Minoru Yamasaki (1912-1986)

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The architect of Pruitt-Igoe and the World Trade Center survived a life of racial discrimination and blame laid for the demise of the Modernist dream – but did not live to see the revisionist movement that asserts the underfunded Pruitt-Igoe's fate was predetermined

Illustration by Marianna Gefen

Minoru Yamasaki embodied the American dream while feeling the sting of endemic racism. He achieved professional success and international fame as a minority architect, whose ‘otherness’ marked him as a permanent outsider to the East Coast-oriented architectural culture of postwar America. Born and raised in Seattle, Washington, as a poor child of Japanese immigrants, he suffered routine racial discrimination from an early age. Growing up he was taught to accept

these episodes passively, with magnanimity. ‘A word that I heard over and over again whenever there would be an incident or a slight was *shikataganai,* which means “it can’t be helped”’, he told a *Time* magazine interviewer. In his autobiography, *A Life in Architecture,* he elaborated ‘I know from personal experience how prejudice and bigotry can affect one’s total thought process … the prejudice I experienced in Seattle hurt me deeply …’

A gifted child who excelled in school, particularly in mathematics, Yamasaki turned to architecture after a chance visit by a Japanese relative who had just received an architecture degree. He enrolled in his hometown University of Washington and financed his education by labouring in the gruelling Alaskan fish canning industry during the summers, where he averaged nearly 70 hours per week, rising to over 120 at the height of the season. Conditions were harsh, but Yamasaki was determined to overcome the ethnic prejudices that trapped his Asian and Filipino co-workers in near-poverty. From that point, his ‘philosophy and goal’ was to develop his natural talents and use them ‘in a way that would make my life meaningful to both me and those around me.’

Rainier Tower in Seattle, a late-era skyscraper. Image courtesy of Balthazar Korab Archive / the Library of Congress

Biography

Key works:
Pruitt-Igoe housing, St Louis, 1954
St Louis Lambert International Airport, St Louis, 1956
McGregor Memorial Conference Center, Detroit, 1958

Dhahran Airport, Saudi Arabia, 1959
Reynolds Metals HQ, Detroit, 1959
US Science Pavilion, Seattle World's Fair, 1962
Michigan Consolidated Gas Company, Detroit, 1962
IBM Building, Seattle, 1963
North Shore Congregation Synagogue, Illiniois, 1964
Northwestern National Life Building, Minneapolis, 1965
World Trade Center, New York, 1971
Rainier Tower, Seattle, 1977
Quote:
'We build buildings that are terribly restless. And buildings don't go anywhere. They shouldn't be restless'
Yamasaki graduated with an architecture degree in 1934 and moved to New York City. After serving a decade-long apprenticeship working on large-scale projects for prominent firms, he was lured to Detroit in 1945 by Smith, Hinchman & Grylls to be its new lead designer with explicit orders to move the firm's output in a more modern direction. By 1963 he'd formed his own practice, been hired to design the world's tallest buildings and featured in a *Time* magazine cover story. Yet he still was barred from joining exclusive country clubs or purchasing a house in the wealthier suburbs outside Detroit because of his ethnicity.

Yamasaki rose to prominence with a distinctive approach that married core Modernist beliefs such as structural determinism and functional aptness with a 'humanist' orientation that fused ideas and elements from architecture's global history. This latter interest arose after a recuperative tour of world architecture, from Europe to Asia, undertaken after surgery for life-threatening stomach ulcers in late 1953. He distilled his mature vision into three self-explanatory principles, which he called 'serenity', 'surprise', and 'delight'.

These qualities are synthesised in his masterpiece, the McGregor Memorial Conference Center (1955-58) at Wayne State University in Detroit. The building is infused with memories of Yamasaki's travels, in striking contrast to his previous work, which tended toward

Miesian boxiness and a simple language of visible metal frames with glass-and-brick infill walls. To the McGregor Center's conventional square plan with internal atrium, he added touches of Classical, Gothic, Mughal, Islamic and Japanese architecture, finished with luxurious travertine end walls, marble-sheathed columns, teak wall panels and exquisite stainless-steel details, all surrounded and contained by a tranquil reflecting pool.

The McGregor Memorial Conference Center. Photograph by Matthew Garin

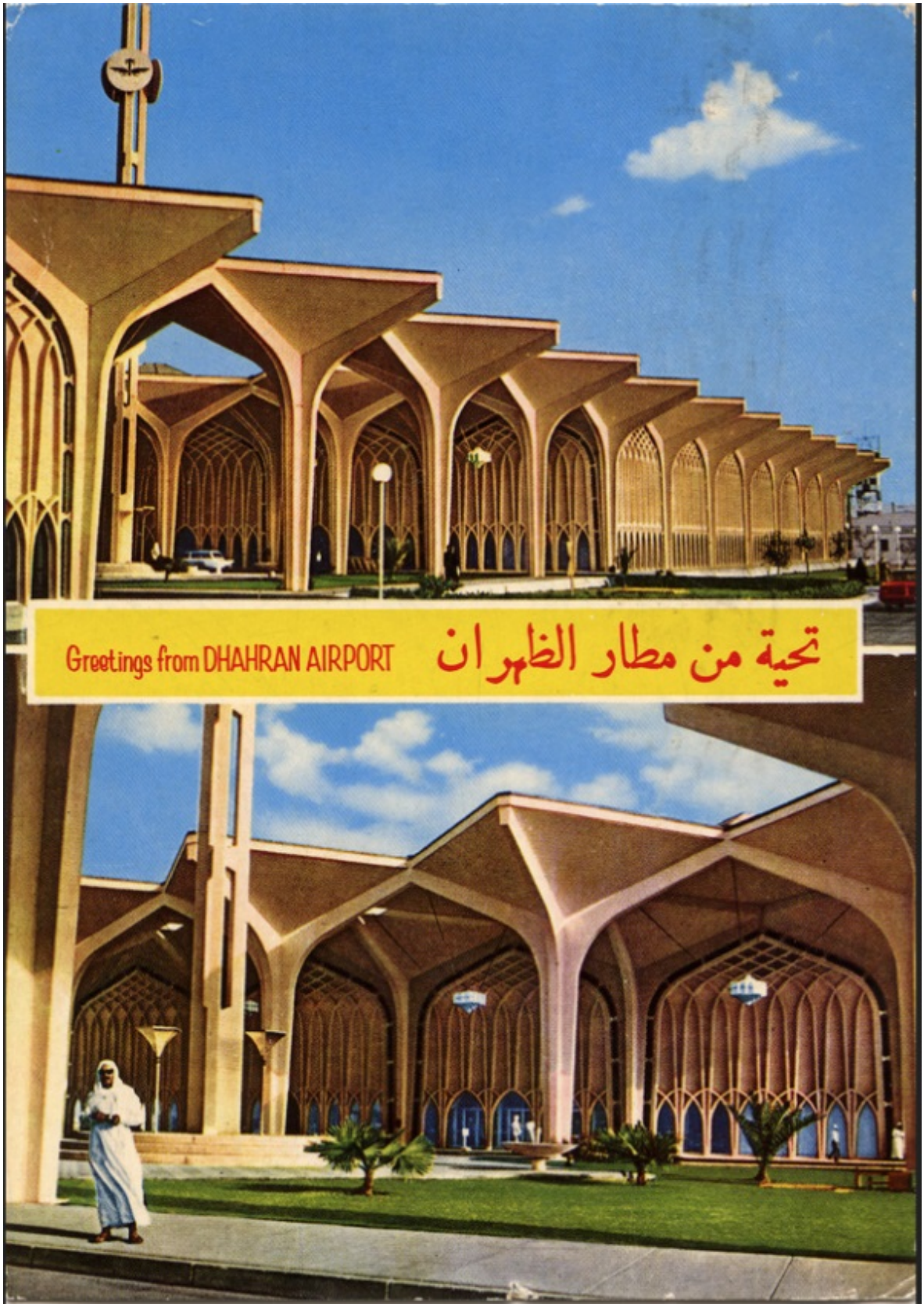
The Reynolds Metals HQ wrapped in a screen of gold aluminium. Image courtesy of Balthazar Korab Archive / the Library of Congress

An engineer at heart, Yamasaki was at his best when stimulated by a structural or material challenge. He idolised Mies and similarly believed in technology's fundamental role in architecture. At the same time, however, he was wary of standardisation's deadening impact and the prospect of a world dominated by prefabricated building parts,

which would remove most aesthetic (and some structural) decisions from the architect. Hence Yamasaki viewed the emergence of precast concrete in the 1950s as an exciting alternative to prefabricated metal components. Concrete was inexpensive and malleable, and if precast in the factory or workshop, its finish could be controlled. It returned architectural expressiveness to the designers, putting them 'back in charge again'.

Yamasaki's initial extraordinary foray into concrete was St Louis Lambert Airport, the first airport of the modern age, intended to accommodate the rapid expansion of airline travel. Inspired by New York's Grand Central Station, a rectangular, three-storeyed terminal is topped by three huge cylindrical groined vaults spanning ticketing and waiting areas. The audacity of Yamasaki's proposal required an entire team of engineers to execute it, including Anton Tedesko, the Austrian engineer and thin-shell concrete pioneer. The vaults – 32 feet high but only four-and-a-half inches thick at their crown – were unprecedented in ambition.

The pioneering thin-shell concrete structure of St Louis Lambert International Airport



Yamasaki directed his technical explorations along two paths: continued precast-concrete experiments, mostly using arches, in buildings of various types – such as Dhahran Airport in Saudi Arabia

and North Shore Congregation Synagogue near Chicago – in tandem with the pursuit of a new way to design tall office buildings. Yet despite his reputation as a skyscraper architect, when Yamasaki was awarded the World Trade Center commission from the Port Authority of New York in 1962, beating Walter Gropius and Philip Johnson, he'd designed only two tall buildings.

The Michigan Consolidated Gas Company in Detroit, was an odd tower: a square 28-storey box overlaid with a precast-concrete screen with narrow lozenge-shaped windows. Searching for an alternative to standard tall building design had led Yamasaki to try concrete as an alternative skin, but his interest soon switched to structural matters. He discovered kindred spirits in Seattle engineers John Skilling, Jack Christiansen and Les Robertson, who were resurrecting the old-fashioned notion of load-bearing walls. Their innovation included narrow supports closely spaced around the building's perimeter to carry the weight, creating partition-free interiors. The Skilling engineering firm would become pioneers in the development of the framed-tube structure. Subsequently, with Seattle's IBM Building, Yamasaki and his engineers had the first opportunity to test their theory. The design was only months ahead of the World Trade Center.

Northwestern National Life Building fronted by a slender, arched colonnade

US Science Pavilion for the Seattle World's Fair. Image courtesy of Balthazar Korab Archive / the Library of Congress

Lured by the promise of a marquee skyscraper in the world's architectural capital, Yamasaki had to reconcile his small-scale sensitivities with his egotistic dreams. The Port Authority had hired him because they were impressed by his unique synthesis of human-

oriented design with engineering acumen. In the end, the project nullified the former qualities. Serenity, surprise and delight were difficult to find in such enormous brute objects or the vast windswept plaza. Despite the project's aesthetic failures, there were successes: the buildings functioned wonderfully and quickly achieved almost full occupancy. Essentially, the Twin Towers were technological marvels, illustrating the efficacy of framed-tube construction.

Yet the Trade Center's critical reception affected the course of Yamasaki's remaining career. Architectural journalists unanimously praised the proposal at its 1964 unveiling, but raged against a slightly modified version published two years later. What was originally considered a bold urban scheme and a technological phenomenon became reinterpreted as a monstrously over-scaled inhuman blight on the city. Such critiques never swayed potential clients, however, and Yamasaki's office received a steady stream of skyscraper commissions until his death. But within the profession, the damage could be seen in the decreasing coverage afforded to Yamasaki's buildings: after 1966, his new projects were ignored by most architectural journals.

The World Trade Center, whose surface delicacy belied their structural heft. Image courtesy of Balthazar Korab Archive / the Library of Congress

Attacks on his work, however, weren't new. When the Trade Center's most trenchant critic, Ada Louise Huxtable, memorably described the buildings as 'the world's daintiest architecture for the world's biggest buildings', she echoed supporters of the 'masculine' bare bones, steel-

and-glass wing of contemporary architecture who viewed Yamasaki as a mere decorator whose work raised troubling associations.

‘Dainty’ wouldn’t be the only dubious epithet of a gendered nature to be directed toward Yamasaki’s work: a comprehensive list would include terms like ‘frilly’, ‘precious’, ‘prissy’, ‘saccharine’, ‘lacy’ and ‘epicene’. Such descriptions were firmly connected in the public mind with women and their ‘frivolous’ obsession with decoration. To his detractors, much of Yamasaki’s work revealed an unfortunate tendency to cherish ornament and decorative effects over spatial or tectonic rigour.

Image courtesy of Balthazar Korab Archive / the Library of Congress

A further blow occurred in the early 1970s, when publicity surrounding the demolition of St Louis's Pruitt-Igoe apartment complex incited a wave of criticism against America's urban renewal policies. Yamasaki had designed Pruitt-Igoe early in his career, as lead architect of Helmuth, Yamasaki & Leinweber. He originally envisioned the complex of nearly 3,000 dwelling units as a mixture of two-storey row houses and widely spaced 11-storey slab blocks with a 'green river' of grass and playgrounds weaving through the site. When the designs were published, his innovative combination of skip-floor lifts with a wide, street-like gallery outside each apartment door drew praise. But draconian federal housing regulations and cost cuts gutted the project and, despite his protests, Yamasaki was forced to nearly double the density of units per acre, eliminate the row houses and green river, and shrink the individual units. The resulting buildings – all slab blocks – were institutional and imposing, a far cry from the more human-scaled community Yamasaki had intended.

Cheap construction, forced segregation, restrictive income policies and managerial indifference to tenants' needs and requests turned Pruitt-Igoe into a disaster. Intended for more than 10,000 occupants, only a few hundred remained after two decades. As public housing deteriorated both literally and conceptually, detractors looked to assign blame. Sociologists concluded that the tenants' miserable lives were attributable to flawed government housing policies combined with poor management. Some, however, held Yamasaki responsible, claiming Pruitt-Igoe's design predicted its failure. But Charles Jencks went a step further: he laid the blame solely with the architect. When a section of Pruitt-Igoe was demolished in 1972, Jencks seized on an image of the destruction as symbolic of the death of the Modernist-utopian dream and began scapegoating Yamasaki as the cause of the project's demise. Unfortunately, less knowledgeable or attentive readers naively accepted Jencks' absurd and oft-repeated indictment, further damaging Yamasaki's reputation.

Time magazine, 1963. Image courtesy of Time

In recent years, a fully fledged revisionist history has evolved to counter ‘The Pruitt-Igoe Myth’, shifting culpability from the architects to the government’s misguided and underfunded public housing initiatives. The consensus today is that such public housing projects were doomed from the outset, but Yamasaki died well before this revisionist movement gained momentum.

The Pruitt-Igoe experience left Yamasaki bitter, and not just because of his battles with the housing authority. Over time he became progressively self-critical about Pruitt-Igoe's design, regretting the 'deplorable mistakes' made there and expressing his disillusionment with high-rise housing as a whole. In private correspondence he was harsher: 'I am perfectly willing to admit that of the buildings we have been involved with over the years, I hate this one the most'. Beyond the damaging critiques of the World Trade Center and Pruitt-Igoe, Yamasaki also was accused of simultaneously pandering to popular taste and catering to elite corporations. Such criticisms removed him from the pantheon of American architecture and obscured his work for a generation. But Yamasaki deserves better. He should be remembered as an innovator who questioned Modernism's basic tenets, reconnecting with our human heritage to create serene, dignified buildings and environments for everyone.