PARADOXICAL MODERNISM IN SINGAPORE'S MOSQUE ARCHITECTURE

Secularism, Indo-Saracenic Elements, and Mosque Upgrading in the Inaugural Mosque Building Fund Phase (1977-1983)

Hadi Osni

ABSTRACT: This paper examines the paradoxes of applying modernist architectural principles, rooted in secular, functional ideals, to mosque design during the initial phase of Singapore's Mosque Building Fund (MBF) from 1977 to 1983. Drawing on archival plans, photographs, and newspaper articles, it explores how national objectives shaped mosque construction, resulting in what this paper terms "paradoxical" Modernism: architectural outcomes that adapt modernist ideals to meet the Malay/Muslim community's spiritual, symbolic, and communal needs. Rather than signalling deficiency, the term highlights the negotiated tensions between state planning and religious expression in a postcolonial context. It examines the collaboration among the Islamic Religious Council of Singapore (MUIS), architects from the Housing Development Board (HDB), and the Mosque Building Committee (Jawatankuasa Pembinaan Masjid, JPM), focusing on how these partnerships balanced planning objectives with community feedback. The resulting mosque designs attempted to reconcile modernist forms with Malay/Muslim perceptions of appropriate mosque aesthetics and functions. The study analyses how modernist idioms, the International Style and Brutalism, were used to reinterpret Indo-Saracenic elements such as domes, minarets, and arches into simplified, geometric forms across seven MBF mosques: Muhajirin (1977), Mujahidin (1977), Assyakirin (1978), An-Nur (1980), Al-Ansar (1981), Al-Muttaqin (1980), and En-Naeem (1983). The analysis is structured around three key areas: first, a discussion of mosque designs influenced by modernist idioms; second, how Indo-Saracenic forms were adapted to fit these idioms; and third, the integration of elements such as open courtyards and balconies. Finally, the paper addresses how redevelopment pressures have led to modifications or demolition of these buildings. These changes reveal the "paradoxes" not as flaws, but as signs of how architecture responded to evolving community needs and planning priorities. Instead, these mosques should be recognised as culturally significant reflections of their time's socio-political conditions, raising broader questions about conserving modernist religious architecture in Singapore.

KEYWORDS: Indo-Saracenic, Modernism, Secularism, Singapore mosques, Urban redevelopment

INTRODUCTION: In Singapore, the state adopts pragmatic governance in a secular, multicultural society by maintaining a formal separation between religion and government. Acknowledging the significance of social cohesion in a multicultural context, the state has implemented strategies to ensure that religious practices and institutions contribute positively to the nation's stability and growth since its independence. This is achieved by utilizing religious institutions to foster social cohesion and uphold societal stability. This model permits religious institutions to operate freely but within the boundaries set by the state's governance objectives. One of the primary tools for managing religious affairs in this framework is the Islamic Religious Council of Singapore (Majlis Ugama Islam Singapura, MUIS), established in 1968, which provides centralized governance for Muslim affairs, aligning religious activities with national development goals.

The Mosque Building Fund (MBF), launched in 1975, exemplifies this pragmatic governance and approach to secularism. In the 1970s, rapid urbanization in the

post-independence period led to the demolition of traditional settlements and the resettlement of Muslims into Housing Development Board (HDB) estates, leaving many without convenient access to religious infrastructure. The MBF, funded through voluntary contributions from the Central Provident Fund (CPF), allowed mosque construction without direct government funding, aligning with urban development goals to ensure every HDB estate had a mosque (Anonymous, 1977).

The outcome is what this paper terms "paradoxical" Modernism, which describes the architectural outcomes that result when modernist principles are adapted to meet Singapore's Malay/Muslim community's spiritual, symbolic, and communal needs. Rather than signaling deficiency, the term highlights the negotiated tensions between state planning and religious expression within a postcolonial context.

The mosque-building process under the MBF was collaborative. HDB architects designed the mosques, involving MUIS, and the Mosque Building Committee (Jawatankuasa Pembinaan Masjid, JPM) (Salleh, 1985). Between 1977 and 1983, the MBF facilitated the construction of seven mosques, including Muhajirin (1977), Mujahidin (1977), Assyakirin (1978), An-Nur (1980), Al-Ansar (1981), Al-Muttaqin (1980), and En-Naeem (1983).

PARADOXICAL SYNTHESIS: MOSQUES WITHIN SINGAPORE'S SECULAR, MULTICULTURAL GOVERNANCE

Various scholars have analyzed this state-religion dynamic. For instance, Tan (2019) highlights Singapore's "pragmatism," which prioritizes practical solutions over ideological rigidity. Musa (2023) distinguishes between "soft" and "hard" secularism, showing how the state adapts to integrate religious diversity while maintaining stability. Abdullah (2012) explores how Islam is managed through co-optation strategies that balance state control with religious autonomy. Accordingly, Singapore's mosque architecture can be seen as a tangible manifestation of this relationship, encapsulating governance, secularism, religious adaptation, and state-religion dynamics within a multicultural framework.

This balance is evident in the MBF, which facilitated mosque construction in housing estates while upholding the government's secular stance by avoiding direct state funding. The MBF supported land purchases and building costs, allowing mosque committees to focus on fundraising for furnishings and other necessities. Significant funds were raised for high-quality items such as furniture and equipment. For instance, Muhajirin's mosque building committee (JPM) spent approximately $70,000 in 1977, while Al-Ansar's spent $200,000 in 1981 (Ahmad, 1986). In addition to the fixed monthly contributions via their CPF, households were also encouraged to make voluntary donations, and fundraising activities like selling *Hari Raya Puasa* (Eidul Fitri) cards were organized. Once mosques were completed, they raised funds to cover ongoing costs, such as utilities and religious staff allowances (Yaakub, 1982). This approach upheld the government's secular stance by avoiding direct state funding while empowering the Malay/Muslim community to develop and maintain religious infrastructure.

Under the Development Control (DC) guidelines established by the Urban Redevelopment Authority (URA), the "use quantum" guidelines mandate that 50% of a mosque's gross floor area must be designated for prayer spaces. The remaining 50% is allocated for religious-ancillary functions such as classrooms, offices, and community services (Mutallif & Rauzan, 2019, p. 48). These ancillary services include pre-marriage counseling, legal clinics, health check-ups, and interfaith collaborations, positioning MBF mosques as community hubs (Mutallif & Rauzan, 2019, p. 60). Thus, within HDB estates, these mosques serve dual roles: as places of worship and centers for education and social services to address the educational and social needs of the Malay/Muslim community:

> *In Singapore, mosques have become multi-functional. They are still chiefly houses of worship. But the new mosques today carry out a series of other activities such as kindergarten classes, religious tuition for students and adults, and even a Library service.*
>
> *They are all related to efforts to promote the education and well-being of Muslim youngsters. They are a reflection of the progress of the Malay/Muslim community here, of their desire to play their part in the economy of the country.*
>
> *And in the housing estates, the mosque figures prominently in their plans. Progress has been made, but the Malays/Muslims know that there is a lot more ground to be covered.*
>
> *This is accompanied by a keen awareness of the fact that modern education must also be harnessed to strengthen the religious foundation of Muslims and to equip the young for their role in society. (Rashid, 1982, p. 4)*

Given the complexity of designing mosques, a collaboration between MUIS, HDB architects, and JPM was essential. MUIS oversaw mosque development, while HDB architects designed mosques to meet community needs

in compliance with DC guidelines. The JPM, comprising professionals like architects and engineers, refined these designs to ensure they were functional, culturally, and religiously appropriate. While HDB architects were generally receptive to suggestions from the JPM, especially those that enhanced the mosque's aesthetic appeal and functionality, all recommendations were carefully evaluated for feasibility and alignment with the broader design vision. (*Anonymous, 1985; 1990; 1993*).

An additional factor shaping the design outcomes was the financial pragmatism underpinning post-independence development. As with schools, housing, and clinics, mosque construction under the MBF was influenced by what has been described as an "architecture of austerity", a state-led strategy prioritizing standardized, cost-effective, and replicable designs to maximize delivery without compromising basic function or decorum (Jacobs & Cairns, 2008; Chang & Zhuang, 2023). Modernism's modular "kit-of-parts" logic enabled architects to meet tight budgetary constraints while still incorporating essential religious elements, resulting in mosque forms that were legible, adaptable, and symbolically resonant within a highly rationalized building regime.

The construction of Darussalam (1989) and Darul Ghufran (1990) highlights some of the challenges of balancing functionality with cultural and religious identity as well as the tensions between HDB architects and the JPM. For the construction of Darussalam, HDB initially proposed a circular prayer hall design, but the JPM rejected it, citing limited capacity and concerns over its impractical layout. Instead, the JPM favored a design outlined by a private firm, Design 2000, which better addressed the needs of worshippers while meeting the community's expectations for functionality and religious needs. Further deliberations between the JPM and HDB resulted in modifications to the proposed structure, including expanding the number of floors from two to three to accommodate additional classrooms (*Anonymous*, 1986). Similarly, for Darul Ghufran, the JPM raised concerns about the lack of essential Islamic elements, such as a dome, which they viewed as vital for religious and cultural expression. While HDB incorporated some suggestions, like a minaret and decorative Islamic motifs around the windows, other proposals, such as installing louvers for the women's prayer hall to enhance gender segregation, were rejected due to ventilation concerns. (Zainal et al., 1987; *Berita Harian*, 1987, 1990).

Central to these debates was ensuring that mosque designs incorporated key Islamic elements, such as domes and minarets, to reflect the religious and cultural identity of the Malay/Muslim community within Singapore's secular, multicultural society. These architectural features were seen as crucial for providing visual continuity with traditional mosque design and reinforcing their symbolic significance in an urban and modernizing context. The symbolic importance of architectural elements as essential features of Islamic architecture was illustrated in a 1990 *Berita Harian* article titled "Masjid" by Basiran H. Hamzah [FIGURE 01]. In the story, Haji Muin, a fictional character, dreams of a red cross, a Christian symbol, appearing on the minaret of a newly built mosque, which lacked the familiar dome. The absence of the dome symbolizes for Haji Muin a more profound loss of Islamic identity, reflecting his anxieties about its erosion in the face of modern architectural trends. In contrast, his son Munir embraces the design without a dome, viewing it as part of the natural evolution of mosque architecture in a modern context. The article includes an illustration with Haji Muin conversing with his son in front of a domeless mosque, illustrating generational perspectives on mosque design. Their dialogue reads: "What is a mosque without a dome?" and "Perhaps, it's a mosque for the technological age" (Hamzah, 1990, p. 6). This generational divide mirrored broader societal changes, where younger Muslims adopt more pragmatic perspectives while older generations struggle with the diminishing presence of familiar religious symbols.

PARADOXICAL ADAPTATIONS: TRANSLATING INDO-SARACENIC ELEMENTS TO MODERNIST AESTHETICS

The Indo-Saracenic vocabulary seen in MBF mosques should be understood not as novel stylistic intrusions, but as part of a longer genealogy of mosque architecture in the region. Masjid Sultan (rebuilt in 1932) is perhaps the clearest exemplar of this earlier phase in Singapore Situated in Kampong Glam near the former royal Istana Kampong Gelam, the mosque represents a colonial reimagining of Islamic architecture. The original 19th-century structure, featuring a vernacular triple-tiered roof, was demolished and replaced with a grand Indo-Saracenic design that blended Mughal forms with Gothic Revival and Neo-Classical influences typical of British India. Its exaggerated onion domes, minarets capped with chhatris, scalloped arches, *jali* screens, and *pishtaq*-style ornamentation reflect the British colonial mode of incorporating Indian-Islamic aesthetics into civic and religious buildings.

This style was widely adopted across Southeast Asia in the late 19th and early 20th centuries. Regional examples include Masjid Raya Baiturrahman (1881) in Banda Aceh, Masjid Zahir (1912) in Alor Setar, and Masjid Ubbudiyyah (1917) in Kuala Kangsar. Within Singapore itself, mosques such as Masjid Abdul Gafoor (1907), Masjid Hajjah Fatimah (rebuilt in the 1930s), and Masjid Alkaff Kampong Melayu (1932) also reflect Indo-Saracenic influences [FIGURE 01].

01 Pre-MBF mosque precedents showing transregional Indo-Saracenic influences. Exterior view of Masjid Sultan in Singapore, in the 1960s (a). © RAFSA Collection, courtesy of the National Archives of Singapore; The exterior of Masjid Zahir in Alor Setar, Kedah, was built in 1912 and officially opened in 1915 (b). © Tan Kok Kheng Collection, courtesy of National Archives of Singapore.

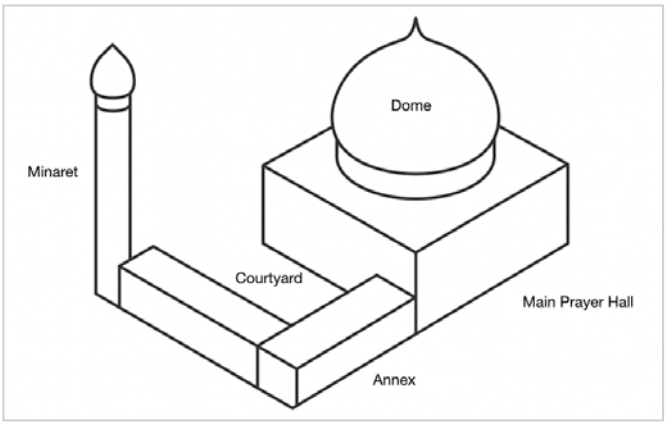
Despite extensive research on mosque architecture in Southeast Asia, there is limited focus on how modernist mosques have adapted Indo-Saracenic elements into the modernist idioms of the International Style and Brutalist aesthetics. Metcalf (1989) explores how Indo-Saracenic architecture reflected British imperial power, influencing mosque designs across the region, while Glover (2007) highlights how colonial urban planning shaped architectural practices. Tajudeen (2017) examines how transregional trade facilitated a blend of styles in traditional mosques, although their intersection with modernist trends in Singapore remains underexplored. Studying Singapore's mosques reveals how designs navigate regional traditions, urban policies, and the balance between continuity and change, integrating modernist principles with Islamic traditions, secularism, and pragmatism warrants further exploration.

During Phase I of mosque development, two modernist idioms, the International Style and Brutalist aesthetics, shaped mosque architecture. The International Style, which emerged in the 1920s, centered on rectilinear forms, minimal ornamentation, and modern materials such as glass and concrete (Hitchcock & Johnson, 1932; Ballantyne, 2003). This approach resonated with Singapore's urbanization, which was used in the 1960s and 1970s, and HDB's focus on functionality and efficiency in nation-building. Furthermore, Chang and Winter (2015) highlighted how modernist principles were adapted to tropical climates, merging minimalism with functional designs. This regional Modernism, shaped by colonial and postcolonial influences (Crinson, 2008; Le Roux, 2003; Driver & Yeoh, 2000), incorporated features such as open courtyards and balconies. Mosques like Muhajirin (1977), Mujahidin (1977), An-Nur (1980), and Al-Ansar (1981) exemplify this approach, employing geometric designs and tropical adaptations like courtyards, balconies, and clerestory windows to balance aesthetics and practicality

Likewise, Brutalist aesthetics, which were predominant from the 1950s to the 1980s, emphasized raw concrete, bold geometric forms, and utilitarian design (Banham, 1966). In Singapore, Brutalism influenced key buildings during the 1970s and 1980s, in line with rapid urbanization and an emphasis on functionality. Notable examples include the People's Park Complex (1970), Jurong Town Hall (1974), and the Singapore Science Centre (1977). The incorporation of Brutalist aesthetics in Singapore's mosque architecture during this period reflected these national priorities, underscoring a pragmatic shift towards simplicity and utility over traditional forms. Mosques such as Assyakirin (1978), Al-Muttaqin (1980), and En-Naeem (1983) exemplify this aesthetic through their use of exposed materials and striking geometric compositions, which reflect both modernist functionality and local context [FIGURE 02].

Although the International Style and Brutalist aesthetics prioritized efficiency and simplicity, Indo-Saracenic elements such as domes, minarets, and arches were not entirely abandoned. Early MBF mosques generally adhered to a consistent spatial typology that prioritized functional zoning and clarity of form, which aligned with modernist design principles. At the core was the main prayer hall (*dewan solat*), the largest and most prominent space, often marked by a dome. Within the prayer

02 International Style aesthetics in early MBF mosques. An-Nur: Elevated view highlighting the stepped entrance, prayer hall, and annex. © Aga Khan Trust for Culture Collection.



03 Axonometric diagram illustrating the typical tripartite spatial configuration comprising a main prayer hall, transitional courtyard, and front-facing annex block with an adjacent minaret. © Author.

04 Mujahidin: featuring a circular main prayer hall with a simplified dome and adjacent minaret, connected through an open courtyard. © Aga Khan Trust for Culture Collection.

05 Al-Muttaqin illustrating a geometric dome above the prayer hall and a transitional courtyard linking the main building to the annex block. © Aga Khan Trust for Culture Collection.

hall were essential liturgical elements such as the *mihrab* (a niche indicating the direction of prayer), the *minbar* (a pulpit for sermons), and, in many cases, a minaret to signal the *adhan* (call to prayer). A transitional open courtyard typically connected the prayer hall to a front-facing annex block, accommodating supporting functions including classrooms, administrative offices, multipurpose spaces, and ablution areas. [FIGURE 03, FIGURE 04, FIGURE 05].

Additionally, these features were adapted through a modernist lens of aesthetic abstraction, employing simpler designs and modern materials for cost-effective and

06 A modernist reinterpretation of a minaret in early MBF mosques: Mujahidin. © Aga Khan Trust for Culture Collection.

efficient construction. This pragmatic approach aligned with Modernism's minimalist ethos while maintaining cultural and religious resonance. Domes, typically onion-shaped and highly ornate in Indo-Saracenic architecture, were simplified into geometric forms and integrated into the overall structure of early MBF mosques. For instance, Mujahidin (1977) features a cuboid-shaped dome with semi-oval openings constructed from concrete, steel, and glass fenestrations. [FIGURE 06].

Similarly, Al-Muttaqin (1980) features an octagonal dome atop the minaret extending into an octagonal gallery within the prayer hall, emphasizing Brutalist structural clarity and modernist functionality. On the inside, a view from the gallery towards the *mihrab* illustrates the octagonal dome's spatial efficiency and integration within the prayer hall [FIGURE 07].

In Indo-Saracenic architecture, minarets were elaborate and decorative, often featuring multiple towers and intricate details. Modernist mosques simplified these elements, retaining the minaret as a focal point, and translated it into simplified geometric forms aligned with modernist principles of structural clarity and material efficiency. These minarets were typically constructed using reinforced concrete, enabling the clean expression of vertical volumes without excessive ornamentation. Visual emphasis was placed on silhouette and proportion rather than on decorative surface treatments. For example, Mujahidin (1977) features a circular minaret transitioning to four streamlined columns at the dome's base. Similarly, Assyakirin (1978) incorporates a linear minaret of exposed brick and an onion dome, exemplifying Brutalist materiality, while Al-Muttaqin (1980), An-Nur (1980), and Al-Ansar (1981) showcase simplified minarets that integrate modern materials and geometric forms. These minarets geometrically adapt the *chhatri*, semi-open, elevated, dome-shaped pavilions from Indo-Saracenic architecture, emphasizing structural clarity and vertical symbolism within a modernist aesthetics [FIGURE 08].

Arches were also adapted into modernist mosques to reflect minimalist design principles. In Indo-Saracenic

07 Al-Muttaqin: Exterior view (a). Internal view (b). © Aga Khan Trust for Culture Collection.

architecture, arches were often pointed, cusped, or scalloped, adding grandeur and intricate ornamentation. In contrast, modernist mosques stripped arches of embellishment, instead emphasizing scale, proportion, and material integrity. This simplification did not reduce their symbolic or spatial significance; rather, it foregrounded their monumentality through austere geometric forms. For instance, Al-Ansar (1981) and An-Nur (1980) feature tall, geometric arches stripped of the intricate carvings typical of traditional styles, reflecting Modernism's emphasis on functional simplicity, spatial continuity, and the transition between indoor and outdoor spaces. Similarly, in En-Naeem (1983), arches frame a perforated concrete screen, creating a formal counterpoint to the glazed arch openings behind. These elements act as *brise-soleil*, filtering light and improving thermal comfort, echoing Corbusian strategies in buildings like the ATMA House, where sun-shading devices serve both environmental and compositional purposes [FIGURE 09, FIGURE 10]

This translation process operated in both directions. While domes and arches were simplified, modernist features like courtyards, balconies, and clerestory windows were incorporated. Early MBF mosques were designed to rely primarily on natural ventilation and daylight, reducing dependence on air-conditioning or artificial lighting. This approach reflected both climatic responsiveness and cost-efficiency, aligning with modernist principles of functional, context-driven design. Site plans and building layouts were typically oriented to maximize cross-ventilation and minimize solar heat gain, with attention to sun paths and prevailing wind directions. High-level clerestory windows, recessed balconies, and façade treatments such as *brise-soleil* were incorporated to reduce glare and allow indirect lighting. These strategies informed core design aspects such as orientation, massing, and fenestration patterns. Additionally, courtyards in Mujahidin (1977), Assyakirin (1978), Al-Muttaqin (1980), An-Nur (1980), and En-Naeem (1983) linked indoor and outdoor environments while facilitating airflow and providing shade. They also offered overflow spaces for worshippers during peak

08 A modernist interpretation of a minaret in early MBF mosques: Al-Ansar. © Aga Khan Trust for Culture Collection.

09 A modernist reinterpretation of an arch in early MBF mosques: An-Nur; A perspective from the covered aisle toward the stepped entrance. © Aga Khan Trust for Culture Collection.

10 A modernist reinterpretation of an arch in early MBF mosques: En-Naeem; Close-up of the arched entrance. © Aga Khan Trust for Culture Collection.

11 A tropical-sensitive courtyard in an early MBF mosque: Al-Muttaqin; Perspective from the covered aisles towards the outdoor courtyard. © Aga Khan Trust for Culture Collection.

12 Modernist balconies and clerestory windows in an early MBF mosque: An-Nur; Interior view of the prayer hall. © Aga Khan Trust for Culture Collection.

times, such as Friday prayers and *Hari Raya Puasa* (Eidul Fitri) or *Hari Raya Haji* (Eidul Adha) [FIGURE 11].

Similarly, balconies were streamlined to emphasize functionality, replacing intricate latticework with sleek lines. Mujahidin (1977), for instance, features both open and enclosed balconies that transition between covered aisles and the prayer hall, resulting in a minimalist transition between spaces. Assyakirin (1978) includes upper-glazed and screened balconies, optimizing natural light and airflow. Likewise, Al-Muttaqin (1980) utilizes covered upper balconies with semi-circular openings and a design based on geometric functionality. In An-Nur (1980), clerestory windows, integrated galleries, and arched balconies harmonize with geometric forms to enhance ventilation and illumination [FIGURE 12].

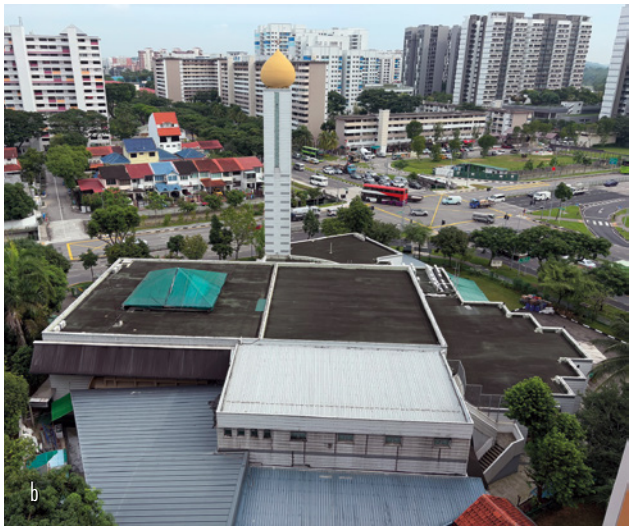
PARADOXICAL MODERNISM, MODERN VULNERABILITIES

Today, modernist architecture in Singapore faces increasing threats from rapid urban redevelopment, placing many early post-independence buildings, including these mosques, at risk of demolition or significant alteration. Once hailed as symbols of progress, these structures now paradoxically confront challenges as they compete with the demand for new infrastructure and urban development. From a policy standpoint, the number of buildings officially gazetted for conservation in Singapore from the post-war period is relatively small and has only recently gained attention. Singapore has conserved over 7,200 buildings, primarily from the pre-war era. Recently, there has been a heightened effort to conserve post-war modernist structures. The URA has taken proactive measures, gazetting notable buildings such as the Golden Mile Complex, which was officially conserved in 2021 (Tham, 2021). The challenge lies in the fact that, unlike older pre-war buildings, many of these modernist structures are larger and woven into the everyday urban landscape, making them less prominent and often overlooked. Consequently, there is a lack of awareness regarding their significance in representing Singapore's architectural heritage and its phases of nation-building.

From the outset, these mosques encountered challenges concerning capacity and adaptability. For instance, En-Naeem (1983) required expansion just five years later to accommodate the growing Malay/Muslim community in the estate. The original HDB-designed mosque lacked adequate facilities, catering to 2,000 worshippers. A $1 million expansion by SZ Partnership included a single-story extension with a multipurpose hall and classrooms, raising the mosque's capacity to 3,500 worshippers (Pandi, 1993). However, these modifications compromised the mosque's original modernist features, such as its open courtyards, which were enclosed to enhance comfort for congregants [FIGURE 13].

Assyakirin (1978) faced similar challenges. By the 1990s, its original design, which incorporated exposed brick and geometric forms and accommodated 3,000 worshippers, required revision. In 2003, it was demolished and redeveloped for $4.5 million by SZ Partnership. The new mosque increased its capacity to 4,000 worshippers and incorporated modern features, including over 20 classrooms, a basement car park, and a plaza for outdoor activities (*Anonymous*, 1999; Samat, 1999). However, this redevelopment resulted in the loss of the mosque's distinctive Brutalist aesthetic. It was replaced with plastered walls and decorative arches embellished with arabesque motifs featuring a 12-pointed star within a circle, with a smaller 12-pointed star at its center, a unicursal dodecagram. The original Brutalist minaret with exposed brick and open courtyards made way for the rebuilt minaret featuring a square, tapering design without a dome. The original design of the prayer halls featured a men's prayer hall on the first floor with a surrounding women's gallery. In contrast, the redeveloped prayer hall spans three levels with triple-height volume and an open women's gallery that does not extend to the front, creating an impression of increased vertical space. The new design incorporates open windows on both sides, allowing more natural light into the hall [FIGURE 14].

In the 2000s, MUIS established the Mosque Upgrading Program (MUP) to systematically tackle these challenges.



13 Evolution of En-Naeem: Exterior view showing the original exposed brick façade and open courtyard spaces (a). © National Library Board Singapore; Present-day view after redevelopment showing the ecnlosed couryard and cladded façade (b) © Author.

14 Evolution of Assyakirin: Exterior view of the original minaret (a). © Aga Khan Trust for Culture Collection; Exterior view of the rebuilt minaret (b) © Author.

Over three phases, the MUP has continued to modify or entirely replace numerous early modernist mosques, impacting their original design and aesthetic intent (Islamic Religious Council of Singapore [MUIS], 2024). For instance, during MUP Phase I, Muhajirin (1977) underwent significant redevelopment in 2006. The original structure, featuring exposed brick and noted for its onion-shaped dome and Minangkabau-style roof, was demolished in favor of a new design. Completed in 2009 as part of the Singapore Islamic Hub, the new mosque features contemporary Islamic architectural elements, including Persian-style archways and geometric motifs showcasing a 12-pointed floral design within a 10-pointed star pattern, as well as a "Malay roof" with a tiered jack roof and ochre-tiled accents [FIGURE 15].

Similarly, Al-Ansar underwent a $15.9 million renovation in 2015, led by ONG&ONG Pte Ltd. While the domed prayer hall and cuboid-shaped minaret were retained, much of the 1981 structure was replaced. The mosque's layout was expanded by 40%, increasing its capacity to accommodate 4,500 worshippers. The prayer hall remained embedded in the hill, with access to a new basement level, and the minaret was adapted to accommodate a lift. Key additions included wheelchair ramps and lifts, which are accessible for individuals with disabilities, as well as multipurpose classrooms, an auditorium, a library, and a family prayer area. (*The Straits Times*, 2015) The original prayer hall and women's gallery on the second floor incorporated fenestration designs and the structural supports for the dome, creating a cantilevered space below. For the modernized prayer hall, the dome structure was redesigned to feature an arabesque

15 Evolution of Muhajirin: Exterior view of the original mosque, featuring exposed brickwork, an onion-shaped dome and a Minangkabau-style roof (a). © MUIS, 1991, p. 12; Exterior view of the redeveloped mosque (b). © Author.

16 Evolution of Al-Ansar: Exterior view of the original mosque (a). © Majlis Ugama Islam Singapura Collection, courtesy of National Archives of Singapore; Redeveloped structure (b) © Author.

star motif. A lattice façade, described by the architects as "an intricate pattern inspired by the arabesque," replaced the original modernist aesthetic, offering a contemporary reinterpretation of Islamic art while allowing for daylight and ventilation. (*ArchDaily*, 2015). [FIGURE 16].

PARADOXES IN SINGAPORE'S MODERNIST MOSQUE ARCHITECTURE

In the paragraphs before, the paradoxes inherent in applying modernist architectural principles to mosque design in Singapore during the initial phase of the MBF from 1977 to 1983 have been examined. These mosques reflect how design practices negotiated regional traditions, urban policies, and the balance between continuity and change. Such negotiations, shaped by pragmatism (Tan, 2019), calibrated secularism (Musa, 2023), and institutional co-optation (Abdullah, 2012), resonate with Lefebvre's (1991) notion of the production of space, where architecture becomes a medium through which state ideologies are spatially embedded. In this context, early MBF mosque designs can be understood as aesthetic adaptations and spatial expressions of governance, mediating between religious tradition, modernist form, and national planning imperatives. This offers a productive lens for understanding how architecture materializes between control and continuity in a secular, multicultural state.

By tracing three forms of paradoxes, we have explored how national objectives, cultural considerations, and evolving urban demands have shaped the synthesis of secular Modernism and religious symbolism in mosque architecture.

Firstly, an paradoxical synthesis of secular and religious expression emerged as national objectives, such as urban development, social cohesion, and budgetary constraints, which influenced mosque construction. The government's pragmatic approach aimed to integrate religious institutions within the national framework without undermining state planning goals. While modernist architecture was favored for its emphasis on technological progress, standardization, and functional efficiency, its universalist

tendencies sometimes underplayed the symbolic and cultural expressions valued by the Malay/Muslim community. Therefore, community feedback, mediated through the JPM, sought to reconcile the modernist forms proposed by HDB architects with Malay/Muslim conceptions of appropriate aesthetics and functional expectations for mosque architecture.

Secondly, this collaboration yielded an architectural outcome that this paper terms an paradoxical modernism: a negotiated adaptation of secular design principles and religious architectural symbolism. Through the use of modernist idioms, such as the International Style and Brutalist aesthetics, key Indo-Saracenic elements like domes, minarets, and arches were reinterpreted into simplified, geometric forms. This was not a pure application of Modernism but an intentional adaptation that preserved the movement's minimalist ethos while integrating culturally resonant forms. In this sense, paradoxical Modernism does not imply architectural failure, but instead highlights how modernist frameworks were pragmatically and symbolically recalibrated to reflect the spiritual and communal needs of the Malay/Muslim community in a postcolonial context.

Thirdly, the original designs, once hailed as symbols of progress, have "paradoxically" faced contemporary challenges such as urban redevelopment and changing community needs. Many of these early modernist mosques faced limitations in capacity and adaptability, prompting alterations or complete demolition. While emblematic of a period in Singapore's architectural and social history, the original structures were insufficient in anticipating future demands, not in a technical sense, but insofar as they reflected the planning priorities and demographic projections of their time, which have since evolved. Although it is necessary to address the evolving needs of Singapore's Malay/Muslim community, focusing on functionality, inclusivity, and larger congregational spaces, the extensive renovations and redevelopments have impacted their original design and aesthetic intent. These developments highlight the vulnerabilities of modernist heritage in rapidly urbanizing contexts and reflect broader challenges in balancing heritage conservation with the dynamic needs of urban and religious communities. This is compounded by a general lack of awareness and appreciation, among stakeholders and the public, of the architectural, social, and ideological significance of these early mosques. None are legally protected as conserved buildings, making them especially susceptible to unsympathetic alterations or replacement.

These paradoxes in Singapore's modernist mosques reflect the tensions between the universal aspirations of modernist architecture and the specific cultural, religious, and urban demands of an evolving society. By applying modernist principles to mosque design during the inaugural MBF phase, Singapore navigated the dual forces of globalization and cultural and religious expression, resulting in an paradoxical synthesis. This paper underscores how such paradoxes offer lessons for heritage preservation, particularly in contexts where functional, cultural, and religious needs intersect with evolving urban priorities. These insights contribute to broader discussions on the adaptability of modernist architecture and its relevance in addressing the challenges of contemporary heritage conservation.

CONCLUSIONS

This study has examined the paradoxes of applying modernist architectural principles, rooted in secular and functional ideals, to mosque design during Singapore's initial Mosque Building Fund (MBF) phase from 1977 to 1983. These "paradoxes" stemmed from the interplay of secular governance, cultural and religious symbolism, and the evolving needs of urban redevelopment.

These paradoxes reflect the tensions between the universal aspirations of modernist architecture and the specific cultural, religious, and urban demands of a rapidly evolving society. The MBF mosques illustrate how Singapore navigated the dual forces of globalization and cultural expression, resulting in an paradoxical synthesis. These paradoxes highlight broader challenges in reconciling modernist architecture with cultural and religious identities in a rapidly urbanizing context, offering lessons for heritage preservation. By addressing the intersection of functional, cultural, and religious needs with urban priorities, this study contributes to ongoing discussions on the adaptability of modernist architecture and its relevance to contemporary heritage conservation.

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Hadi Osni *is a curator at the Malay Heritage Centre under Singapore's National Heritage Board and is involved in curatorial and research work on Malay heritage in Singapore. In 2023, he earned his PhD in Architecture from the National University of Singapore (NUS), focusing on the architectural and urban history of the Baweanese community in Singapore. His research interests include Malay material culture, diasporic narratives, and Southeast Asia's built environment histories. Hadi has led participatory research, cultural mapping, and GIS-based projects to preserve community narratives. He has also contributed to heritage projects supported by government agencies. The views expressed here are solely those of the author in his private capacity and do not in any way represent the views of the National Heritage Board and/or any government agencies.*