

Journey to the East: *Jūnikai*, Japan's first skyscraper

Viaje de Oriente: *Jūnikai*, el primer rascacielos de Japón

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Abstract

One century after the Great Kanto Earthquake devastated Tokyo and Yokohama in September 1, 1923, the remains of the foundation of the Jūnikai (Twelve-Stories), or Ryōunkaku (Cloud-Surpassing Tower), the first Skycraper of Japan, have been discovered in the old Asakusa Park, in Tokyo. It was designed by the Scottish sanitary engineer William Kinnimond Burton (1856-1899), and inaugurated in 1890. Contemporary of Adler and Sullivan's first high-rise buildings in Chicago, it was the icon of the Asakusa Park, a copy in Japan of the cheerful western entertainment districts such as Broadway or Montmartre. The Ryōunkaku was the focus of several pages of Japanese modernist literature and its powerful presence in Tokyo's skyline made it one of the symbols of the country's opening to the west, which started with the Meiji Restoration, a time of transformations in which domestic intimacy moved from the strict horizontality of Japanese dwellings—embodied by the delicate platforms built to observe the moon in the town of Katsura—to the vertiginous verticality of the new forms of high-rise living of modern towers.

Keywords

Japan, Skyscraper, Jūnikai, Asakusa, William K. Burton.

Resumen

Un siglo después del Gran Terremoto de Kanto, que arrasó Tokio y Yokohama el 1 de septiembre de 1923, en el antiguo Parque de Asakusa de la capital nipona, se han descubierto los restos de los cimientos del primer rascacielos del Japón, conocido como el Jūnikai (Doce Pisos) o Ryōunkaku (la Torre que perfora las nubes). Proyectado y construido por el ingeniero higienista escocés William Kinnimond Burton (1856-1899), fue inaugurado en 1890. Coetáneo de los primeros edificios en altura de Adler y Sullivan en Chicago, era el icono del Parque de Asakusa, replica japonesa a comienzos del siglo XX, de los alegres barrios occidentales de espectáculos como Broadway o Montmartre. Protagonista de variadas páginas de la literatura modernista japonesa, con su potente presencia en el perfil de Tokio fue uno de los símbolos de la gran apertura de Japón a Occidente iniciada con la Restauración Meiji, una época de transformaciones, en la que la intimidad doméstica transita de la estricta horizontalidad de la casa japonesa, encarnada en la delicadas plataformas para observar la luna de la villa de Katsura hacia la vertiginosa verticalidad de los nuevos modos de habitar en altura de las torres modernas.

Palabras Clave

Japan, Rascacielos, Jūnikai, Asakusa, William K. Burton.

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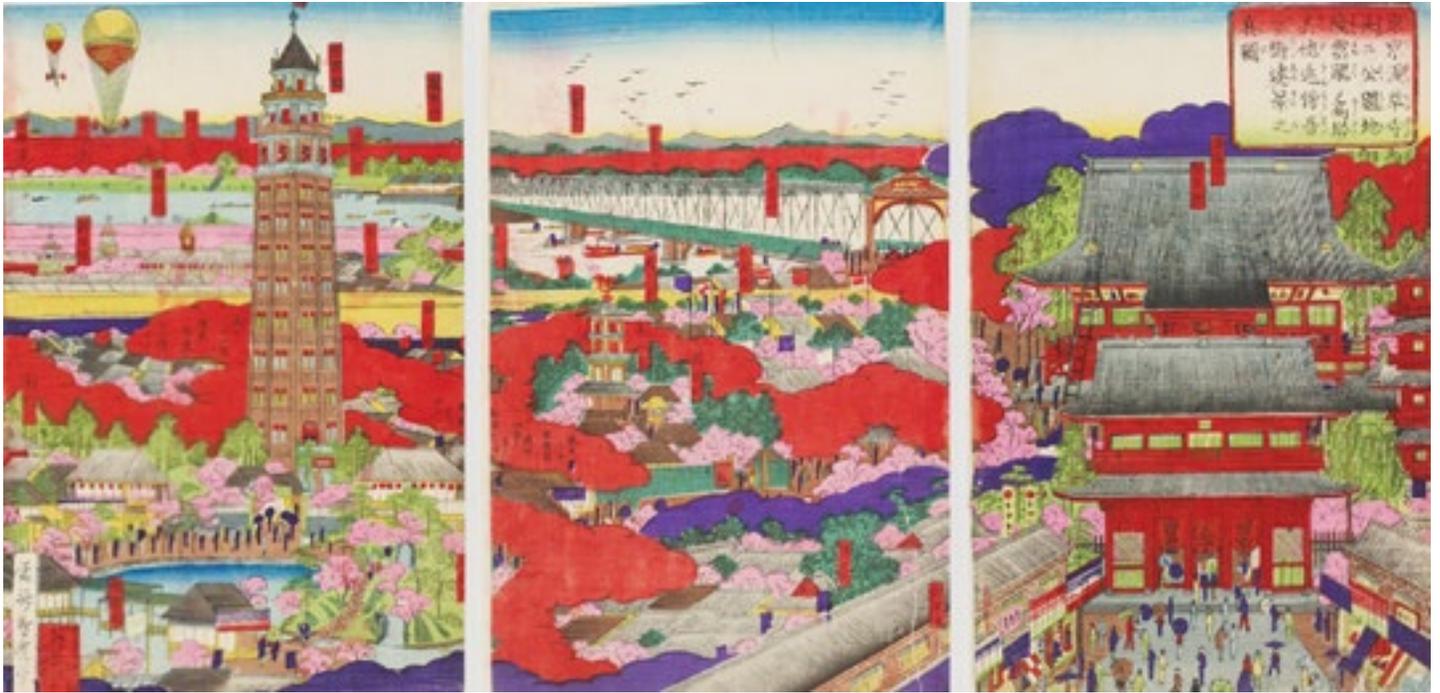


Figure 1. Tokyo Asakusa-Temple and Tower of Ryounkaku in the Park and Azumabashi Bridge in the Distance View. Ukiyo-e by Nagashima Shungyo, 1891.

From East to West: Recurrent Travels

In 1868, the Meiji Restoration¹ ushered in the modernization of Japan, which had been cut off from foreign influence under the Tokugawa dynasty throughout the Edo period (1603-1868). The nation sought the keys to political, cultural and economic transformation in the western model. A number of diplomatic expeditions were dispatched to Europe and America to learn about western educational systems, technical knowledge, culture, social structures and economies. The best known of these missions was *Iwakura* (1871-1873), led by Iwakura Totomi, who headed a group of over one hundred travelers that included ministers, historians and chroniclers, as well as a group of seventy students who were to finish their training in the west and would experience an intense cultural and technological transference on their return to Japan. Not since the so-called *Iberian Century*² had there been an opening-up on such a scale.

Here, now, comes the greatest revolutionary epoch! These are the two great events, the restoration of the Imperial power from the lands of the last Shogun after the end of several wars, followed by the opening of our communication and the forming of our treaties with the western world!³

Wakon Yosai —“Japanese spirit, Western learning”—was one of the mottos of the Meiji era, which, along with the notion of *Kyohei Fukoku*—“enrich the country, strengthen the military”—took Japan to the top of the world’s economies in the early 20th century, but also led to the birth of a fearsome military power with an aggressive expansionist policy.

The recognition of western culture paved the way for a period of devoted admiration, which was especially intense in the field of architecture. In the 1870s, as a result of the aforesaid expeditions, the Japanese government invited numerous western architects to the country and entrusted them with a two-pronged mission: to design the new buildings of modern Japan and instruct the next generation of technicians in the country’s universities.⁴

These were generally imposing, solid buildings on two or three floors that, in the intertwining and confusion of the various styles, reflected well the atmosphere of ferment and preparation of European architecture from the late 19th century.⁵

The adoption of the eclecticism of *fin-de-siècle* western architecture as the visual model for the country’s new public buildings was merely another phase

- 1 The Meiji era (1868-1912) drew the curtains on the Edo period, two hundred and fifty years under the dominance of samurais from the Tokugawa shogunate—a feudal system that was abolished after the abdication of the shogun Yoshinobu Tokugawa and the concentration in 1868 of all delegated power in the warlord clans under Emperor Mutsuhito. Japan’s capital was moved from Kyoto to Edo, which was renamed Tokyo. The Meiji era ended with the death of the emperor on June 30, 1912.
- 2 In Japanese history, *Iberian Century* refers to the period between 1543 and 1643, one of intense cultural transfer between Japan, Spain and Portugal, founded on the commercial exchanges between the two regions and the evangelization of Japan by Jesuits, which began with the arrival of Saint Francis Xavier in 1549.
- 3 Imperial College of Engineering graduation thesis by Funakoshi Kinya (1883) in Christine Visita, “Japanese Cultural Transition: Meiji Architecture and the Effect of Cross-cultural Exchange with the West”. *The Forum: Cal Poly’s Journal of History*, 1 (2009): 33.
- 4 The Englishmen T.J. Waters and Josiah Conder, the American R.P. Bridgens, C. de Boinville from France, the Italian C.V. Capelletti and H. Ende from Germany built the institutional buildings for the new era with eclectic profusion, including the National Mint in Osaka and the History Museum and the Nikolai Cathedral in Tokyo.
- 5 Mario Busssagli, *Historia Universal de la Arquitectura: Arquitectura Oriental* (Madrid: Aguilar, 1989), 182.

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Figure 2. Le Corbusier and his disciple Junzo Sakakura in the Villa of Katsura, 1955.

in the incessant back-and-forth between Japan and the west with exhilarating results that refuted the pessimistic foreboding of Toynbee, for whom “*the great development of our era is the coming together of east and west, the overriding impact of which has been the destruction of the way of life of all non-western peoples.*”⁶

In the mid-19th century, before the European architects arrived, there had been a formidable infiltration of the Japanese concept of domestic space. A people so prone to producing images as the Japanese had no problem seducing the western cultural elite who had converted to *Japanism*,⁷ with its simple mass-produced prints aimed at the lower classes: the *Ukiyo-e* woodblock prints.⁸ With an intense visuality, far-removed from realism and prioritizing representation, their flat colors and impossible perspectives are the key to a new way of looking that imbued impressionist and cubist proposals, with an influence that was also palpable in the avant-gardes at the forefront of modern architecture.

The western sense of domestic space had been characterized by the strict limits between the built and nature, understood, to a greater or lesser extent, as distinct spheres. Japanese houses, with their intense horizontality and undefined boundaries, suggest a new intimacy in which the light and delicate built object expands and dissolves within its external environment to bring transitional spaces front and center.

Frank Lloyd Wright was one of the main vectors of the revolution of modern domestic space resulting from Japanese influence. “*Japan has appealed to me as the most romantic, artistic, nature-inspired country on earth. If Japanese prints were to be deducted from my education, I don’t know what direction the whole might have taken.*”⁹ In his “*prairie houses*”, there are fundamental echoes of the *sukiya* style of Japanese dwellings, such as the *engawa*—the veranda surrounding the house that Wright transformed with broad overhangs with deep planes of shadow—and the *tokonoma*, a ceremonial central space, a role that Wright assigned to the fireplace and chimney, the *axis mundi*, the point from which all the house’s rooms seem to unfold.

The paradigm was to be the Katsura Imperial Villa, a recreational palace built in the 17th century and inspired by passages from the primitive novel *Genji Monogatari* (*The Tale of Genji*), which praised the sensual reflection of the moon

6 Joao Rodrigues SJ, José Luis Alvarez Taladriz, *Arte del Cha* (Tokyo: Sophia University, 1954), IV.

7 The term *Japanism* expresses the powerful influence of Japanese art on western culture in the second half of the 19th century, through universal exhibitions and the changing tastes of collectors and their extensive imports.

8 Japanese ukiyo-e prints were woodcuts made by a four-color process applied through wooden plates that were fundamental to the popularity of “Japanism” in late 19th-century Europe. Their influence on western art has not waned since then.

9 Frank Lloyd Wright, *Autobiografía: 1867-1944* (Madrid: El Croquis, 1998), 35.

10 Manfred Speidel, quoted by José Manuel García Roig in José Manuel García Roig, "Bruno Taut y el Japón", *Cuaderno de Notas 8* (2000): 98.

11 William Kinnimond Burton was born in Edinburgh on May 11, 1856. His father, John Hill Burton, came from an impoverished Aberdeen family. A lawyer and amateur historian, he wrote two books on economics that received considerable attention in Japan. His mother, Katherine, was the daughter of Doctor Cosmo Innes, one of Scotland's foremost amateur photographers.

Burton grew up in the family home, Craig House. Currently known as Old Craig, it forms a part of the Napier University and is the main local point of reference for those interested in his life.

Another key influence on young William was his aunt, Mary Burton, a pioneering social and educational reformer who was responsible for the Watt Institution & School of Arts—the first Institute of Mechanics and the forerunner of the city's Heriot-Watt University—admitting women for the first time. William's sister, Ella, was one of the first women to study there.

In Mary's house in Liberton Bank, Edinburgh, William met a young Arthur Conan Doyle, the beginning of a friendship that was to last his whole life. Burton advised Doyle on his short story *The Adventure of the Engineer's Thumb*, with Conan Doyle returning the favor by dedicating his novel, *The Firm of Girdlestone*, to Burton.

Burton studied at Edinburgh's Collegiate School. In 1873, instead of going to university, as would have been expected for a young man in his position, he joined the innovative Edinburgh mechanical and hydraulic engineering firm of Messrs. Brown Brothers as an apprentice. In 1879 he moved to London where he began to work for his uncle Cosmo, secretary of the London Sanitary Protection Association.

In 1887 he arrived in Japan to teach engineering at Tokyo's Imperial University. In 1888 he was appointed as the Japanese government's Sanitary Engineer, tasked with modernizing the water supply and sewerage systems for the country's biggest cities and fast-growing number of colonies. In 1890 he founded the Japanese Photographic Society and designed the *Junikai*, Japan's first high-rise building. In 1894 he married Matsu Arakawa, the mother of his only daughter. He died in 1899. His ceremonial tomb still remains in Tokyo's Aoyama cemetery. A century later, the figure of the European who saved the lives of numerous Japanese people by eradicating the outbreaks of cholera and dysentery associated with bad urban sanitation is still revered. Every year, on the anniversary of his death, a remembrance ceremony is held at which flowers are laid on his tomb and Scottish folk songs are played.

(See Olive Checkland's biography *W.K. Burton, 1856-99: "Engineer Extraordinaire"* in Cortazzi, Hugh, ed. 2002. *Britain & Japan: Biographical Portraits*. London: Routledge.)

12 It is not known who recommended his appointment to provide services to the Meiji government. Perhaps his fame as an engineer from the London Sanitary Protection Association was deemed sufficient endorsement to be entrusted with the modernization of Japan's sanitary systems.



Figure 3. W. K. Burton along side of sumo wrestler Ozutsu, or Taiho, around 1890.

in the Katsura River. The radical abstraction of the pavilions in the Katsura palace complex was analyzed by Bruno Taut in a series of drawings entitled *Gedanken über Katsura (Thoughts about Katsura)*, completed in 1934 after his visit to the palace. "Architecture reduced to pure essence. Astonishing. I feel as innocent as a child. Satisfaction which stems from real longing (...) a beautiful sight—the eye becomes a purveyor of the spiritual. This is the wonder that Japan offers us."¹⁰ Taut also dedicated to Katsura the final chapter of his 1937 book, *Das japanische Haus und sein Leben (Houses and People of Japan)*, a work that was widely read by modern western architects. In 1954, Walter Gropius, after visiting the Imperial Villa, wrote in great excitement to his friend Le Corbusier, declaring that he had found something at Katsura that was in parallel to his architectural principles. In 1955, Le Corbusier closed the circle by visiting Katsura with his host and disciple, the Japanese architect Junzo Sakakura.

William Kinnimond Burton, Engineer Extraordinaire

One of the leading lights from this journey to the east was the encyclopedic Scotsman William Kinnimond Burton.¹¹ This engineer from Edinburgh seems to occupy a somewhat discrete role in the chronicles of this period, although his involvement in Japan's transformation is beyond question. With the devotion of a sanitary engineer, he designed the water supply and sewerage systems for major Japanese cities, built Tokyo's first skyscraper and founded the Japanese Photographic Society.¹²

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- 13 The list of his contributions is so extensive that the possibility that Burton led work on the island has to be considered. It seems probable due to his status as consultant and coordinator of teams of young Japanese engineers.
- 14 See Burton, William Kinnimond. 1884. *The ABC of Modern Photography*. London: Piper & Carter. The use of gelatin as the base for the suspension of the silver halides that form the emulsion, or light-sensitive layer, of photographic paper represents one of the great advances made in photography in the late 19th century.
- 15 During his Japanese period, W. K. Burton undertook a number of studies and published a series of works that combined scientific documents and traditional prints. He also embarked on an intense collaboration with Kazumasa Ogawa (1860 -1929), a local photographer whose work Burton commented on in various articles published between 1890 and 1894 in a number of British photographic magazines.
- 16 His observations on the effects of seismic waves on structures based on early photographic plates of elastic waves, as he set out in his article *On the application of photography to Seismology and Volcanic Phenomena*, were premonitory. In *The Great Earthquake of Japan*, 1891, Burton documented the effects of an earthquake measuring 8.4 on the Richter scale that hit Japan on the morning of October 28, 1891. Ogawa's photographs showed that modern western-style buildings and the new infrastructure of the Meiji era did not withstand earth tremors any better than traditional wooden structures.
- 17 See Burton, William Kinnimond. 1883. *Out-of-doors life in Japan*. Tokyo: K. Ogawa.
- 18 William Kinnimond Burton, *Wrestlers and wrestling in Japan* (Tokyo: K. Ogawa, 1895), 2.
- 19 In the late 19th century, the race to build high was being run around the world, with the 330-meter-high Eiffel Tower unveiled in 1889 at the Paris Universal Exhibition. The formal principles of this new style were established during the rebuilding of Chicago after the Great Fire of 1871, thanks to elevators becoming increasingly common and the possibilities offered by new metal structures, which allowed buildings to be constructed without load-bearing facades. William Le Baron Jenney, Richardson, Sullivan and Adler all designed high-rise buildings, which grew inexorably ever higher, from the first examples, such as William Le Baron's ten-story, 42-meter-high



Figure 4. Theater Street with a view of the Ryōunkaku skyscraper, around 1912. Author: Oswald Lübeck.

Hyperactive and tireless, between 1887 and 1899 he designed or supervised the water supply and sewerage systems for Japan's biggest cities and for the newly conquered island of Taiwan.¹³ His reservoir designs, the introduction of sand filtration systems and the new infrastructures in Japanese cities saved the lives of thousands of people who gained access to drinking water.

Burton was also an extraordinary photographer of great technical skill. In 1884, before traveling to Japan, he had published *The ABC of Modern Photograph*, "a manual of photography for beginners on the assumption that the *gelatine* process is now the process of the day."¹⁴ The impact of this practical guide was considerable, as is evident from the continuous reprints to the present day.¹⁵

Burton's hobbies and knowledge would seem to be aligned with exact predestination. It is no coincidence that before designing the *Jūnikai*, he concentrated on investigating the possibilities offered by photography in the study of the effects of earthquakes and natural disasters on buildings.¹⁶ Burton also focused on the prints showing traditional life in Japan and the changes underway. *Out-of-doors life in Japan*¹⁷ documented the opening up of the hermetic domestic life in the country and the blurring of its boundaries with a new exteriority. In *Wrestlers and wrestling in Japan* (1895), Burton combined the keys to traditional Japanese wrestling with Ogawa's excellent portraits. He wrote "*The wrestlers themselves seemed to me to be about the most good natured and kindly lumps of humanity that I have ever come across, and it was a pleasure to observe the good feeling that evidently existed amongst themselves, and the way in which they enjoyed the work—or play—that they were going through*"¹⁸ and reflected at length on the hermetic tradition that played with the form and weight of the human body in a sacred space; a sudden, gloomy ballet, a beautiful likeness of the effort required to sustain the momentum that inspires architecture works.

The Ryōunkaku

Japan's first skyscraper was a contemporary of the first high-rise buildings in Chicago.¹⁹ Around 1890, Burton received his first commission to erect a tower

in Tokyo's Asakusa Park²⁰—an enormous space with amusements intended for the working classes from the Meiji era. The park, in the city's sixth district, *Rokku*, contained theatres, restaurants, illegal brothels and Japan's first cinemas.²¹

Nobel prize-winning Japanese writer Yanusari Kawata (1899-1972), who lived in the neighborhood in the 1930s, was a privileged witness to life in Asakusa. A sufferer from chronic insomnia, he became a well-known *flâneur* in Asakusa's nightlife: chronicler of the new intimacy, inhabited by nyctalops—seized by a sensual, ground-breaking reality—who rejected domestic modesty as emerging actors on the world's stage, where the limits between public and private become blurred, constantly mutating.

Donald Richie, in his preface to *Asakusa Kurenaidan (The Scarlet Gang of Asakusa)*, looked to Tanizaki to describe the hypnotic, bizarre life in Asakusa; a curious syncretism of tradition and distorted reflections of western myths—the razzmatazz of Broadway, the bohemian air of Montmartre or the decadence of Berlin between the wars.

Later, in an unfinished novel, *The Mermaid (Kojin)*, Tanizaki tells what Asakusa was like in 1918. Its attractions were 'plays of the old style, operettas, plays in the new style, comedies, movies—movies from the West and Japanese productions, Douglas Fairbanks and Onoe Matsunosuke—acrobats balancing on balls, bareback riders, Naniwa bushi singers, girl gidayv chanters, the merry-go-round, the Hanayashiki Amusement Park, the Twelve Story Tower, shooting galleries, whores, Japanese restaurants, Chinese restaurants, and Western restaurants—the Rairaiken, won ton mein, oysters over rice, horsemeat, snapping turtles, eels, and the Café Paulista.²²

The symbol of this place was to be Tokyo's first skyscraper, designed by Burton. Unveiled in 1890, the *Ryōunkaku* ("Cloud-Surpassing Tower"), also known as the *Jūnikai* (Twelve-Stories), was an imposing 69-meter-high brick structure that, for decades, would be the city's highest building, twice as high as Nikolai Cathedral. Under its panoramic observation platforms at the top of the building, there were floors selling Chinese products, exhibition halls and entertainment venues; an immense, eclectic showcase of city life and activity in overlapping levels.

In his 1914 novel, *The Nightside of Japan*, Taizo Fujimoto included a *costumbrista* description of the building and its surroundings:

At the east end of the street there stands a tall hexagonal brick building in twelve stories; its name is the Ryōunkaku (Tower piercing through clouds), and popularly called Jūnikai (Twelve Story Tower). When the tower was first built the elevator was furnished for visitor; but shortly afterwards as there happened an unfortunate event, owing to incomplete adjustments of the machine, it was abolished by order. You step up to the top of the tower by the spiral steps and, in rooms of each story, various kinds of toys and other articles are sold, or fine pictures and photographs are hung against walls. In 1911, one winter night at about eleven, a young man jumped down over the balcony of the eleventh story of the tower and killed himself, crushing his body upon the ground. After this event, the windows and balconies above ten story are entirely covered with wire-nets.

Stepping down the tower you enter a beef shop (gyū-ya) just below the tower; it is now one o'clock A.M. and there some twenty or thirty laborers or workmen of the lowest class are drinking sake, and devouring beef, pork, or even horseflesh from the boiling pans on square tables arranged in a broad, dusky room. When you enter the room, your nose is attacked by the stinging smell of bad sake and boiling flesh, mixed with the odor of cheap tobacco smoke, which fills the room and whirls like dense clouds. Maid-servants of ugly face and on rusty garment carry bottles of sake and plates of flesh, and their chattering and laughing with customers are noisy and disgusting. Among these customers there may be thieves, pickpockets, and gamblers, who have come in this house in triumph for their victories. They drink and drink till morning, and it is not seldom that they make quarrels at last, throwing bottles and breaking porcelains.²³

The precedents for a building of this height in Japan went back to the pagoda towers at the Todaiji complex, which, with approximately 100 meters, were the world's highest vertical structures of their time. The recurrent earth tremors that brought down the pagodas called for a height limit in monumental buildings of 31 meters in the Edo period.²⁴

1884 Home Insurance Company Building, to Sullivan's 13-floor Guaranty Building, built in Buffalo between 1894 and 1895. All of these employed a new architectural language that was to be the precursor to modern skyscrapers. This emerging design arose in order to accommodate new workspaces and soon evolved into new ways of inhabiting in height that would revolutionize living spaces in the 20th century.

20 Asakusa was one of the five parks that surrounded the great temples associated with the Tokugawa clan that were opened to the public in 1873. Associated with the Sensō temple, the oldest in Tokyo, it was extended to become a large urban park, and in 1884 was divided into seven districts. It continued to grow, reaching its apogee in the early 20th century before the devastation wrought by the Great Kanto Earthquake in September 1923. Rebuilt after the disaster, it was again destroyed by US bombardment in 1945; the Americans restoring the ancient Buddhist temple during the post-war occupation.

21 Yasunari Kawabata, *The Scarlet Gang of Asakusa* (Barcelona: Planeta, 2014), 271-272.

22 Kawabata, *The Scarlet Gang of Asakusa*, 10-11.

23 Taizo Fujimoto, *The Nightside of Japan* (London: T. Werner Laurie, 1914), 4.

24 Mario Busssagli, *Historia Universal de la Arquitectura: Arquitectura Oriental* (Madrid: Aguilar, 1989), 181.

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25 Images of his native Scotland would have also been present in the first stages of design reverie. On Calton Hill, in Edinburgh, there stands a tower-monument to Admiral Nelson, built between 1807 and 1815, and the Astronomical Observatory, where a camera obscura was installed to capture spectacular panoramic views of the city. In Princes Street Gardens, there is a monument to Sir Walter Scott, built in 1846 as an enormous neo-Gothic needle standing 61 meters high. However, perhaps the clearest point of reference was the tower-monument to the 8th-century Scottish hero, William Wallace, unveiled in Stirling in 1869. This tower by John Rothead was conceived as a panoramic observatory over the land in which Wallace conducted his military campaigns. Its height—70 meters—coincides with that of the Ryōunkaku. The two buildings also share a similar anatomy: an imposing shaft jutting skyward supporting a lighter, openwork crown: arches and tracery in Stirling, wood and metal in Tokyo.

26 This annular structural approach—which can still be seen in many modern skyscrapers—optimizes the inertia of the building in contrast to the horizontal stress it is subject to, both wind and seismic, which are the major challenges facing high-rise construction.

27 However, Burton did not directly apply this age-old technique to flexible wooden frames, which are extremely effective in terms of resistance to earth tremors:

"When it came to articulating natural materials the Japanese were not as thorough in adopting Western carpentry techniques and framing procedures, types and methods of tool use, in the Meiji period, for the simple reason that their own technology was better. The shortcomings of Western style brick construction in both seismic and climatic terms are well known, as the Japanese soon discovered. Again, in timber-frame buildings Western style diagonal bracing proved less than effective. Traditional building design in Japan was based on the 'flexible frame' principle now widely used for high-rise buildings. Diagonal bracing makes large flexible frame structures rigid and hence liable to damage in a severe earthquake, as was discovered in the 1923 Great Kanto Earthquake. Western style diagonal braces and tensioning devices, added to the main Shoin complex of Katsura Imperial Villa in the Meiji period, were systematically removed in the recently completed restoration project."

See William Coaldrake, *Western Technology Transfer and the Japanese Architectural Heritage in the Late Nineteenth Century, Fabrications: The Journal of the Society of Architectural Historians, Australia and New Zealand* (1994): 51.



Figure 5. Parcheesi of Ryōunkaku Ukiyo-e by Utagawa Kunimasa IV, 1890.

The numerous *ukiyo-e* prints from the period showing views of the *Ryōunkaku* bear witness to the popularity of the new tower. With their didactic simplicity, they depict a building with a wide-ranging hybrid of styles, basically a slender ten-story prism of brick crowned by an altogether lighter two-floor pointed structure.

Halfway between pagoda and campanile, Burton's formal hesitancy expressed his desire for syncretism.²⁵ With practical ingenuity, he used local materials to conceive the new building as an octagonal tubular structure, with a load-bearing brick exterior that was strengthened at the edges, and an interior core for the elevator.²⁶ The question of the need for openings was resolved by the use of semicircular arches, adapted to a brick construction though a serial distribution that imposed a classical, neutral composition—better suited to the inclusion of local forms. A lighter structure was added on top of this shaft; Japanese construction tradition based on wooden frameworks resurfaces here in the form of a light steel structure.²⁷

Beyond its eclectic conventionalism, the *Jūnikai* was an unprecedented typological revolution. The assortment of uses in a high-rise building, so commonplace in modern skyscrapers, was unique at that time. New ways of living were found on its floors, characterized by a functional diversity and an increasing blurring of the boundaries between domestic and public. A new way of looking at nature emerged: from the observer lying prostrate on light platforms looking up at the moon over the Katsura Imperial Villa, to the dominant gaze over the Kanto plain from the top floors of the *Ryōunkaku*, interested not only in nature but also in the human life seething below.

The *Ryōunkaku* witnessed the splendor that accompanied the turn of the century. It resisted the destruction of the great earthquake of 1891, documented by Burton himself with the splendid woodcuts by K. Owaga, with the inclusion of a number



Figure 6. Promotional flyer for the Ryōunkaku Tower, author: Shimada Tanzan, 1890.

of metal reinforcements in the cracked ceramic. Nevertheless, the vast quake that struck the Kanto region at midday on September 1, 1923 put an end to a history that had lasted over thirty years.²⁸

Ryōunkaku's final moments were narrated by Yasunari Kawabata:

That symbol of old Asakusa, the Twelve Story Tower was beheaded in the 1923 earthquake. Until then, I'd been a student living in a boarding house in Hongo. I'd always liked Asakusa, and so less than two hours after that 11:58 A.M. earthquake, I was in my way there with a friend, going to determine the damage. (...) The Twelve Story Tower was surrounded by buildings still on fire when my friend and I got there, but the fire hadn't yet gone as far as the stalls and theatres of the Rokku. (...) After things had calmed down a bit, the demolition team came out to blow up the corpses of the bigger buildings left. The stump of the Twelve Stories was among these. ... then there was the bang of the first detonation, and we saw a waterfall of bricks. I thought that one side of the tower would stay standing, sticking up like a sword, but it fell down with the second explosion. And we all cheered—hurray, hurray—and then burst out laughing. Remember? After the last sword of a wall fell, all those people down there raced up until the brick mountain was black with them. We were so surprised. It was like soldiers seizing a brick mountain. From far away, all of us watched and cried with happiness. Why? Shouting hurray when a tower collapses and scurrying up the bricks even before the smoke had settled?²⁹

28 The earthquake, measured at 7.8 on the Richter scale, caused the fracture and fall of the uppermost floors, just where the brick base transitioned into the observatory. Photographs from the time allow us to imagine the collapse of the light structures on the top two floors, which impacted on the tenth story and the side of the tower. Burton's mastery was proved by the fact that the tower's brick envelope remained intact, resisting the brunt of the tremendous horizontal forces produced by the earthquake.

29 Kawabata, *The Scarlet Gang of Asakusa*, 98-100.

30 Burton's untimely death meant that we will never discover the culmination of his scientific and professional career. After 12 years of intense work in Japan and Taiwan, William decided to return to Scotland with his Japanese wife, Matsuko, and his daughter, Tamako. His journey never took place: a sudden liver infection proved fatal and he died on August 5, 1899 at the age of 43.

In little over a decade, Burton had managed to leave an indelible mark on Meiji Japan that survives to this day.³⁰ The melancholic memory of the *Ryōunkaku*, his mastery of photography as an innovator among a people who longed for images, which moves from *ukiyo-e* prints to photographic plates, and his role as a sanitary hero—the savior of a Japan that had been devastated by illnesses stemming from unsafe water—are the valuable contributions he made to the intense technical and cultural exchanges taking place between the west and Japan, reflecting the mutual admiration that existed between the two in the early 20th century.

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Figure 7. Remains of the Ryōunkaku after the 1923 Earthquake.



Figure 8. Portrait of William Kinnimond Burton, around 1895.

It is no coincidence that one of the few photographs of W. K. Burton to survive to the present day is his most Japanese portrait. Like a proud 19th-century successor to the missionaries from the Iberian Century, he shunned the then current fashion of *yōfuku*—or western dress—and appeared in traditional Japanese attire against a background that was typical of *chanoyu*—or the Art of Cha (Tea). As befits a guest and in keeping with tradition, he is sat on a *tatami* with his back to the *tokonoma*. There is an *ikebana* to his right, a floral arrangement of plants and ceramics, and the accoutrements used in the tea ceremony at his feet, “the Japanese solution to the solitude-company dichotomy.”³¹

The look is inverted. Burton, the photographer subjugated by Japanese style-life, is portrayed static and frontal like one more character in the *ukiyo-e* prints of the period, which revealed a domestic intimacy, so jealous of its privacy, composing graphic stories of multiple vignettes with impossible perspectives that surprised unsuspecting life with a didactic and exhaustive gaze, with multiple registers, from naive scenes to the most sensual passages.

31 Joao Rodrigues SJ, José Luis Alvarez Taladriz, *Arte del Cha*, IV.



Figure 9. Brocade Picture of the “Pavilion Above the Clouds” Sugoroku (Ryounkaku kikai sugoroku) Ukiyo-e by Utagawa Kunimasa IV, 1890.

[The abundant *Jūnikai*'s representations, such as the plates of Utagawa Kunimasa IV,³² prefer the vertical section as a method of narrating their bustling inner life. An anatomical, pre-cubist viewpoint predating by a century the exhaustive lists of Georges Perec: “I imagine a Parisian apartment building whose facade has been removed - a sort of equivalent to the roof that is lifted off in *Le Diable boiteux*, or to the scene with the game of go in *The Tale of Genji* - so that all the rooms in the front, from the ground floor up to the attics, are instantly and simultaneously visible.”³³

Transcending its historicist skin, the *Ryōunkaku* advances the kinematic revolution of the modern *promenade* with its helical staircase that renews the traditional *engawa*, tightening the spatial dimension by incorporating time. The characteristic quietism of Japanese domestic interiors is subverted: horizontal planes are detached and stacked vertically to form a panoptic tower of exposed intimacy.

Built to withstand earthquakes, with a defiant will to permanence, the *Jūnikai* has in its structure the germ of its spatial innovation. The circulation is located on the perimeter, like an ascending porous wall of spiral staircases that mediates between inside and outside, giving priority to movement in a sequence plane that blurs any condition of limit to illuminate a new *specie of space* of a dynamic and mutant nature that shares many of the key features of contemporary Japanese architecture.

32 Utagawa Kunimasa IV (1848-1920). Ukiyo-e artist, pupil of Utagawa Toyokuni III (q.v.), trained Utagawa Kunimasa V (q.v.) Produced actor prints and prints of life in modern Tokyo, as well as newspaper illustrations. (www.britishmuseum.org/collection/term/AUTH225464)

33 Georges Perec, *Species of Spaces and Other Pieces* (London: Penguin Books, 1998), 40.

If you want to look out over the loveliest landscape in the world, you must climb to the top of the Tower of Victory in Chitor. There, standing on a circular terrace, one has a sweep of the whole horizon. A winding stairway gives access to this terrace, but only those who do not believe in the legend dare climb up. The tale runs:

On the stairway of the Tower of Victory there has lived since the beginning of time a being sensitive to the many shades of the human soul and known as the A Bao A Qu. It lies

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dormant, for the most part on the first step, until at the approach of a person some secret life is touched off in it, and deep within the creature an inner light begins to glow. At the same time, its body and almost translucent skin begin to stir. But only when someone starts up the spiralling stairs is the A Bao A Qu brought to consciousness, and then it sticks close to the visitor's heels, keeping to the outside of the turning steps, where they are most worn by the generations of pilgrims. At each level the creature's colour becomes more intense, its shape approaches perfection, and the bluish form it gives off is more brilliant. But it achieves its ultimate form only at the topmost step, when the climber is a person who has attained Nirvana and whose acts cast no shadows.

Otherwise, the A Bao A Qu hangs back before reaching the top, as if paralysed, its body incomplete, its blue growing paler, and its glow hesitant. The creature suffers when it cannot come to completion, and its moan is a barely audible sound, something like the rustling of silk. Its span of life is brief, since as soon as the traveller climbs down, the A Bao A Qu wheels and tumbles to the first steps, where, worn out and almost shapeless, it waits for the next visitor. People say that its tentacles are visible only when it reaches the middle of the staircase. It is also said that it can see with its whole body and that to the touch it is like the skin of a peach.

In centuries, the A Bao A Qu has reached the terrace only once.³⁴

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Figure 2. Le Corbusier and his disciple Junzo Sakakura in the Villa of Katsura, 1955.
Le Corbusier Foundation.

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Author: Oswald Lübeck.

Deutsche Fotothek.

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Ukiyo-e by Utagawa Kunimasa IV.

Meiji era, November 1890.

Unmounted woodblock prints on four sheets of paper with paper flap; ink and color 95.5 x 37.2 cm (37 5/8 x 14 5/8 in.).

Printed and published by Fukuda Kumajirō at No. 19, Hasegawa-chō, Nihonbashi.

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Collection of Edo-Tokyo Museum.

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Ukiyo-e by Utagawa Kunimasa IV. 1890.

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