⁹ Thomas Daniell, “Acting Natural,” *AA Files* 69 (May 2017): 101.

use ornamental patterns on artefacts; today these forms continue to manifest themselves in various aspects of people's lives.

The Japanese concept of pattern, while primarily concerned with the creation of forms to decorate the surfaces of objects, has undergone significant development, particularly under the influence of Chinese culture, and the interaction between these two cultural traditions has contributed to the evolution of Japanese artistic expression.

After the Jomon period, in which the ancestors of the Japanese decorated the surfaces of pottery with reliefs of simple geometries, animal claws, and ropes, the Late Jomon period saw the development of intricate decorative figures used on cult objects. Subsequently, in the Yayoi period (from 300 BC to 300 AD), there was a tendency towards simpler compositions. It was during the Asuka period, however, that significant advances in transportation facilitated the widespread importation of Chinese culture, thanks to the arrival of Buddhist missionaries. This cultural exchange influenced the development of Japanese models and led to a fusion of artistic styles that continue to shape Japan's aesthetic heritage today.

Among Japan's neighbors, China was the most influential, especially during the Sui and Tang dynasties. This period marked a significant turning point when Japan adopted the missionary policy towards Tang China, sending about 20 groups of envoys to China. Their aim was to absorb the knowledge of advanced technologies, legal systems, philosophy, art, and architecture.

While Japan engaged in this cultural exchange, Chinese models left a lasting impression on the artistic landscape. The Japanese gradually began to assimilate Chinese designs, resulting in a fusion of cultural aesthetics: this mutual exchange of ideas played a fundamental role in shaping the evolution of Japanese design.

Figure 11

Kuma Courtyard House: Inside/Outside

Between the need to create an enclosure for shelter, protection and privacy, and the need to transmit light for illumination and visibility, this building expresses its nature in a binary domain, between inside and outside. In general, a person standing in the doorway is neither inside nor outside, but their presence is acknowledged in both spaces. When it rains, or on a sunny day, a person can stand under a cantilevered roof, outside the walled part of the building but still be protected by the building, depending on the intensity of the rain and the direction of the wind.

Transparency and overcoming spatial boundaries have a long history in modern architecture, and it is hard to imagine one without the other, a theme that can be seen as part of the Vitruvian dogma of the *firmitas*, stability, with its corollary of longevity. Beyond the analysis of its structural functions, however, modernist discourse has often neglected the function of the wall as a mere mediator between the interior and the environment.

It is in this design space of the *engawa* that Kuma comes into play, with the solution of dissolving the physical boundaries of this building through the use of this mechanically assembled metal model.²⁰

His choice to dissolve the physical boundary constituted by the wall is based on the undeniable assumption of its existence: a wall serves as a delineation, separating both the interior and exterior.

But at the same time, a wall is never just a wall; the inside has never been completely

²⁰ The *engawa* is located between the tatami-covered living spaces and the garden belonging to the house, it is usually at the interior level, is covered and has no railings; the separation from the interior is through sliding doors, and from an architectural point of view, it represents an intermediate zone, and therefore cannot be attributed to either the interior or the exterior space. The *engawa* is always covered, to protect the delicate sliding doors from rain and the interior from sunlight in summer.

separated from the outside: definitions of enclosure, protection, and privacy have always been accompanied by notions of transition, transfer, and exchange. In this way, property boundaries have never been understood as absolute separators, but rather as mediators. And the mediating and multifunctional role of borders is not diminished, as Kuma wrote: “A world of relationships is a world in which there is an awareness of boundaries, a world that is gentle to human beings.”²¹

From a phenomenological point of view, a quote from Tanizaki’s ‘In Praise of Shadows’ may be appropriate: “We find beauty not in the thing itself but in the patterns of shadows, light, and darkness, which one thing creates against the other. [...] If there were no shadows, there would be no beauty.”²² The use of boundary techniques and patterns as a design strategy is illustrated by this quote from Kuma: “Japanese architecture is a treasure trove of boundary techniques.”²³

There are many projects that could be used as examples similar to this one, but is there something uniquely Japanese about Kuma’s approach to design? Unlike the more common modern European approach, where boundaries have been rethought and deliberately erased, this project goes in the opposite direction. Despite the use of elementary geometries, this project represents an attempt to significantly increase the number, scale, or extension of boundaries, whether real, metaphorical, or perceived. Of course, this is not necessarily an exclusively Japanese approach, but this quest to increase complexity by making it transparent can be seen as a typical feature of this type of approach.

Connecting Nature and People

The essence of Kuma’s design philosophy is therefore focused on creating architecture that connects people with their environment and nature, and in this KKAA is a company that experiments with materials rather than forms. Throughout his career, Kuma has developed a contemporary language that combines vernacular architecture, traditional craftsmanship, and the latest technology.

His architecture reveals a radical interest in indigenous building techniques and an attraction to globalized aesthetics. In one of his most famous recent works, the V&A Museum in Dundee (2018), there is a faithful programmatic translation of his ideas of respect for nature, landscape, and people.

Kuma’s architecture has gone through different phases,²⁴ from an initial postmodern period, through a subsequent period characterized by an approach he defined as anti-object, to a phase he called the New Organic period.²⁵ In the first period, his work had a strong iconic character and was based on a reflection on the importance of the symbolic message; during the Anti-Object period, Kuma focused on the ‘erasure of architecture,’ a concept achieved through the fusion of the project with the site or the integration of natural materials, while the New Organic period presents an architecture that emerges from structural analysis and is defined not by volume but by what Kuma calls particulization.

Here, Kuma applied his design philosophy through direct dialogue with craftspeople experimenting with the nature of each material, be it wood, bamboo, paper, or stone. This direct contact with craftspeople was a direct response to Kuma’s original interest in materials and construction innovation, which he had pioneered in the post-modern period. This conversation, therefore, invited Kuma to abandon all formalist ideas and privilege the

²¹ Kengo Kuma, *Patterns and Layering. Lightness and Transparency in Contemporary Japanese Architecture* (Munich: Prestel Publishing, 2012), 65.

²² Jun’ichirō Tanizaki, *In Praise of Shadow* (New Haven, CT: Leete’s Island Books, 1977), 46.

²³ Kengo Kuma, *Toward a Japanese-Style Architecture of Relationships*, trans. Hiroshi Watanabe, in *Kyokai: A Japanese Technique for Articulating Space*, ed. Kengo Kuma (Tokyo: Tankosha, 2010), 7.

²⁴ Aya Jazaierly, and Salvator-John Liotta, “Des architectes japonais en France. Les parcours de Ban Shigeru, Kuma Kengo, Fujimoto Sou et Tane Tsuyoshi,” *Ebisu Journal* 57 (2020): 320.

²⁵ Kuma and Associates, *Studies in Organic*, 14.

materials themselves - especially natural materials - to create an architecture in danger of extinction or, as he calls it, an anti-object.

Figure 12

Arguing that his anti-object architecture does not deny the tangibility and presence of buildings but rather criticizes the presence of massive architectural designs, usually isolated from their surroundings and often designed to stand out rather than blend in, Kuma is highly critical of this formalist approach, what he calls 'object-oriented architecture', which harkens back to the modernist period in which a building had to be cut off from its surroundings and be a prominent object to have an easily comprehensible overall character. So, rather than thinking about architecture from the outside in and devising gestures and forms to create buildings, Kuma abandoned all formal ideas to focus on materials, or more precisely, what he calls material 'particles', such as this L-shaped aluminum model.

From this point of view, what makes this project particularly interesting is that Kuma was able to combine his three approaches, from the initial postmodern and symbolic period, through the anti-object phase, to the New Organic approach, in this single project.

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Captions

Fig. 1. Xidamo Street, the Pilot Project Zone.
Drawing: (c) Kengo Kuma & Associates.

Fig. 2. The previous state of Damochang 220 Courtyard House.
Drawing and photography: (c) Kengo Kuma & Associates.

Fig. 3. The Damochang 220 Courtyard House transformation.
Drawing: (c) Kengo Kuma & Associates.

Fig. 4. The original condition of the siheyuan façade.
Photography: (c) Kengo Kuma & Associates.

Fig. 5. Repositioning of refurbished timber elements.
Photography: (c) Kengo Kuma & Associates.

Fig. 6. Reconstruction of the façade with new bricks, tiles, and beams for the roof structure.
Photography: (c) Kengo Kuma & Associates.

Fig. 7. The new transparent façade with the aluminium canopy.
Photography: (c) Kengo Kuma & Associates.

Fig. 8. The curtain wall details.
Drawing: (c) Kengo Kuma & Associates.

Fig. 9. New structural, insulating, and waterproofing elements bridge the old building with the new.
Drawing: (c) Kengo Kuma & Associates.

Fig. 10. The contemporary ‘Chinese grid’, the *Huagechuang*: a cast aluminium lattice screen.
Drawing: (c) Kengo Kuma & Associates.

Fig. 11. The reinterpretation of the *Huagechuang*, made with the two aluminium elements assembled in different ways.
Photography: (c) Kengo Kuma & Associates.

Fig. 12. Technical details of the aluminium *Huagechuang*.
Drawing: (c) CreatAR Images.