

**Paradox of a Landmark that is not: the life of the Nakagin Capsule Tower**Ishida, Aki <sup>\*1</sup><sup>1</sup> Assistant Professor, Department of Architecture, Virginia Tech, USA**Abstract**

Nakagin Capsule Tower (1972) by Kisho Kurokawa has been at the center of a preservation debate for over a decade. In the Metabolist spirit of continual growth, the architect designed the capsule living units to be replaced every 25 years while the concrete cores were to permanently remain. In the 43 years since its completion, no replacement has taken place. The building is in an advanced state of decay and neglect, but a strong voice of opposition from architects worldwide has continued to postpone demolition. A point of contention is that it has not reached a 50-year mark at which a work of architecture could, having proven its significance on its own, qualify for protection as historic landmark in Japan. The reason for Nakagin Capsule Tower's ultimate demolition, ironically, may be its inability to live up to its principals that made it landmark-worthy in the first place – the idea of the metabolic cycle, interchangeability, and adaptability. The paper will question preservation of a building which materialized ideals and principals that are culturally significant and yet did not economically and physically survive for 50 years. Furthermore, it will examine what it means to preserve a building such as the Nakagin Capsule Tower that was built upon the ideas of both permanence and impermanence.

**Keywords:** Nakagin; Kurokawa; Preservation; Impermanence; Post-War



Fig 1 Nakagin Capsule Tower on July 10, 2014 during the author's stay in unit 907B. A makeshift drain pipe hangs from a capsule. The net was placed to protect the pedestrians on the street after the 2011 Tohoku earthquake.

**1) The Nakagin Capsule Tower**

As the *The New York Times* critic Nicolai Ouroussoff wrote in 2009, the Nakagin Capsule Tower by Kisho Kurokawa is a noteworthy carrier of cultural values: "The Capsule Tower is not only gorgeous architecture; like all great buildings, it is the crystallization of a far-reaching cultural ideal. Its existence also stands as a powerful reminder of paths not taken, of the possibility of worlds shaped by different sets of values" (Ouroussoff 2009). How are we to determine when a building should be demolished to make place for new structures, or preserved and restored as a cultural monument when the anticipated nomadic bachelordom in capsules did not turn out to be as desirable 43 years later? Moreover, what does it mean to preserve a building that was built on a principal that it would grow and transform with its context over time?

The Tower consists of two steel frame and reinforced concrete cores to which 144 capsule units are attached with high-tension steel bolts. Stairs spiral around the elevator with capsule doors accessed from staggered

\* Contact Author: Aki Ishida, Assistant Professor  
Virginia Tech, School of Architecture + Design  
201 Cowgill Hall, Blacksburg, VA 24061-0205, USA  
Tel: 1-917-514-1653 e-mail: aishida@vt.edu

landings that occur every five risers. This spiral layout enables the capsule windows to face all four cardinal directions. The capsules were prefabricated off-site by a railroad car manufacturer, with modules consisting of a bathroom unit, a circular window, and built-in furniture and appliances. The capsules were brought to the site on trucks late at night and lifted into place by a crane. Each capsule is individually anchored to the concrete shaft with the intent that it could be replaced without affecting others. The entire construction took only one year, with all 144 units sold by the time of construction completion (Lin 2001). Kurokawa intended the concrete cores to remain while the capsules are removed and replaced every 25 years, but this never occurred. There were eight capsule types structurally, depending upon the relationship of the entrance door to the stairs and the mechanical systems, and the window placement. Unit owners had the option of selecting from eight different interior finishes. There was no kitchen as the units were designed for businessmen - in the 1970s urban professionals were predominantly men - who ate in restaurants and only came home to lounge and sleep. Many units were owned by companies who used them as temporary housing for their traveling employees, as business offices, or as investments. In 1980, about 35 persons actually slept in the capsules overnight regularly while the rest used the capsules during the day only (Watanabe 1980).

## 2) The Debate

As the Tower aged, the question of replacement or demolition did not come as a surprise to its architects. Since 1998, Kisho Kurokawa Architects and Associates had been working on plans to replace the capsules while keeping in place and repairing the original concrete cores. In February 2005, World Architecture News (WAN) website published a poll they took of over 10,000 architects in 100 countries. The results were overwhelmingly in favor of preserving the Tower in some form: 75 percent favored replacing the capsules, 20 percent supported to leave as existing, and five percent for demolition. Many commented that the architect's idea of evolution over time should be honored and that they want to see the capsules replaced and the Tower saved as an example of Metabolist movement (Nakagin Tower dilemma 2005). However, on April 15, 2007, 80 percent of the capsule unit owners voted in favor of

demolishing the building and replacing it with a more profitable 14-storey building. This plan would give each capsule owner 60 percent more space for the same price than re-building the original design (Solomon 2007). Kurokawa, then age 73, went on a passionate campaign to save the Tower. Using his persuasive public relations skills that he honed and exercised all his career, the aged architect garnered support of architects worldwide. In October of 2007, Kurokawa passed away of heart failure. Development of the new tower had stalled due to the economical recession of the late 2000s, the public suspicion of postwar architecture, and the lack of allure in mass housing unit investment (Ourousoff 2009). In 2013, there were only about ten to fifteen people living in the Tower while the rest were abandoned (Magalhães & Soares 2013). More recently, those who want to save the Tower have been purchasing units one by one, including architect Masato Abe who has been renting his unit on the short-term apartment rental website Airbnb (Forster 2014). In August 2015, Japanese crowdfunding website indicates that, with an increase in the number of unit owners who are for restoration that construction of a brand new building will face a significant difficulty (MotionGallery 2015).

The Nakagin Capsule Tower is a paradox in which its argument for demolition may be equally compelling as of that for preservation. Arata Isozaki, an architect strongly associated with the Metabolists yet not a member, makes a case for preserving it for it has attained a significant cultural value. Toyo Ito, who was a student in the 1960's during the Metabolist's intellectual peak and started his office just as the dreams of Metabolism were starting to fade, says he sees architecture as living matter and finds it difficult to justify preserving a building that no longer functions (Nakagin Capsule Tower 2001). This debate will continue to resurface as more modern buildings face demolition in Japan.

## 3) Metabolist Theory on Renewal and Preservation

What further complicates and fascinates this debate is the extensive writing Kurokawa left (He boasted having published 100 books) on the paradoxical Japanese notion of achieving permanence through impermanence. He spoke of the ancient, culturally important Ise Shrine as having been 'preserved unaltered' by being identically rebuilt every 20 years.

He wrote, "...the Japanese have never felt that the materials themselves have a sense of eternity. On the contrary, they are and always have been conscious of the spirit and philosophy beyond the materials and regard the form as an intermediary conveying that spirit and philosophy of human beings." (Kurokawa, 1977, p. 32). The idea of constant renewal is deeply rooted in Buddhist religion. Kurokawa emphasized in his essay 'Philosophy of Metabolism' that Japanese architecture, traditionally built mostly in wood, embodies the idea of impermanence. According to Kurokawa, the Buddhist idea of *muso* holds that "human beings should not become too attached to any one idea or place but should always remain aware of being in eternal time." He goes on to say that because most important Japanese buildings are of wood, they are accustomed to gradual destruction, or in other words, participate in the Buddhist idea of *rinne*, the on-going cycle of life and death (Kurokawa 1977). As Los Angeles-based Japanese architect Yo-ichiro Hakamori says, whereas it would be significant for a Western culture to retain the very same blocks of stone that were built ancient temples, in Japan, permanence of the artifact is valued less than the process of craft that is passed on for generations. (Hakamori 2003).

In order to understand the notion of (im)permanence in Nakagin Capsule Tower, it is necessary to reference the core ideas of Metabolism as explained by Kurokawa. In the essay "Grave-Post of Contemporary Architecture" written in 1978, he observed that modernization in Japan starting with the Meiji Restoration (1868 to 1912) meant Westernization based on industrialization. In architecture, this resulted in inviting a British architect Josiah Conder to teach at the University of Tokyo how to emulate Western architecture styles rather than developing Japan's own. Kurokawa stated that the inspiration for the Metabolism movement was the desire to "inlay a multi-dimensional value system into contemporary architecture which has been built on a mono-dimensional Western cultural value system." (Kurokawa 1978, p. 2). The two pillars of the Metabolism movement were to resist the course of cultural evolution based on Western values, and to "search for a junction point between Japanese culture and contemporary architecture," which he calls "an introspective soul search." He criticized those who,

during the World War I colonization and even after World War II, tried to resuscitate and copy traditional Japanese structures of *Jomon* and *Yayoi* eras, calling such an approach 'sterile'. Kurokawa long argued for defining the present, not the past, as the backbone of Japanese culture (Kurokawa 1978)

#### 4) Capsule as Cyborg

The capsule approach to housing was rooted in the idea of the co-existence of technology with humans. To Kurokawa, the capsule was more than a housing unit. He opened his *Capsule Declaration* of 1969 with this: "The capsule is cyborg architecture... . As a human being equipped with a man-made internal organ becomes a new species which is neither machine nor human, so the capsule transcends man and equipment." He likened his capsule to a spaceship, a container that would be meaningless without an astronaut inside, and vice versa (Kurokawa 1977, p. 75). In a way that is characteristic of Kurokawa, he looked to the future while considering Japan's past. As Charles Jencks points out in the introduction to Kurokawa's book *Metabolism in Architecture*, the Nakagin capsules were designed in tatami module proportions of 4x2.5 meters, or 107 square feet. Even though it had futuristic technologies, the capsule also had the smallness and proportions of traditional space (Jencks 1977). In the 1969 text *Capsule Declaration*, Kurokawa included images of traditional Japanese *kago*, a small palanquin strung from a pole carried by two people, which he called 'capsules'. He declared that in the future, a human's status will be measured by mobility, not by the size of a tract of land (Kurokawa 1977). This model of mobile living, Kurokawa traced in his 1969 text *Homo Movens* to the tradition of Japanese agriculture workers traveling from villages to urban areas in the winters and dwelling in seasonal homes. He believed that this mobile mode of living would increasingly become central to Japan's urban life. He speculates "For modern man in our highly mobile society – for *homo movens* – the capsule dwelling will probably come to be of high importance" (Kurokawa 1977, p. 105). Japan 40 years later, however, did not turn out to be as he dreamed. In fact, more people in their 20's and 30's live with their parents than they did twenty years ago (Kremer and Hammond 2013) – a dramatic change from the ambitious and mobile road warriors of the

economic boom period.

### **5) Japan and Impermanence**

In a 2005 interview, Kurokawa recalls witnessing his hometown of Nagoya, a city of 1.5 million, destroyed to the ground overnight by hundreds of bombers. He said, “War helped me discover Japanese culture. As I stood amidst the ruins of Nagoya ... there was nothing but scorched earth for as far as I could see”. His father, a prominent architect in the region, said, “Now we must build the city from scratch” (Kurokawa 1977, p. 23). Seeing a city vanish in a day made an impression on the young Kurokawa that everything, including cities and architecture, was impermanent. Following the devastating loss in the war, avant-garde Japanese architects continued to look to the same iconic buildings in traditional Japanese architecture studied by the imperialist architects of his father’s generation, which Koolhaas found shocking and incomprehensible, but in ways that were different from the previous generation. Kurokawa said the notions of impermanence and prefabrication, not the outward form, was what he took from studying the Katsura Palace and the Ise shrine (Koolhaas et al 2011). He noted that Katsura was expanded twice over 150 years into an asymmetrical plan, with different types of modules for each phase, and that at each stage, people said it was a perfect beauty, “perfect as a constantly changing process.” The Palace embodied metabolic and cyclical idea of growth over time, which made it an apt building for the Metabolism text (Koolhaas et al 2011, p. 379).

Kurokawa claimed that the Metabolists were seeking modernity in philosophy, not in style. This was where they looked to traditions of Ise and Katsura where, unlike the visible traditions of the west, they sought out the invisible. He said, “We are talking about Ise as an invisible continuity: every 20 years the visible – the architecture – is rebuilt. We say the tradition has been maintained for 1,200 years, though the material is always new” (Koolhaas et al 2011, p. 385-391).

### **6) Capsule Replacement Proposal**

Kurokawa’s office made elaborate plans to replace the capsules while repairing and preserving the concrete cores. The steel connection bolts also were dangerously in need of replacement. Kurokawa did not intend the capsules to be the exact replica of the

original, however. He said, “I want to see new ones built to the same design, but incorporating new technologies like renewable energies and broadband.” (Kuchrek 2007, p. 63). Structurally, the 1972 capsules had 0.8mm thin steel sheets with asbestos fire protection sandwiched in-between. The new replacements were to have 6mm thick fire-resistant steel, which is used frequently in Japan for protection from earthquake fires. The thin steel will enable the building to maintain the appearance of the original module while meeting current codes. The local Tokyo government officials had even offered to waive the stringent requirements for fire stairs so that the original stairs would not need to be modified (Kuchrek 2007).

There are other factors of resistance in play. As architecture critic Hiroshi Watanabe remarked in 1980, “Any capsule is supposed to be replaceable ‘theoretically,’ without disturbing the others. There are three things that might, however, stand in the way: money, other owners, and the architect’s own design.” At the time he wrote this, the Tower was only eight years old, and the estimated cost of the capsule would have been three times the original construction cost of \$4,500 each (Watanabe 1980, p. 76). Kurokawa’s office estimated the replacement cost at \$80,000 shortly before his death. The cost of getting a crane to access the capsule is high for a site that is significantly more built up today. In 1972, the Tower stood prominently as the tallest building in the surrounding blocks. Today, other buildings encroach tightly on three sides and an elevated highway on the fourth. The tower also stands on prime Tokyo real estate. On average, the construction cost of a building in Tokyo accounts for a tenth of the price of its site. This cost factor coupled with the tradition of impermanent Japanese architecture results in a relatively high rate of demolition and redevelopment. Then-president of real estate firm Nakagin, Torizo Watanabe was impressed by Kurokawa’s Takara Beautilion at the 1970 Osaka Expo, and he commissioned Kurokawa to design the Tower in Tokyo (Lin 2011). Nakagin found difficulties in the the mixed use that included hotel, apartment, and office. The residents wanted to building to be secure, while the businesses wanted people to come and go with less restriction. Each unit was billed separately for phone and electricity, but the fuel and hot water costs were split among the unit

owners. This may have been good for those who lived there regularly, but not for those who were there only intermittently. The capsules walls were thin, which made them hot in the summer and cold in the winter. With no operable window, it was completely dependent on mechanical system. Contrary to the Metabolist theory, the environmental controls of the capsule were not designed like a living organism but as machines (Watanabe 1980). On top of all this, the contractors repeatedly complained that it is impossible to fully access the pipes run alongside the cores and underneath the floors of the units, which accounts for the extensive water leakage throughout. Today, the building is no longer water-tight, there is no hot water, many abandoned capsules have moldy and fallen ceilings and walls, and make-shift water proofing contraptions made of plastic bags and tubes are common sights in the hallways.<sup>1</sup>

A few of the capsule owners today, are passionately attached to the design of the original capsules and do not want the buildings to evolve and the capsules renewed (Kuchrek 2007). Ironically, this desire for conservation is counter to the architect's original Metabolist concept. What began as a futuristic design now suffers from resistance of Mid-century Modern nostalgia. Here again is one of the building's conflicting, multidimensional characters.

### **7) Question of Culture-Specific Historic Preservation**

Japan is one of the few countries to designate the title "National Living Treasure" to a living person practicing a craft. Like the Ise Shrine, there is more value placed on the process associated with making an artifact than the artifacts themselves. Had the renewal of the capsules taken place after 25 years in accordance with the Metabolist principles, the Nakagin building's preservation method may have been what made it deserving of a landmark status. Should preservation of buildings be specific to its culture, and if so, how? As other iconic works of Modern architecture age, this appears to be an increasingly important question. Kurokawa was arguably the first and the most vocal among Japanese

architects to use Japanese vocabulary such as *en* and *jiga* (Buddhist words for self and identity) to write about architecture to a global audience (Uesaka 1974). As a building that embodied concepts that are Japanese in its roots, perhaps the ways in which it is preserved or evolves also needs to be thought of in non-Western ways.

Starting in 1880 to 1894, the Ministry of Home Affairs established historic Shinto Shrines and Buddhist Temple Preservation Grants to protect historic buildings from Westernization, vandalism, and the anti-Buddhist movement (Asano, 238). Japan also has laws to protect intangible folk cultural properties such as manners and customs. In outward appearance, the Nakagin Capsule Tower looks nothing like a Buddhist building, even though the ideas embodied by the architecture are rooted in Buddhist ideas and influenced by Shinto religious buildings such as the Ise Grand Shrine. Unlike his predecessors of the Imperialist era whose work took on the appearance of Shinto buildings, Kurokawa was one of the first to materialize Japanese spatial and philosophical ideas into modern buildings. The influence of ideas, however, is not sufficient to earn historic designation. Had the preservation techniques, or the process of renewal for the capsules been successfully executed every 25 years, then could it have been protected under a preservation law for its renewal process?

In Japan, the priority of property rights is protected by the Constitution. As common in other parts of the world, property rights and the profits associated with them are often the barrier to preservation of buildings. The owner must consent to the designation of Traditional Buildings Conservation District (TBCD) for the benefit of the public over the private (Asano 1999). The challenges of obtaining a historic preservation building status for a modern building is not just limited to Japan. Docomomo (Documentation and Conservation of Buildings, Sites and Neighborhoods of the Modern Movement) was established in 1988 to protect significant modern buildings, including the Nakagin Capsule Tower which was listed as its architectural heritage site in 2006. While it brings awareness to the listed buildings, it does not provide legal protection against demolition.

<sup>1</sup> Based on the author's stay at unit 907B through Airbnb on in July 9, 2014.

## 8) Life and Death of Buildings

Abandoned by its client, its capsules too compact and cramped for living even for the Japanese, standing on a piece of land that is very desirable for new development, the Nakagin Capsule Tower no longer participates in the metabolic process of a contemporary city. Preservation architect Jorge Otero-Pailos refers to James Marston Fitch's idea of the 'fourth dimension' of architecture, which was not simply time but to "the process, whereby preservation supplements architectural form in time, helping buildings achieve the cultural significance that they should, but for whatever reason, couldn't on their own" (Koolhaas et al, 2014, p. 98). We speak of buildings as living and surviving 'on their own', but as with humans, longevity of a building is dependent upon multiple external factors, including maintenance over the years by its owner, the architect's design for its aging or evolution over time, property values, and financial resources to preserve or reconstruct. For a work of architecture that is deemed worthy of preservation for its cultural value, the constituents including the architect, the owner, and the city must actively help a building continue to adapt to and participate in the metabolic cycles of a living city. Rather than thinking of the preservation debate as a question of whether to preserve it, an appropriate debate would be the question of 'how'. What it means to preserve the Nakagin Capsule Tower is neither reconstructing the Tower based on the original blueprints nor demolishing it to make place for a new building.

As with other Metabolist attempts to translate concepts into buildings, for a complex set of reasons, the Nakagin Capsule Tower did not get the human assistance it needed to adapt and change with the city of Tokyo. Its deteriorating state is the clearest evidence that a new life was not being incubated over the years. The reason for the Tower's ultimate demolition may be its inability to live up to its principals that made it landmark-worthy in the first place – the idea of the metabolic cycle, interchangeability, and adaptability.

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