Architectural Messaging and Social Responses: 1964 Yoyogi National Stadium vs. 2020 Japan National Stadium

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Introduction

The Olympics often bring to mind images of coveted gold medals, elaborate opening ceremonies, and, of course, athletes at the peak of their sport. Often forgotten, but equally noteworthy, is the awe-evoking nature of Olympic stadium architecture. In particular, there are two significant Olympic stadiums in Tokyo—the 1964 Yoyogi National Stadium [29], measuring nearly 47 meters tall and praised for its suspension roof structure and central structural spine, and the 2020 Japan National Stadium [9], standing at 50 meters tall and marked by its cantilevered roof and wooden lattice framework. One can only imagine the anticipation and excitement of sitting in the stadiums during the rainbow fireworks of the opening ceremony, watching each nation parade in with their flags, and rooting for teams during track relays. However, both stadiums were built for reasons beyond spectator enjoyment, as evidenced by the 68,000 empty seats of the 2020 Olympics [27]. The primary purpose of this research is ultimately threefold. First, I will establish that Olympic stadiums are built to reflect national identity. Second, I will examine the different historical and architectural factors of the 1964 and 2020 Tokyo stadiums to see if Japan's stadium messaging or national identity shifted. Third, I will assess social responses to each stadium, both global and national. If possible, I will discern which stadium is more representative of national pride.

The selection of Tokyo, Japan proved essential for this project's comparative case study. Tokyo is the first of three Asian cities, including Seoul (1998) and Beijing (2008), to host the Summer Olympics [19]. It is also the only Asian city to host the Summer Olympics twice (1964, 2020). Therefore, Tokyo presents a unique opportunity to examine the architecture between the games under different historical circumstances. Moreover, the stadiums for this project were selected with specific intent. There is an overwhelming consensus that Yoyogi National Stadium

[40] was the “jewel” or “centerpiece” of the 1964 Olympics (Figure 1: Yoyogi National Stadium, Tokyo, entrance, 1964). There is limited scholarship on the other 32 venues constructed for the Games, including the 1964 National Stadium, where the opening ceremony was held. In fact, the 1964 National Stadium was later demolished in 2015, making way for the 2020 National Stadium [17]. The importance of the 2020 National Stadium is evident through the intentionally high criteria of fashioning an “iconic, future-orientated landmark that could echo the status of Yoyogi Stadium” [8]. To further indicate the 2020 National Stadium’s significance, Japan allocated $1.4 billion to construct what became the most expensive venue in Olympic history (Figure 2: Japan National Stadium, Tokyo, aerial view, 2019).

On “potty talk” and stadium national identity

In an increasingly globalized world, Olympic stadiums have become more than just commercial sports sites. As Xuefei Ren notes, Olympic stadiums are dynamic vehicles that “negotiate national identity” and “express national ambitions” [34]. State politicians and bureaucrats often use Olympic architecture to rebrand nations, constructing an idealized image of a clean, safe, well-managed, visually appealing, and “modern” city [6]. The architecture can also enhance visibility, stimulate civic pride, revive local identity, and prompt beautification efforts.

The Bird’s Nest Stadium of the 2008 Beijing Olympics is one of the most popular examples of national identity portrayed through megasports stadium architecture (Figure 3: Bird’s Nest Stadium, Beijing, aerial view, 2009). China viewed the Games as a global stage to demonstrate the nation’s progress and emergence as a major world player [6]. Moreover, China sought to link its successful Olympic bid with the legitimacy of the Communist Party. The resulting stadium became a symbol for China, blending tradition and modernity. In terms of modernity, China set out to create the biggest stadium in Beijing and the world’s largest steel

structure [42]. As a showcase of China's technological advancements, engineers developed a new grade of pure steel that was lightweight yet earthquake-proof. In addition, Swiss architects Jacques Herzog and Pierre de Meuron brought forth an ingenious design mimicking a "bird's nest," featuring a single thread wrapped around a ball. In a nod to China's traditional past, the stadium fabric contained multiple pentagrams that alluded to the stars on the Chinese flag. The stadium even reflected the Chinese philosophy of yin and yang, in which the "bird" represents masculinity and "nest" represents femininity. In the brief accompanying the design, Herzog and de Meuron described the stadium as a "collective vessel for the People's Olympics" [34].

As for national stadium branding in Japan, Zaha Hadid's proposed stadium for the 2020 Tokyo Olympics perfectly depicts how stadiums symbolize national identity. More specifically, Hadid's proposal showcases what happens to stadiums that fail to live up to the ideal of representing a nation (Figure 4: Japan National Stadium, Tokyo, design proposal, 2014). Hadid, an Iraqi architect, won the bid to design the 2020 Tokyo National Stadium in 2012 [8]. Japan Sports Council chairman Tadao Ando stated that Hadid's winning design "embodied the messages Japan wanted to convey to the world" [39]. Ando's comment implied that he believed Hadid's plan could present a positive image of Japan. In addition, the committee was particularly interested in the retractable roof, indicative of the "high level of Japanese architecture technology." Several months after Ando's proclamation, however, the stadium was attacked by Japanese dissenters over concerns that Hadid's stadium did not respect Japan's culture. The vertical scale of Hadid's proposal would have intruded on the sacred Meiji shrine and destroyed prized urban green space [8]. Japanese architect Fumihiko Maki predicted that the "embarrassing construction would be sneered at" [39]—and it was. A 2015 *Guardian* article [14] proposed alternative uses for Zaha Hadid's stadium, comparing it to a "go-kart," "helmet," and "potty"

(Figure 5: Proposed Japan National Stadium, Tokyo, meme, 2015).

The stadium also inspired a series of memes [41], in which the building was parodied as a video game weapon (Figure 6) or a Roomba vacuum cleaner (Figure 7). Twitter user @nabechan even created a meme of a dragon breathing fire on the stadium, suggesting that it deserved to be destroyed upon completion. After all, what nation wants to be symbolically represented by a toddler's toilet or a vacuum cleaner? Hadid's stadium failed to provide an awe-evoking image of Japan that related to national culture, and hence her design was scrapped. In 2015, Kengo Kuma's design was approved as Hadid's replacement. His revised stadium is the primary focus of the remainder of this paper along with Kenzo Tange's 1964 Yoyogi National Stadium.

A message of masculinity and modernity

We have established that Olympic architecture can send a national message to the world, for the better or the worse. With this baseline, we will delve into the different historical and architectural factors of the 1964 and 2020 stadiums to see if Japan's national identity shifted. From a historical lens, Japan was initially scheduled to host the 1940 Olympics [37]. However, Japan was stripped of its bid and barred from sending a 1948 delegation due to its role in WWII. In 1959, Japan won the bid for the games again, ushering in a surge of national pride [43]. Japan adopted the slogan "faster, higher, stronger" for the 1964 Olympics or "Festival of Peace" —the first to be held in an Asian country. This later became a slogan for the Japanese government, striving for Tokyo to be "a faster city, higher city, and stronger city." Although Japan was still in post-recovery mode, the nation was determined to use the Olympics to establish its economic and technological capabilities [25]. Thus, economic growth and city infrastructure planning became a top priority for the Japanese central government. During the Korean War, Allied Forces used Japan as their military base and a source of supplies, boosting Japan's export-

orientated economy. Record economic growth commenced in 1955 and continued into the 1970s with more than 10% annual growth of the GNP. Tokyo's spatial structure was effectively transformed with the introduction of the first elevated inner-city highway, extended subway lines, and, most impressively, the first bullet train line between Tokyo and Osaka [43].

As a result, the 1964 Olympic stadium needed to mirror Japan's historical transformation, portraying a modern-state striving for international peace. It also had to demonstrate that Japan had caught up to the rest of the world while still honoring its traditional cultural roots. This architectural messaging was captured by Kenzo Tange's 1964 Yoyogi National Stadium [29], which housed swimming pools and diving areas for over 15,000 fans (Figure 8: Yoyogi National Stadium, Tokyo, architectural plan, 1961). Tange's design spoke to themes of grandeur and modernity primarily through his suspension roof structure, a construction method that had never been seen before in the world [3]. To accomplish this architectural feat, a central structural spine made out of two 126-meter long steel cables holds the stadium structure together (Figure 9). Smaller perpendicular wires connected to the ground and provided the cover grid for the compressed, tent-like structure. Ultimately, Tange aimed to create something tall and big, using materials that played a main role in Japan's industrialization: concrete and steel. At the same time, Tange paid a nod to Japan's past through the lens of modernity. Yoyogi National Stadium was intentionally fashioned to allow for an imagined line of sight to the Meiji shrine [38]. The shrine was dedicated to Emperor Meiji, who led Japan into modernity after 200 years of limited contact with the West. Furthermore, Tange was inspired by the Memorial Cenotaph he designed in the 1950s (Figure 10: Memorial Cenotaph, Hiroshima, entrance, 2012). The cenotaph contained a curved structure, similar to the stadium, and represented the enshrined souls of the Hiroshima atomic bomb victims. Thus, the stadium paid respect to Japan's history while blazing

forward with a statement of potential and progress.

Along with historical circumstances, the selection of Kengo Tange as the leading architect also fortified Yoyogi National Stadium messaging. Kenzo was an influential pioneer of the "Metabolist movement" [11]. Young Japanese architects after WWII used this term to describe their beliefs about how buildings and cities should be designed. They believed that cities were not static entities but rather ever-changing, like humans with a "metabolism." Metabolists produced a number of futuristic visions that extended into the realm of fantasy [35]. This architectural style was in line with the messaging Japan wanted to send to the world in 1964, the height of industrialization and rapid growth. Tange proved that Japan was at a comparable industrial level to the West by suspending the Yoyogi National Stadium with tall concrete support columns that appeared to reach the heavens, playing on seemingly impossible technology. From Kengo Tange's Metabolist inspiration to Japan's international re-emergence, Yoyogi National Stadium delivered its message of masculine power and modernity.

A message of femininity and humility

The 2020 Tokyo Olympics or "Recovery Games" unfolded under entirely different circumstances, resulting in national stadium messaging unique to the times. Japan won the bid to host the Olympics in 2013, shortly after the earthquake, tsunami, and nuclear meltdown of 2011 [37]. In 2019, prime minister Shinzo Abe told Japanese citizens: "You will see that people in devastated areas will benefit from the infrastructure and hope brought by the Games" [7]. Hours later, activists staged a protest rally in Tokyo's Shinjuku district, chanting "Boycott the Radioactive Olympics!" and "Another Fukushima Is Possible!" Japan also had to deal with a global pandemic that postponed the widely unpopular Games to 2021. A poll conducted in Japan revealed that 83% of the population didn't want to host the Olympics, especially since only 2-3%

of the population was fully vaccinated one month before the July 23 opening ceremony. Shunya Yoshimi, a professor at the University of Tokyo, concluded that Tokyo needed to shift away from a "faster, higher, stronger" city to a "more enjoyable, more resilient, and more sustainable" Olympics [43]. In June 2021, the International Olympic Committee voted to change the slogan to "faster, higher, stronger, *together*" [13], signaling a shift from Japan's individualistic message in 1964 to one of solidarity in 2020.

Hence, Kengo Kuma's 2020 National Stadium vastly differed from Tange's 1964 Yoyogi National Stadium. Tange's hard, masculine stadium was a by-product of a period of expansion and high economic growth [5]. This period of high growth, however, has ended in the 21st century. While Japan's population has been shrinking and aging, the international community has moved toward conserving and nurturing the environment. Kuma's stadium represents these trends by promoting a softer, flatter, and more feminine design. His structure is indeed flatter than typical Olympic stadiums at just under 50 meters tall [35] and features three tiers of seats beneath a latticed wooden roof framework [18]. Deeply affected by the 3/11 natural disasters, Kuma used stadium messaging to highlight Japan's refined, cutting-edge environmental techniques. Kuma also abandoned conceptions of "modernity" by drawing inspiration from the 7th century Horyu-ji temple [20], the oldest wooden building in the world. As Kuma stated, "Tall and big buildings destroy the environment. Architecture needs to be as low and humble as possible and made mainly of wood rather than concrete." Kuma further argued for the environmental, emotional, and protective benefits of using trees as building materials. True to his word, the stadium complex is hugged by parklands and dotted with trees.

In keeping with the historical messaging, Kuma's stadium harmoniously combines Japanese tradition, climate, and technology. The architectural plans feature a profile with five-

layered eaves, similar to Horyu-ji's five-storied pagoda (Figure 11: Horyu-ji temple, Nara, eaves, built 607 AD). These "grand eaves of the wind," known as Kaze no Obisashi [2], improve the thermal environment of the stands and field by bringing in the seasonal wind while removing heat and humidity from inside the stadium through the top (Figure 12: Japan National Stadium, Tokyo, eaves, 2019). In addition, the spacing between the lattices on the eaves varies according to the direction of the building, allowing it to forgo air conditioning. The narrower south-southeast side captures the summer breeze and directs it to the stands, whereas the wider north side diverts the winter wind and directs it inside the roof. Lastly, the stadium projects a message of unity as a reminder of the communal effort needed to combat the coronavirus pandemic. This was achieved by sourcing more than 70,000 cubic feet of stadium timber from each of Japan's 47 prefectures [18].

Another critical factor that shaped 2020 Olympic stadium messaging was Kuma's architectural approach. Kuma developed a theory that he has variously termed "defeated architecture" or "small architecture" [33]. His idea is centered around two primary questions [24]: "Can we abandon our desire? Can architecture be defeated rather than victorious?" Kuma recounted that losing WWII made the Japanese turn to the economy by redeveloping major cities and promoting full-scale industrialization. In response, architects mass-produced thousands of "tall, big buildings" that fulfilled the human desire for quantity, speed, and attention. "Defeated architecture" seeks to reduce the burden that architecture has placed on the environment by encouraging the use of local materials as well as combining the environment, architecture, and humans in the process of creating living works. In a YouTube interview with the Louisiana Channel, Kuma articulated his fear that the pandemic was a product of humans spoiling the earth and vowed to adopt a "nature-friendly architectural style." Kuma's approach to architecture

holds true in his 2020 stadium design, which has no air conditioning and is primarily constructed from locally sourced timber. A comparative analysis of both Tokyo stadiums reveals that Tange's 1964 Yoyogi Stadium sought to showcase modernity after a decade and a half of war, whereas Kuma's 2020 Japan National Stadium was grounded in the past, hammering home an environmental mission during a global pandemic.

Among the most beautiful in the world, 1964

In this section, we will conclude by assessing social responses to each stadium in Japan and America. My analysis of the 1964 Yoyogi National Stadium was limited to English databases of Japanese newspapers dating to the 60s, of which I was able to locate three newspaper articles in the *Japan Quarterly*. This sample size is admittedly small but revealing, and could be strengthened with interpretation from a native Japanese speaker. Yuichiro Kojiro's 1964 article "Building for the Olympics" was particularly insightful, depicting the Yoyogi National Stadium as a symbol of Japanese pride [21]. He lauded Kenzo's "completely modern, original design" for incorporating elements of "Japanese national qualities." Kojiro also claimed that Japan should be proud of the "high technical level" the suspension roof showcased.

Other articles from the *Japan Quarterly* [22] recognized the various accolades the stadium amassed, including "the Olympic Diploma of Merit by the International Olympics Committee, the Asahi Cultural Award, and the Gold Medal of the British Royal Institute of Architects." Most impressively, Tange was awarded the Pritzker Prize in 1987, architecture's highest award, and the citation designated Yoyogi as "among the most beautiful buildings of the 20th century." Lastly, Peter Popham described the 1964 Olympic stadium as "representative of a country full of energy and potential" with "expressive posts and beams, deep eaves, and lean proportions" [32]. Based on this sample, the award-winning Yoyogi stadium generally evoked

pride among Japanese citizenry, a structure worthy of symbolizing a modern nation.

American newspapers were generally in agreement with the Japanese media, although with lesser enthusiasm. A *New York Times* article from 1964 bestowed several compliments upon the Yoyogi National Stadium, describing the structure as an "architectural gem" and "a stunning temple assigned for swimming" [30]. The article singled out the curved ceiling, notable for "its eye-pleasing geometric sweep." However, while the Japanese admired Yoyogi stadium for its traditional inspiration and advanced technology, Americans equated the stadium grandeur with the price tag. Another *New York Times* article recounted an interview with a Japanese taxi driver "with the slightest fluency in English" who proudly stated that the stadium "cost many money" [36]. A *Christian Science Monitor* article also narrowed in on the cost of the "$6,120,000 Yoyogi National Stadium," which author Stuart Griffin deemed the most "eye-catching showpiece among the Tokyo Olympic Games sports facilities" [15].

What needed to be done, 2020

In contrast to the Yoyogi National Stadium, the 2020 Japan National Stadium was mired in controversy and evoked conflicting emotions. From the Japanese perspective, a Hangorinnokai Tumblr blog published an interview with an older woman living in the way of what would become the new national stadium [39]. The woman was suddenly informed that she would have to relocate and that her apartment would be torn down. In addition to housing relocations, Japanese citizens were largely concerned about the post-Games management of the Japan National Stadium. As an editorial in the *Asahi Shimbun* pointed out, the facility "cost 2.4 billion yen per year ($21.7 million)" to maintain [26]. Authors Shuhei Shibata and Yoshitaka Ito sarcastically noted that one "legacy" of the 2020 Tokyo Olympics would be the "newly built venues eating billions of yen in taxpayers' money for years to come." Currently, the future use of

the Japan National Stadium stands in limbo, especially without a covered roof and air conditioning. In a final blow, *Japan Times* author Alex Martin adopted a resigned tone when referencing the stadium: “It may not be Mr. Kuma’s most ambitious design or fully reflective of his creative vision, but he did what he had to in a limited amount of time” [28]. Regardless, a subset of citizens complimented Kuma’s architectural messaging and affinity to nature. YouTube channel Behind Asia promoted the environmentally-friendly stadium as “an honor for Japan’s heritage” [4]. Similarly, subscriber Zosimo Monsanto commented, “Wow.... It’s an Amazing Elegant Stadium with a much softer, kinder cool feeling kind of venue this coming Olympic Game 2021.”

The American media was more skeptical of the stadium’s ability to deliver sustainable messaging, accusing Japan of “greenwashing” or displaying concern for the environment while providing bare minimum solutions. In 2017, *Reuters* reported that the Tokyo 2020 Organizing Committee sourced timber from Indonesia and Malaysia “contributing to rapid deforestation” [31]. NGOs also uncovered that the tropical forests cleared for the 2020 Olympics included the destruction of habitats for critically endangered Bornean Orangutans. Just two months later, *Reuters* reporter Elaine Lies revealed the long hours and perilous conditions Japanese stadium workers suffered. The parents of a 23-year-old building at the National Stadium petitioned the government to recognize his suicide as “karoshi,” or death by overwork. Sharing the same sentiment as *Japan Times* author Alex Martin, architecture video blogger Martin van der Linden admitted that Kuma’s National Stadium was “definitely not iconic” [12]. *Forbes* writer Keith Flamer stated that Tokyo finally “settled” on Kuma’s design, seen as the next best alternative after the Zaha Hadid controversy. Flamer finally concluded that the 2020 National Stadium paled in comparison to the “drama of constructing the venue.”

Conclusion

Through the examples of the Bird's Nest Stadium and Hadid's proposed Japan National Stadium, this research tracked stadiums as forms of national identity. Later, we examined how historical and architectural factors played a significant role in stadium messaging. Kenzo Tange's modernist approach brought forth a concrete design that highlighted Japan's technological progress post-WWII. Kengo Kuma's theory of defeated architecture resulted in a wood design that reflected Japan's environmental mission during a global health crisis. A detailed analysis of primary sources dating back to the 60s revealed that the 1964 Yoyogi National Stadium was better received, as evidenced by the taxi driver's account and the "one of a kind suspension roof." However, questions still linger about the legacy of the Japan 2020 National Stadium. Did it fail to deliver Kuma's message of pioneering a new, sustainable direction for Japan?

Despite greenwashing accusations, the 2020 Japan National Stadium marked a definite shift in overall Olympic stadium messaging and construction. Kuma rejected the traditional approach of outdoing other nations with outlandish, extravagant stadiums constructed by star architects. Instead, Kuma promoted sustainability and longevity in his designs, and his influence has extended to the following three Olympics. Beijing 2022 has pledged to promote a “green, open, inclusive, and green” Olympics by renovating the Bird’s Nest Stadium for the opening and closing ceremonies [1]. Paris 2024 has begun construction on the 30-year-old Stade de France, which will be converted into an Olympic stadium. Lastly, LA 2028 has adopted “sustainability as a core Olympic mission,” publicly announcing that no new permanent venues were needed for the Games [23]. As the Games shift to reflect changing times, we must recognize the power of Olympic stadium imagery to meme-ify a nation’s world status, act as a stage for a modern-striving nation, and, in Kuma’s case, encourage global environmentalism.

Figure 1: Yoyogi National Stadium, Tokyo, entrance, 1964

Figure 2: Japan National Stadium, Tokyo, aerial view, 2019

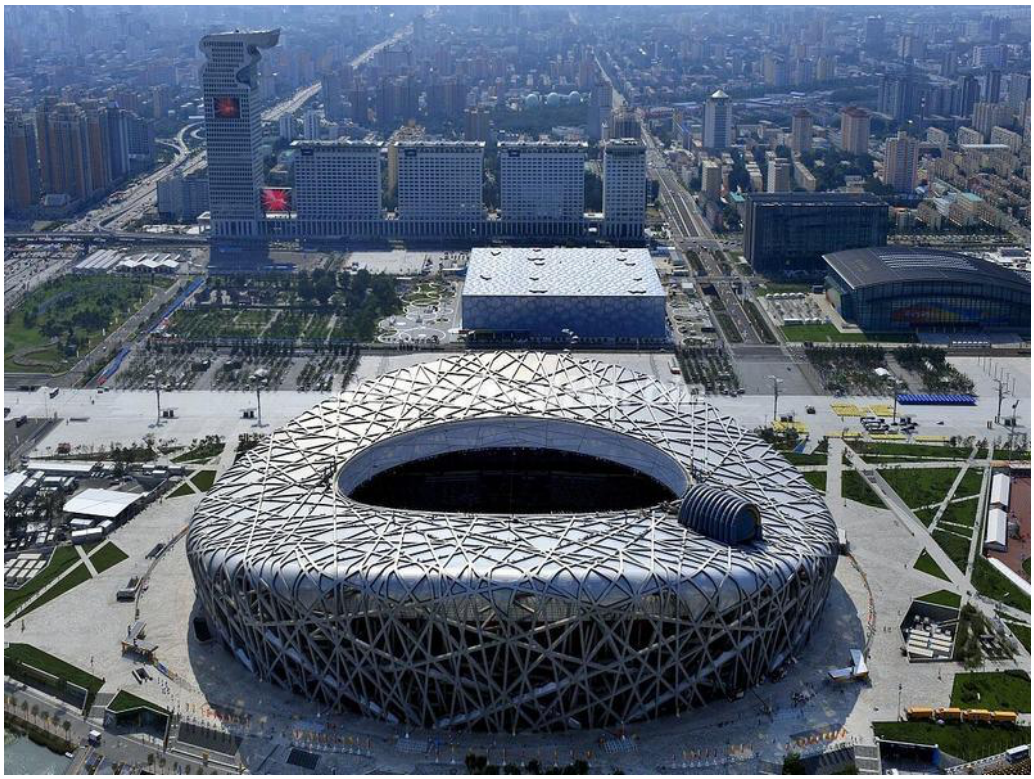

Figure 3: Bird's Nest Stadium, Beijing, aerial view, 2009

Figure 4: Japan National Stadium, Tokyo, design proposal, 2014

Figure 5: Proposed Japan National Stadium, Tokyo, meme, 2015

Figure 6: Proposed Japan National Stadium, Tokyo, meme, 2015

Figure 7: Proposed Japan National Stadium, Tokyo, meme, 2015

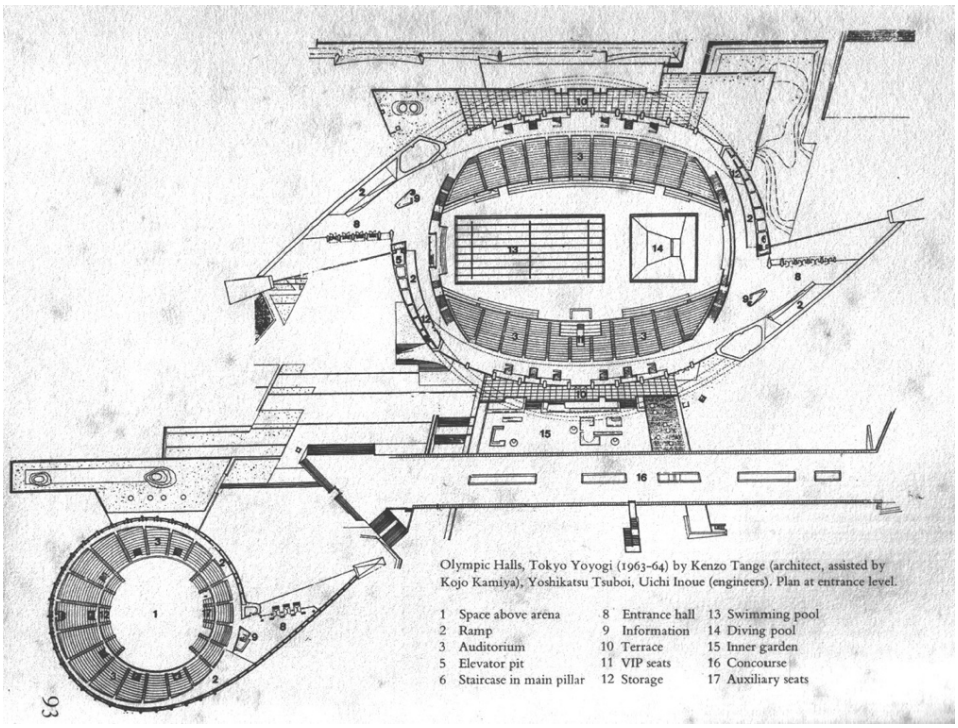

Figure 8: Yoyogi National Stadium, Tokyo, architectural plan, 1961

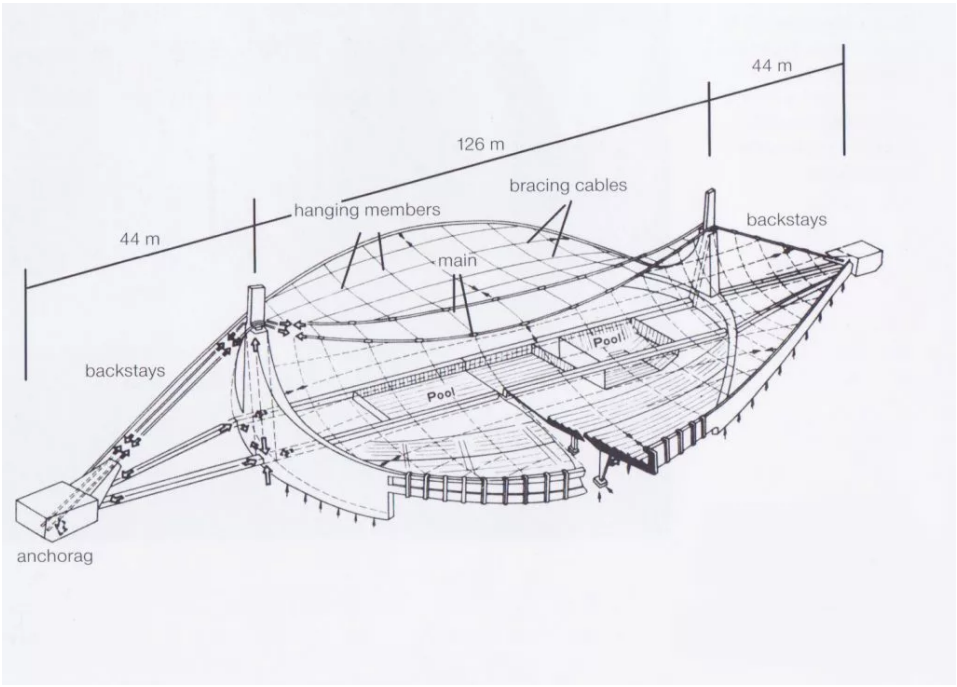

Figure 9: Yoyogi National Stadium, Tokyo, architectural plan (roof), 1961

Figure 10: Memorial Cenotaph, Hiroshima, entrance, 2012

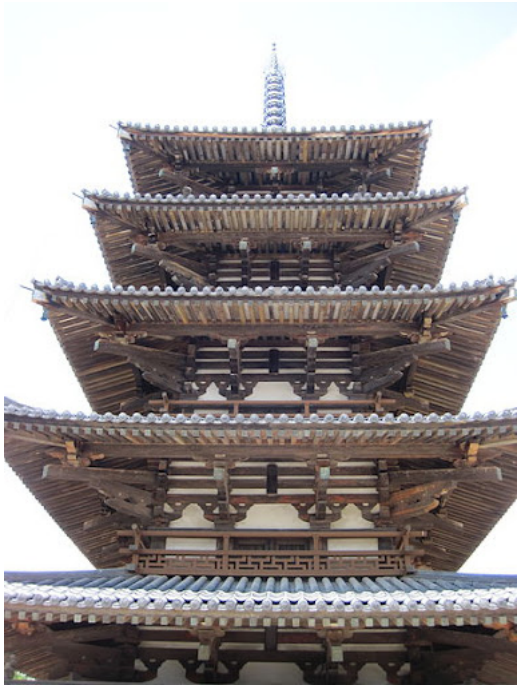

Figure 11: Horyu-ji, Nara, eaves, 607 AD

Figure 12: Japan National Stadium, Tokyo, eaves, 2019

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