

## **Nakagin Capsule Tower: In Pieces**

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### **Abstract**

Built in 1972 by Kisho Kurokawa, the Nakagin Capsule Tower is one of the few structures remaining that embody the Metabolist Movement. The metabolist began their manifesto in the 1960s, which involves regenerative megastructures that allows for fluid adapting purposes of the evolving society as well as unforeseen tragedies such as the Great Kanto Earthquake and the nuclear bombings in World War II. Adhering to metabolist beliefs, Nakagin Capsule Tower had 144 individual units with basic amenities including an integrated bathroom unit, kitchen stove, television set, a toothbrush, and others but it is relatively small and limited in space. Metabolist beliefs and architecture were popularized after the Osaka Expo in 1970, but their fame quickly faded due to rapid urbanization and radical beliefs. Tokyo's economic boom in the 1980s resulted in mass production of highrise buildings that provided more spacious and modern areas for people to work and congregate in. The glamour of the Nakagin paled against the chic, glittering glass-pane high-rise buildings. Therefore, leaving the Nakagin in a state of disrepair due to neglect and extravagant price to maintain and restore the building. Since 2015, there has been a growing movement to designate the Nakagin as a historical monument as well as restoring the building to its proper glory, but its fate is still undecided.

**Keywords:** Nakagin Capsule Tower, Metabolist Movement, Japanese architecture

### **1. Introduction**

Japan is renowned for their swift recovery from World War II into a flourishing, high tech country. Out of this rapidly rising economy was Japan's first "movement which succeeded [in showing] originality after the war" (Yamazaki, 2005). Metabolism, an architectural movement, had radical ideas, utilizing megastructures that are utopian in nature. Although Metabolists like Kisho Kurokawa, Fumihiko Maki, and others were able to appeal to the public with their radical ideas their fame was short-lived. Since the burst of Japan's bubble economy in the mid-1980s, various Metabolist structures have been destroyed and replaced with modern high-rise buildings. Others like Kurokawa's Nakagin Capsule Tower are at risk of meeting the same fate. However, renewed interest in metabolic architecture, Kurokawa's campaign to save the building, and the deteriorating interior of the tower has sparked a massive dilemma on whether to preserve or replace the building.

### **2. The Metabolists**

Beginning in the 1960s, a group of young architects- including Kurokawa- formed the Metabolist Movement and released their radical manifesto through their book, *Metabolism: Proposals for New Urbanism*, at the World Design Conference in Tokyo in May 1960 (Oshima, 2012) which stated:

Metabolism is the name of the group, in which each member proposes future designs of our coming world through his concrete designs and illustrations. We regard human society as a vital process- a

continuous development from atom to nebula. The reason why we use such a biological word, metabolism, is that we believe design and technology should be a denotation of human society. We are not going to accept metabolism as a natural historical process but try to encourage active metabolic development of our society through our proposals. (Lin, 2011)

Biological principles- mostly the cell life cycle- is at the core of their structures and designs. The Metabolist saw the country as a functioning unit- the cell- that is constantly undergoing inevitable change- essentially discarding the past and embracing the future. Additionally, the group was “partly founded on a need for a more effective means of sheltering people,” whether it be from their emotionally draining social lives or another nuclear disaster (Minami, Rose, & Yoshida, 2015). Tragedies such as The Great Kanto Earthquake in 1923 and the devastating aftermath of World War II in 1945 left Japan in a state of shock. In order to rebuild and restore a shattered country, Japan opened its doors to trade, which allowed it to become an attraction for commerce, rapid restoration, and urbanization. Furthermore, the Metabolists had ambitions of building organic megastructures that consisted of a permanent foundation and replaceable outer parts- like Kisho Kurokawa’s Nakagin Capsule Tower.

### 3. Metabolic Architecture in Japan

Kurokawa’s Nakagin Capsule Tower is one- if not the only- structure that truly embodied the beliefs and goals of the Metabolists. Kurokawa’s display of capsule architecture with the Takara Beautilion impressed many spectators at the 1970 World Exposition in Osaka. His architectural fantasy left a lasting impression on many, especially Nakagin Corporation’s then president Torizo Watanabe- who requested and commissioned Kurokawa to build a capsule building for permanent use. Nakagin Capsule Tower was built in 1972 with the future in mind. In Figure 1, you can see that the tower was constructed with two permanent ferroconcrete shafts, 144 replaceable capsules and service equipment. Kurokawa had predicted that “the shafts would last at least sixty years, while the capsules would be due for replacement in twenty-five to thirty-five years” and also noted that “the lifespans of the capsules were not a mechanical one, but a social one” (Lin, 2011). Hinting that human and social influences would dictate when the capsules would be replaced.



Figure 1: Nakagin Capsule Tower Model (left) and current state (right) (Minami et al, 2015, pp. 6, 89)

Measuring about “7.5 x 12.5 x 7 ft,” (Lin, 2011) each capsule is about the size of a shipping container, or a Japanese tearoom, and are individually bolted to the shafts with four high-tension bolts. Every capsule includes the basic needs of an individual- an integrated bathroom, built in furnishings, and even a toothbrush, but the amenities, varied from capsule to capsule for no two capsules were identical (Minami et al, 2015). Since pod-style architecture is an experimental design, the pods had to be custom made because they did not yet exist. Kurokawa recruited a design team from a department to help build the capsules and had them transported back to the location of assembly.

According to Kurokawa in Rima Yamazaki's film *Nakagin Capsule Tower: Japanese Metabolist Landmark on the Edge of Destruction*, it took about a year to attach all the capsules to the shaft (Yamazaki, 2005). Inspiration for the design of the Nakagin Capsule Tower came from Kurokawa's two children who were playing with building blocks. In *Nakagin Capsule Tower: Japanese Metabolist Landmark on the Edge of Destruction*, Mikio Kurokawa-Kurokawa's son- recalls the pure excitement and joy that he could see in his fathers' face every time he spoke about the building.

#### 4. Downfall of Nakagin Capsule Tower

Interest in Metabolism and the Nakagin Capsule Tower waned after 1972 when Metabolism was shunned along with the New Left Political Movement whose advocates were known for their violent tactics and their utopian goals (Minami, 2015). Prior to the construction of Nakagin in 1970, Japan was "anticipating the 1964 Olympic Games" (Jinnai, 2007) in Tokyo. Lacking the suitable land to expand and accommodate for the event, various expressways were built in preparation of the copious amount of people who would be attending. In addition, high-rise buildings began to take over the cities resulting in the demolition of various buildings. During architectural journalist J.M. Richards three-week stay in Japan in 1962, he had stated that Japan had "allowed their cities to grow so wildly out of control" because of their lack of integrity and effective town planning (Watanabe, 2003).

In the mid-1980s and 90s, Japan experienced a "economic overheating" where much of the infrastructure was improved due to inflation. As people began to move inland and reside in the cities- waterfront properties began to lose their charm and popularity. However, there were several efforts in reviving the waterfront properties, watersports, and waterborne amusements. Restorations included new modern residential areas like River City 21, improvement in water quality and reintroducing fish into the rivers, revival of yakatabune boats, and Odaiba Park brought new life to Japan's waters. Amid reconstruction and restoration, Kurokawa's Nakagin Capsule Tower seems to be forgotten- a carcass in a country flowing with technology and information (Jinnai, 2007).



Figure 2: Dilapidated Capsule Triptych (Minami et al, 2015, pp. 44-46)

Only forty-seven years have passed since the tower was built, but its condition is becoming a growing concern for its residents. Nakagin Capsule Tower was meant to be a place for business owners to utilize for overnight stays or as a work and living space for dwellers. Although, it may have been Kurokawa intention for the capsules to be replaced as society sees fits, the cost of replacing each capsule is more than the cost of a brand-new building. In Figure 2, you can see a capsule that is completely in ruins and in need of being replaced. Capsules like this one pose a health threat to the residents because asbestos, a naturally occurring mineral that was used as a fire retardant, could cause cancers like mesothelioma and progressive lung disease (Lin, 2011). Furthermore, the capsule lacks insulation- making it "hellishly hot in the summer and freezing cold in the winter." Some issues included high water bills due to ruptured pipes which are hard to get to because the pipes are fitted underneath the capsule- making them hard to fix and maintain. Other issues include the lack of storage/space and a lack of communal space for the residents (Yamazaki, 2005).

Discussion of regenerating the tower into a more modern and spacious building has been in debate for almost a decade. Renewed interest in avant garde art and architecture has sparked a movement to save the building and put it into protection for historical purposes (Eken, 2017). However, Japan has a rule that a building must be at least 50 years to be put into consideration for protection. Most people agree that Nakagin should be saved in some way- whether in pieces or as a whole- but the threat that Nakagin poses is concerning because of how much of the building has deteriorated.

## 5. Conclusion

Nakagin Capsule Tower is in a vulnerable state, it represents an unexplored fantasy of what is to come of the future. The Metabolists' beliefs and Kurokawa's persistence has led many to wonder what life could have been or could be like in the future. Preserving the Nakagin Capsule Tower would preserve an idea, a dream that never came true, but destroying it would mean erasing a part of Tokyo's history that could never truly be replaced again.

## 6. Acknowledgements

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