Kenzō Tange **Hiroshima Peace Memorial Museum** 1949-55 (Showa period)

Key facts:

- **Location:** Hiroshima Prefecture, Honshu Island, Japan
- **Size:** 10.514m in length x 6.498m in height, 1,400 square metres
- **Materials:** ***Reinforced concrete and glass***

1. ART HISTORICAL TERMS AND CONCEPTS

Traditionally, memorials to war mourn the dead and are designed and constructed by the victors with patriotic, nationalistic and even sacred overtones. Kenzō Tange's Peace Memorial Museum in the Hiroshima Peace Park was built after the 1945 US bombing of the city and marks the beginning of a new direction in twentieth century commemoration: to commemorate peace. Funded by the Japanese state – then still under occupation by the US, it was both a painful reminder of destruction, and a hopeful monument to a peaceful future.

Classical Architectural Traditions

Tange's design for mass commemoration looked to past communities. He studied ancient Greek agora, and the processional space leading to the Parthenon on the Acropolis as well as the processional routes in Rome from those of the ancients to Michelangelo's for their axial symmetry and sense of social spectacle.

Modernist Architecture

Modernist Architecture also known as the **Modern Style** or the **International Style** emerged in the 1920s throughout Europe to reflect the new industrialised machine age, using steel, reinforced concrete and glass. Major architects associated with it were Walter Gropius, who founded the Bauhaus, and Le Corbusier (1887-1966), both of whom believed architecture was part of a social revolution to improve people's lives through the new philosophy of

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functionalism and the catch-phrase *"form ever follows function"* (coined by US architect Louis Sullivan). The basis of functionalism is: (1) form must reflect or 'express' function; (2) all the different elements in the building should be separately expressed, for example the structural frame would clearly express its function of holding up the floors and the roof; (3) 'inspiration' came from machines and engineering techniques; (4) a coherent system of organisation. The geometrical, pure style was characterised by the elimination of weight-bearing walls, a skeletal structure of reinforced concrete allowing cantilevering, smooth white rendered walls or glass and metal skin, simple cubic forms, asymmetrical compositions, flat roofs, open plans with free flow of space, large windows often in horizontal bands and no decoration or mouldings.

After Tange graduated in architecture from Tokyo University in 1938,he was employed by Kunio Mayekawa who had worked with Le Corbusier in Paris. Thus Tange gained direct access to the ideas of the greatest European modernist, including utopian ideals for town planning. For Tange, the Peace Park was a tabula rasa, but "*not that heart of an ideal city to which we have been mentally so attached. It represents an unusual and fortunate opportunity in Japan".*

Tange's final design and structure for the secular Peace Memorial Museum and Memorial Cenotaph follow ideas expressed in Le Corbusier's book 'Towards a New Architecture'. There is a central north-south axis to the park's symmetrical placement of forms, which one visits counter-chronologically: entering beneath the Memorial Museum in the south, flanked by the Main Hall and Conference centre and moving past the parabolic memorial with a direct view to the Atomic Bomb Dome -the only relic of the nuclear devastation. The Memorial Museum includes four of Le Corbusier's five points of architecture (1926): *pilotis* (columns) elevating the mass of the building off the ground, *free plan* - achieved through the use of columns thereby relieving the walls of a load-bearing function, *free façade*, also achieved through non load-bearing walls, and *ribbon windows.* Located in a large park there is no need for a roof garden (which was Le Corbusier's fifth recommendation). Built of unadorned raw concrete, it has a flat roof and vertical *brise soleil* (sun-breakers) which Tange saw when he visited Le Corbusier's Unité d'Habitation. He met both Le Corbusier and Gropius at the International Congress of Modern Architecture (CIAM) outside London in 1951.

The Memorial Museum is symmetrical with a central focus on 3 of the 11 bays, supported on 10 *piloti* on each façade. The vertical divisions of the first storey provide a rhythm, articulated by paired elements into a b c d, c c c, d c b a - to articulate the façade. A sense of monumentality is achieved by the large *piloti* at the either end of the typically International style structure, with smaller *piloti* on a curve providing a second rhythm of articulated space beneath. The interior exhibition space conforms to the European modernist concept of the 'white cube'.

The Peace Monument is a small-scale reinforced concrete saddle-like arch, composed of two hyperbolic paraboloids resembling an inverted catenary curve (the curve of a hanging chain), very strong in tension and compression. Such forms were an example of modern engineering and popularised by Mexican modernist architect Felix Candela. This replaced Tange's original scheme for an arch – based on Saarinen's Gateway Arch at St Louis, as too closely associated with the USA. Inside are inscribed the names of 220,000 dead.

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Japanese Architectural Traditions

The horizontal structure, modularity and minimalist effect are also linked to Japanese traditions. In particular the post and lintel structure, and *piloti* relate to the raised floors of wood storehouses, for example Shōsōin, Nara from the C8th CE, and the Shinto shrine at Ise originally from the Yayoi period (300 BCE – 300 CE). While the modularity reflects the use of the *tatami* mat as a module for screens in domestic architecture. The raised building also functions as a monumental gate to the peace park, much like the ceremonial gate to every Shinto temple.

However, it is in the structure of the Memorial Monument where more direct links can be recognised: the parabolic contour relates to *magatama* (curved beads), *haniwa* (terracotta houses as grave offering to rulers) and *d taku* (bronze ceremonial bell) as well as the layout of traditional ceremonial tombs from the Kofun period (250-538 CE).

2. CULTURAL, SOCIAL, TECHNOLOGICAL AND POLITICAL FACTORS

At 8.15am on the 6th August 1945 the US B-29 bomber *Enola Gay* released the 'Little Boy' atomic bomb on the industrial and military city of Hiroshima. The 6,000°C blast obliterated 90% (13 sq km) of the city and instantly killed 80,000 people. Toxic black rain fell for 30 minutes carrying 200 types of radioactive isotypes, affecting the whole population; the wooden houses and broken gas pipes caused fire-storms lasting 3 days. A further 130,000 died. Hiroshima was chosen because there were no allied prisoner of war camps, and "*a large part of the city could be extensively damaged. There are adjacent hills which are likely to produce a focusing effect which would considerably increase the blast damage.*"[1]

[1] US Army document 720284 on display Hiroshima Peace Museum

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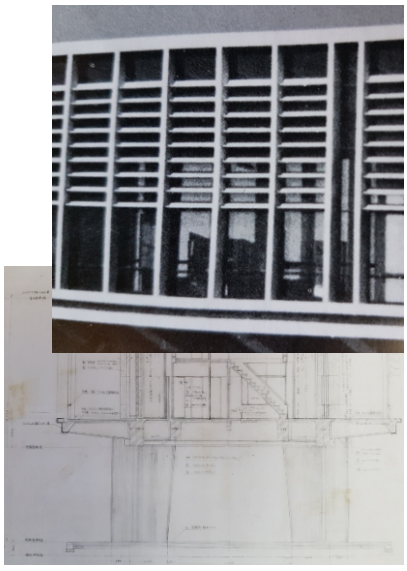
After the outbreak of World War II in Europe, and the fall of France to Nazi Germany, Japan moved to occupy French Indo-China and in 1941 launched a surprise attack on the US Pacific fleet at Pearl Harbor, Hawaii. Twelve ships were sunk, 9 damaged, nearly 2,500 people were killed. The US and its allies declared war on Japan. By 1944 US forces were near enough to Japan to start bombing raids on Japanese cities. After Hiroshima the US dropped a second bomb on Nagasaki on 9 August. Emperor Hirohito then surrendered and relinquished his divine status; Japan was placed under US military government. By 1952 Japan had regained its independence as a democratic country, and in 1956 it joined the United Nations.

For 2,000 years the island archipelago of Japan had never been invaded or occupied, nor had Japanese troops ever been defeated by a foreign power. The atomic bombing caused a *"re-thinking of fundamental attitudes towards existence and the world as a whole: it was almost as though one of nature's basic laws had been shown to be false…".*[2] Hiroshima became the symbol for the reconstruction of a new democratic Japan on the side of peace, as the mayor said in 1949: *"the physical appearance of the town… shall be a monument to perpetual peace."*

After a local referendum, the Law for the Construction of the city of Hiroshima for the Commemoration of Peace was passed on 6th August 1949 *"to respond to the worldwide movement for the establishment of a symbolic peace city."* There were 132 entries for the design competition won by Tange. The original plan comprised: (1) the Hall of Peace to seat 2,500, the Peace Square to hold 20,000, the Arch of Peace, and a commemorative chapel housed in the ruins of the concrete neo-classical style building whose shell survived the explosion- the Atomic Dome. (2) a children's centre with a hall for 1,500 children, a library, a museum, club house etc.(3) the Peace Avenue, 100m wide with a series of bridges and gardens. (4) dormitories and halls outside this ground zero area, on the flat delta surrounded by high mountains, to remind one of the scale of the devastation.

Tange was motivated to reconstruct the city, despite the danger posed by residual radiation on the site, by his memories of attending secondary school there, and also by the coincidence that his mother had been killed by an incendiary bomb at Imabari, his birthplace, on the day that Hiroshima was destroyed.

3. DEVELOPMENTS IN MATERIALS, TECHNIQUES AND PROCESSES



The Hiroshima Memorial Museum is a long, narrow, geometrical, single-storey building (10.5m wide x 6.5m high) indebted to Le Corbusier and the International Style's notion of the "weightless box". It is constructed of archetypal modernist materials – a reinforced concrete structural frame, and glass windows. It is raised above the ground on 6.5m tall rectangular *pilotti,* and entered by a staircase piercing the lower horizontal cantilevered slab floor. The projecting vertical slat-like concrete window partitions on the north side, set into a concrete frame rhythmically repeat outwards from the centre. These not only add to the geometry and modularity of the design but also function as *brise soleil.* Both exterior and interior are finished in rough concrete (*beton brut)* so as not to distract from the content of the exhibition. The typically modernist austerity and modularity also recalls traditional Japanese architecture.

[2] 'Kenzo Tange' Hamlyn p. 8

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Mass production of pre-fabricated elements for the frames, and on-site assembly, together with reinforced concrete – which had already been used in Japan, a land of earthquakes, ensured completion on time and within budget.

4. INTERPRETATION

"Peace is not naturally given from the gods, but it should be searched for. This facility is not meant to commemorate peace in an abstract way, but it is for actively producing peace. I hope that my building works as a factory for peace." (Tange)

At the time of Tange's pioneering commission Japan hoped to deny any causal relationship with its military aggression, and the USA hoped to disassociate itself from dropping the bomb. Thus both parties shared an ideology of 'starting over', a kind of deliberate amnesia, to escape the troubled history. The choice of rational modernist architecture using industrial materials was seen to reject historical, ethnic and national references to create a new post-war hegemony of humanity through democracy and economic prosperity. It has been described as a "*monumental public space for an aspiring democracy".* Indeed the inscription on the cenotaph reads: "*Please rest in peace for we shall not repeat the error"* – a collective aspiration.

The Memorial Museum is crucial to the overall plan, the central feature where form and content are fused; as it acts as a gateway to the park the *pilotti* are carefully placed to allow for the view down the major axis. Tange has used Modernism to capture a key moment in time and space, with the soft lighting of the interior (due to the *brise soleil*) creating a subdued mood appropriate for the material on display. Every Japanese child is taken on a school visit to this museum.

Since the 1980s some critics have controversially claimed Tange's designs for the Peace Memorial Park share too much with his earlier pre-warnationalist, imperialist designs, such as his 1942 plan for a memorial to the creation of the Great East Asia Co-prosperity Sphere; thus in fact registering continuing imperial aspirations rather than a new beginning. While others see the almost total removal of all traces of the devastation (save for the Atomic Dome) as linked to cycles of decay and growth, a Buddhist concept close to the heart of Japanese culture. Coaldrake (1996) suggests specific links, not with style but with periods of Japanese history: (a) Nara era – modern sturctures based on foreign prototypes; (b) Momoyama period – when the nation state rebuilt after a war for national stability; (c) Mejii period – consciously planned, government-engineered westernisation. He concludes that Japan was embracing political democracy with this social engineering programme, and that Tange was *"a genius to capture the special moment of time and place."*

Points to consider:

- To what extent is the project to do with post-war Japanese identity?
- Does the museum have a sense of authority?
- Does it symbolise the power of the state, or of the people?

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Further reading and links:

- **R. Boyd: *Kenzō Tange* (New York and London, 1962)**
- **W. H Coaldrake: *Architecture and Authority in Japan* (Routledge 1996)**
- **Seng Kuan and Yukio Lippit (Eds): *Kenzo Tange* (Harvard 2012)**
- **https://www.archdaily.com/160170/ad-classics-hiroshima-peace-center-and-memorial-park-kenzo-tange**
- **https://en.wikiarquitectura.com/building/hiroshima-peace-memorial-museum/**
- **https://www.tandfonline.com/doi/full/10.1080/10464883.2012.720915**