IMPERFECT MODERNISM

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EDITORIAL

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LAYERS OF MODERNISM

The idea for this special issue was born during the Imperfect Modernism conference in a discussion with the guest editors Liutauras Nekrošius and Kateryna Didenko. Held in Vilnius in May 2024 and organized by the guest editors of this special issue, the conference brought together scholars, architects, and experts in heritage preservation from Canada, Cyprus, Eritrea, Georgia, Germany, Israel, Kosovo, Lebanon, Lithuania, Poland, Portugal, and Ukraine. A wide range of issues was discussed, highlighting the uniqueness of regional adaptations in conservation, restoration, and adaptive reuse of buildings, sites and neighborhoods of the Modern Movement shaped by each country's political, economic, and socio-cultural factors, while also revealing shared patterns.

Turning to the discussion on the concept of Modernism, it is worth noting that different manifestations and perceptions of modernist heritage have evolved throughout the 20th and 21st centuries across diverse contexts and value systems. Scholarly debates, conservation practices, international initiatives, and local experience have shaped the concept as layered and flexible, now encompassing not only doctrinal modernist works and interpretations but a broader spectrum of modernities.

The earliest doctrinal interpretations linked modernist heritage primarily to the work of pioneering figures of the Modern Movement—often originated in North-western Europe and North America and considered to be Eurocentric. The classic works of Nikolaus Pevsner[1], the foundational texts of Hubert-Jan Henket and Wessel de Jonge, and DOCOMOMO's activities since the late 1980s established the disciplinary canon, presenting Modernism as a coherent doctrine embodied in the works of Le Corbusier, Mies van der Rohe, and the Bauhaus. However, this canon soon began to expand, incorporating Art-deco, tropical and colonial, and Soviet and socialist architecture, thus opening the way to a broader inventory.[2] The establishment of the Modern Asian Architecture Network (2001) highlighted Asia's rich local interpretations of Modernism, while Western-centric approaches continued to shape the global canon by focusing on leading figures and schools, and international perspectives emphasized Modernism as a universal 20th-century architectural language. The issue of 'Other Modernisms' was not only the theme of the 2006 Docomomo International Conference but was further discussed in the Docomomo Journal 36.[3] The integrative framework of UNESCO's Identification

01 The 2006 Docomomo International Conference and Student Workshop in Istanbul (workshop) and Ankara (conference) was entitled and devoted to "Other Modernisms". © Photo: Wido Quist, 2006.

1   PEVSNER, N. (1976). Pioneers of modern architecture. Yale University Press.

2   TOSTÕES, A. (2017). How to love modern [post-]colonial architecture: Rethinking memory in Angola and Mozambique cities. Architectural Theory Review, 21(2), pp. 1-22.

3   TOURNIKIOTIS, P. (2007). Modernism and the issue of otherness. In Other Modernisms: A Selection from the DOCOMOMO Registers. Docomomo Journal, 36, pp. 5-79. https://doi.org/10.52200/docomomo.36.

4   UNESCO World Heritage Centre (2003). Identification and documentation of modern heritage (World Heritage Papers 5). UNESCO.

5   HAYASHI, K., Muramatsu, S., Yamana, Y., & Widodo, J. (Eds.). (2024). mASEANa: Appreciating modern ASEAN architecture (Paperback). Docomomo Japan. ISBN 978-4-904700-80-8

6   FOOLE, F., Eikhoudt, B., Bierman, J. (Eds.) (2010). Ecomomo – Hoe duurzaam is Modern Erfgoed, Docomomo Netherlands, ISBN 9789052693972. https://www.docomomo.nl/upload/files/publicatie_ecomomo1_1.pdf

7   TOSTÕES, A., Blasi, I. & Prudon, T. (Eds.) (2011). Modern and Sustainable. Docomomo Journal, 44. https://doi.org/10.52200/44.I.Z10ME4PV.

and Documentation of Modern Heritage program (2003) encompassed an even broader range—from Art Nouveau to Postmodernism—highlighting the diversity of modernist trajectories.[4]

In the last decades, new horizons have emerged in understanding Modernism. The memory-based heritage perspective views modernist architecture as a carrier of collective memory, tied to everyday practices and community attachments, as reflected in the mASEANa Project (2015-2020).[5] At the same time, an eco-cultural and sustainable heritage perspective is emerging, highlighting the potential of modernist buildings for sustainable development, adaptive reuse, and energy and resource efficiency, as demonstrated for example in Ecomomo[6], a publication by Docomomo Netherlands as from 2010 a follow up to the 2008 Rotterdam Docomomo International Conference or Docomomo Journal 44 from 2011[7]. Both approaches are still further developing but already complement traditional views of modernist heritage mainly driven by historical and biographic approaches, broadening the horizons of its interpretation and preservation.

Within the growing community of today's 85 national and regional Docomomo Working Parties, this approach gains increasing importance and relevance, and poses the challenge of recategorizing and diversifying the views to modernist buildings, sites and neighborhoods. It is our privilege that the guest editors Liutauras Nekrošius and Kateryna Didenko took up this challenge and identified manifold examples that might be perceived as 'imperfect' from a traditional modernist perspective and will help us to understand and further define the future scope and limits of Modern Movement.

INTRODUCTION

Liutauras Nekrošius, Kateryna Didenko

IMPERFECT MODERNISM

In this special issue of the Docomomo Journal, we introduce the concept of "Imperfect Modernism" and continue enriching the ongoing debate on Modernism, highlighting that it exists not only as an ideal but also as a fragmented, locally interpreted practice. It was shaped by geopolitical, economic, and socio-cultural constraints: shifts in power and political upheavals, resource shortages, the needs of local communities, and the integration of traditional architectural practices. Within this "imperfection" are encoded highly informative layers of heritage, which enable the reconstruction of the lived experience of 20th-century architecture, rather than merely its abstract ideals.

"Imperfect Modernism" does not contradict earlier interpretations but extends an integrative logic, emphasizing that the value of modernist architecture lies not in the perfection of forms and concepts, but in the imprints of historical and political constraints and local adaptations, which render it a vibrant, vulnerable, and diverse heritage of the 20th century.

In the special issue Imperfect Modernism, we aimed to highlight the geographical and civilizational diversity of modernist architecture, while also examining how it served not only as a witness to the pivotal moments of the 20th century—such as political and social utopias, technological breakthroughs, and aesthetic and social experiments—but also as a reflection of the dual forces of globalization and a unified architectural vision on one hand, and the struggle to preserve ethnic and religious identities on the other.

In the Call for Papers, we sought to address the following questions:

- How have changing political conditions affected contemporary attitudes toward modern heritage, and what are the current practices for its preservation?
- What challenges and solutions arise when dealing with the rehabilitation or critique of modern heritage?
- How have new societal needs influenced attitudes toward the technical condition of modern heritage sites, which are outdated typologies that are expensive and difficult to adapt?
- What are the practices for documenting modern heritage that is under threat of destruction or has already been lost?

Thus, the open call invited scholars and practitioners to submit research addressing the factors that contribute to the vulnerability of modernist heritage,

ultimately highlighting the aspects that render it "imperfect". This issue comprises ten research articles, including studies presented at the conference in Vilnius as well as submissions received through the open call. It represents a curated collection of research dedicated to the heritage of Modernism across diverse geographical and political contexts, encompassing countries in Europe (Lithuania, Romania, Slovenia, Ukraine), Asia (China, Singapore, Uzbekistan), Africa (Sudan), and Latin America (Argentina, Chile).

The articles can be organized into thematic categories, although most authors address more than one area:

- Modernities in geopolitical transition
- Contextualized modernism
- Functional typologies at risk
- Theory and practice of preservation

This thematic sequence helps to illustrate the underlying causes of the heritage's vulnerability, the pathways of its local adaptations, and the challenges faced by adopting outdated functional typologies. It provides examples of the use of contemporary conservation tools.

MODERNITIES IN GEOPOLITICAL TRANSITION

This section brings together studies demonstrating how political and social transformations have shaped the fate of modernist architecture in countries with varying political regimes. The research shows that this architecture functions not only as tangible heritage but also as a vulnerable witness to political transitions and shifts in power.

In Romania, leisure complexes of the 1960s to 1970s—restaurants, resort centers, and sports halls—have transformed from symbols of socialist modernization into problematic heritage, having lost state support and fallen within the sphere of contentious privatization. Public perception of these sites often remains negative due to their association with the former political regime, which further complicates efforts to engage with and preserve these buildings.

In Chile, the unfinished Ochagavía Hospital became both a symbol of the unfulfilled utopia of a welfare state and a stage for artistic resistance against the dictatorship, before ultimately being converted into a commercial property. The building's condition and functional transformations clearly reflect the impact of shifting political and economic regimes, illustrating how modernist architecture can serve as an indicator of broader social and political transformations.

The Sudan National Museum, from its colonial inception to the post-independence period, consistently functioned as a site of identity negotiation and a political instrument: both its collections and the building's own fate reflect the intertwining of international and local interests. The museum can be understood as an architectural archive, vividly revealing the consequences of political regime changes and the transformations of the socio-political landscape.

CONTEXTUALIZED MODERNISM

This section examines how the universal principles of Modernism were transformed through encounters with local cultural and religious traditions. Both represented cases illustrate that Modernism is not a pure, autonomous doctrine. In various contexts, it inevitably entered into dialogue with history, identity, and social practices.

During the second half of the 20th century, Tashkent in Uzbekistan became a laboratory for architectural experiments in aesthetics, where Soviet

standardization and features of the Modern Movement combined with regional forms and symbols. The city's buildings demonstrate how European Modernist ideas were "translated" into the language of Central Asian traditions through the use of ornamentation, climate-adapted solutions, and familiar spatial configurations. Today, this heritage faces preservation challenges amid post-Soviet transformations and the city's rapid development, while also reflecting issues of identity and engagement with globalization.

In Singapore, modernist forms were integrated into a religious context. The mosque construction program from 1977 to 1983 demonstrated how the functional principles of the International Style and Brutalism were reinterpreted in consideration of traditional Indo-Saracenic elements. Domes, minarets, and arches were transformed into simplified geometric forms, creating hybrid structures that simultaneously reflected state requirements and the needs of the Muslim community. The term "imperfect" emphasizes the intentional architectural compromise that arises from the dialogue between modernist doctrine and local religious and cultural practices.

FUNCTIONAL TYPOLOGIES AT RISK

This section focuses on buildings where typological and technical challenges come to the forefront. The authors analyze how industrial and residential modernist projects confront deterioration, resource shortages, and adaptation difficulties.

The industrial architecture of Kharkiv illustrates these challenges. From the late 19th century, and particularly during the avant-garde and modernist periods, the city developed as an industrial hub, with its architectural language reflecting shifts in ideology – from Constructivism to extremely standardized and industrialized, reminiscent of late soviet architecture modernism. Following the transition to a liberal market economy in the 1990s, many factories and industrial complexes began to deteriorate, and recent military aggression by Russia has heightened the risk of losing these ensembles. The authors propose strategic directions for revitalization that could restore the significance of these spaces for the city's identity.

The Chinese example complements this picture from a different perspective: housing built between the 1950s and 1980s under severe resource scarcity demonstrates "adaptive modernity"—an approach in which standardized plans and industrialized methods were combined with continual local adjustments driven by material shortages, regional climatic conditions, and technological constraints. Projects of this era did not aim for an ideal housing typology but embodied pragmatic, incrementally developed solutions, which today face challenges in assessing historical and architectural value, functionality, and safety. Their preservation demands a comprehensive approach combining technical analysis, socio-cultural context study, and adaptive reuse strategies, reflecting the specificities of modernist typologies developed under resource constraints.

CONSERVATION PRACTICES

The final thematic category focuses on practical methods for preserving modernist heritage, considering digitalization, restoration, and adaptive reuse as key tools for extending the lifespan of architectural works.

The case from Argentina illustrates how digital technologies serve as a vital resource for conservation. The focus is on the work of architect Miguel Ángel Roca, whose projects epitomize Latin American Modernism. An interdisciplinary team of researchers from Argentina and Italy developed digital archives and

multi-scale models that support conservation strategies while actively engaging local communities. The study also emphasizes that digitization and interdisciplinary approaches help overcome existing weaknesses in the conservation of modernist architectural heritage, establishing standards for sustainable management and integrating conservation with contemporary functional requirements. This approach demonstrates that digital technologies open new possibilities for research, representation, and sustainable stewardship of heritage.

Another perspective is provided by the history of Kurnėnai School in Lithuania, built in the 1930s through the initiative of a local patron. This facility, constructed using contemporary technologies and materials, stood out among interwar educational buildings. Following its closure in the early 21st century, the school fell into disuse and gradually lost its architectural integrity, putting its future at risk. The 2019-2020 conservation reinstated the building's architectural and engineering features, emphasizing its significance as a rare example of modernist ambitions in a rural context. The preservation of Kurnėnai School demonstrates how attention can be returned to buildings that, due to their modest scale or peripheral location, are often overlooked in heritage discourse.

The case of the Home of the Army in Šabac, Serbia, is listed among the seven most endangered modernist heritage sites by Europa Nostra (2024). Conceived initially as cultural and community centers, buildings of this typology, following the disintegration of Yugoslavia, came under pressure from market forces while also reflecting the challenges of preserving local identity. The study illustrates how vocational and civic initiatives seek to maintain their role as spaces for culture and community interaction, developing adaptive reuse strategies. The analysis includes a critical assessment of contemporary approaches to rehabilitating modernist structures and demonstrates how these strategies can improve similar conservation efforts internationally. This perspective positions the Šabac case as a relevant example of modernist heritage preservation and intervention practices applicable globally.

CONCLUSION

This special issue of the Docomomo Journal seeks to deepen the discourse on modernist heritage by introducing the concept of "imperfect Modernism" as an additional lens for interpreting its complexities. Instead of celebrating a seamless and idealized vision, the contributions demonstrate how modernist architecture emerged in fragmented, locally adapted forms shaped by political shifts, social demands, economic scarcity, and cultural encounters. Far from diminishing its value, these imperfections provide essential insights into the lived realities of the 20th century and the resilience of communities that engaged with modernity on their own terms. The articles gathered here highlight not only the vulnerabilities of modernist legacies, often contested or neglected due to political and economic transformations, but also their capacity for reinvention. From fragile typologies and hybrid traditions to digital conservation and adaptive reuse, the case studies demonstrate how Modernism remains a site of negotiation between global visions and local identities. By drawing together perspectives from Europe, Asia, Africa, and Latin America, this issue highlights the diversity of experiences that collectively redefine what modernist heritage means today. The notion of "imperfect Modernism" thus opens space for more inclusive, sustainable, and context-sensitive approaches, ensuring that the architectural legacy of the twentieth century remains a vital and relevant part of our present and future.

WHEN LEISURE ENDS IN LOSS

Revising Urban Entertainment Facilities from Socialist Romania

Ruxandra Balcanu*, Alexandra Ioana Radu*

ABSTRACT: The article aims to analyze how the large-scale buildings designed to host entertainment activities during the 1960s and 1970s in socialist Romania transitioned from iconic experimental architecture to an obsolete problematic heritage. During those years, leisure activities became part of the propaganda while state-funded infrastructure was built around them. Organized leisure time is directed towards shaping the 'new man'. The paper focuses on two different architectural programs that fit into the leisure section: restaurants and commercial centers within holiday resorts and multi-purpose sports halls in cities. The objects in question are defined by different types of post-war modern architecture, varying from mid-century modern up to brutalism. During the socialist period, both case studies were directly managed by the state, from financial aspects to functional ones. After the fall of the communist regime, their status changed, and they endured the transition from a closed socialist economy to a capitalist one. While the sports halls remained under public administration, the restaurants and commercial centers in the holiday resorts were privatized. Alongside a series of unfortunate events that occurred during the 1990s, the general public developed a negative perception of this kind of architecture due to its connection with the former regime. While both case studies are relevant to the entertainment of the general public before 1989, after the fall of the socialist regime, there is a difference in their management and subsequent use, resulting in their presentation in parallel in this paper. The research is centered on how the changes after 1989 led to the fragile state of this heritage today and aims to propose contemporary approaches to properly address them. The buildings suffered both reversible and irreversible transformations, lack funding, and are improperly exploited. Since the late modern socialist heritage is often disregarded in Romania, this paper aims to establish possible guidelines for preserving and adapting these buildings for the present and the future.

KEYWORDS: entertainment, leisure, modernist architecture, socialism, sports

INTRODUCTION: The paper sets out to explore the evolution of two forms of entertainment architecture that gained prominence in Romania between the 1960s and 1970s: firstly, experimental restaurants and open-air shopping centers in newly built seaside resorts; secondly, large-scale sports facilities, primarily multi-purpose sports halls, that emerged in major urban centers. Following Khrushchev's speech in 1954, the Romanian Communist Party embarked on a mission to shape the emerging 'new man'. In this quest, along with a series of social policies and new state-funded institutions, an advanced architectural scenography is employed to create an ideal image for society, as well as to host these past-time activities. Following the 1960s, both commercial and sporting programs exhibited a distinct and modern architectural language, incorporating novel materials such as glass walls, concrete, and metal structures, as well as innovative construction technologies[1]. Despite the initial momentum, the construction of both architectural programs stalled, if not came to a complete halt, after the beginning of the 1970s. Nevertheless, they had a significant impact on Romania's international recognition, leading to a remarkable improvement in the performance of our sporting teams and a substantial increase in foreign tourism to the coastal regions. The paper will also examine the subsequent decline that ensued after 1989 and explore the prospects for these buildings, taking into account their current state of vulnerability. The research is based on written materials from that period and recent years, laws and public policies, archive documents, and field investigation. Hence, the two main subjects will be treated simultaneously. Due to the changes that occurred after the fall of the socialist regime, there are different

approaches to the current use of these buildings, which has led to a parallel exposure of the two subject matters.

LEISURE OVERVIEW

Interest in leisure activities emerged across Europe at the beginning of the 20th century, gaining further popularity following the Second World War. Romania, which had a modest holiday and recreation tradition prior to the establishment of the new political regime, was not the first nation to develop architecture and social policies to accommodate recreational activities within the socialist framework. Since the 1930s, the Soviet Union sought to establish a context that would ensure rest and recreation for the working class, providing it with an annual holiday and encouraging engagement in organized sports that would "bring ethical and therapeutic benefits", as well as "instilling hard work and collective discipline" (Karnoouh, 2024, p. 157). During the period of time this paper addresses, in Romania, the contemporary individual is instructed to cultivate a heightened spiritual dimension (by default, in the sense of the socialist spirit), through engagement in diverse social activities (ranging from sports to travel), thereby unleashing their inherent potential to the extent of a cultural act (Lăzărescu et al., 1972, p. 94). Nevertheless, leisure is supposed to be active, at least in its intention, unifying, while stimulating a meeting between professionals of different backgrounds (Pavelescu, 1972, p. 13). Propaganda was instrumental in promoting the concept of leisure as a complementary aspect of professional duties, an aspect that would be even further developed in the future society (Borgovan, 1972, pp. 2-3).

POLITICS AND PROPAGANDA

The grand master plan for shaping the untamed Romanian coastline was created by Romanian architect Cezar Lăzărescu and his team of young architects. This systematic plan was developed linearly along the coastline, north and south of the city of Constanta, with the first construction works appearing after 1955. The prototype of the resort was developed at Eforie Nord, featuring two rest centers: Eforie I (1957-1958) and Eforie II (1958-1959). The model was later extended and used for the construction of the Mamaia resort, as well as later ones built on the South side of the Romanian sea coast. This type of holiday resort was designed as a solution to a constant popular need: after a year of hard work, people seek refuge in nature, thus supporting the constant development of the tourist industry (Snak, 1972, pp. 44-45). To preserve the natural element, the architecture was specifically designed not to interfere with the landscape, by giving the new buildings a local color (Lăzărescu, 1972, p.4).

In 1955, the *ONT Carpați* (Office for National Tourism Carpați) was established, marking the beginning of the organized state-funded holidays that would shape the way the general population spends its time away from home (Snak, 1972, pp. 44-45). Following the year 1960, foreign tourists began to visit the Romanian seaside, and subsequently, the communist state signed partnership agreements with various European and international travel agencies, including Neckermann, Vingresor, Resso, and Club Med (Ștefan, 2024, p. 150).

The emergence of modernist architecture served as a symbol of the regime's effectiveness and achievements. The architecture for both restaurants and open-air shopping centers—auxiliary functions that became main actors inside the holiday resorts—sparked interest from the local and the national press, with newspapers such as *Scînteia Tineretului*, *Flacăra* or *Dobrogea Nouă*, covering every opening, event, or even conducting on-site visits, before praising the services and the personnel. The manner in which commercial establishments were exhibited persisted in perpetuating the promoted illusion:

> "[…] the socialist commerce represents the main connection between production and consumption; as such, it is obliged to consider the expectations of the working people, for whom the shops represent not only a place to shop, but also an exposition of their own accomplishments."
> (Editorial team, Architecture RPR Magazine, 1962, p. 4)

Subsequently, short propaganda films were produced to further showcase the entertainment provided during a seaside holiday.

As many studies assert, sports and sporting activities have been integral to the evolution of modern cities, particularly within the context of the industrial city in the 19th century, encompassing both the working class and the bourgeoisie (Edelman, 2016; Hau, 2008; Pujadas, 2012; Bolz, 2012). Following the First World War, sports emerged as a significant cultural and social phenomenon, underscoring the vulnerability of both eastern and western European populations (Hau, 2008, pp. 381-383). Consequently, sports practice came to be regarded as more than a mere form of entertainment for the masses, and it began to be incorporated into the military training of the population, particularly in totalitarian states such as Germany, Italy, and the USSR. In Romania, the development of sports activities followed a trajectory similar to that observed in the Western world until the Second World War. Society, especially in the urban areas, began to engage with sports as a form of recreation and a means of maintaining good health (Popa, 2013). Even so, the

large sports infrastructure that exists today was not built until the Communist Party came to power. Prior to the war, the model of sports organization in Romania was coordinated according to German, French, or Swedish methods. However, following the war, this changed, with the USSR becoming the main source of inspiration. Through a resolution of the Political Bureau of the Central Committee of the Communist Party, the foundations were laid for a new development of sport under the careful guidance of the Party. The limited access to sport that the working classes had had until then is brought into question, with sport being accessible only to the so-called *bourgeoisie*. In addition, resolutions of the period stipulated the necessity of encouraging the development of sports fields and facilities, as well as the appointment of individuals tasked with promoting sports to the general public. The People's Councils were entrusted with the responsibility of supplying towns and villages with sports equipment and facilities, as well as sports fields and amenities, including swimming pools and halls. During the early communist period, there was a notable emphasis on mass sport, particularly within industrial and manufacturing settings. In addition to the imperative for high productivity in the workplace, there was a parallel expectation of excellence in sporting performance.

Consequently, gymnastics and other sports were introduced in the workplace, organized according to scientific (Soviet-origin) principles, taking into account factors such as the nature of work and work schedules. This approach, ostensibly straightforward and uncomplicated, was implemented to enhance productivity and ensure the physical well-being of the workforce. The nature of these activities did not necessitate the use of sports equipment, nor did they require the allocation of dedicated facilities or the employment of specialist personnel. This approach enabled the attainment of optimal results with minimal effort (Pompiliu-Nicolae, 2015).

Propaganda shows a clear connection between results in sports and industrial development, with the phrase *"First in sport, first in production"* being specifically created for this purpose[2]. Workplace gymnastics became the norm, with physical exercise tailored to the type of work and work schedule, following scientific principles to maintain high production rates. In the same time, the concept of professional sport didn't exist in the socialist period – all top athletes had to first have a job in production, they had to belong to the working class. (Pompiliu-Nicolae, 2020, p. 913).

The relationship between dictatorial regimes and sports has been studied thoroughly. As Edelman (2016) points out, no authoritarian regime has ever been in favor of mass sports, as it is inherently difficult to control and regulate.

Indeed, mass sport constitutes an element of socialization and cohesion that serves to obscure the perception of class and ethnic differences, thereby engendering a potentially illusory sense of unity that is accompanied by significant political ramifications. In the context of socialist regimes, the function of mass sports did not pertain to control or as a means of alleviating social tensions; rather, its primary objective was educational and stimulatory in nature. Additionally, sports played another important role in providing international recognition and prestige for small states. International sporting competitions represent a unique theater in which communist and capitalist countries can compete directly: "a struggle between East and West, a battle between two ideologies for global dominance" (Riordan and Cantelon, 2001, p. 96).

ARCHITECTURE

Entertainment facilities, such as restaurants, bars, and open-air shopping centers, became architectural icons within the resorts. In 1958, the opening of the Neon Restaurant (Eforie I recreation center) marked the transition to a new architectural language [FIGURE 01]. With *pilotis* supporting the entire structure, movable glass walls connecting the inside to the outside, and a large terrace overlooking the sea, it quickly became an impressive sight. A year later, the Perla Mării restaurant (Eforie II Rest Center) was opened, taking modernist elements even further, with interconnected glass boxes for the canteen which floated above the open restaurant and service area. Later, in Eforie, the Pescăruş restaurant was built at the center of the resort, offering visitors a bar, cafeteria, and pastry shop, while resembling a mid-century American diner. Smooth lines, glass, and metal replaced the previous heavy architecture of Socialist Realism, bringing Romanian architecture in line with the international scene.

Due to the size of the resort in Mamaia, some building plans for the new restaurants were used more than once, however, the final result was still impressive. One of the most spectacular examples is the Restaurant Victoria (1960)—built twice at the resort—where the entire roof is supported by a concrete hyperboloid that splits at the bottom, marking a vertical connection with the sky. Another fascinating example is the Melody Bar-Club, where the large glass box is complemented by floating concrete volumes that intersect the façade. Other concrete details complete the composition. The examples presented, designed by the renowned collective from Bucharest, were extensively covered and praised in the *Revista Arhitectura RPR*—the most important professional publication of the time. The other works by local architects, built later, were not covered as broadly by the magazine.

01   Open terrace facing the sea, Neon Restaurant, Eforie Nord. © Alexandra Ioana Radu, 2024.

The shopping centers maintained the airy aesthetic, with interior gardens between the shops (also made of glass boxes). The most notable examples are those of Eforie Nord (1961), Mamaia (1963, built on a much larger scale, partly with two-story volumes), and Neptun (1967) [FIGURE 02]. Towards the end of the 1960s, as the southern part of the coast was undergoing construction, the vocabulary shifted to a more tectonic approach, ranging from Soc-Mod to Brutalist works. The seaside projects ceased at the beginning of the 1970s, which spared them from the compromises the architects would have had to make from that point on (Zahariade, 2024, p. 15). Early examples of entertainment facilities were praised by the international press, including magazines such as *Architectural Forum* (1962) and *L'Architecture d'Ajourd'hui* (1962) (Popescu, 2024, p. 23).

In addition to maintaining a continuous connection with nature and taking into account the characteristics of

02   Neptun Commercial Center closed at the end of the summer season, Neptun. © Alexandra Ioana Radu, 2023.

their environment (Lăzărescu, 1972), the entertainment facilities had to be flexible spaces that could meet the needs of the different types of people that popular tourism addressed (Sechelarie, 1966, pp. 14-16). Additionally, in a propagandistic sense, these buildings, apart from providing food and various goods to their respective users, were intended to serve a cultural-educational purpose, as the tourist activity carried a socio-political role (Snak, 1972, pp. 44-45). Inspirational and unique, the model developed experimentally on the seaside was later replicated, with slight adjustments made for the commercial facilities of the neighborhoods later built in the cities.

The existing sports infrastructure did not meet the quality, but especially not the quantity requirements of the Communist Party. Thus began a vast program of planning, designing, and building numerous sports facilities. This program was part of a broader urban restructuring initiative that also involved the construction of a sports nucleus, closely linked to the development of new collective housing and industrial areas. In the context of Romania's post-Second World War socio-economic situation, the development of its infrastructure was characterized by the establishment of outdoor recreational spaces, such as the parks of culture and recreation. These were, in essence, urban parks that were equipped with a variety of sporting and leisure facilities (Rică, 1958, p. 50).

Concurrently, there has been an increase in the construction of urban sports complexes alongside these parks. These facilities, while resembling parks in many ways, are distinguished by a heightened emphasis on sporting activities. These facilities offer a blend of professional sporting activities and those intended for more general participation. Issue no. 7, 1957, of the magazine *Arhitectura RPR*, presented several sports complex projects designed for the cities of Călăraşi, Calafat, Giurgiu, and Focşani. The projects were complex, comprising both landscaped outdoor spaces, such as so-called red courts — namely, tennis, basketball, volleyball, soccer, and athletics nuclei — with outdoor grandstands for approximately 2,000 seats, and indoor sports spaces, including a gymnasium, a pavilion with changing rooms, and a bowling pavilion. Since 1965, the sports complexes, which were predominantly open-air fields, have been complemented by enclosed facilities such as specialized or multi-purpose sports halls. These facilities are of significant urban importance, not only as venues for sporting competitions, but also as suitable locations for various types of conferences and social events.

This type of investment became a priority for developing sports activities in urban areas, and a considerable number of Romanian cities were equipped with an entire network of multi-purpose sports halls. This strategic realignment was to have a profound impact on the nation's landscape of sports activities. Since 1963, the Institute for the Design of Typical Constructions (IPCT) has been responsible for the study of sports constructions, including multi-purpose sports halls, which have been realized in a series of constructions in various Romanian cities (Popa, 1978). Among these, the most notable are those in Cluj Napoca, Iaşi, Piteşti, and Deva [FIGURE 03, FIGURE 04]. It is important to note that these edifices are not isolated cases; in certain cities, the responsibility for designing sports halls and new sports complexes was assigned to architects from the county design institutes.

The 1950s and 1960s witnessed a period of significant urban growth, which gave rise to the requirement for modern multi-purpose facilities in expanding cities. This demand, coupled with the allocation of necessary financial resources, served as a catalyst for the remarkable advancement of integrated architectural-structural design at both national and local levels.

AFTER 1989

After the fall of the communist regime in December 1989, the buildings either passed into private ownership or were retained by the former state trust, IHR, the Hotel and Restaurant Enterprise, which initially managed most of them and later leased them out to various operators. Some are still in use today, with the original architecture altered to suit current tourist tastes, while others have been permanently closed or even demolished. Unfortunately, due to their size, most of the sites are not profitable in today's open market. Moreover, since they were built to operate only during the summer months, they have undergone various changes and additions to make them suitable for year-round use. The architectural changes they have undergone are partly due to their primarily experimental character, as the exposed concrete and thin glass are not suitable materials for the Romanian coastal environment.

The lack of official recognition of coastal heritage in Romania makes it almost impossible to protect these buildings. In an anonymous survey conducted in 2024 among some of the current operators of these facilities, the unanimous response was that the professionals they worked with for the renovations did not adequately explain the heritage value of the buildings. In addition, the current owners, or in some cases users, would welcome a guide to the conversion and sustainable use of these spaces. Some of them even embraced the idea of an official heritage protection measure and an official state list that would shed light on and draw attention to their respective buildings.

Following the collapse of the communist regime in 1989, there was a notable shift in the economic, legal,

03 Athletes lateral entrance, Multipurpose Sports Hall in Pitești. © Ruxandra Balcanu, 2024.

04 Main façade, Multipurpose Sports Hall in Timișoara. © Ruxandra Balcanu, 2024.

and ideological landscape of sports halls. Concurrent with this transformation was a significant shift in public perception. In contrast to other public buildings that were funded by the state during the communist period and subsequently privatized, multi-purpose sports halls, along with the majority of sports complexes and facilities, remain under state ownership. These are overseen by the Ministry of Sport and Youth. However, there was a sharp decline in investment during the 1990s compared to the communist era, resulting in the existing infrastructure requiring significant repairs. This decline can be attributed to the fact that sports no longer constituted a priority area for the new government system.

In this context, sports halls have undergone various types of interventions. Some have been subject to minimal funding, resulting in their continued use, while others have been completely demolished to make way for new structures. In the most fortunate cases, which have undergone a major refurbishment process, sports halls have been restored to a condition that is safe for use and have been reopened. A further challenge confronting these facilities is the need to upgrade the amenities and ancillary

structures designed for athletes, which, having been constructed over half a century ago, fail to meet contemporary standards.

The ongoing interplay between municipalities, which are often unable to intervene directly, and the central authority, which lacks the necessary financial resources and a well-defined intervention strategy, further complicates the situation.

CONCLUSIONS

Since the 1950s, entertaining the masses in a controlled manner became a state policy in Socialist Romania, followed by studies and funding towards developing new architectural programs. New large-scale restaurants and bars were built, along with outdoor shopping centers opening on the seaside. Meanwhile, in the already established urban centers, new multi-purpose sports facilities opened their doors to the enthusiastic public. As this kind of architecture was relatively new throughout Europe, its aesthetic and technical aspects were remarkable for that time. Its image ranges from mid-century modern to socialist modernism, marking the shift in direction made by the entire Romanian architectural practice, which distanced itself from the realist-socialist architecture adopted by the new regime at first.

After 1989, the entertainment facilities on the seaside suffered a different fate from the sports facilities. While the sports halls remain in public ownership, the restaurants and commercial spaces are sold to different private owners; hence, a parallel approach is taken in examining them during the study.

The present situation in the two previously examined cases poses a significant threat to the immediate future of these buildings. It is evident that the absence of a formal, official list of the extended modernist heritage of the 1960s and 1970s, as designated by the Minister of Culture, renders these buildings vulnerable to loss, whether due to negligence or unauthorized alterations.

A sustainable approach to raising awareness towards these buildings, regardless of their location, can be accomplished through the update of the General Urbanistic Plan of their respective cities. Since this type of urban document contains an extensive historical study of the built layers, greater emphasis can be placed on this type of heritage. It is a small, yet safe step before an official classification, which would take years to comprise all of these buildings³. In the context of rapid urban development that endangers the present, the necessity of establishing a form of protection, while educating the public and current users about their value, separate from the mark of the regime they bear, is paramount.

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ENDNOTES

1 Prior to this period, only a limited number of projects had been constructed; for example, a canteen designed by architect Spiridon Spirescu, finished in 1957 in Vasile Roaita (now Eforie Sud), or the multi-purpose sports hall started in Constanta in the same year, designed by Romeo Belea, Gheorghe Dumitrascu et al. All were Soviet-inspired, with strong socialist-realist elements.

2 Such slogans were taken from the USSR, which was the main source of inspiration for sports and physical education organization in the first years of the Romanian socialist regime.

3 In Eforie (city on the Southern Romanian seaside), which is relatively a small resort, there are around 40 modernist buildings that would meet the criteria to be classified as monuments. They are all included in the historical study made for the Urban General Plan, which is yet to be approved.

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INTERRUPTED MODERNITY IN SANTIAGO DE CHILE

The Political Afterlife of the Ochagavía Hospital

Claudia Oliva Saavedra

ABSTRACT: The Ochagavía Hospital serves as a tangible reminder of Chile's interrupted modernist aspirations and shifting political ideologies. Conceived in the late 1960s under the principles of the Welfare State, it was envisioned as the largest public healthcare facility in the country, bringing high-complexity services to Santiago's southwestern periphery. Designed with a "tower and slab" typology and influenced by international references such as the Saint-Lô Hospital in France, the project embodied hygienic principles and the role of modern architecture in promoting social equity. However, construction was halted following the 1973 military coup, and for four decades the building remained unfinished, informally appropriated by nearby communities, artists, and activists. This article analyzes the architectural, political, and symbolic trajectory of the Ochagavía Hospital, focusing on how its form, location, and evolving uses reflect broader transformations in Chile's political economy. Combining critical architectural analysis, historiographic research, and the study of visual and literary archives, the article examines how the hospital became both a symbol of abandoned utopia and a stage for memory and resistance. Particular attention is given to the building's resignification during the dictatorship, including the performance "Suda-mérica" by Pedro Lemebel and interventions by Lotty Rosenfeld. In 2013, the hospital was sold and converted into a logistics and office center, erasing its original public intent and marking the final step in its privatization. As an unfinished modernist project turned commercial infrastructure, the Ochagavía Hospital exposes the effects of neoliberal reforms on public architecture, while also revealing the layered meanings that emerge from spatial abandonment and reappropriation. The building's transformation stands as a poignant reminder of Chile's intricate political, social, and economic history. Its unfinished state offers a critical lens through which to understand the broader urban consequences of Chile's political transitions and the enduring legacy of neoliberalism.

KEYWORDS: Ochagavía Hospital; unfinished architecture; welfare state; neoliberal urbanism; architectural memory; political re-signification

INTRODUCTION: The Ochagavía Hospital, conceived as a monumental public health project in the late 1960s, stands as one of the most emblematic and controversial expressions of the Welfare State model in Chile. Projected to be the largest healthcare facility in the country, its "tower and slab" typology, influenced by international references such as the Saint-Lô Hospital in France, was designed to bring high-complexity medical services to the underserved southwestern periphery of Santiago. In addition to responding to modern functional demands, the project symbolized a political and architectural commitment to social and territorial equity. As noted by Illanes (2010), during the governments of Eduardo Frei Montalva (1964-1970) and Salvador Allende (1971-1973), public health was

conceived as a central pillar of a just society. This idea materialized in architectural initiatives such as this one, promoted especially under the political coalition known as the Unidad Popular (the Popular Unity coalition in Chile). The photo in [FIGURE 01] captures a moment of state-led investment in public health infrastructure under the principles of the Welfare State. The modernist design, symbolized by the "tower and slab" typology, reflects the political aspirations of the late 1960s to democratize access to healthcare in Santiago's southern periphery.

However, the 1973 military coup marked an abrupt break in public policies, halting the construction of the hospital and leaving the building unfinished and unused for the next four decades. The transition from a

developmentalist to a neoliberal economic model not only abandoned the vision of a decentralized public health system but also transformed the building into a symbol of institutional rupture and unfulfilled social aspirations. Over time, the Ochagavía Hospital was resignified by its surrounding communities and by artists and writers, who turned it into a space of memory, resistance, and appropriation.

This article explores the architectural, political, and symbolic trajectory of the Ochagavía Hospital, focusing on how its form, function, and evolving meaning reflect broader transformations in Chile's political economy and urban landscape. It examines the building's typology and urban integration, analyzes its historical context, and studies its informal uses during the period of abandonment. Particular attention is given to its symbolic activation through artistic interventions during the dictatorship, including the performance Suda-mérica by Pedro Lemebel and the video installation Cautivos by Lotty Rosenfeld.

Methodologically, the article adopts a multidisciplinary approach, combining historiographic and architectural research with the analysis of literary and visual archives. This allows for a critical interpretation of the hospital not only as an unfinished building, but as a site of ideological transition, contested memory, and architectural afterlife. By tracing the hospital's transformation, from state-led utopia to privatized infrastructure, this study contributes to the understanding of architecture as a political artifact embedded in historical conflict and spatial resignification. This includes comparative typological analysis, interpretive reading of performance documentation, and the integration of urban memory narratives gathered from community-based sources.

THE HOSPITAL PROJECT: PROPOSAL AND CONSTRUCTION

The design of the hospital was commissioned under the Ministry of Public Health and directed by architect Hernán Aubert through the Sociedad Constructora de Establecimientos Hospitalarios (SCEH) [Hospital Facilities Construction Society]. The project aligned with broader state efforts to decentralize public services and address deep territorial inequalities in Santiago. The selected site, located in the underserved southwestern periphery of the capital, was emblematic of a policy that sought to integrate social infrastructure into areas historically excluded from urban development plans. As noted by Valdivieso and Juricic (1970, p. 483), this decision aimed to provide hospital access to a zone that "lacked its own facility," reaffirming the project's orientation toward equity and universal coverage.

Architecturally, the hospital was designed following the "tower and slab" typology inspired by international precedents such as the Saint-Lô Hospital in France. The plan consisted of a two-story horizontal base intersected by two seven-story vertical towers, resulting in a total of nine floors above street level. This configuration, visible in the original floor plans and sections [FIGURE 04], illustrates a functional division: while the slab contained outpatient and administrative services, emergency rooms, and diagnostic units, the towers were designated for inpatient care, with cross-ventilation, circulation zoning, and vertical service cores. The design prioritized natural light, air flow, and modularity, essential principles in hospital design aligned with hygienist ideals of the time (Severo, 2020).
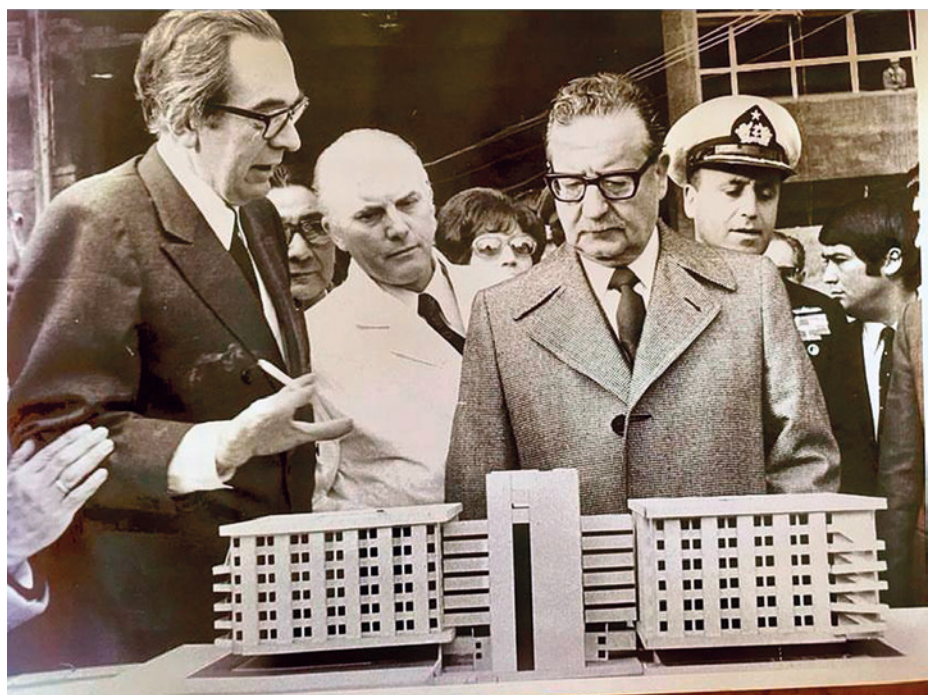
01 President Salvador Allende reviews the architectural model of the Ochagavía Hospital, ca. 1969–1971. © Rioseco family archives.

02 Ochagavía Hospital during construction. © Public Health Ministry, Chile, 1976.

This concern with hygiene was not only technical but symbolic. Modern architecture, as Colomina (2019) suggests, was intimately connected to medical discourses and new ways of understanding the body in space. Yet Colomina's analysis, which emphasizes the cultural and visual regimes of Modernism, must be complemented by more technical accounts. Kisacky (2017), for instance, provides a valuable perspective on how zoning, material specifications, and the control of movement institutionalized hygienist ideals in hospital design. In Chile, such principles were likewise advanced by public institutions such as the SCEH. As Galeno and Roco (2023) point out, these institutions were instrumental in consolidating a modernist language grounded in standardization, functionalism, and infrastructural ambition.

[FIGURE 02], extracted from a 1976 publication by the Ministry of Public Health, shows the building during its construction phase. It captures the scale and morphological clarity of the structure, although it does not allow for a full assessment of interior layouts or material finishes. While insufficient to demonstrate hygienist principles on their own, such images serve as crucial historiographic documents, providing visual testimony of the state's commitment to building a monumental public health facility in an area that, at the time, had no hospital of its own. They must therefore be read alongside the original plans and project documents to reconstruct the architectural intention behind the design.

In terms of urban integration, the building's placement at the intersection of four major avenues and its volumetric articulation offered a balance between institutional scale and neighborhood accessibility. The horizontal slab was conceived to operate at pedestrian level, with multiple public courtyards, entry ramps, and consultation zones. The towers, by contrast, projected a vertical presence onto the city's skyline, signaling the importance of healthcare infrastructure within the modernist imaginary. As Severo (2020, pp. 61–62) points out, such facilities were not only technical systems but also urban symbols. They were understood as architecture that was difficult to remove or

replace, embedded in the territory as markers of a welfare-driven future.

The original projected area of 64,000 m² included 988 beds, which would have made the hospital the largest in Chile. Its administrative and care zones were to be equipped with then-innovative medical technologies, while circulation was carefully planned to separate patients, visitors, and staff. [FIGURE 04], which presents the original floor plans, reveals a modular structure with clear zoning and rationalized movement, consistent with international standards of the time.

Before construction began, President Pedro Aguirre Cerda had already articulated the political ideal behind such projects with his phrase: "To govern is to educate and provide health to the people." (Allende, 1939, p.5). This vision was later taken up by Salvador Allende, both as Minister of Public Health and as President, when he advocated for comprehensive reforms in healthcare infrastructure. His book *The Chilean Medical-Social Reality* (Allende, 1939) laid out a public health vision that found architectural expression in projects like the Ochagavía Hospital. The project was not only a technical undertaking but the built manifestation of a political horizon that linked architecture with social transformation.

Despite the clarity of its design and the initial political support it received, the project was abruptly suspended following the 1973 military coup. Construction ceased at 80% completion, and the building was left exposed to the elements for the next four decades. Its unfinished structure, stripped of technical equipment and public function, became a symbol of interrupted modernity—a state-led utopia that never materialized. The transformation of the Chilean health system began soon after, with Law 2,763 of 19791, which restructured the Ministry of Public Health and created the Sistema Nacional de Servicios de Salud (SNSS) [National System of Health Services] by merging the Servicio Nacional de Salud (SNS) [National Health Service] and the Servicio Médico Nacional de Empleados (SERMENA) [National Medical Service for Public Employees]. The same reform created the Fondo
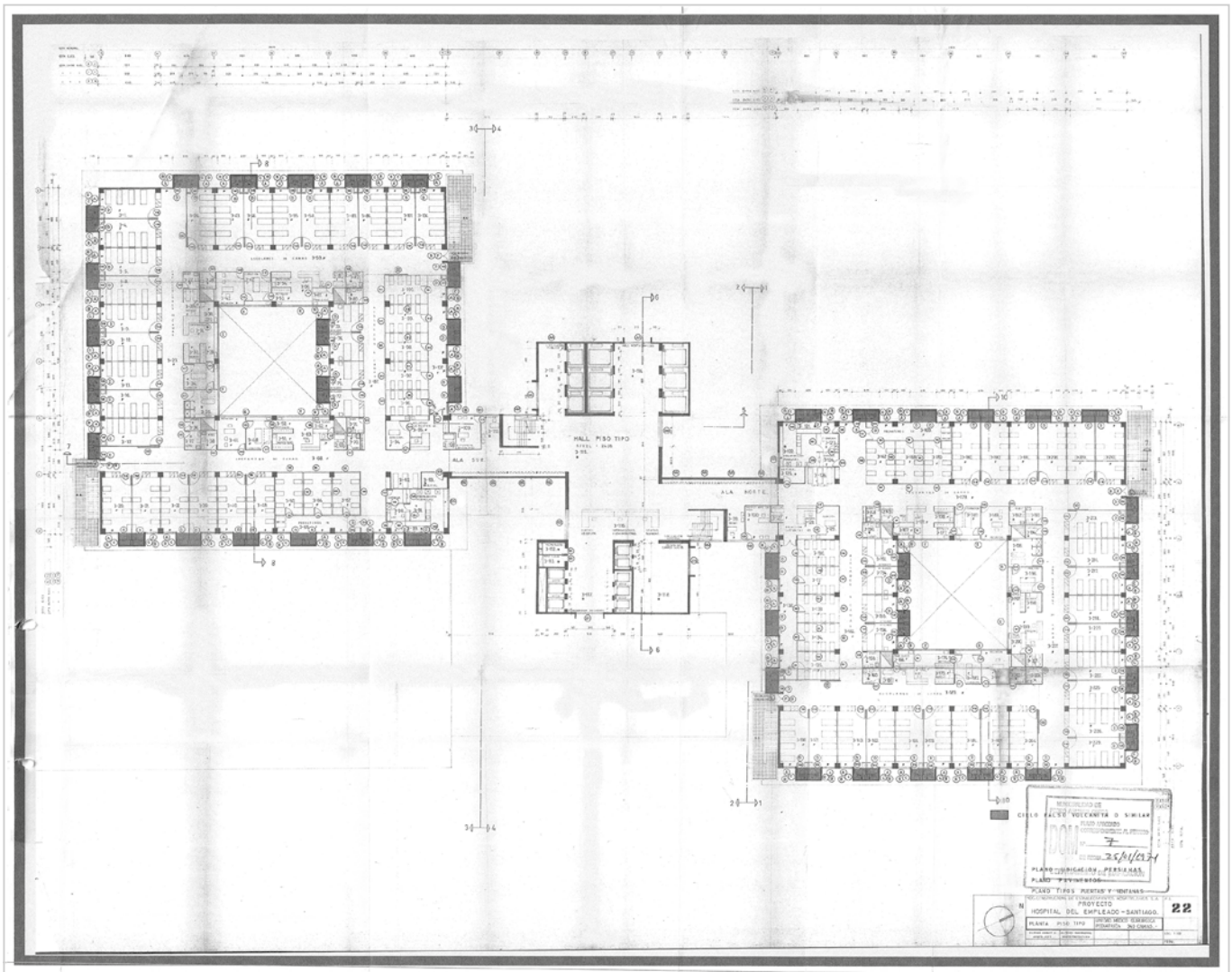
03 Floor plan of the Ochagavía Hospital Project (folding lines have been digitally removed from the scan). © Public Health Ministry, Chile, 1976.
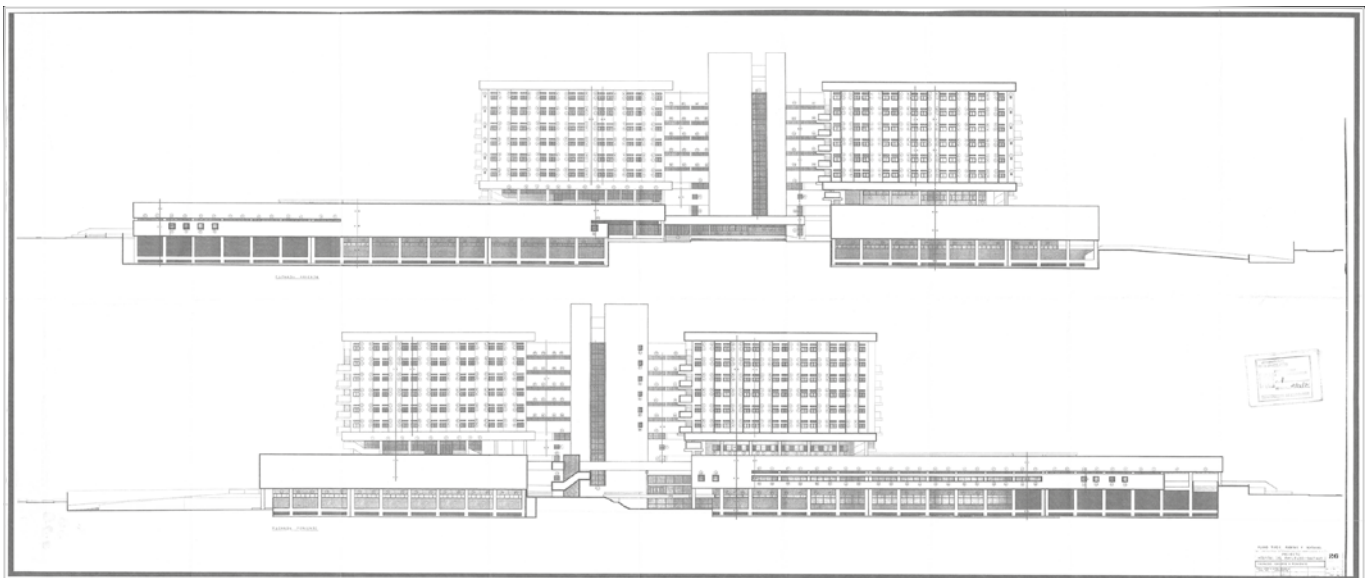
04 Section of the Ochagavía Hospital Project (folding lines have been digitally removed from the scan). © Public Health Ministry, Chile, 1976.

Nacional de Salud (FONASA) [National Health Fund] to manage financial operations, consolidating a new administrative and economic model. As Gattini (2019, p. 49) argues, these reforms were emblematic of "the neoliberal restructuring of the Chilean state," a process that shaped healthcare provision well into the democratic period.

THE IMPACT OF THE 1973 COUP D'ÉTAT AND NEOLIBERAL POLICIES

The idea of building the Ochagavía Hospital emerged during a period when Chile's macroeconomic policy was guided by state-led development. As Ffrench-Davis and Stallings (2001, p. 25) observe, this development model was based on "stable macroeconomic policies

and an active role of the State in the economy." Under Eduardo Frei Montalva's administration (1964-1970), and later with greater emphasis during Salvador Allende's presidency (1970-1973), the Chilean government implemented structural reforms aimed at democratizing access to health, education, and land. These included the nationalization of copper, expansion of public services, and the intensification of agrarian reform—policies that aligned with a broader vision of social justice expressed materially in state-financed infrastructure projects.

However, the implementation of these reforms generated fierce political opposition, both domestically and internationally. As noted by Stallings in the 2001 CEPAL report Reforms, Growth, and Social Policies in Chile Since 1973, this instability was due "in part to the internal and external activities of the opposition aimed at destabilizing the government, but also to the fact that the policies implemented were not viable" (Ffrench-Davis & Stallings, 2001, p. 26). By 1973, social demands had expanded, inflation had surged, exports had declined, and foreign capital inflows had contracted, leading to a sharp economic and political crisis that culminated in the September 11 military coup.

The coup marked a rupture not only in governance but also in the ideological orientation of the Chilean state. Although the new military regime initially lacked a coherent economic strategy, by the mid-1970s, a group of economists associated with the Pontificia Universidad Católica de Chile [Pontifical Catholic University of Chile] and the University of Chicago—known collectively as the "Chicago Boys"—had begun to implement far-reaching neoliberal reforms. These policies promoted privatization, deregulation, and a drastic reduction in the state's role in social provision. The 1980 Constitution*2* codified this shift by establishing that individuals could choose between public and private health providers, thus institutionalizing the logic of free market choice over the Welfare State model*3*.

In 1979, the government passed Law № 2,763, which restructured the Ministry of Public Health and created the Sistema Nacional de Servicios de Salud (SNSS) [National System of Health Services], merging the Servicio Nacional de Salud (SNS) [National Health Service] with the Servicio Médico Nacional de Empleados (SERMENA) [National Medical Service for Public Employees]. This reform also established the Fondo Nacional de Salud (FONASA) [National Health Fund] to manage public healthcare financing and, a year later, the Instituciones de Salud Previsional (ISAPREs) [Private Health Insurance Institutions], which took responsibility for managing workers' mandatory contributions (Aguilera et al., 2019, p. 57). Together, these changes laid the foundation for Chile's dual health system and marked the consolidation of a neoliberal approach to health governance.

Within this new paradigm, large-scale public investments such as the Ochagavía Hospital became increasingly untenable. Though the structure had reached approximately 80% completion, it was soon abandoned and left without technical equipment or operational capacity. As Lemebel (1998, p. 276) wrote in his chronicle dedicated to the building, "Dr. Allende's boundless dream did not measure its affection against the practical implementation of the project. And there it remained, like a monument punished by the justice of the social body." For Lemebel, the hospital stood not only as an unfinished building but as a political and symbolic remnant of a utopia that never came to fruition. He would later add: "It was so close to being implemented, that concrete elephant (…) everything suggested that, with great effort, the Workers' Hospital would one day operate fully" (p. 276).

The hospital's incomplete state rendered it highly vulnerable to environmental degradation, informal appropriation, and abandonment. With no roof or interior finishes, the building was quickly stripped of equipment, furniture, and symbolic meaning. It became both an eyesore and a refuge. Local residents referred to it as "the largest animita in Santiago" (Tamayo, 2013, p. 31). In Chilean popular culture, an animita is an improvised shrine, often placed at the site of an untimely or unjust death. These vernacular memorials are usually adorned with candles, flowers, and handwritten messages, becoming spaces of mourning, devotion, and popular spirituality (Foerster & Montecino, 1996). Tamayo's metaphor casts the hospital not simply as an incomplete project but as a funerary monument—haunted by expectations and filled with lingering presences. It was, he writes, a place "full of spirits waiting for the building to be completed," and a shelter for "the hopeless, the out of time, the ones filled with questions, filled with waiting, the ones with pleading gazes" (Tamayo, 2013, p. 32).

As shown in [FIGURE 05], the building remained suspended in a liminal state: materially present yet socially voided. It offered shelter and anonymity, attracting marginalized populations and, at times, criminal activity. The absence of state oversight transformed the structure into a space open to multiple and often contradictory appropriations. This dual condition, simultaneously a site of symbolic mourning and material neglect, reveals how the architecture of abandonment can register both dispossession and latent potential.

While the neoliberal state promoted private clinics in affluent areas of Santiago, the Ochagavía Hospital, massive and unfinished, stood inert over one of the city's most underserved sectors. The contrast was stark. What had once been planned as an emblem of collective care now became a ruin, marked by silence, graffiti, and dust. The failure to complete the hospital was not merely technical

05 The Ochagavía Hospital in a state of abandonment, c.2000s.
    © La Segunda, Foto 7, Cerda, 2016.

or financial; it was political. It exposed the vulnerability of socially ambitious architecture in the face of abrupt ideological shifts. What remained was not a hospital, but a haunted shell, part ruin, part promise, awaiting new inscriptions by those left behind.

THE RESIGNIFICATION OF THE SPACE DURING ITS ABANDONMENT

The decades of abandonment that followed the halt of construction at the Ochagavía Hospital turned the building into a powerful space of symbolic resignification. No longer a functioning institution, it was nonetheless a persistent presence in the landscape of Santiago's southwestern periphery—an architectural ruin that recorded the failure of a state-led utopia and invited new meanings from those who lived in its shadow.

In his short story *El hospital*, writer Luis Alberto Tamayo opens with a fictional exchange between two neighbors: "When will they remember us?" asked Ladislao. "They will never remember us," replied Remigio, "because that's how they talk…" (Tamayo, 2013, p. 31). Through this allegorical dialogue, Tamayo gives voice to the building itself, recasting it as a living yet forgotten presence—one that speaks not only for its own abandonment but also for the community surrounding it. In a striking passage, the narrator says: "I started dying because they ignored me, they looked at me and looked away (…) as if I were dead" (Tamayo, 2013, p. 31). The Ochagavía Hospital becomes a proxy for a collective social body abandoned by the state.

Pedro Lemebel, one of Chile's most important queer writers and performers, deepened this symbolic dimension through his work. Known for his political militancy, gender nonconformity, and poignant chronicles of marginal life in Santiago, Lemebel co-founded the performance collective Yeguas del Apocalipsis alongside Francisco Casas in the late 1980s. Their work challenged the military regime not only through its content, but also through its form: public interventions that reclaimed space through the performative presence of the queer body.

In 1989, Lemebel carried out one of his most emblematic performances at the ruins of the Ochagavía Hospital. Titled *Suda-mérica*, the intervention was part of a series of actions responding to the political repression and the persistent social inequalities at the end of Pinochet's dictatorship. Clad in a neoprene suit and surrounded by rubble, Lemebel set himself on symbolic fire, transforming the hospital's abandoned shell into what he called "the great theater of helplessness" (Lemebel, 1998, p. 276). In doing so, he activated the ruin as a stage for memory, protest, and poetic occupation.

This action, preserved in the audiovisual documentary *Corazón en fuga* (Qüense, 2008), has become a fundamental reference in Chilean counter-memorial practices. Lemebel's body, a site of non-normative identity and political dissent, stands in stark contrast to the institutional failure symbolized by the hospital. The structure, stripped of its function but saturated with memory, becomes a container for a different kind of archive: one inscribed through performance, pain, and defiance.

As shown in [FIGURE 06], the contrast between the fragility of the human body and the scale of the unfinished hospital highlights the spatial violence resulting from abandonment. The architecture is not merely a backdrop; it is a participant in the performance. The exposed concrete, the rubble, the vast emptiness, all these elements contribute to a dramaturgy of absence. In this sense, the hospital operates as what Diana Taylor (2003) has called a scenario of memory: a physical and social space where history is not simply recalled but re-enacted.

On the same day as Lemebel's performance, artist Lotty Rosenfeld, member of the Colectivo de Acciones de Arte (CADA) [Collective of Art Actions]*4*, presented her video installation Cautivos in another section of the building. Art historian Nelly Richard describes the action as an incendiary act that "made the rooms of the abandoned hospital burn" through "the image of one of its disobedient crosses, drawn on the city pavement" (Richard, 2018, p. 5). The performance linked fire, territory, and female resistance in a gesture that echoed urban barricades and grassroots insubordination. The building, already a ghost of its former promise, became a contested site of representation and insurgency.
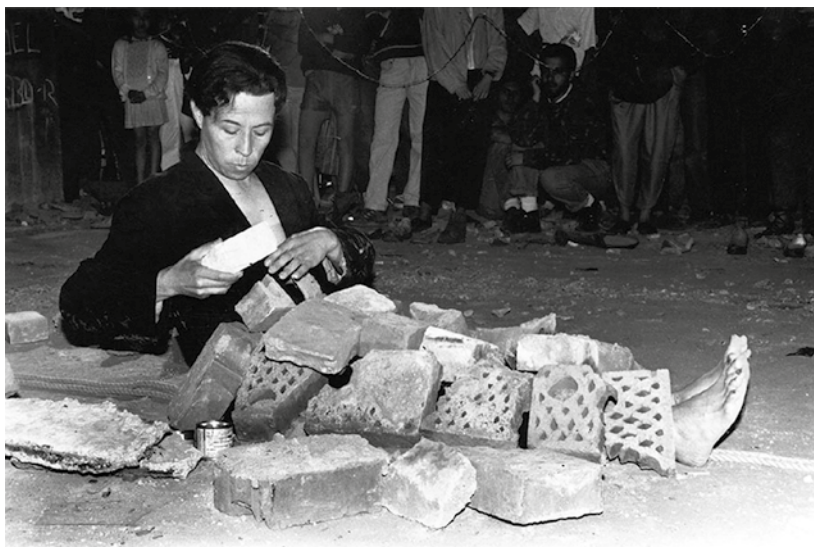
More than a decade later, in 2002, artist Juan Castillo created the photographic project *Geometría y misterio de barrio*, also engaging with the Ochagavía Hospital. In this work, Castillo sought to map local memories, voices, and mismatched identities against dominant historical narratives. By photographing community members in dialogue with the structure, Castillo transformed the building once more, this time into a backdrop for popular sovereignty and quiet endurance.

Across these works, the Ochagavía Hospital becomes an active archive of social frustration and creative response. While the state failed to fulfill its vision of collective care, artists and writers developed their own readings of the space. Through bodily action, visual inscription, and narrative reimagination, the hospital was reactivated as a ruin of resistance. As Tamayo suggests in the closing lines of his story, the building may never have been inaugurated, but it was inhabited by hope, by memory, and by those who asked, even after the return of democracy: "When will they remember us?"

FROM APPROPRIATION TO PRIVATIZATION

Following the democratic transition in the early 1990s, the Chilean state faced the challenge of managing numerous unfinished or abandoned public projects inherited from the previous regime. Among them was the Ochagavía Hospital—an enormous, deteriorating structure occupying a strategic location in Santiago's southern periphery. In 1994, the property was transferred to the Ministerio de Bienes Nacionales (MBN) [Ministry of National Assets] and subsequently to the Servicio de Vivienda y Urbanización (SERVIU) [Housing and Urban Development Service], the public agency responsible for social housing and urban development. The goal was to find a viable function for the building through public-private collaboration or a tender process.

In 1999, during the government of President Eduardo Frei Ruiz-Tagle, the hospital was sold to the private company Inmobiliaria Mapocho S.A. through a public bidding process. The sale price, 1% of the original estimated value, was, as local media reported, equivalent to "the cost of paving three blocks with sidewalks."5 This transaction exemplifies the neoliberal logic that had by then become entrenched in Chilean urban policy: large-scale public investments were liquidated for minimal returns, justified by the state's inability (or unwillingness) to maintain their original social purpose. Pedro Lemebel captured this absurdity and alienation in his chronicle:

> "A mall, a shopping center, a condominium (…) so
> many ideas from companies, all of which ended
> up swimming in the empty body of the giant"
> (Lemebel, 1998, p. 278).

Despite this first sale, no project materialized. The "ghost" of the building, as Lemebel described it, seemed to reject each attempt at reinvention. For more than a decade, the structure remained in limbo—used sporadically for clandestine activities, but officially frozen. Its ominous presence provoked discomfort, and at times fascination. In Tamayo's fictionalized chronicle, the characters narrate a rumor: "Last night rumors came again that they are going to sell and turn the hospital into a shopping center. Rumors always come" (Tamayo, 2013).

In 2009, SERVIU initiated a new bidding process. This time, the sale succeeded. In 2013, the property was acquired by MEGACENTRO S.A., a logistics and real estate company, which proposed transforming the structure into a business and warehouse complex, preserving the concrete skeleton but erasing all traces of its unfinished past. Their promotional slogan: "Un viejo sueño que renace" [An old dream reborn], stood in ironic tension with the building's actual history. While the phrase evoked continuity, it actually signaled erasure: the original dream of a public hospital was not being fulfilled but replaced.

According to architect Juan Sabbagh (as cited in Narváez, 2019), who participated in the rehabilitation, the project was "an icon of failure and abandonment"6 at its inception. Nonetheless, in a remarkable turn of

07 Exterior of the Ochagavía Hospital after its transformation into the Megacentro logistic and office complex. © Paul Plaza — LUN, Foto 8, Cerda, 2016.

narrative, the revamped building received the Premio Aporte Urbano (PAU) [Urban Contribution Award] in 2015, celebrating its role in revitalizing the industrial district of Pedro Aguirre Cerda. This recognition, while understandable from an architectural recycling standpoint, underscores the paradox of memorialization in neoliberal contexts: a project once abandoned by the state is later celebrated for its commercial reintegration.

As shown in [FIGURE 07], the new façade retains the formal logic of the original design, yet its function, symbolism, and institutional meaning have been entirely redefined. The spatial memory of the hospital is now buried beneath glass panels, corporate logos, and functional efficiency.

Crucially, the rehabilitation made no reference to the building's decades-long history of informal appropriation. The traces of performances, graffiti, and the community's memory were not preserved or acknowledged in the new complex. The spatial history of resistance and mourning described by Tamayo, Lemebel, and Rosenfeld was effectively erased from the material narrative. What was left was a "clean" surface, efficient, rentable, depoliticized.

The Ochagavía Hospital thus moved from a symbol of public utopia to a product of urban commodification. Its privatization marked not just a legal transfer of ownership, but a semantic transformation: from architecture as a right to architecture as an asset. The building was no longer a monument to care and inclusion, but a warehouse of goods and services, part of a new urban logic where health, like memory, is a transaction.

This transformation is not unique to Chile. Across Latin America, numerous modernist state buildings have been reabsorbed into the circuits of private capital under similar dynamics. However, the scale, history, and visibility of the Ochagavía Hospital make it particularly revealing. It embodies a deep contradiction: that a structure designed to serve the most vulnerable became a silent witness to their displacement, not through demolition, but through architectural repurposing.

CONCLUSIONS

The transformation of the Ochagavía Hospital condenses over four decades of political, architectural, and social upheaval in Chile. From its conception as a monumental public health facility under the Welfare State, to its abandonment following the 1973 military coup, and ultimately its privatization and reinvention as a logistics center, the building stands as a material chronicle of shifting ideologies. It is a structure that never fulfilled its intended purpose, but whose unfinished presence has generated a multiplicity of meanings.

Originally projected as a beacon of territorial equity and modern care, the hospital was an architectural manifestation of a political utopia—an ideal of universal access and state-led development. Its interruption, brought on by the radical reorientation of Chile's economic and institutional frameworks under the dictatorship, reflects more than the failure of a single project. It marks the end of an era in which architecture served as an instrument of redistribution and inclusion. What was left behind was not just an empty building, but a hollowed-out promise.

During the decades of abandonment, the hospital did not remain silent. On the contrary, it became a powerful and contested space of appropriation. Through literary narratives, urban myths, and especially performative interventions such as *Suda-mérica* by Pedro Lemebel, the building was resignified as a stage of memory and dissent. These actions reactivated the structure as a site where politics, identity, and pain converged. The ruin spoke, not as a symbol of decay, but as a living archive of what could have been, and of those who refused to forget.

The later privatization of the hospital, and its reintegration into the city's logistics and commercial circuits, sealed a second transformation: not just of the building, but of the very notion of public space. The "revitalization" celebrated by awards and urban discourse obscured the memory of the communities that had once inhabited the space symbolically, if not materially. The concrete structure remained, but its social content was evacuated

and overwritten by a new language of efficiency and investment.

This case reveals the layered temporality of architecture: buildings are not static entities, but are constantly rewritten through use, policy, and perception. The Ochagavía Hospital functions today not as a monument to the Welfare State, but as a palimpsest, bearing traces of care, violence, resistance, and commerce. Its trajectory illustrates how built form can become both victim and vector of political transformation, and how architecture continues to mediate the relationship between collective memory and structural change.

More broadly, this study suggests that the reading of incomplete or reappropriated architecture offers critical insight into the social histories of cities. The Ochagavía Hospital, far from being a failed object, emerges as a lens through which to understand the unfinished work of justice and the unresolved tension between public aspiration and neoliberal reality. In that sense, it remains, as Lemebel once described it, the great theatre of abandonment, but also of enduring memory.

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6   "As soon as I received the assignment, I thought it was a hassle. I immediately thought of the excuses I would give to avoid doing it, and it wasn't just any building. It was the icon of failure and abandonment." Juan Sabbagh: the architect who will "re-found" the white elephant of Pedro Aguirre Cerda. La Tercera, June 10, 2013.

Congress Center Augsburg, 1972.
© Uta Pottgiesser, 2025.

FROM NUBIA TO KHARTOUM

The Politics of Constructing the Sudan National Museum

Mai Abusalih

ABSTRACT: In April 2023, just weeks after the armed conflict broke out in Sudan, the National Museum was damaged by fire and later broken into by the militias of the Rapid Support Forces. In the months to come, it would be reported that a part of the museum's collection of over a hundred thousand priceless antiquities was looted. These events chronicle the most recent entanglements of the Sudan National Museum with politics and power relations in Sudan. However, examining the museum's history unveils deeper connections to pivotal moments in the nation's history. The museum's colonial roots, as a building, archive, and educational institution, reveal how the British perceived it as a potential tool for establishing sovereignty over Sudan through the politicization of archaeology. As the project was given new life after Sudan's independence, external influences continued to shape the museum when it became entangled in the geopolitics of the Nile Waters Agreement and the construction of the Aswan High Dam. The International Campaign to Save the Monuments of Nubia, launched by UNESCO in response, was a vital moment during which the endangered Nubian antiquities were 'displaced' to the museum. While the museum was positioned as a repository for cultural heritage protected by conservation law, the museum building itself fell outside of this protection because it does not apply to modern heritage.
Since the museum is a national project, it would come to be governed by the politics of Sudan's successive military governments, each leaving its imprint on the project. All these political influences cannot be separated from the museum, rendering it an archive of critical moments that shaped the country. Unraveling this archive allows us to trace the interwoven threads of displacement, national identity, and representation embedded within the museum complex. It allows us to understand the museum not merely as a static collection of objects, but as a dynamic reflection of Sudan's evolving socio-political landscape.

KEYWORDS: Archeology, modern architecture, Nubian heritage, post-independence, Sudan National Museum

INTRODUCTION: The Sudan National Museum, designed by Petermüller, Hinkel, and Muddathir, was inaugurated in 1971 (Abusalih, 2024) and has been housing one of the largest archaeological collections of Nubian antiquities in the world [FIGURE 01]. This paper explores the history of the museum and its archive by analyzing the various influences that shaped its development. Firstly, the project's colonial roots, as it was initially proposed to serve as an instrument for strengthening British sovereignty over Sudan vis-à-vis Egypt's desire to rule a unified Nile Valley. Secondly, the realization of the museum through its entanglement with the geopolitics of the 1959 Nile Waters Agreement, which allocated water shares between Sudan and Egypt and enabled the construction of the Aswan High Dam. Due to the Dam reservoir, the museum became a part of the International Campaign to Save the Monuments of Nubia launched by UNESCO. Thirdly, the architectural visions within the design of the museum complex that mirrored its influences. Lastly, the role of Sudan's successive military regimes in shaping the museum, leading to the impact of the ongoing conflict since April 2023.

National buildings are governed by the policies and ideologies of political regimes, and for developing countries like Sudan, external influences and regional geopolitics shape the country's national projects as a part of their support and funding. Understanding how the museum was formed contextualizes its architecture in history. It allows us to question how the museum buildings, collections, and curation act as mediums for the power dynamics in the country. Unraveling this history enables us to trace the interwoven threads of displacement, national identity, and representation embedded within the museum

01 School children visiting the Sudan National Museum. © Vaughan Parry, 2010.

complex. It allows us to understand the museum not merely as a static collection of objects, but as a dynamic reflection of Sudan's evolving socio-political landscape.

The paper examines the history of the National Museum through an interdisciplinary framework that draws from archaeology and heritage studies, post-colonial analysis, architectural history and theory, political history, and foreign relations. The research builds upon a diverse body of local and international scholarship. Alsadig (2006), Adam (2017), and Adam and Taha (2022) examine the establishment of Archaeology and Antiquities Ordinances in Sudan by British colonial officials, the colonial legacies of the discipline that was shaped by Egyptocentrism, and trace the development of museums in the country. Critical reflections by Bushra Hamad (1995) highlight the politicization of archaeology under the colonial British administration. Abdalla (1971), Taha (2009), and Ginat (2007) examine the geopolitics of the Nile Valley and Sudanese-Egyptian relations before and after independence, particularly surrounding the construction of the Aswan High Dam. UNESCO's involvement in the Nubian salvage campaign is documented by various sources, including the UNESCO Courier, Hinkel (1978), Säve-Söderbergh (1987), and Carruthers (2022). Dafalla's The Nubian Exodus (1975) offers a detailed account of the displacement of Nubian communities, while Abdalla (1970) analyzes the government's decision to select Khashm el-Girba as a resettlement site. More recently, Carruthers (2022) reflects on how colonial legacies shaped the archaeological work of the Nubia Campaign and created an ancient Nubia severed from the region's population. Bundi (2019) and Mohamed and Emberling (2021) offer critical perspectives on the museum's relationship to national identity and

representation. Architectural analyses by Osman (2005), Osman, Bahreldin, and Osman (2014), Bashier (2007), and Akcan (2022) contextualize the history of modern architecture in Sudan, situating the museum's design within the broader framework of Tropical Modernism and post-independence nation-building. Hinkel (1978), Richter (1975), and Bundi (2019) provide technical and curatorial insights into the museum's design and construction. Recent documentation of ongoing threats to heritage amid conflict underscores the impact of war on the museum and the urgent need for stronger protections and international cooperation. The National Museum is arguably one of the most documented modern buildings in Khartoum, largely due to the visibility it gained through the Nubia Campaign. This paper contributes to the existing literature by offering an interdisciplinary analysis that situates the museum's architecture at the intersection of broader historical, geopolitical, and cultural frameworks.

THE ARCHAEOLOGICAL MUSEUM AS A COLONIAL INSTRUMENT

The founding of museums in Sudan is generally linked to the 1898 reconquest of Sudan by the British. In the early years of Anglo-Egyptian rule, the British actively collected archaeological and ethnographic materials during their colonial explorations (Adam, 2017; Mohamed and Emberling, 2021). This led to the founding of a small archaeological exhibit in 1904, which occupied a room at Gordon Memorial College (now the University of Khartoum). In the same year, Sudan's Governor-General Reginald Wingate expressed his hopes for dedicating a site in Khartoum for an archaeological museum, but admitted that funds to construct such an edifice were

not forthcoming (Wingate, 1904). Soon after, the first Ordinance of Antiquities was formulated in 1905, which defined antiquities to

"mean all buildings monuments, remains or objects of whatever age or people which are illustrative of art, science, industry, history, religion, literature or custom and were built produced or made in the Sudan or brought thereinto before the year 1783 of the Gregorian Calendar"
(Antiquities Ordinance, 1905, p. 377).

This encompassed movable and immovable objects, granted the colonial government ownership of all antiquities and authority to expropriate any site or structure deemed historically significant, and established the position of Conservator of Antiquities to be filled by senior British employees at the Department of Education. As Alsadig (2006) notes, the colonial government prioritized the preservation of antiquities primarily to export rare and significant artifacts to Europe and the colonial metropole. He recounts that the first colonial archaeological exhibit was accessible exclusively to Europeans. It wasn't until 1932 that Sudanese audiences were permitted entry.

The idea for an independent permanent building for the Sudan National Museum was first proposed in the 1940s during the final decade of Anglo-Egyptian Condominium rule (1899-1956). The convergence of interest between the two governing entities seems to have frayed since the signing of the Condominium Agreement in 1899, which came to a head after Egypt gained its nominal independence from Britain and launched a propaganda campaign calling for the unity of the Nile Valley (Ginat, 2007). The Anglo-Egyptian rivalry over the question of Sudan was driven by Egypt's desire for sovereignty over the country and a return to the 19th-century unification of the Nile Valley under the Muhammad Ali Dynasty. Britain, on the other hand, supported Sudan's achievement of self-governance as long as it remained the predominant external influence in the country. In response to Egypt's propaganda, the British funded education in Sudan from the early 1940s to cultivate a national identity and counter the Egyptian influence (Ginat, 2007). One potential avenue for this was to utilize archaeological research to educate the Sudanese people about their history and foster the concept of nationalism, through which the British would highlight Sudan's ancient history, which was distinct from Egypt's, enabling it to contest Egyptian claims. Bushra Hamad (1995) argued that through Sudan Notes and Records (SNR), a journal established by the British Administration in Sudan in 1918, archaeology was politicized to keep Sudan under British rule and defuse Egyptian claims of sovereignty. A proposal for Sudan's National Museum was publicized in

SNR editorial notes, which framed the museum as a vital instrument of conservation and education that would disseminate knowledge of Sudan's ancient history. Anthony Arkell, Commissioner for Archaeology and Anthropology and SNR editor at the time, argued that

"knowledge of history will sow the seeds of a national culture and will lead to a realization of the causes, both moral and economic, which once operated to raise the Sudan to a world power, and then reduced it to an unknown back-water, causes which are still operative today."
(Arkell, 1946, p. 3).

The editorial notes mentioned that the proposal plans were prepared by architect W. G. Newtown, who designed the additions to the nearby Gordon Memorial College. It was to be built on the site of the River Hospital (now the Ministry of Health) as soon as it was evacuated by the Medical Service. This site was chosen due to its proximity to Gordon Memorial College, which was seen as advantageous for research work (Arkell, 1946). However, the timing of these colonial ambitions following World War II impeded their realization since the British Administration did not allocate funds to the museum in the Post-War Development Programme (Arkell, 1947).

THE GEOPOLITICS OF THE NILE WATERS AGREEMENT AND THE INTERNATIONAL CAMPAIGN TO SAVE THE MONUMENTS OF NUBIA

New urgency for the National Museum became apparent when Egypt decided to build the Aswan High Dam in 1954, which triggered a sequence of events that shaped the project. The hydraulic development of the Nile Valley, which was governed by the distribution of water shares between Sudan and Egypt, had been a topic of contention since the late 1940s (Taha, 2009). At the time, the irrigation system was controlled by the 1929 Nile Waters Agreement, signed by Egypt and the British government on behalf of Sudan, which gave Egypt the overwhelming majority of the shares (48 billion cubic meters compared to Sudan's 4 billion). As Sudan gained its independence and began to reassess its future agricultural expansion, the previous agreement had to be revised (Abdalla, 1971). From 1954 to 1958, negotiations between Sudan and Egypt over Nile water shares repeatedly ended in a deadlock. Resentments and political tensions waged to the extent that Egypt occupied the Halaib Triangle in 1958, an area recognized as a Sudanese constituency in the 1954 elections (Taha, 2009). It took the military coup of General Ibrahim Abboud for negotiations to progress. Despite controversy, the military regime signed the Nile Waters Agreement on November 8, 1959, just

THE NILE

WHITE NILE

BLUE NILE

SUDAN NATIONAL MUSEUM

02   Sudan National Museum site in Khartoum. © Google Earth, 2025.

weeks after negotiations began. Egypt was allocated 55.5 billion cubic meters, and Sudan 18.5 billion (Taha, 2009). With the countries' shares decided—and with the exclusion of other Nile Basin countries such as Ethiopia and Uganda—construction of the Aswan High Dam commenced two months later.

From its inception, it was clear that the High Dam would have catastrophic repercussions. The dam reservoir, Lake Nasser, which would become one of the largest human-made lakes in the world, would submerge the villages of 120,000 Nubians in Egypt and Sudan, as well as ancient temples, churches, and antiquities dating back thousands of years (Dafalla, 1975). The affected area in Sudanese Nubia would extend to 150 km, encompassing Wadi Halfa town and twenty-seven villages, along with their entire agricultural land, which would be submerged under the reservoir lake. The reality of the imminent destruction of Nubia's cultural heritage drove Sudan and Egypt to appeal separately to UNESCO to salvage the endangered monuments. The International Campaign to Safeguard the Sites and Monuments of Ancient Nubia was consequently launched in 1960.

At the campaign launch, Abboud stated at UNESCO House that Sudan is "*prepared to give at least fifty percent of the finds to contributors and, since Nubia is a little-known country, finds are likely to be of great importance*" (UNESCO, 1960, p. 5). Sudanese Nubia, unlike

its Egyptian counterpart, was framed as *terra incognita* (Vercoutter, 1960), a label rooted in colonial legacies that reflected both the logistical challenges of accessing remote desert sites and the broader racialized bias against recognizing black Africa's ancient civilizations compared to Egypt's (Grzymski, 1993; Adam & Taha, 2022). At the time, only around 100 archaeological sites were known. Following the campaign, approximately 1,500 sites were identified in Sudanese Nubia. These discoveries marked the establishment of Nubian Studies as a distinct discipline and repositioned the ancient kingdoms of Nubia as distinct and complex civilizations in their own right, rivaling those of Egypt. In exchange for their participation, half of the findings were taken by foreign archeological missions. The selection of what was rescued also relied on the funding of foreign missions, which didn't necessarily prioritize Sudan's benefit, and Nubians were ignored in this process (Carruthers, 2023; Lemos et al., 2024). The Sudan Antiquities Service identified four temples–Aksha, Buhen, Semna East, and Semna West–to be rescued alongside many other archeological finds.

In 1956, shortly after independence, the Antiquities Service designated an area of 31,348 m^2 for the National Museum in Khartoum (Alsadig, 2006). The site is located on the banks of the Blue Nile in the Mogran neighborhood, which is named after the nearby confluence of the Nile River [FIGURE 02]. The foundation stone for the "Sudan

Museum" was laid on November 19, 1959, on behalf of General Abboud, which coincided with the first anniversary of his military coup, and took place ten days after the signing of the Nile Waters Agreement (Bundi, 2019). Abboud's government insisted that the Nubian temples be transferred to Khartoum to ease access for schools, universities, teaching centers, and tourists. The government argued that it would be difficult to access the antiquities if they were relocated to nearby deserted areas, which could put them at risk of being vandalized (Säve-Söderbergh, 1987). Mohamed and Emberling (2021, p. 39) argue that "the Sudan National Museum aimed through its name, its location at the confluence of the Blue and White Niles, and its connection to UNESCO and the international community, to serve as a symbol of national identity for Sudan."

To undertake the difficult task of dismantling, packing, transporting, and reconstructing the Nubian temples at the museum in Khartoum, the Antiquities Service hired Friedrich Hinkel, a German architect who worked for the Academy of Science of the German Democratic Republic. In his book, Exodus from Nubia, Hinkel (1978) recounts that the reconstruction plan he submitted to the Antiquities Service in 1961 for the Lion Temple of Musawwarat es-Sufra—a significant archaeological site near Khartoum where he participated in Humboldt University's expedition—inspired the government to pursue a similar effort to preserve the Nubian temples threatened by flooding. Nubians living nearby were crucial to this monumental task and were hired to dismantle the temples, which were then transported from Wadi Halfa to Khartoum. The extensive documentation of the UNESCO campaign reveals Nubians braving the scorching sun as they worked tirelessly to rescue the heritage of their ancestors (Sudan Radio and Television Corporation, 1964; Carruthers, 2022). As the monuments were rescued and given priority, Nubian villages were left to be submerged by Lake Nasser. It is estimated that 50,000 Sudanese Nubians were displaced. Most were relocated over 800 km away in Khashm El Girba, the chosen resettlement site by Abboud's government despite mass demonstrations in 1960 (Abdalla, 1970; Dafalla, 1975). Nubians requested a sum of £313 million as compensation for their lost homes and palm trees, but were granted only £15 million in compensation from Egypt according to the Nile Waters Agreement (Abdalla, 1971).

The campaign reflected a broader historical pattern in Sudan's heritage conservation, which was shaped by colonial legacies. Early 20th-century practices were dominated by European-trained archaeologists and technical approaches that prioritized the preservation of monumental, tangible heritage from a colonial perspective (Alsadig,

2006; Adam & Taha, 2022). As Adam and Taha (2022) argue, this framework treated heritage as a scientific field reserved for experts, sidelining local communities by disregarding the significance of intangible cultural practices. The Nubia Campaign echoed this pattern by divorcing heritage from the everyday lives of Nubians and stripping their agency through alienation and dispossession.

TWO VISIONS FOR THE NATIONAL MUSEUM

In Khartoum, the National Museum complex was constructed in two parts: three interconnected museum blocks and an open-air archeological garden. The Museum Board commissioned Austrian-Greek architect Alexandre O. Petermüller in January 1957, shortly after acquiring the site, making him the first architect appointed to the project. Petermüller established the first architectural practice in Sudan in 1954. His firm was responsible for most of the major works in Khartoum at the time, including the Senior Trade School (now Sudan University of Science and Technology), the Chemistry Laboratory at the University of Khartoum's Faculty of Science, the Industrial Bank, and the Bata Shoe Factory (Gibb, Petermüller & Partners, 1966; Osman, 2005; Akcan, 2022). For the museum project, he designed three interconnected blocks: a two-story museum, a two-story laboratory, and a four-story administrative headquarters for the Antiquities Service—today known as the National Corporation of Antiquities and Museums (NCAM) (Richter, 1975; Bundi, 2019) [FIGURE 03, FIGURE 04]. Hans Asplund, a Swedish architect, was chosen as a UNESCO architect in 1957 to advise on questions of museography. In his capacity as architect-consultant, Asplund collaborated with Petermüller on the development of the design until 1959. The National Museum could be considered a part of Khartoum Style Architecture, a regional interpretation of Tropical Modernism (Bashier, 2007; Osman et al., 2014). Similar to other newly independent African countries, the architecture of the Modern Movement came to be associated with nation-building in Sudan post-independence. The museum's International Style architecture reflected its international influences and the post-colonial embrace of Modernism in the nation-building process. The main exhibition hall, reminiscent of S.R. Crown Hall, is a rectilinear structure defined by ten reinforced concrete columns that protrude from and wrap around the building. The 8-meter-high main exhibition hall features an open space illuminated by circular skylights [FIGURE 05]. Exhibits span two floors and are connected by a ramp [FIGURE 06]. The museum's exterior, finished in sandy-brown, bush-hammered artificial stone plaster, evokes mud buildings in Sudan, which are suited to the local climate and require minimal maintenance [FIGURE 01].
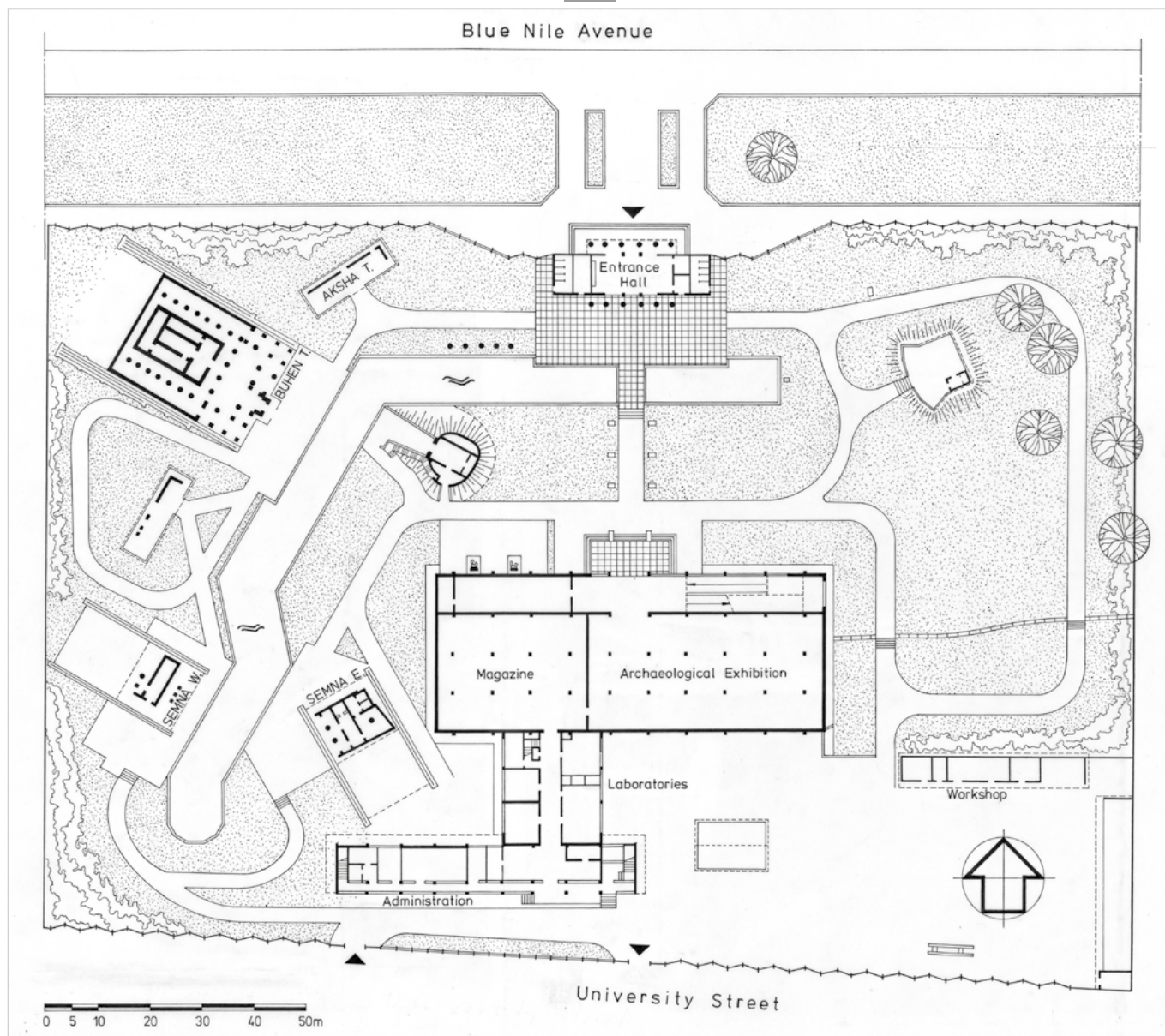
03 Layout of Sudan National Museum Complex, 1971 (inauguration date). © DAI, Archiv Friedrich W. Hinkel, Z1721.
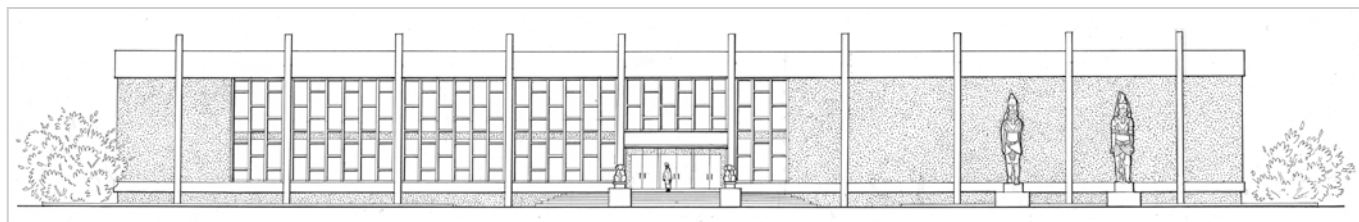
04 Elevation of the Main Exhibition Hall, 1971 (inauguration date). © DAI, Archiv Friedrich W. Hinkel, Z3139-1-2.

05 Interior of Main Exhibition Hall. © Alan Mandic, 2018.
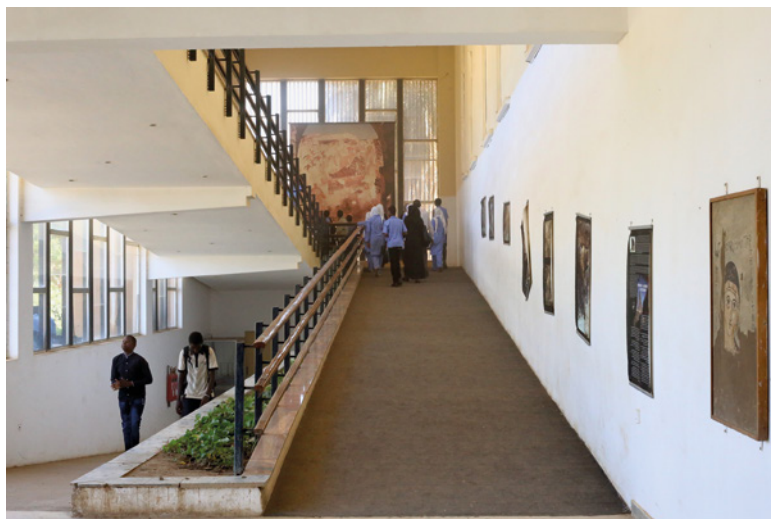
06 Circulation ramp connecting exhibits. © Rund Alarabi, 2015.

07 Temple Shelters in the garden. The artificial lake suffered some leakage issues and has not been filled in recent years. © Rawya Saeed, 2022.

ROOF OF BUHEN TEMPLE ROLLED BACK

GROUND PLAN, ELEVATION AND SECTION OF TELESCOPIC ROOF CONSTRUCTION TO PROTECT THE BUHEN TEMPLE
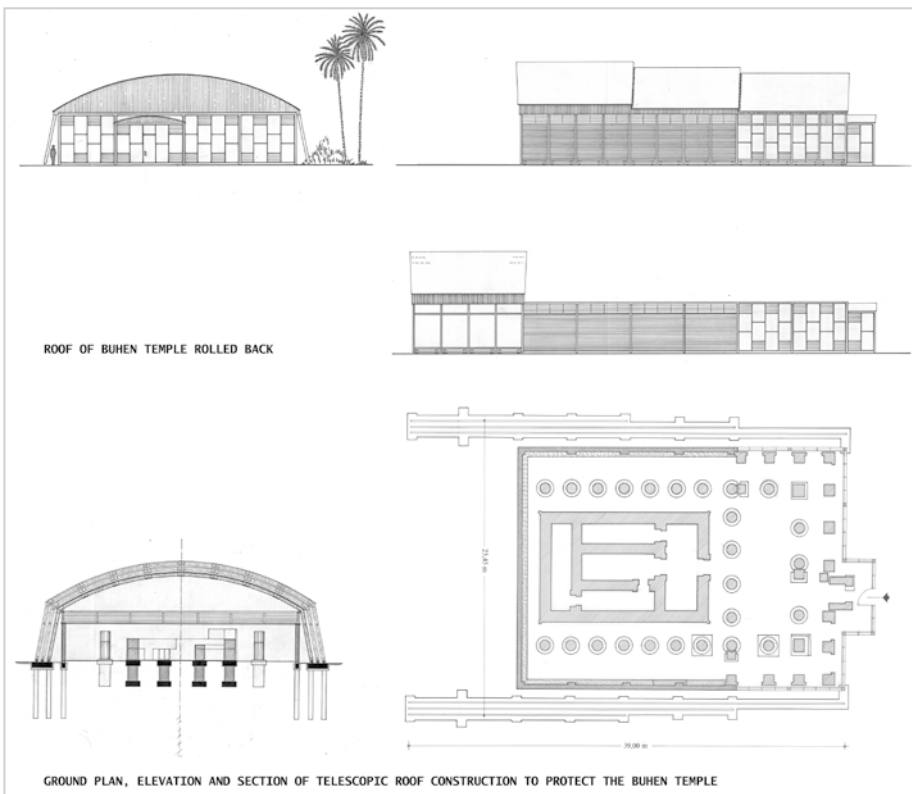
08 Ground plan, elevation, and section of the Telescopic Shelter of the Buhen Temple. © DAI, Archiv Friedrich W. Hinkel, Z3108, Z3111, Z3113, Z3118. Annotated by Author.

09 Buhen Temple with Telescopic Shelter. © Eric Lafforgue, 2019.

For the archaeological garden, Hinkel designed a 200-meter-long artificial lake to serve as the project's "dominant centerpiece" and symbolize the Nile River. Under his supervision, the Nubian temples were reconstructed on the banks of the artificial lake to replicate their original relations and orientation, recreating their origins along the Nile. One aspect Hinkel had to contend with was Khartoum's climate, which is rainier than that of Nubia and would ultimately affect the monuments. Hinkel designed three enclosed steel structures to shelter the Buhen, Kumma, and Semna West temples, as well as two open protective shelters for a wall from the Aksha temple and other gathered monuments. Low cost and efficiency were prioritized in the design; however, the pavilions were movable since they could close during the rainy season and open for the rest of the year to display the uncovered temples (Hinkel, 1978) [FIGURE 07, FIGURE 08, FIGURE 09]. [1]

The entrance to the museum, designed by Sudanese Architect El Amin Muddathir, is a horizontal pavilion with a flat roof overhang supported by *pilotis* and integrated into the boundary wall [FIGURE 10]. Muddathir graduated in 1961 as part of the first cohort of professionally trained architects from the University of Khartoum and spent two years working at Petermüller's office following his graduation. He recalls the National Museum as one of the projects "on the drawing board" during the working drawings phase. After establishing his practice, Muddathir was invited by Hinkel in the late 1960s to design the museum's entrance pavilion and support site work on the garden and movable shelters. In 1985, the Central Bank of Sudan issued a 50-pound banknote depicting the museum entrance pavilion as well as a view of the Nubian Antiquities alongside the lake, underscoring the museum's status as a national symbol [FIGURE 11].

It remains unclear whether Petermüller and Hinkel ever met, as Hinkel's account of his work at the National Museum does not reference an interaction between them. The two components of the project appear to have been designed independently, possibly because the decision to displace the Nubian monuments to Khartoum was a late addition that necessitated some site expansion. Petermüller's design approach reflected his other public commissions in Khartoum tied to post-independence nation-building. In contrast, Hinkel opted to create a micro-environment in his garden design to evoke the Nubian monuments at their origins. Hinkel's original design intent, which envisioned movable shelters, became unachievable in 1974 when a UNESCO consultant warned that UV light would harm the temples' painted displays, and they have since remained enclosed (Mallinson Architects & Engineers, 2012). Between these

10   Entrance Pavilion. © Sami Elamin, 2012.

11   Sudanese 50 pounds banknote issued by the Central Bank of Sudan in 1985. © KATZ Auction.

12 Aerial View Sudan National Museum Complex. © Mazin Salah, 2022. Annotated by Author.

two contrasting visions for the museum complex, the relationship to Nubian Antiquities remained a point of tension. While the proximity to the Nile and the artificial river evoke the civilizations that thrived, these bodies of water also serve as symbols of the interwoven relationship between the geopolitics of Nile waters and Nubian displacement, into which the museum became implicated. Both rivers, whether natural or artificial, reference submerged Nubian lands and the separation between Nubian monuments and Nubian people despite their shared history. As Carruthers (2022) notes, the only surviving connection in the museum between these monuments and living Nubian heritage is the names of the temples, which reference the villages now submerged under the waters of Lake Nasser.

THE MUSEUM AND THE STATE

The main construction work on the museum blocks was completed by 1962, but was halted due to financial constraints. Work resumed after 1967, albeit with challenges (Hinkel, 1978). Following the October 1964 Revolution, which ousted Abboud's regime, popular calls for the nationalization of foreign trade and property had a negative impact on foreign businesses, leading to their departure, including Petermüller, who left the country in 1965 (Osman, 2005; Bundi, 2019). The prolonged construction was also influenced by Gaafar Nimeiry's 1969 coup. Nimeiry's regime ushered in an era of nation-building, characterized by the construction of roads, bridges, and numerous public projects, including the National Assembly and Friendship Hall. For the museum, Nimeiry's government urged construction to be done by May 1971 to coincide with the second anniversary of its *May Revolution*. To meet this deadline, the remaining cost of the project had to be drastically reduced from £200,000 to £70,000 (Hinkel, 1978). According to Hinkel, whose responsibilities later expanded to include overseeing the museum's finishing work, earlier material selections were

replaced with local alternatives. Marble originally sourced from Italy was substituted with marble from the Red Sea Hills, and special timber intended for the interiors was replaced with locally available wood, further integrating the museum's modernist design into its local context. Some features in the design, such as seven-meter-high aluminum sunbreakers, were deemed "unnecessary extravagance" and discarded (Hinkel, 1978). The National Museum inauguration ceremony was held on May 27, 1971.

Following Nimeiry's embrace of Islamic ideology and the implementation of Sharia Law in 1983, the regime sought to enhance Islamic representation within the museum's collections. This resulted in the Christian medieval galleries expanding to include artifacts from Sudan's Islamic periods (Mohamed and Emberling, 2021). These Islamist policies continued following the military coup of Omar Al-Bashir in 1989. The government initiated a major expansion, the new Islamic Hall wing of the Sudan National Museum (Mohamed and Emberling, 2021; Bundi, 2019). The new building design by DAR Consult was approved in 2005, and construction soon began with Dan Fodio Co. as the contractor. However, due to a lack of funds as well as some rumors of structural deficiencies, the skeleton of the expansion lay unfinished for over a decade (Bundi, 2019). Funds allocated to museums have historically been insufficient and are rarely prioritized in public expenditure (Adam, 2017). This was exacerbated by Sudan's placement under international economic sanctions between 1997 and 2017, which impacted the museum's ability to receive external support. After the sanctions were lifted and Bashir's regime was overthrown by a popular revolution, the expansion was inaugurated in 2022–albeit with discarding its earlier vision–to contain laboratories and a storeroom [FIGURE 12]. According to senior NCAM curator Shadia Abdrabo, the new building suffered from structural issues and leaks despite having only recently opened.

Amidst the prolonged political turmoil, the museum remained without comprehensive rehabilitation for over 50 years. In 2012, Mallinson Architects & Engineers conducted a study of the museum's general conditions for NCAM and the Qatar Museums Authority, proposing the "*Renaissance Project*," a new extension that was never realized. The study revealed that the buildings had deteriorated due to a lack of maintenance. The main hall's flat roof asphalt had deteriorated and would leak in heavy rains. The steel structures in the garden were weathering, and birds had made nests above the Nubian temples, resulting in bird droppings on their surfaces (Mallinson Architects & Engineers, 2012). These conditions worsened over the years.

The declining state of the museum underscores structural challenges in the protection of Sudanese heritage. Generally, 20th-century modern architecture in Sudan, particularly post-independence, is not regarded as heritage. The Ordinance of Antiquities, first introduced in 1905, has undergone two revisions. Initially, the law only protected antiquities produced before 1783, and was first revised in 1952 to extend protection until 1821. The 1999 Antiquities Ordinance introduced a more expansive definition of heritage, encompassing sites, buildings, and objects dating back over 100 years. The latest Ordinance protects the archeological collections, but the museum buildings themselves, which house these priceless collections, fall outside of this protection. Both suffered from limited support. As Adam and Taha (2022) observe, the gaps in protection reflect broader issues in Sudanese heritage legislation, where enforcement has been weak and many sites that should be protected were nevertheless demolished and destroyed by developers, foreign investors, and military personnel. Adam and Taha note that decades of political instability led to frequent changes in the government ministries responsible for heritage management, which hindered long-term preservation efforts and reduced interventions to rescue missions due to increased threats.

In early 2023, the museum began preparations for a full rehabilitation project sponsored by UNESCO. However, on April 15, 2023, armed conflict between the Sudanese Armed Forces (SAF) and the Rapid Support Forces militia (RSF) broke out in Khartoum, close to the museum premises. By May 2023, the Cultural Heritage Monitoring Lab and the Smithsonian Cultural Rescue Initiative released a report that confirmed fire damage to the Aksha and Buhen temple structures in the garden (Gunter-Bassett et al., 2023). In June 2023, viral videos on social media showed the RSF breaking into the museum garden and bioarchaeology laboratory. The extent of the damage to the National Museum only became clear in March 2025, after the SAF seized control of the capital from the RSF. By then, the looting of the museum had been confirmed, with reports indicating that portions of the museum's collection of over 100,000 priceless antiquities had been stolen (UNESCO, 2024; York, 2025). Photographs and videos shared on social media depicted the museum's shattered glazed facade and broken temple shelters. The destruction and looting of the National Museum amid the ongoing conflict mark the culmination of decades of neglect, political instability, and weak heritage protection. As a result, one of Sudan's most significant cultural institutions has suffered severe losses that may take years, if not decades, to recover from.

CONCLUSIONS

Sudan National Museum's history serves as a microcosm of the country's political history, reflecting key moments of national development and the interplay between architecture, power, and national identity. Despite this history, Mohamed and Emberling (2021, p. 50) note that "*museums in the country are not currently thought of as places for political debate*" and that decolonization has not yet influenced museum discourse, partly due to the country's isolation from these global debates. This remains a considerable oversight given the colonial roots of the museum and its ongoing entanglement with politics, particularly the separation of Nubian monuments from their communities. These political decisions ultimately benefited the museum, as the acquisition of the Nubian collection cemented its status on the national and global stages.

Within the current context of conflict, Sudan has become the world's largest and fastest-growing displacement crisis, with over 11.3 million people internally displaced and another 3.9 million having fled across borders (International Organization for Migration, 2025). Amid such a catastrophe, addressing humanitarian needs understandably takes precedence, often leaving cultural heritage vulnerable and sidelined. Nevertheless, it's important to address the considerable impact on cultural institutions, as many museums, universities, and archives have been damaged in the war. In response to the impact on the National Museum, a post-conflict future will need to prioritize strengthening heritage protection measures. Recovering the museum's looted collection will require a higher level of support from the international community, as outlined by the 1970 UNESCO Convention to combat the illicit trade of cultural property. The current crisis underscores the need not only for reconstruction but for rethinking the role of heritage and museums in Sudan. In a country fractured by divisions, the very notion of a National Museum should spark debates about the institution's identity, purpose, and representation. It is imperative to question what it means to be a "national" institution in a context of fragmentation.

In recent years, NCAM developed and launched the Western Sudan Community Museum Project, which focused on the heritage of Darfur, the region most threatened by conflict in Sudan (Mallinson et al., 2020). The project prioritized community participation by engaging local leaders and residents in shaping museum activities and training both NCAM staff and locals in new, inclusive museum practices. Education was used as an integral tool to strengthen community ties, raise awareness about the importance of heritage, and involve communities in their own heritage recording. Perhaps a similar approach can be adopted in the National Museum to reframe the nation's history through open dialogue by providing a platform that fosters cultural resilience, inclusion, and reconciliation.

ACKNOWLEDGEMENTS

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ENDNOTES

1 In 1973, Hinkel was awarded the Medal of Merit, First Class, by the Democratic Republic of the Sudan in recognition of his efforts to preserve Nubian archaeological monuments threatened by flooding. For more background on Hinkel's work in Sudan, see Lawrenz (2017).

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SHIFTING PARADIGMS BETWEEN MODERNISM AND TRADITION

The Case of Tashkent

Sofia Celli, Davide Del Curto, Karolina Pieniazek, Gunce Uzgoren

ABSTRACT: The global dissemination of modernist architecture reflects an intricate interplay between universal principles of design and regional adaptations, often shaped by sociopolitical ideologies and local traditions. Tashkent, the capital of Uzbekistan, serves as a compelling example of this phenomenon, illustrating the fusion of global and socialist modernist ideals with Central Asian heritage. This paper explores the emergence of Tashkent's modernist architecture, focusing on its transformation in the 20th century through three interconnected dimensions: a brief theoretical framework focusing on the global origins and regional responses of Modernism, its reinterpretation in Tashkent's Soviet-era urban development, and the localized adaptations that integrate regional decorative and architectural elements, climate-responsive features, and cultural narratives.
The study traces Modernism's journey from its European roots to its adoption in socialist and postcolonial contexts, emphasizing how, in the second half of the 20th century, Tashkent became a laboratory for architectural innovation. Through the analysis of emblematic buildings, the paper highlights how modernist principles were reimagined to address regional conditions and to integrate Eastern ornamentation and traditional spatial practices. Despite the rich cultural synthesis achieved in Tashkent's modernist heritage, these buildings face challenges in preservation due to post-Soviet identity shifts and rapid urban development. Thus, the paper concludes by examining emerging conservation efforts, highlighting the importance of these architectural achievements in advancing a deeper understanding of the dynamic interaction between global modernism and local influences. Tashkent's 20th-century architectural legacy not only represents a significant chapter in the history of modernist architecture but also serves as a unique lens through which to reconsider the complexities of cultural identity, globalization, and architectural preservation.

KEYWORDS: Tashkent, Soviet Modernism, traditional and modern, global and local.

INTRODUCTION: This paper examines the interaction between modernity and local traditions in the development of modernist architecture in Tashkent. It provides a comprehensive analysis of how the universal principles of the Modern Movement were reinterpreted and adapted to the cultural, political, and environmental context of Uzbekistan, particularly through the city's transformation under the framework of socialist modernization. By tracing Tashkent's 20th-century architectural development, the paper explores not only how these modernist buildings reflected and reshaped local identity but also their significance at the time of construction and in the present day. Specifically, it investigates the role these buildings played during their creation, when Tashkent served as a "shop window" for socialism, showcasing the Soviet model to decolonized countries, and their contemporary significance as pioneering examples of preservation for modernist heritage in Central Asia.

In particular, this study engages with ongoing debates on the Soviet architectural legacy in post-Soviet societies. These discussions center on the re-evaluation of Soviet-era heritage, addressing the complexities involved in attributing cultural and historical value to these buildings and the challenges of preserving them. Many of these structures embody a synthesis of ideological, artistic, and regional influences, making their study crucial for understanding broader narratives of 20th-century architecture, urban development, and identity. As post-Soviet states continue to critically reassess their historical legacies, the preservation of modernist architecture in cities such as Tashkent emerges as a pressing concern in heritage conservation.

The paper is based on the results of the research project *Tashkent Modernism XX/XXI*, which employed a multi-layered methodology to investigate the architectural legacy of Soviet Modernism in Tashkent, focusing on buildings

constructed between the 1960s and 1980s. Grounded in the principles of the Burra Charter, the methodology combined historical research, on-site analysis, and diagnostic investigations. A selection of 25 representative buildings served as case studies. Historical research involved the collection and examination of diverse sources, including bibliographic references, archival materials, and oral testimonies, allowing for the reconstruction of each building's development and transformations. This was followed by detailed documentation of the current condition through site inspections, surveys, diagnostic tests, and comparative analyses between original and as-built states. Findings were synthesized into inventory forms accompanied by individual statements of significance, which informed the development of tailored conservation strategies, addressing both material and functional aspects. The outcomes were further developed during the preparation of the World Heritage nomination dossier, reinforcing the broader goal of recognizing and safeguarding Tashkent's modernist architectural heritage.

The paper is organized into three main sections, each addressing critical aspects of Tashkent's modernist architecture within its socio-political and cultural context. The first section explores the origins, global spread, and regional adaptive responses of Modernism. The second section delves into how global modernist influences were integrated with local Central Asian traditions in Tashkent's architecture. The third section examines the challenges and opportunities in preserving this heritage, as these buildings reflect the city's role in the 20th-century processes of modernization, globalization, and cultural preservation.

GLOBAL ROOTS AND REGIONAL ADAPTATIONS OF MODERN ARCHITECTURE

Influenced by the Industrial Revolution and emerging as a response to its consequences, Modernism utilized prefabrication and mechanization to explore new possibilities in form and structure. Emphasizing functionality and standardization, modernist architecture was seen as embodying modern life, thought, and production with a moral agenda to advance social and political goals. Consequently, it was celebrated as an International Style, embodying an optimistic vision of globalism where global interests were prioritized over national ones (Hitchcock and Johnson, 1932). Within the polemical discourse of the Modern Movement, its new forms, spatial concepts, and technological advancements were regarded as universal knowledge that transcended national borders, embodying the spirit of the age with an inevitable influence on all societies (Conrads, 1970).

Modernism extended beyond its European origins, often serving as a nation-building tool in newly independent countries, where "modernity became the nation's

new identity" (Lu, 2011, p. 13). The widespread adoption of modernist architecture was facilitated by its neutral and universal aesthetic as well as increased global mobility. Lu notes:

> "On the other hand, Modernism traveled in the name of knowledge transfer, overseas aid, and new forms of cooperation among newly independent countries. Successful modernist design proved effective in helping the nations that offered it to create expanded spaces in the global political arena, as well as bringing international recognition and faster-paced modernization to the host societies."
> (2011, p. 9)

Socialist internationalism emerged as an alternative to capitalist-driven globalization (Stanek, 2020, pp. 30-31). Influenced by the USSR, Eastern European countries actively contributed to global urbanization by offering planning, construction, and architectural expertise to newly independent nations in Africa and the Middle East, thereby shaping localized forms of Modernism beyond the Western paradigm (Stanek, 2020, pp. 30-31). Within this geopolitical context, Tashkent, the capital of the Uzbek SSR, was envisioned as a domestic and international showcase of the USSR's modernization achievements through socialism (Colla, 2024, p. 258). It was designed to become a political, economic, and cultural hub, serving as the "capital" of international socialism and a counter-model to imperialism for Central Asia and newly independent nations in the Global South (Stronski, 2010, p. 7; Kalinovsky, 2013, pp. 199-200).

However, modern architecture was not entirely detached from its eurocentric and Western roots. This influence often resulted in the replication of similar materials, techniques, lines, surfaces, volumes, and even colors, often disregarding local spatial and social traditions, cultural heritage, and environmental contexts. This universal approach led to a phenomenon of *placelessness* (Relph, 1976), where modernist architecture appeared identical regardless of location, aligning with Augé's (1995) concept of *non-places*, in which architectural uniformity makes it difficult to discern specific cultural or geographical identities.

The one-size-fits-all nature of Modernism sparked debates in subsequent decades. The theory of multiple modernities challenges the notion of a singular Western modernity and suggests that modernity manifests in diverse, context-specific ways (Eisenstadt, 2000, p. 2). In architecture, this concept underscores how different regions have reinterpreted and adapted modernist principles based on their unique cultural and socio-political realities.

Kenneth Frampton (1983) critiqued the perceived universality of Modernism by advocating for *critical regionalism*, which integrates modern design principles with local materials, traditions, and landscapes to create architecture that is both contemporary and contextually grounded. Frampton argued that an over-reliance on international styles risks erasing cultural identity, whereas a sensitive approach to placelessness allows modern architecture to resonate with its surroundings (1983, p. 26). Such approaches were already being practiced in various regions, including Tashkent. Early modernist buildings, such as the Panoramic Cinema by a team lead by Vladimir Berezin(1960-64), featured pure modernist forms. However, in subsequent decades, traditional ornamentation became more prominent in the pursuit of a national style (Chukhovich, 2012, p. 217). This shift is evident in buildings such as the State Museum of History (lead architect Evgenii Rozanov, 1968-70), and the Peoples' Friendship Palace (lead architect Evgenii Rozanov, 1971-81), which reflect a synthesis of modernist design with local cultural references.

Unlike the homogeneous Modernism often associated with Western globalization, socialist architectural globalization produced hybrid forms of modern architecture that addressed local climates, geological constraints, cultural needs, and political aspirations (Stanek, 2020, p. 36). This phenomenon is evident in Tashkent, but can also be observed in regions such as Latin America, Africa, and Asia (Lu, 2011).

In Tashkent, Modernism was blended with ornamentation rooted in traditional motifs, climate mitigation measures typical of the region, and spatial configurations characteristic of Uzbek culture. This synthesis produced a distinct modern architectural language unique to the city.

TASHKENT: A CITY AT A CROSSROADS

During the Soviet era, Tashkent became a focal point for urban experimentation and socialist ideals, emerging as a paradigm of modernization and development within both the USSR and the broader socialist bloc (Stronski, 2010, p. 7). The Soviet leadership sought to present socialism as an alternative to Western models of progress, positioning Tashkent as the symbolic capital of international socialism in Central Asia (Colla, 2024, pp. 257-258). This ambition placed the city at the intersection of three key trajectories: modernist ethos, socialist ideology, and the cultural heritage of Central Asia. This confluence drew upon the region's artistic and cultural legacy to create a dynamic, multidimensional urban identity.

The earthquake that hit Tashkent in 1966 marked a pivotal moment in the city's architectural history. The extensive damage provided an opportunity for the Soviet government to implement long-sought modernization

plans (Raab, 2014, p. 277). The reconstruction effort was supported by resources from all Soviet republics, leading to a large-scale mobilization of architects, engineers, and construction workers (Meuser 2016, p. 86). The post-earthquake urban plan of Tashkent envisioned a series of architectural ensembles aligned along two primary axes, combining spatial, functional, and symbolic considerations.

At their intersection, the plan designated a governmental core, while cultural, educational, and recreational zones extended east and west (Vanke and Puretskii, 1967, p. 14). In this framework, modernist buildings were designed as prominent nodes within the city's fabric and green network, serving as important urban landmarks [FIGURE 01]. The ground floors were specifically designed to create visual and programmatic continuity with the surrounding context, using distinctive solutions to anchor the structures to the ground, such as plinths, suspended volumes, and galleries.

In the western part of the city, the system formed by the Peoples' Friendship Palace and the State Circus, designed by Tashgiprogor Workshop № 1 under Genrikh Aleksandrovich (1962-76), is a striking example. Positioned at opposite ends of Furkat Street, the principal north-south axis of Tashkent, these two buildings face one another, marking the boundaries of the city center and maintaining a direct visual relationship. The squares in front of them reflect the socialist ideal of public spaces as a place for collective gathering, while also serving to connect the buildings to their surroundings. To enhance their prominence and visibility, both structures are elevated on podiums, reinforcing their significance within the urban landscape.

Other key structures, such as the State Museum of History and the Panoramic Cinema—located in the middle core of the city—further illustrate how architecture was integrated into the urban fabric. The museum's cubic symmetry and stepped approach underline its cultural prominence and reflect the broader zoning logic of the city's administrative core, bringing together the state power, physical order, and hierarchy. Similarly, the Cinema was designed to mediate between large-scale public use and formal expression: its position—set back from Navoi Street and surrounded by open spaces—was strategically conceived to regulate crowd flows, particularly due to its proximity to the Pakhtakor Stadium by Mithkat Bulatov (1954-56), while enhancing both its recreational function and its visibility as a landmark. The design, thus, balanced functional circulation needs with a sculptural volumetric composition. With other modernist buildings, these structures reflect a coherent planning strategy that merged climate adaptation, mobility, and monumental architecture—central to the city's post-disaster transformation.

01   Map highlighting the most notable examples of Tashkent Modernism and their locations. © Michela Barazzetti and Laura Codilupi, 2022.

Although architecture and urbanism in Tashkent remained largely under local control during the first decade of Soviet rule (Chukhovich et al., 2025, p.62), the following decades witnessed a gradual shift toward Moscow's centralized approach. Most architects working in Central Asia at the time had been trained in Moscow or Leningrad rather than within the region itself. They were entrusted with the task of promoting the socialist way of life (Meuser, 2016, p. 166). The design and construction of public buildings were primarily overseen by state-affiliated architects based in Tashkent's planning institutes, such as Uzgosproekt (UzNIIPgradostroitel'stva), TashZNIIEP, Tashgiprogor, and Tashgenplan (TashNIiPIgenplan). From the 1960s to the 1980s, these institutions played a fundamental role in shaping the city's architectural landscape, blending Soviet methodologies with localized approaches (Chukhovich et al., 2025, p.99).

The circulation of modernist ideas into the USSR, despite the Iron Curtain, also significantly influenced Tashkent's architectural identity. Technical journals, such as *L'Architecture d'Aujourd'hui* (Steiner, 2012, p. 7), exposed Soviet architects to global trends, fostering an exchange that highlighted the interconnectedness of architectural practices across political and geographical boundaries. In Tashkent, these ideas were not simply replicated but rather reinterpreted, striking a balance between innovation and tradition. In this regard, the architectural trajectory of Tashkent from the 1960s to the 1990s mirrors broader shifts in Soviet architectural policy. Khrushchev's 1954 construction reforms emphasized modernist

minimalism, standardized construction, and the use of materials like concrete, metal, and glass (Novikov and Belogolovskiĭ, 2010, pp. 9-11). Early modernist structures in Tashkent reflect this functionalist approach, adhering strictly to the principles of Soviet and international modernist architecture.

By the late 1960s, a more symbolic and stylistic approach emerged, reflecting Soviet efforts to develop an architecture that was "national in form, socialist in content" (Chukhovich, 2012, p. 215). Moscow-based institutions increasingly produced modern designs featuring orientalist imagery and emphasized perceived "Eastern" elements (Chukhovich, 2012, pp. 218-219). Tashkent architects later followed, creating the architectural diversity that enriches the city's urban fabric, while illustrating the interplay between socialist ideals and local traditions. Beyond surface aesthetics, architects sought to reinterpret traditional residential forms within modernist frameworks, integrating cultural identity into functional designs. This duality is evident in the way Tashkent's modernist architecture incorporated influences from Europe, Russia, and the United States, such as prefabrication, curtain walls, and advanced building facilities, while simultaneously drawing on regional traditions. Central Asian elements, such as courtyards, loggias, and *pandzharas* (traditional patterned grills), were adapted to suit the region's social and climatic needs, while geometric patterns, colorful ceramic tiles, and Islamic-inspired decorative motifs added cultural depth.

02 The Central Exhibition Hall of the Academy of Arts (1972-74), featuring decorated prefabricated panels in the façade and an arcade with lancet arches evoking traditional forms. © Authors, 2022.

THE GLOBAL-LOCAL NEXUS IN TASHKENT'S MODERNIST ARCHITECTURE

A prime example of the fusion between global and local influences is the Central Exhibition Hall of the Academy of Art (lead architect Rafael' Khairutdinov, 1972-74), which reinterprets traditional architectural motifs and climate-responsive solutions while embracing modern construction techniques. The pleated façades, made from decorated prefabricated panels, blend modern technology with local decorative traditions [FIGURE 02]. These panels feature repetitive stucco patterns on a light-blue mosaic backdrop, creating a modernist twist on the regional ornamentation. The stylized cotton boll symbolizes both Islamic tradition, evoking paradise gardens, and Uzbekistan's Soviet-era identity, representing the nation's agricultural strength and the socialist division of labor (Chukhovich et al., 2025, p. 606). Moreover, the ground-floor arcade, with lancet arches recalling traditional forms, is reimagined with outward-tilted apexes and gaps replacing keystones, adding a playful reinterpretation of tradition. Behind the arches, blue ceramic tiles with geometric patterns evoke the Islamic heritage, further highlighting the blend of the past and the present. The interior is centered around a full-height atrium, illuminated by skylights that provide zenithal light. The lanterns, shaped like lancet arches with semi-circular horizontal projections, not only illuminated the hall but also facilitated ventilation through the stack effect (also known as the *shipang technique)*, a characteristic of traditional Central Asian architecture.

Given the region's continental climate, experimentation extended to mitigation solutions, primarily aimed at shielding buildings from solar exposure and overheating. A key feature of Tashkent's Modernism is the *pandzhara*. Reinterpreted with modern materials and design, this feature is prominently used in numerous buildings, such as the State Museum of History [FIGURE 03],

where Moscow architects adopted this element to create a distinctly national architecture. In this case, *pandzhara* screens were also notable for their innovative technology. According to the museum's architect, it was the first time in construction practice that sunshades were made with high precision from precast reinforced concrete elements (Rozanov et al., 1970). The façade system was complemented by cutting-edge technical systems, including an air-conditioning system integrated with a radiant ceiling for heating and cooling, and a water-filled roof designed to reduce solar heat gain. The museum marked the beginning of a new architectural aesthetic in Tashkent, one that fused Soviet Modernism with Uzbek cultural identity. If the pure design concept of the museum, a glass cube floating above ground, straightforwardly referred to Modernism, the geometrical pattern of the *pandzharas* linked it to the Eastern world.

Pandzharas are also used in other major buildings, including the Hotel Uzbekistan by TashZNIIEP, (lead architect Il'ia Merport, 1963-74), the State Circus, and the Peoples' Friendship Palace by a team lead by Evgenii Rozanov (1971-81). In the palace, the lattice screens are paired with an interpreted version of Islamic *muqarnas*, a three-dimensional honeycomb-like decorative element, hanging from the top of the façades [FIGURE 04]. The interior is equally imbued with local references, with decorative elements inspired by local traditions, albeit scaled up to match the building's grandeur, as the palace was intended to be the largest and most sumptuous congress and concert hall in Tashkent and the entire region. For example, the auditorium ceiling features plaster elements modeled after the traditional Uzbek *karnay* trumpet. The Moscow architects who designed the building stated: "We sought to create our own aesthetic series when developing the plasticity of façades and interiors, which would make it possible to recognize traditional techniques through complex

03　Modern reinterpretation of the *pandzhara* on the façade of the State Museum of History (1968-70). © Authors, 2022.
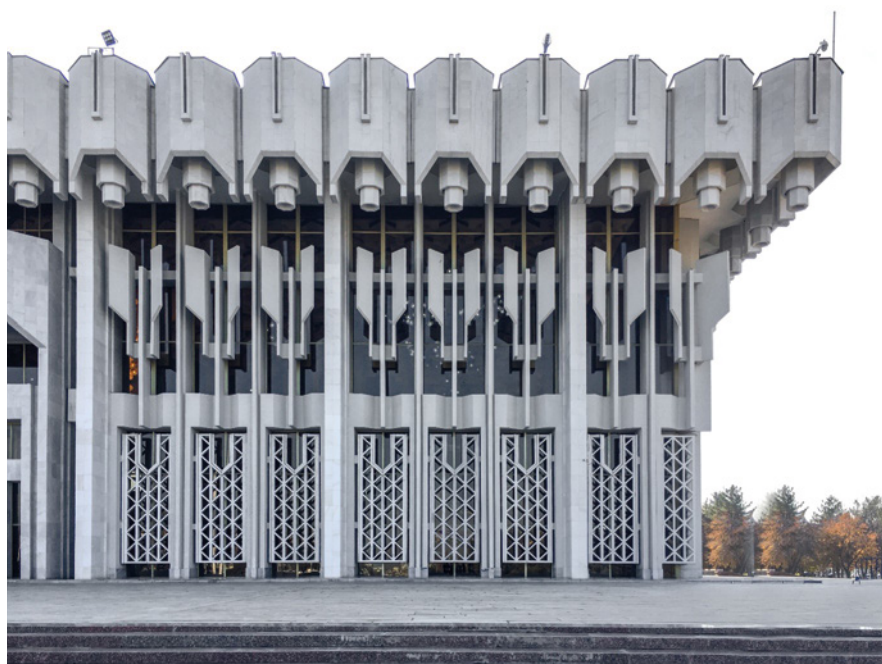
04　The façade of the Peoples' Friendship Palace (1971-81), featuring a modern reinterpretation of the *pandzhara* and the muqarnas, traditional architectural characteristics of Central Asia. © Authors, 2022.

associations rather than direct repetition" (Sukhanova & Krichevsky, 1981, p. 24). Despite traditional influences, the extensive use of prefabricated concrete and glazing clearly refers to modernist logic, successfully blending modular modernity with Islamic-inspired decoration.

The integration of global Modernism with local heritage is also evident in minimally ornamented buildings, such as the Zhemchug Residential Building by TashZNIIEP with the leadership of Ofeliia Aidinova (1972-85). Designed as a "vertical *mahalla*" (traditional neighborhood), this innovative housing complex sought to merge modernist housing solutions with the traditional Uzbek communal lifestyle. It reinterprets the spatial organization of the traditional *mahalla* through suspended triple-height courtyards [FIGURE 05], promoting community interaction and continuity of cultural practices in a modern setting. Each apartment also includes a summer room, reinterpreting the traditional *iwan*, a vaulted space open on one side typical of Islamic and Persian architecture, that historically separated public and private areas in Uzbek homes (Adle et al., 2005, p.

05 Suspended triple-height courtyards in the Zhemchug Residential Building (1972-85), recalling the spatial organization of the traditional *mahalla*. © Authors, 2022.

06 Buffet Hall of the Peoples' Friendship Palace (1971-81) with ceramic art by Aleksandr Kedrin. © Authors, 2022.

815). Aidinova's experimental approach extended to the construction, where she employed sliding formworks to create a monolithic structure, rather than using prefabricated elements (Meuser, 2016, pp. 235-236). Alongside the concept of the vertical *mahalla*, which anchors the building in traditional practices, the raw concrete and clean lines of the design clearly reflect the language of modernist architecture.

Tashkent's modernist buildings also reflect the intersection of global architectural trends and local cultural narratives through the integration of monumental art. In the post-war decades, public buildings in Tashkent were conceived not only as functional spaces but as ideological stages, designed to showcase large-scale artworks that blended Soviet symbolism with Uzbek visual and material traditions. This artistic synthesis reached a pivotal point in the 1960s, when monumental art began incorporating regional motifs, indigenous materials, and artisanal techniques rooted in the applied arts (Chukhovich et al., 2025, pp. 605-606). This integration reflected an ideological aim: to promote a unified socialist identity while celebrating the cultural diversity of the republics. Tashkent's modern architecture thus became both a medium for political discourse and a vessel for cultural continuity. Under Khrushchev, monumental art evolved from Stalinist rigidity toward more thematic and abstract forms, emphasizing ideals such as peace, labor, and unity. Though propagandistic in nature, much of this art also engaged with local heritage and individual artistic expression (Chukhovich et al., 2025).

A prime example of this fusion is the Peoples' Friendship Palace, where the banquet and buffet halls highlight local craftsmanship with Aleksandr Kedrin's ceramic panels, *Gulinaf* and *Gulichi* [FIGURE 06], which symbolize spring and autumn, respectively. Rendered in terracotta and emerald hues, these panels represent Uzbekistan's agricultural abundance and natural beauty while emphasizing its contribution to Soviet prosperity. Moreover, the Presidium Hall of the palace features an iconic tapestry by Bakhodyr Jalalov that blends Soviet internationalism with Uzbek traditions. At its center, a depiction of the "happy cell of society"—a family in an idyllic setting—is surrounded by classical symbols, such as the Greek goddess Venus, alongside representations of Soviet advancements like astronauts, books, and stars. This tapestry embodies the ideological message of collective achievement, uniting regional symbolism with Soviet aspirations for progress and education. The use of local materials and motifs, coupled with the involvement of artists from other Soviet republics, underscores the palace's dual role: celebrating local heritage while symbolizing the unity of all Soviet republics.

PRESERVING A CONTROVERSIAL HERITAGE

Over time, Tashkent's post-earthquake urban plan and its modernist architecture have undergone significant changes. However, the main axes and the broader structural layout established in the second half of the twentieth century remain clearly legible today. While development pressures have led to the demolition or substantial alteration of several modernist buildings, many others have been preserved and continue to serve as prominent landmarks along the city's principal thoroughfares, standing as enduring symbols of Tashkent's pivotal role in the 20th century. They embody the aspirations and contradictions of a society navigating the challenges of modernization, globalization, and cultural preservation.

Nonetheless, this heritage reflects the broader struggles of modernist heritage worldwide, often overlooked due to its temporal proximity. In Tashkent, these challenges are compounded by two critical factors. The first is related to Uzbekistan's quest for a post-Soviet national identity following independence in 1991. In line with the global discourse on "difficult, dissonant, or contested heritage" (Tunbridge and Ashworth, 1996; Macdonald, 2009) in ideologically tied heritage places, many former Soviet republics have had to confront the Soviet legacy—particularly modernist architecture—which carries complex ideological undertones. Unlike countries that pursued de-Sovietization policies to remove Soviet symbols[1], Uzbekistan has taken a more moderate approach, preserving much of this heritage as part of the city's identity. The second factor influencing Tashkent's modernist heritage is the rapid urban development that has characterized Uzbekistan in recent years. While this growth has brought increased resources that could potentially support conservation, it has also accelerated poorly controlled interventions, often carried out without a full understanding of the significance of these buildings. As a result, several modernist structures, if not demolished, have been transformed to meet contemporary functional needs and architectural tastes, losing their original character.

Efforts to counteract these trends have emerged over time, beginning with broader initiatives to address the challenges faced by Soviet modernist heritage[2]. Pioneering work by initiatives such as *Alerte Héritage*[3] and scholars like Jens Jordan (2022) played a critical role in raising awareness about the threats to modernist architecture in Uzbekistan. These efforts laid the groundwork for more focused projects, such as the *Tashkent Modernism XX/XXI* research. Initiated by the Uzbekistan Art and Culture Development Foundation in 2021, this project marked a turning point in acknowledging and preserving Tashkent's Soviet modernist legacy. The outcomes have been numerous, accompanied by significant efforts in dissemination and promotion aimed at raising the visibility of this heritage both nationally and internationally.[4]

On a national level, the registration of several modernist buildings in the State Cadastre of Cultural Heritage Sites[5] has subjected them to Uzbekistan's legal framework for heritage protection. Central to this framework is Law № 269-II of August 30, 2001, *On the Protection and Use of Cultural Heritage Sites*, which regulates the identification, registration, and preservation of heritage sites. The law defines key protective measures, such as the establishment of protection zones, the implementation of scientific research, and the development of monitoring programs. These actions are coordinated by the *Madaniy Meros Agentligi* (Cultural Heritage Agency), which, through its Scientific Expert Council and Cultural Heritage Fund, provides both scientific guidance and financial resources to support conservation initiatives. The Urban Planning Code (adopted on May 23, 2021) further reinforces this system by mandating that master plans incorporate provisions for the protection of cultural heritage sites. This principle is reflected in Tashkent's current General Master Plan (approved on December 25, 2024), which designates areas containing modernist architectural assets as subject to conservation policies and regulations.

Internationally, a significant milestone in the recognition of Tashkent's modernist architecture was reached in 2024, when sixteen key buildings were included in the UNESCO Tentative List (UNESCO, 2024). This nomination highlights the architectural, urban, and social values of Soviet Modernism in Tashkent, framing it within the global narrative of 20th-century heritage. Following this inclusion, a formal Nomination Dossier has been prepared to support the case for full World Heritage status, outlining its outstanding universal value. This development marks a critical shift in how Uzbekistan positions its Soviet-era heritage on the international stage and underscores the growing institutional commitment to safeguarding Tashkent's modernist legacy.

CONCLUSIONS

This paper has illustrated that Tashkent's modernist architecture, through its dialogue with local traditions, resulted in a distinctive regional adaptation of international Modernism, shaped by cultural and environmental specificities. These buildings played a central role in the city's socialist modernization, symbolizing both political aspirations and broader social transformations within Tashkent's evolving urban landscape. The city's unique modernist language diverged from the global homogenization of the movement, establishing an architectural legacy that now serves as a critical reference in contemporary preservation discourse. Through ambitious urban planning and

architectural experimentation, Tashkent embodied a vision of modernity that sought to define the identity of the Soviet East. Today, that same urban fabric is being reinterpreted and revalued, positioning Tashkent once again as a "shop window", this time as a pioneer in the preservation of 20th-century heritage, not only in Central Asia, but across the former Soviet republics.

The preservation of this architectural legacy is of critical importance, not merely for its aesthetic or historical value, but for its capacity to articulate the continuity of identity in the face of political, ideological, and societal change. It acknowledges the shifting political and cultural landscapes while recognizing the historical narrative embedded in these structures. These buildings, once conceived to shape the modern identity of the "capital of Central Asia," are now being protected as part of Uzbekistan's national heritage. Their inclusion in national conservation frameworks and international initiatives such as the UNESCO Tentative List reflects a significant cultural shift: modernist architecture is no longer viewed solely as a legacy of the Soviet era, but as a meaningful and enduring component of the country's present and future identity.

Despite the positive turn of events, significant challenges remain. Adapting this architectural heritage to meet contemporary needs without compromising its integrity is a costly and technically demanding task. Additionally, changing societal attitudes toward these structures often place them at odds with development priorities. The legacy of Tashkent's modernist architecture, much like modernist heritage globally, requires careful documentation and proactive preservation strategies to address the ongoing threat of destruction and loss. By fostering a broader appreciation for this heritage and striking a balance between preservation and urban development, Tashkent can offer valuable lessons for other cities navigating similar issues, ensuring that modernist architecture is not just a relic of the past, but a meaningful part of the future.

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ENDNOTES

1 Several former Soviet republics implemented laws to remove Soviet symbols linked to communist ideologies. Georgia's Freedom Charter (2011) mandated the removal of Soviet-era symbols and monuments, while Latvia enacted a similar ban in June 2022 (Law OP 2022/120.2). Similar measures were considered in Lithuania, Estonia, and Romania.

2 To mention a few, Soviet Modernism 1955-1985 (Novikov & Belogolovskiĭ, 2010), and CCCP. Cosmic Communist Constructions Photographed (Chaubin, 2011) provide a visual overview of modernist buildings across the former Soviet Republics. The Soviet Modernism 1955-1991 (2012) exhibition held at the Architekturzentrum Wien was also essential in raising awareness and resulted in the first online inventory of Soviet modernist architecture.

3 International observatory founded by Boris Chukhovich and Svetlana Gorshenina to raise awareness about endangered modernist heritage in Uzbekistan (https://archalert.net/).

4 Among others, the exhibitions Tashkent Modernism. Index (Milano 17-23.04.2023; Tashkent 20.10-05.11.2023) and A Matter of Radiance (Venice 10.05-23.11.2025), the conference Where in the World is Tashkent (Tashkent 18-19.10.2023), and the books Tashkent. A Modernist Capital (Balas et al., 2024) and Tashkent Modernism XX/XXI (Chukhovich et al., 2025).

5 A first batch of modernist buildings was added to the State Cadastre through Resolution of the Cabinet of Ministers of the Republic of Uzbekistan no. 846 of October 4, 2019. Further buildings, together with 154 modernist mosaics, were added through Resolutions No. 227 of April 22, 2024 and No. 154 of March 25, 2024.

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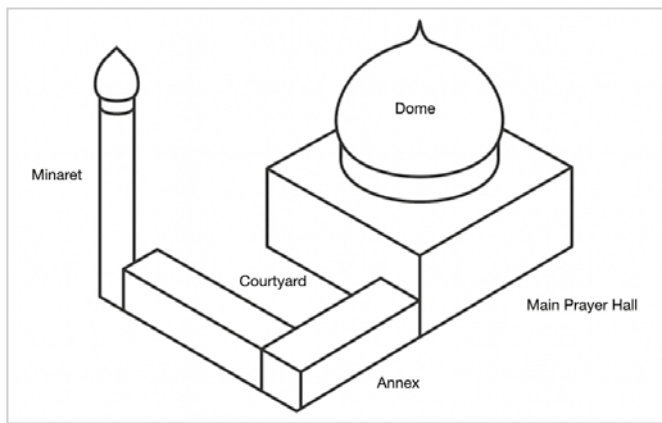
03 Axonometric diagram illustrating the typical tripartite spatial configuration comprising a main prayer hall, transitional courtyard, and front-facing annex block with an adjacent minaret. © Author.

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

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 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 air-flow. 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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PROCESSES OF RUINISATION AND REVITALISATION

Kharkiv Industrial Architecture in the Modernist Era

Olena Remizova, Kyrylo Bozhko

ABSTRACT: The formation of Kharkiv's image as an industrial city in the late 19th-early 20th centuries was accompanied by ups and downs, which were caused by changes in the political status of the city. The aim of this article is to trace the processes of formation, ruination, and revitalization of Kharkiv's industrial architecture during the period of Modernism and their reflection in the authentic features of the city; to outline possible ways to rehabilitate the iconic industrial territories and structures. The method of historical and genetic analysis applied in the study showed that during the industrialization period of 1919-1934, there was a sharp change not only in the ideological program and strategy of the state, but also in the stylistics of industrial construction towards Avant-garde Constructivism, and then towards historicism, which were later replaced by the neutral features of Modernism. The analysis revealed several breakdowns in the search for authentic features of the city of Kharkiv, which are now expressed in a combination of artistic features of the Avant-garde and historical styles. With the achievement of Ukrainian independence and the restructuring of the entire industrial complex from state to private ownership in the 1990s, the process of degradation and decline of Kharkiv's industrial infrastructure began, necessitating a reevaluation of the significance and utilization of valuable historical buildings. In addition, Russia's military invasion in 2022-2025 makes the risk of losing modernist industrial architecture monuments in Kharkiv very real. The article discusses several strategic directions for revitalizing deteriorating industrial territories and constructions, which represent historical and cultural value and contribute to the authenticity of these districts. It develops the possibility of selecting and combining the proposed directions for revitalizing iconic industrial territories and structures.

KEYWORDS: Modernism, Ukraine, Kharkiv industrial architecture, deterioration of architectural monuments, revitalization, authenticity of the city

INTRODUCTION: Modern Kharkiv has been experiencing a complex process of deterioration of its industrial fund in recent years. Many enterprises that dominated in the Soviet period have ceased to function or have lost their leading importance. They have been replaced by private commercial enterprises of a different profile. As a result, large areas of former factories are either deserted or partially repurposed for a new use. Some of them are architectural monuments of the Eclectic and Modernist periods, but are in poor condition, destroyed, or demolished.

However, very little attention has been paid to this problem. Authors such as David P. Billington (1995), S. Khan-Magomedov (1995), Christina E. Crawford (2022), N. Annenkova (2018), and others characterize the development of industrial objects of the nineteenth and twentieth centuries from a historical and stylistic point of view, but do not address the problems of their modern functioning and degradation.

General peculiarities of identity formation of urban ensembles are devoted to the works of D. Noussaa (2018), G. Ballice (2022), B. S. Cherkes (2013b) and serve as an important element of our methodology, but they do not address the problems of changing the semantics of industrial architecture in Kharkiv.

The proceedings of the Constructivism Kharkiv conferences under the auspices of DOCOMOMO 2017 - 2021 (Constructivism Kharkiv, 2021) raise the issue of ideological influence on the formation of mentality and authenticity of the city, point out the problem of Modernism as an "inconvenient heritage" (Remizova & Didenko, 2025). However, this issue has not yet been interpreted in relation to the change in the stylistic appearance of industrial objects in connection with the radical change in the political paradigm in the mid-1930s. On this basis, our goal is to study the degradation process of industrial infrastructure and identify the factors that influence the state of the

01 Factories from the pre-revolutionary period, built in various styles, on Rizdviana St, no. 6, 9, 10, 13, 17, and 19, some of them empty today. © O. Remizova, K. Bozhko, 2010-2021.

architectural environment in Kharkiv's historical zones. Additionally, determining the features of authenticity in the existing environment and identifying strategic directions of preservation and revitalization of these zones becomes important. The subject of this analysis is the change in the semantic and artistic features of degrading historical monuments of industrial architecture in Kharkiv at the end of the nineteenth and the first half of the 20th century.

The research methodology involves a historical and genetic study of the evolution of Kharkiv's historical industrial zones through semantic, stylistic, and morphological analysis.

EVOLUTION OF THE INDUSTRIAL CENTER OF KHARKIV

Kharkiv was not always a major industrial center. The industrial framework of the city was established in the second half of the 19th century with the opening of the railroad in 1869. This process stretched for a century and a half from the end of the 19th century to the present, and the formation of its industrial framework was conditioned by the changes in the political status of the city, such as: provincial center of the Russian Empire in the 19th and early 20th centuries; capital of the Ukrainian SSR in 1919-1934; regional center of the Ukrainian SSR in 1934-1991; democratic city of independent Ukraine.

During this time, the urban industry underwent several stages: birth, prosperity, decline, restoration, and degradation, leaving an indelible mark on Kharkiv's architectural heritage. As a consequence, the architecture of industrial enterprises reflected features of the brick style, Constructivist Modernism, and emerging rationalism, Avant-garde, Constructivism, and Art Deco (Stalinist Empire or Renaissance), among others, which formed the authentic face of the city.

The pre-revolutionary period of Kharkiv's development was marked by a significant surge in industrial construction. Large enterprises began to appear in the 1880s. In the center of the city, near the Annunciation Cathedral and the market on Rizdvyana Street, an ensemble of manufactories was formed, called Kharkiv "City". At that time, it embodied the world of technical progress and science, accompanied by innovations in construction technologies. There was a search for an artistic style. Nine manufactories appeared along 400 meters of Rizdvyana Street in the period from 1903 to 1914. These buildings are striking examples of Art Nouveau architecture, as well as of Neo-gothic style, rare in Kharkiv. They are characterized by a search for rationalist stylistic and structural solutions, the use of reinforced concrete and metal frames, and panoramic glazings [FIGURE 01].

The development of the city's industrial framework continued after the start of the World War I, but no longer in the center, but in the southeastern region [FIGURE 02].

Following the rapid advance of the Kaiser's German army in 1915, the Warsaw machine tool factory Gerlach
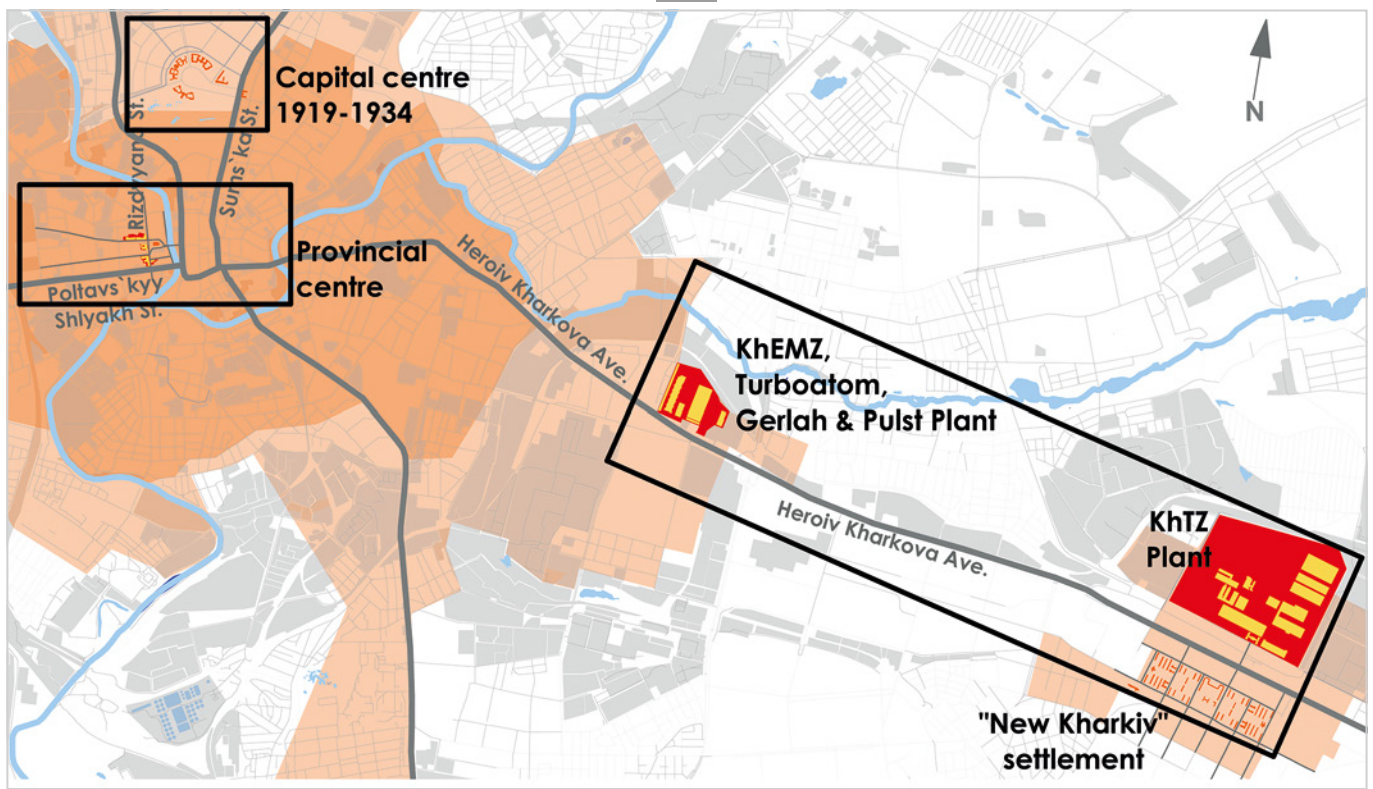
02 Layout of industrial and administrative centers of Kharkiv © K. Bozhko, 2025.
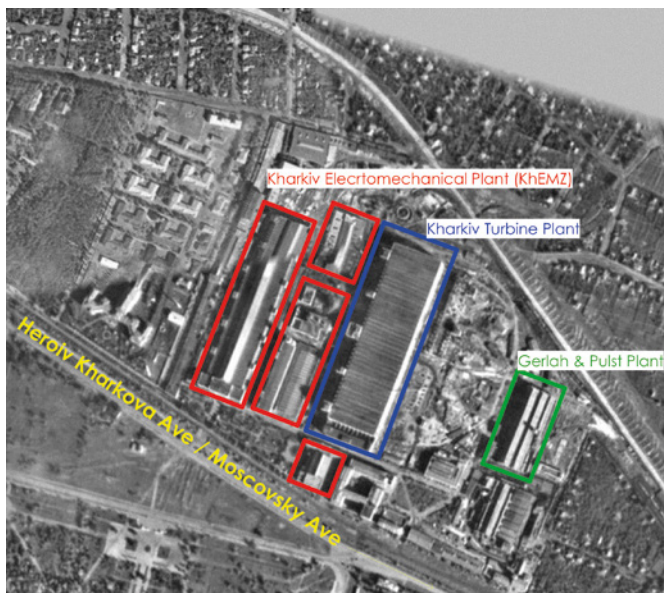
03 Aerial photograph of the KhEMZ, Turbine Plant, and Gerlach & Pulst plants, 1942. © Unknown, private archive of K. Bozhko.
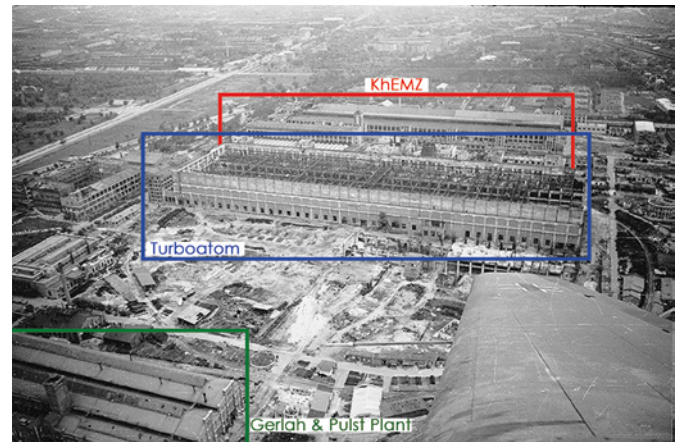
04 Birds view of the KhEMZ, Turbinny, and Gerlach & Pulst plants, 1942. © Unknown, private archive of K. Bozhko.

and Pulst and the Riga Electromechanical Plant of the All-Russian Electricity Company (VKE) were evacuated from the western regions of the Russian Empire (from modern Poland and Latvia) to Kharkiv, which received a new life in the early 1930s in the form of the Kharkiv Electromechanical Plant (KKhEMZ) (Annenkova, 2018). The KKhEMZ and the nearby Turbogenerator Plant formed a new ensemble based on rationalistic tendencies using new reinforced concrete structures (Billington, 1995) [FIGURE 03, FIGURE 04]. The Gerlach & Pulst foundry, built in accordance with the pre-revolutionary paradigm in red brick with large arched windows and Gothic pylons with a three-span metal frame inside, has been preserved since

those times. However, despite the high degree of preservation, it is empty [FIGURE 05].

A comparison of pre-revolutionary and modernist industrial objects in Kharkiv reveals two design tendencies: the reflection of the firm's technical specialization in the building's architecture, on the one hand, and the desire to implement the ideas of technical progress by introducing the latest building technologies, structures, and materials on the other. Let's look at this process further.

05　Current status of Gerlach & Pulst plant, now part of KhEMZ, 2020s. © Private archive of K. Bozhko.

THE INITIAL PROCESS OF SOVIET INDUSTRIALIZATION OF KHARKIV AND THE VANGUARD

After two revolutions, the collapse of the Russian Empire, and a period of turbulence during the Civil War, Kharkiv in 1919 became the capital of Soviet Ukraine. In this regard, a number of landmark structures were built in the city for party organizations and authorities. The denial of past stylistic characteristics of Modernism was reflected in most of the buildings of the late 1920s and early 1930s. In A. Han's manifesto of new architecture, published in 1922, the new artistic movement—Constructivism—is defined as "a slender child of industrial culture… liberated by the proletarian revolution", which, being conditioned by the new economic policy, "evokes new forms and means of expression" (Han, 1922, p. 79). The quantity, quality, and scale of Avant-garde heritage made Kharkiv the capital of Ukrainian architectural Constructivism and Modernism [FIGURE 06].

In 1925, at the XIV Congress of the All-Russian Communist Party of Bolsheviks (VKP(b)), the industrialization program for 1925-1941 was adopted. This new ideological concept would determine not only the scale of industrial construction but also the choice of architectural style. Kharkiv, as T. Dreiser aptly put it, turned into "the future Ukrainian Chicago" (Dreiser, et al., 1996). This idea was symbolically expressed in the master plan of the early 1930s by architects A. L. Einhorn and A. M. Kasyanov (Kasyanov, 1934) and in the ensemble of Freedom Square, whose structure was originally conceived similarly to Howard's Garden City, and which became a new administrative center and a place for political demonstrations and artistically it had to reflect the dynamism of the industrial development of the state [FIGURE 07]. The author of the first Soviet skyscraper, Derzhprom, S. S. Seraphimov, wrote about it as an iconic and symbolic construction:

> "I tried to solve the Derzhprom House as a part of the organized world, to show a factory that became a palace…" (Seraphimov, 1935)
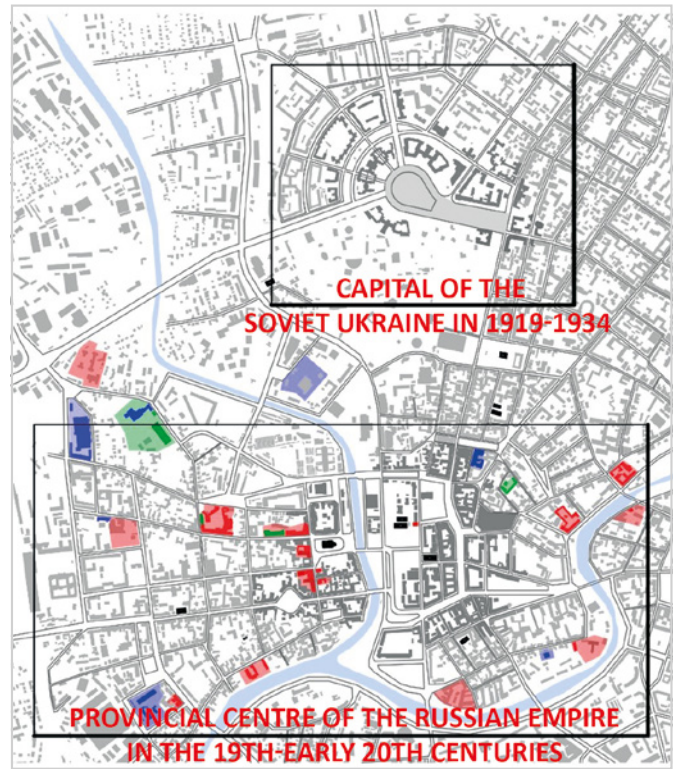
06　Location of the old provincial and new capital administrative centers of Kharkiv. © K. Bozhko, 2024.

This concept of an industrial image for an administrative building on Kharkiv's main square was successfully realized in a dynamic combination of constructivist volumes of varying heights, vertical ribbons of glazed staircases, and giant bridges connecting the buildings. These associations allow us to consider Derzhprom a part of Kharkiv's industrial heritage. The KhEMZ [FIGURE 08], the Turbine Plant, the KhTZ plant, and the linear socialist city "New Kharkiv" [FIGURE 09] were created within the framework of the same

07　New Avant-garde buildings at Freedom Square ensemble, 1940s. © Unknown, private archive of O. Remizova.

08　Construction of the Turbogenerator Plant, 1931. © Ben, 1933, without page number.

09 Aerial photograph of the KhTZ plant and New Kharkiv, May 1942. © Unknown, private archive of K. Bozhko.

program as elements of the city of the future. It is important to emphasize that the new authenticity of the capital Kharkiv was formed on the basis of a communist paradigm in the spirit of the Avant-garde architecture of the 1920s, and the influence of traditionalist concepts was categorically rejected until 1934, when the next paradigm of authoritarianism entered politics and architecture, and the capital of Ukraine moved to Kyiv.

The Kharkiv Turbogenerator Plant, 1929-1932, is an industrial giant, the joint brainchild of General Electric (GE, USA) and Soviet engineers. The building of the plant (footprint: 64,000 m², height: 32 m) reflects the idea of glorifying the achievements of the USSR in industrialization and electrification of the country through Constructivism (Radchenko, 1932, pp. 8-19). At the stage of the project realization, one can see a workshop of colossal length with large panoramic windows, dissected by ten-storey towers protruding forward [FIGURE 08].

As part of the industrialization program, the S. Ordzhonikidze Kharkiv Tractor Plant (KhTZ) was constructed simultaneously with the KhEMZ and the plants in Stalingrad and Chelyabinsk in a complex with the New Kharkiv settlement. The American architectural firm Albert Kahn Inc. participated in the design of the plant from 1930 to 1932, using methods of division of labor, standardization, narrow specialization, and a system of marking drawings. According to Christina E. Crawford, the KhTZ plant was dismantled and transported from the United States. The construction of the plant and village utilized the georeferencing of finished designs on the ground, as well as design methods learned through collaboration

with Ford [FIGURE 09]. The forging shop of the KhTZ bears a striking resemblance to the buildings of Ford's River Rouge Plant: modernist style, modular structures, ribbon glazing, and longitudinal skylights [FIGURE 10, FIGURE 11]. This experience entrenched standardization and replication as the two main methods for designing industrial and residential complexes in the USSR (Crawford, 2022).

The architecture of the KhTZ plant is closely connected with the residential settlement "New Kharkiv", which was developed by a team of architects under the leadership of architect P. F. Alyoshin, devoid of the chaos and shortcomings of the old city. The Avant-garde idea of the project was to place the production and linear structure of the settlement, including housing communities, factory kitchens, and other buildings of social and cultural life, parallel to the transport highway and green sanitary zone. KhTZ was designed as a full-cycle plant, incorporating mechanical, forging, and assembly shops, a power plant, a training center, and plant management. All buildings were designed in simple geometric forms with large glazing planes and had a constructivist look, which, however, has not been preserved everywhere [FIGURE 09].
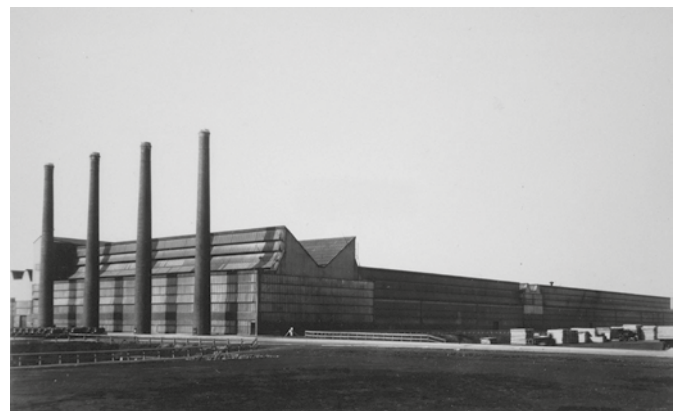
10 The Ford Rouge Glass Plant, 1927. © Ford Motor Company. Photographic Department, 1927.
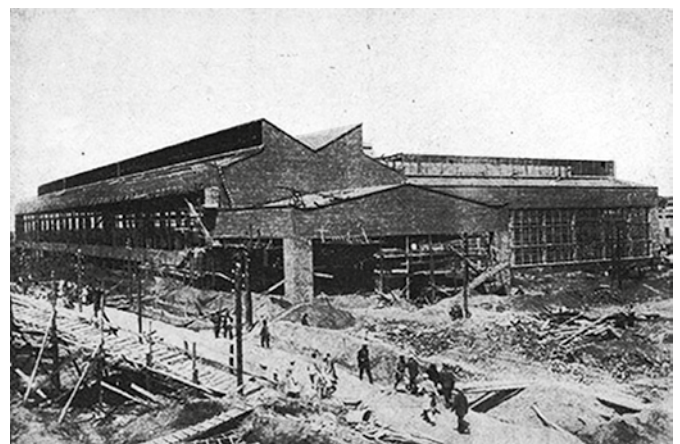
11 Forge shop of KhTZ plant, Kharkiv, Ukrainian SSR, 1931. © Unknown. Potapenko, 1931, p. 46.

DESTRUCTION OF THE AVANT-GARDE PARADIGM AND THE TRANSITION TO HISTORICISM

It is important to emphasize that the change in political doctrine had a significant impact on the future shape of Kharkiv's industrial architecture. In the early 1930s, there was a sharp shift in the architectural paradigm, moving away from the Avant-garde toward historicism. There was an aggravation of the struggle between innovative and traditionalist concepts. The Resolution of the Council for the construction of the Palace of Soviets under the Presidium of the Central Executive Committee of the USSR, from 28 February 1932, put forward new principles of architecture: "monumentality", "elegance", "the use of … the best examples of classical architecture". Architects within the new paradigm were to be oriented to the architectural heritage of ancient Greece and Rome (Cherkes, 2013ª). As a result of the ideological and political appeal to the ancient classics, the Avant-garde groups and their design methods were severely criticized and dissolved, and the Union of Architects of the USSR was established in their place. In fact, this moment marks the end of the Avant-garde era in Ukrainian art and architecture. It is associated with the development of Stalin's personality cult, an increasing control of the administrative-command system over various spheres of state life, and creative methods of work of architects and artists (Khan-Magomedov, 1995).

In 1934, the capital of Soviet Ukraine was moved from Kharkiv to Kyiv, which significantly cut the city's budget. The general plan of Kharkiv, completed in 1933 and executed in the spirit of Avant-garde architecture, underwent significant changes. The articles published after 1934 in the magazines "Architecture of the USSR" (Yanovitsky, 1938) and "Architecture of Soviet Ukraine" (Sanovuch, 1938) show a sharp condemnation of Avant-garde architecture and a paradigm shift of architecture and urban planning towards historicism (Linda, 2009, p. 83). In the mid-1930s, an active process of erasing the features of the Avant-garde and imposing order "clothes" as a symbol of the new, strong, centralized totalitarian power began. There was a shift in the artistic architectural language from the laconic and simplified Avant-garde Constructivism to a complex order system, gravitating to the symbolism of imperial Rome and the late Italian Renaissance. Due to major changes in politics, many Avant-garde buildings were rebuilt in Art Deco forms. Such examples include almost all the factories built in the 1930s, as well as all the landmark buildings on Freedom Square except Derzhprom [FIGURE 12, FIGURE 13].

The relocation of the capital of Ukraine to Kyiv in 1934 did not stop the development of industry in Kharkiv. World War II brought changes in the realization of the identity of the victorious country. As B. S. Cherkes notes, the war victory, experiences, and historical memory formed a new

12 Administrative Building of the KhTZ, September 1932. © Unknown, private archive of O. Remizova.

13 Current state of the KhTZ building. © Sadova, 2021.

identity of the victorious Soviet nation, which was reflected in architecture. The urban planning paradigm shifted from the constructivist socialist city of the 1930s to the postwar "monument city". The main task was to "create cities, ensembles and individual buildings even more beautiful and majestic than they were before destruction" (Cherkes, 2013b, p. 569). Characteristic features of urban planning in the 1943-1957 period were large-scale ensembles and squares, widened highways, monumental tower compositions with spires, sculptures, and reliefs.

This process was reflected in the façades of several industrial buildings, with a gradual change into the forms of classicist architecture. For example, the KhTZ factory building (architects Krupko and Afanasyev in 1932-1937, Khazanovsky in the 1950s), which was badly damaged during World War II, was restored in historical forms: a six-column portal was added to the rusticated façade, the windows were reduced and framed with platbands, medallions and two blind porticoes were added, reinforcing the symmetry of the façade.

A similar example is the main building of KhEMZ (designed by Swiss engineer Robert Maillart, 1925-1941, Romanenko, 1950s), the central risalite of which is extended forward and treated as a colossal portal. The first floor is rusticated, and a two-story arch emphasizes the main entrance, parapets and cornices are added, which brings its image closer to a classicist palace [FIGURE 14].

14 Kharkiv Electromechanical Plant (KhEMZ) in the 1930s.
© Unknown, 1930s. Private archive of K. Bozhko.

1932

1937

1947

1925

1950
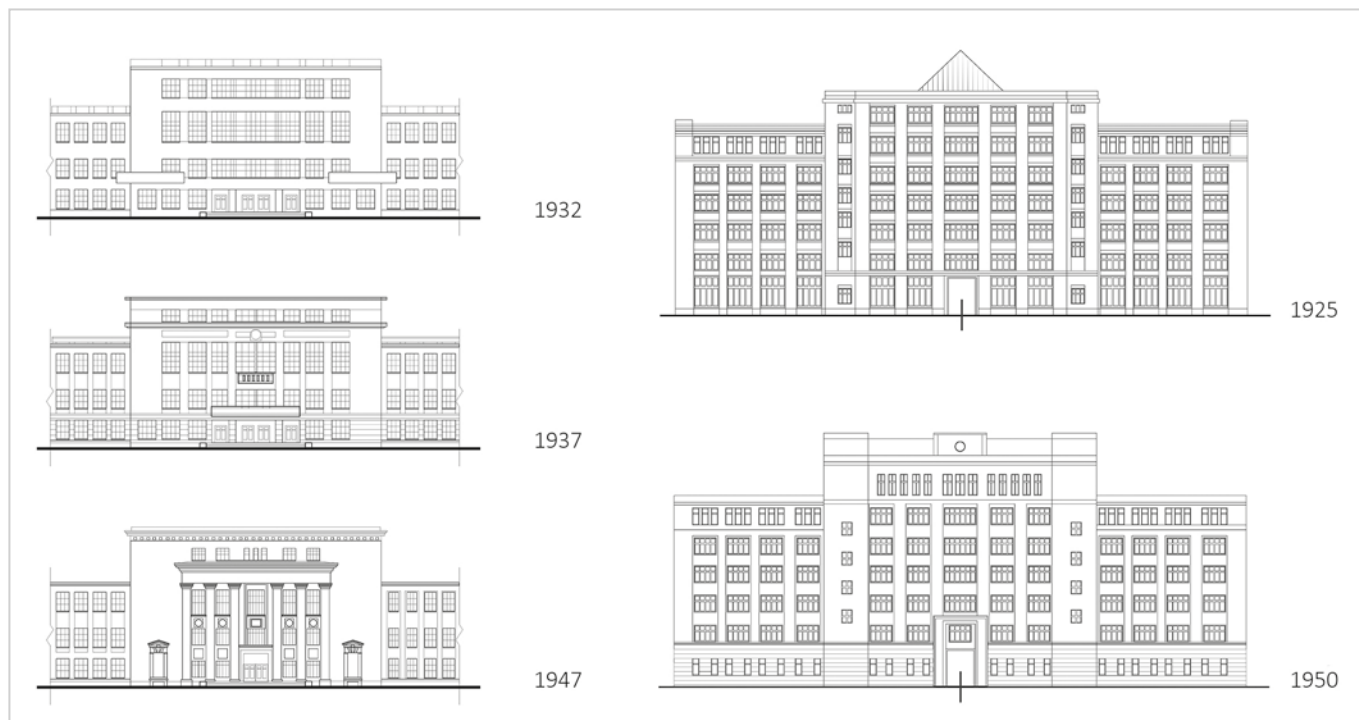
15 Stages of re-classification: Building of the plant management of KhTZ (left), main production building of KhEMZ (right), © Reconstruction by K. Bozhko, 2024.

All these changes indicate a desire to introduce grandiose features into the identity of the postwar Soviet city and to create the image of a "monument city" [FIGURE 15].

A sharp change in the image of architecture occurred after the death of Stalin and the arrival of Khrushchev as General Secretary of the CPSU Central Committee in 1955, when the "Resolution on the Elimination of Excesses in Design and Construction" was adopted. Design abandoned the idea of historical reminiscences and reoriented to industrialized methods of construction. This paradigm shift "saved" some monuments of Constructivism, such as Derzhprom, from "dressing up", but it also had an adverse effect on the historical heritage. Numerous Art Nouveau and eclectic buildings (including industrial buildings) were disfigured: plastic decor was destroyed, and façades were tiled, such as the main production building of the Turbine Works.

"INCONVENIENT MODERNIST HERITAGE"

In the last decade, reflection on national history has become more acute in Ukraine. On the one hand, researchers emphasize the value of Avant-garde architecture, and on the other hand, it has come to be called a "dissonant heritage." Such positions are related to the reassessment of both cultural achievements and tragic events of the Soviet period.

The notion of "inconvenient or discordant modernist heritage" (Bervoets, 2022), (Remizova, Didenko, 2025) includes a number of aspects. First of all, the ideological aspect is negatively conceptualized because the architecture of Ukraine in the first half of the twentieth century is associated with the revolution and Soviet power that prevented Ukraine from gaining independence in the 1920s. The Ukrainian law "On Condemnation of Communist and National Socialist (Nazi) Totalitarian Regimes in Ukraine and Prohibition of Propaganda of Their Symbols" problematizes the assessment of the significance of Ukrainian modernist monuments. But no less important is the loss of memory about the meanings and

values that the architecture of the Avant-garde carried. The ideas of rationalism, asceticism, and innovation espoused by constructivists and functionalists are gradually erased from people's consciousness due to the disappearance of authentic features caused by the destruction and reconstruction of objects. In the mass consciousness, there is a devaluation of the aesthetic qualities of monuments from the constructivist and modernist periods. The consequence of these processes is the weakening or even devaluation of the iconic role of the outstanding objects of Modernism that form the urban framework of Kharkiv. "Dressing" modernist objects in historical clothing leveled their role in important city-forming ensembles and changed their semantics. All this directly affected modernist industrial monuments as well.

DEGRADING MONUMENTS OF INDUSTRIAL ARCHITECTURE IN KHARKIV AND METHODS OF REVITALIZATION

With the achievement of Ukraine's independence, there was a reorientation of the entire industrial complex from the state to private business, which led to the reduction of large enterprises and the growth of private commercial production. As a result, in the 1990s, the process of degradation and ruin of industrial infrastructure began, which was clearly manifested by the appearance of gray and depressive zones in the urban environment. The period from 1991 to 2004 is known as the period of restructuring, during which a number of early 20th-century manufactories in Kharkiv's historical center on Rizdvyana, Kontorskaya, and Katsarskaya streets, among others [FIGURE 06], and separate zones and buildings of industrial giants KhEMZ, Turboatom, and KhTZ became empty and ceased to be exploited. The risk of losing monuments of industrial architecture of the modernist era has increased. However, the analysis of their location and physical condition shows that they are of great historical and cultural value and should be reconstructed. At the same time, there is a complex issue of developing ways to further revitalize them.

Looking ahead, in the works of modern architectural theorists, we can trace several possible strategies to revitalize historical industrial monuments. The most common strategy is anthropocentrism, which is oriented toward adapting industrial territories and objects located on them for active and relevant social functions (Bole et al., 2022). For example, it is obvious that the former industrial buildings—architectural monuments on Rizdvyana Stree—should be transformed into public and educational centers, museums, theaters, and libraries, which are essential in the historical center of Kharkiv and will enrich public life [FIGURE 01].

Concluding the historical review, it is necessary to acknowledge several problems that arise when revitalizing objects that have undergone significant changes in appearance over a long period and continue to function. Stylistic differences in various areas of façades raise the question of which historical moment the object should be restored to, which period or image is more valuable? To a certain extent, this question is answered by the strategy of restoring the identity of architectural monuments, which is based on social values, a careful attitude toward the traditions of the place, and the desire to preserve the unique features and integrity of the environment (Noussaa, 2018; Ballice et al., 2022). The most common strategy is to restore objects to their original appearance at a specific point in time. However, this is exactly where the above-mentioned problem of choosing value criteria arises. For example, the façades of the KhEMZ and KhTZ buildings are perceived as an "inconvenient legacy" of the totalitarian period and could be reconstructed to their original constructivist form. [FIGURE 14]. Monuments of the modernist era—which proclaimed itself free from the burden of history—are distinguished by the rationality of their layout and spatial structure, which makes them almost universal for introducing modern functions. While preserving their style, they accommodate a combination of historical signs and modern symbols (Cherkes, 2013ᵃ). Restoration is traditionally associated with the museification of objects (Gaiko et al., 2021). However, with regard to industrial architecture, this is not always possible and rational, as not every production is of exhibition interest. The issue of new functional filling of decommissioned industrial zones and buildings is becoming key.

For large industrial giants, the question arises of how to combine modern production operations with the simultaneous reconstruction of its "gray" zones. Conducting a SWOT analysis of the enterprise's strengths and weaknesses allows one to assess the prospects for its modernization and localization of production through territorial zoning. On this basis, a mix-use program is developed for vacated territories, allowing for the adaptation of "gray zones" and structures for reuse (Amangeldikyzy, 2023). For example, in 2021, the "Ecopolis KhTZ" competition was held in Kharkiv, proposing to separate a large portion of the plant's territory and, after refurbishment, to house a residential complex, IT offices, and a shopping mall. An attempt to implement a similar strategy was made at the Malyshev Plant, where, following a situational analysis, it was decided to separate a portion of the unused land and dedicate one of the production buildings to public functions. It was transformed into the Art Plant Mechanics space, which hosted concerts and exhibitions until 2022. An example of combining restoration with the complete

replacement of the old function is the reconstruction of V. Gladky's steam mill on Kharkivs'ka Embankment, which was transformed into the IT-park Manufactura and accommodates offices, cafes, exhibitions, and workshops.

Environmental improvement and restoration of valuable historical landscapes are promoted by the strategy of ecological rehabilitation of industrial areas and sites (Noussaa, 2018), which is applicable to all the sites analyzed in the article. The listed programs do not exhaust all possible options for revitalizing industrial territories and architectural monuments, and they can be combined and supplemented depending on the characteristics of a particular object.

CONCLUSIONS

An analysis of the formation, degradation, and revitalization of Kharkiv's industrial architecture has revealed several important turning points and periods that are vividly reflected in the city's authentic features. The period of Modernism that interests us had a significant impact on the development of the city's fabric. It is important to emphasize that radical changes in ideological programs in state policy (the Russian Empire, the Soviet Union, independent Ukraine) began to determine the choice of certain artistic means for designating iconic objects. Industrial objects were no exception. In the pre-revolutionary period, Eclecticism and Modernism dominated, the early Soviet 1920s was characterized by Avant-garde and Constructivism, the authoritarian period of the 1930s-1950s was marked by historical reminiscences, and the Soviet post-war period was faceless and neutral.

In Kharkiv's industrial architecture, the modernist period was marked by a radical shift from Avant-garde constructivist building styles to historical references to imperial and classicist types. This has left its mark on the city's contemporary authentic features in the form of a strange mixture of constructivist and "classical" facades, both in industrial areas and in key public ensembles such as the KhEMZ, the Kharkiv Tractor Plant, the House of Projects, and the House of Cooperation on Freedom Square. This fact makes us think about ways to revitalize objects of "uncomfortable heritage" associated with the Soviet era and the possibility of restoring their original constructivist appearance. The problem of "uncomfortable heritage" lies in the need to reevaluate its value, not so much in material terms as in terms of meaning or ideology. We believe that a professional rethinking of the authenticity of constructivist objects and a broad public discussion of the artistic and symbolic value of modernist architecture will help to remove the negative connotations of "uncomfortable or discordant modernist heritage."

An equally important aspect of revitalizing "gray industrial zones" that have emerged as a result of social upheavals, changes in the status of enterprises, reductions in production volumes and financing conditions, etc., is the need to restructure the territory and vacate the buildings located on it. Changes in the lifestyle and needs of city dwellers require a rethinking of the significance and uses of valuable historical buildings.

The vacant buildings of former factories on Rizdvyana Street in the historic city center and the functioning territories of former industrial giants (KEMZ, Turboatom, KhTZ) have lost their original constructivist face, but have great historical, cultural, and material potential and should be restructured and filled with active modern public functions (museums, theaters, libraries, offices, shopping and entertainment centers, etc.). They can be reconstructed considering their values, and through ecological and functional rehabilitation, they should be included in the modern life of society. However, Russia's military aggression is leading to the destruction of monuments, significantly delaying and complicating this process.

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ADAPTIVE MODERNITY IN TIMES OF SCARCITY

Urban Housing in Maoist China

Yimei Zhang

ABSTRACT: Urban housing built between 1949 and the commercialization of the housing market in the 1980s in China has gained increasing attention from architectural historians and conservationists. Once colloquially dismissed as 'old, dilapidated, and small' during China's rapid urban renewal, these housing projects are now being reconsidered for their heritage values amid growing criticism of large-scale demolitions. However, the preservation of these buildings faces significant challenges due to their outdated floor plans, concerns over structural stability, limited research, and the absence of a shared framework for value assessment. This paper traces the historical evolution of urban housing construction in China from the 1950s to the 1980s, drawing on a range of sources, including academic journal articles, as well as official guidelines and reports. It argues that, while early housing planning in the 1950s was heavily influenced by the Soviet system that emphasized standardized design and industrialized construction, Chinese housing practices made ongoing, incremental adaptations to address technological constraints, material shortages, and regional differences. As a result, instead of aiming for a perfect solution to modern living, designers worked with imperfect solutions using available resources during a time of scarcity. Unlike the ideology-driven, standardized mass housing often associated with Soviet-influenced countries, China's housing projects from the 1950s to the 1980s exhibit a more localized, organic response to both social and material conditions. The paper contends that this adaptive approach to housing design during this period is essential for understanding the challenges in evaluating these housing legacies today.

KEYWORDS: welfare housing, modern architecture, China, scarcity

INTRODUCTION: The evolution of housing under the planned economy in China offers a unique perspective on the diverse trajectories of Modernism. The welfare housing system was established in the 1950s and lasted until the housing reform in the 1980s. For more than three decades, housing was provided by state-owned enterprises as a welfare benefit to their employees, using land and funding allocated by the central and local governments.

The planning, design, and construction of housing in Maoist China does not fit in the historiography of Western Modernism, which often revolves around the visionary ideas of prominent architects, whose ideas were sanctified, disseminated, and further developed by their disciples across the globe. At the same time, it also diverges from the dominant narrative of socialist Modernism, frequently characterized as a counterpoint to Western Modernism, as defined by absolute state authority and central planning. In fact, China began to forge its own path even before the Sino-Soviet split in 1958, demonstrating remarkable diversity and adaptability to local conditions within the constraints of design and construction.

This article seeks to theorize the development of the Chinese welfare housing system as an adaptive process shaped by the logic of scarcity. The extreme shortage in material, technology, and financial resources fundamentally changed the design profession. The primary objective was not to create an ideal modern living environment, but rather to find the most economically and technologically feasible solutions, albeit imperfect most of the time. The paper argues that the expertise developed in maximizing the use of limited resources to design and construct 'imperfectly' should also be recognized as a legitimate contribution to the modernist tradition.

SCARCITY LOGIC

Jeremy Till differentiates between two types of scarcities: one, defined by Nicholas Xenos as the universal condition of the modern world, invented by capitalism and

consumerism; the other, as a socio-material condition also constructed by geopolitics (Till, 2014). The extreme scarcity China faced after independence belongs to the latter category. It was a historical inheritance, exacerbated by the war and political turmoil. It was also structurally created by the planned economic system, and geo-politically influenced by the projected image of an ideal modern socialist society (Lu, 2011).

In housing design, scarcity first imposed a hierarchy of spatial priorities. Housing, as a site of 'consumption', was relegated to secondary importance compared to spaces of 'production'. Consequently, surplus space, comfort, and decorative features were labeled as 'waste'. Key economic indicators, such as the usable area ratio, construction cost per square meter, and the consumption of concrete and steel, became critical metrics for assessing the feasibility of designs. This scarcity logic was formalized in the architectural design principle proposed in the 1950s: "utility, economy, if possible, beauty" (Lyu et al., 2003, p. 131). As a result, the Soviet standard of 9 square meters per person was deemed excessive and reduced to 4 square meters per person, or 18 square meters per household. These quotas remained largely unchanged until 1973, when the State Construction Committee doubled them to 34-37 square meters (Lyu et al., 2003).

While these extreme quotas restricted architectural possibilities, they also demanded solutions tailored to local circumstances and urgent needs. A significant enabler of such adaptive responses was the decentralization of housing design and construction under the *danwei* system, in which each state-owned enterprise was responsible for providing housing, infrastructure, schools, and other amenities for its workers within a designated plot of land. This system not only produced an urban landscape of numerous 'microcosms', but also fostered contingent and context-specific approaches to housing design and construction.

In 1959, the delegation of standardized design to local housing authorities further enhanced the trend. Recognizing the impracticality of enforcing uniform designs across China's vast and diverse territory, the State Ministry of Construction limited its role to drafting quotas and guidelines. Local design institutions were empowered to modify and adapt these standards to accommodate regional climates, lifestyles, and demographics.

Scarcity created not merely a condition to be endured, but also shaped a sense of agency to search for solutions outside of the existing framework and beyond Western knowledge. Designers were encouraged to explore alternative designs, materials, and construction methods for housing construction. In 1964, the central government launched the 'Design Revolution Movement of the Masses', calling for a 'reform of the wall systems'. During this

campaign, the pursuit of local, practical knowledge and feasible construction methods that minimized concrete use and required lower levels of industrialization was actively encouraged as a means of modernization independent from Western paradigms.

The following sections will illustrate how design, material selection, and construction methods were constantly adapted in the welfare housing system.

DESIGN: VARIATIONS OF STANDARDIZED PLANS

In the late 1950s, as the Soviet model of housing design began to falter, the search for alternative approaches to housing design became a central topic in Chinese architectural discourse. A series of design competitions and symposiums was organized at both local and national levels to solicit innovative housing solutions.

The first national housing design competition on Factory Workers' Housing was held in 1957, attracting over 1,200 submissions (Editing Committee of Architectural Journal, 1958). Another important event was the Symposium on Residential Building Standards and the Art of Architecture held in Shanghai in 1959. Presenters from major cities, including Shanghai, Beijing, and Tianjin, advocated for the development of multiple standards to accommodate varying social and climatic conditions, as well as the need for these standards to evolve with socioeconomic development. The symposium reached a consensus on several key principles: designing smaller rooms to accommodate flexible household sizes, providing private kitchens and bathrooms even during the People's Commune Movement when public canteens were widespread, and creating diverse housing typologies to address different needs. Concerns about the monotony of mass housing were also raised by many presenters (Architectural Society of China et al., 1959).

In 1961, the Architectural Society of China held its annual conference in Zhanjiang, focusing again on the topic of housing. Yang Chunmao, the Deputy Minister of Construction and Industry, emphasized the importance of adapting designs to local conditions, establishing reasonable standards, and creating varied housing typologies (Architectural Society of China, 2013). Following this conference, housing design competitions were organized again by local Architectural Societies at provincial and municipal levels in different places.

Analyses of competition submissions and published housing designs from this period reveal two primary strategies for addressing scarcity in design. The first involved further refinement of standardized floor plans. For example, the Municipal Institute of Architectural Design in Beijing developed over 600 housing typologies between 1955 and 1995, illustrating a dynamic process

1955   1958   1974

▨▨▨ Kitchen   ▨▨ Bathroom   ▬ Balcony   (Measurement in centimeter)
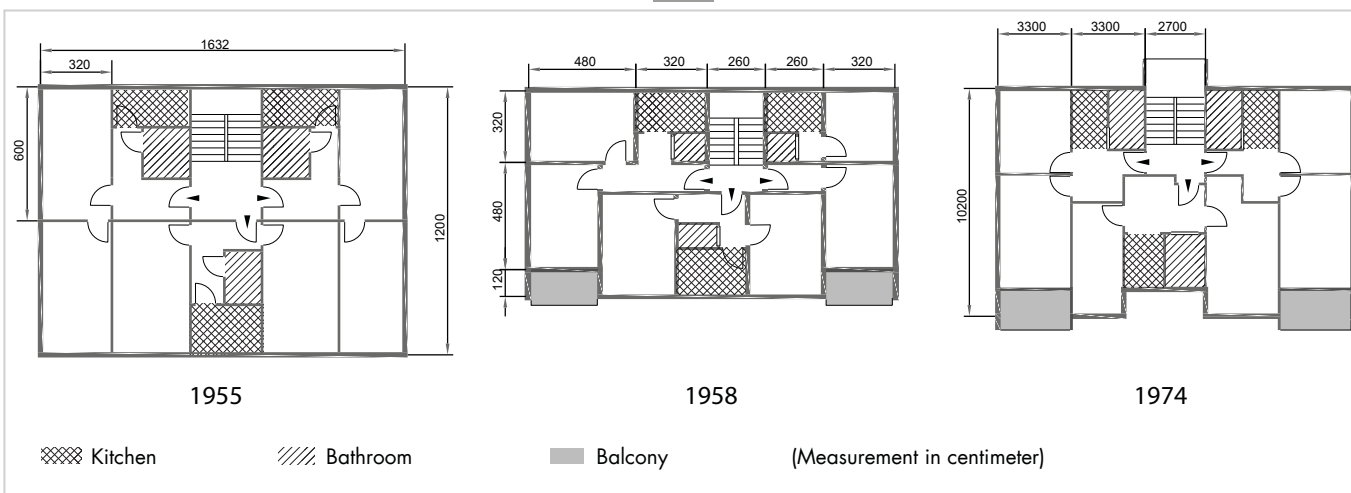
01   Selected standardized designs in Beijing. © Redrawn by the author. Beijing Institute of Architectural Design, 1999, pp. 2-3.

of experimentation (Residential Design Over 50 Years, 1999). The initial 1955 Type Two design was based on the Soviet Five-Bay Plan, utilizing only 3.2-meter by 6-meter rooms to reduce the number of component types and one staircase serving three apartments per floor. Though this typology has been commonly used due to its simplicity (as seen in standardized designs of 1959, 1962, 1964, 1974, and 1976), designers began modifying and creating new possibilities within the standardized framework. The 1958 design, for instance, shifted wall alignments to create more varied room sizes. The 1974 plan further developed the entrance space to create a proper lobby area [FIGURE 01].

In the 1963 housing design competition held in Beijing, the winning entries introduced further innovations. Submission Nº 21 designs a Six-Bay Plan, which serves four apartments per floor with a single staircase, ensuring cross-ventilation in each unit. Submission Nº 63 is a Corridor Plan that achieves a compact layout with relatively separated apartment entrances, optimizing privacy. Submission Nº 31 is a Small Atrium Plan that incorporates a 13-square-meter atrium to facilitate ventilation while achieving a 55% usable area ratio by positioning the staircase asymmetrically on the side of the plan [FIGURE 02].

The other strategy uses regional architectural traditions as sources of inspiration. Vernacular architecture, in contrast to the so-called 'inherent Chinese style', later derided as the 'big-roof style', was considered a viable and independent alternative to Western influence.

The big-roof style was rooted in Liang Sicheng's theory of the 'translatability of architecture', which proposed that the structural logic of traditional Chinese architecture could be adapted to modern construction. Liang's approach drew heavily on the Beaux-Arts tradition, emphasizing symmetrical plans, spatial hierarchies, and monumentality (Liang, 2001). However, this style was heavily criticized in 1955 for its "bourgeois aestheticism in the disguise of a national form" and for being a "waste" of scarce materials (Lyu et al., 2003, pp. 131-132).
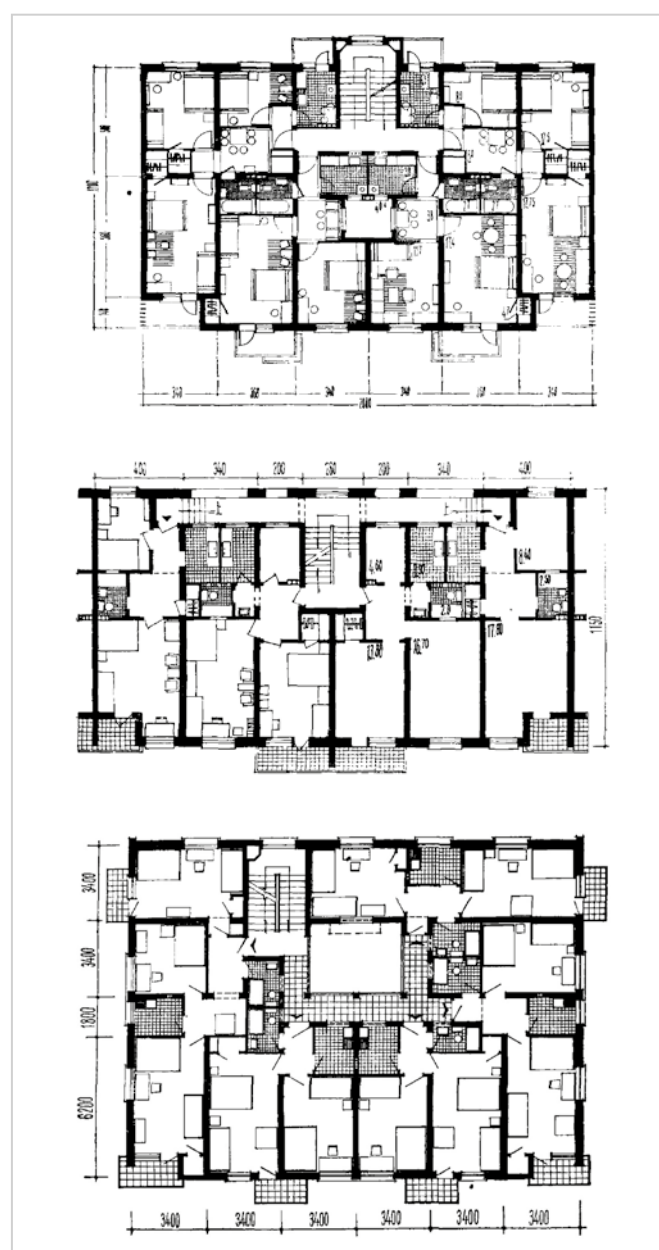
02   Submission No. 21, 63, and 31 of the 1963 Housing Design Competition in Beijing. © Architectural Journal, 1963 (07), pp. 1-5.

Vernacular architecture, on the contrary, represents a tradition of organic settlement planning, flexible floor plan arrangements, adaptability to local materials and climates, as well as reliance on simple, ad-hoc solutions
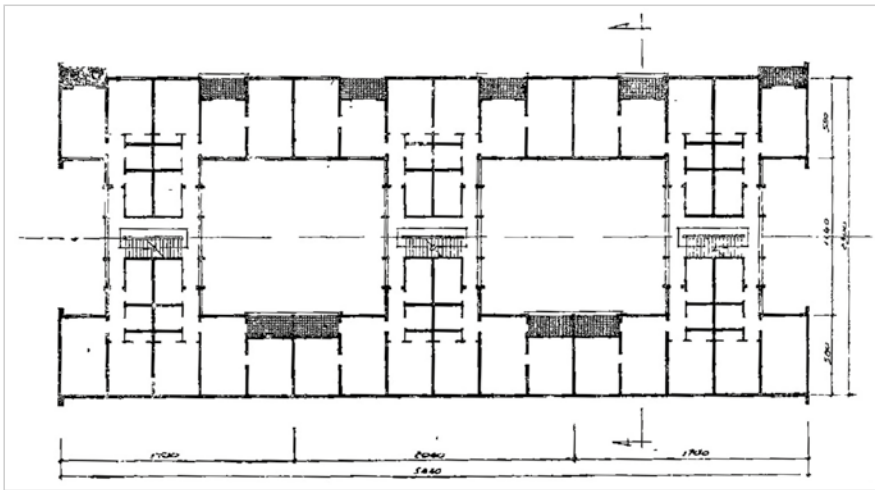
03 Housing Design of Anhui Province in 1960. © Architectural Journal, 1960 (03), p. 16.

04 Housing Design of Guizhou Province in 1960. © Architectural Journal, 1960 (03), p. 27.

05 Housing Design of Nanning in 1960. © Architectural Journal, 1960 (03), p. 25.

(Xu & Tan, 1961). In the late 1950s, academic discussions on learning from the vernacular began to emerge. For instance, a housing design in Anhui province published in 1960 incorporated courtyards within the units, drawing inspiration from local vernacular architecture [FIGURE 03]. Similarly, in Guizhou province—a predominantly mountainous region—housing designs addressed elevation differences and provided context-specific solutions tailored to the area's geographical conditions [FIGURE 04]. In tropical regions, such as Nanning, designs often incorporated verandas to enhance ventilation, demonstrating sensitivity to the local climate [FIGURE 05].

MATERIAL: SUBSTITUTING CONCRETE

Facing a material shortage, reducing the consumption of steel, concrete, and wood became an important task for designers. Similar to the approach in floor plan design, two approaches can be observed in the search for suitable materials: one drawing from vernacular traditions and the other involving variations on existing materials.

The use of traditional materials to replace 'modern' and 'western' materials was not new to China. Various possibilities have been explored since the introduction of Western-style architecture in the late 19th century. A notable example is the use of bamboo as a substitute for

steel in reinforced concrete, a practice widely adopted in Guangzhou in the early 20th century. This approach arose from the scarcity of locally available steel but also illustrated that the transfer of modern construction knowledge was not a direct copy of Western methods. Instead, it was a process of adapting to local economic conditions, technological constraints, and preexisting knowledge systems (Shu, 2019).

During the 1950s, similar experiments were supported by the government under the 'anti-waste' campaign. Bamboo reinforced concrete again attracted research interest (Sun, 1957). Articles on using fiberglass or reed to replace steel in reinforced concrete (Building Materials Teaching and Research Group, 1959) started to appear. Such efforts were actively promoted as creative solutions to address resource scarcity. Some cases were pushed to extremes, serving more as political propaganda to showcase the superiority of the socialist system than rigorous scientific research. For instance, the 'four no-use' buildings constructed in Harbin in 1961 famously claimed to replace steel, cement, timber, and bricks with alternative materials such as glass wire, ceramic, silicate, and wood shavings (Lyu et al., 2003). However, the structural stability and durability of these new materials were often inadequate, resulting in their very limited application in a small number of experimental projects (Sun, 1952).

The second approach focused on making cement more economical by incorporating locally available lightweight aggregates to reduce the amount of concrete required. Much of this research was influenced by advancements in other socialist countries. By the early 1960s, for example, the German Democratic Republic was experimenting with using fly ash to produce ceramsite concrete. The Soviet Union and Czechoslovakia also explored the use of industrial waste and natural materials such as slag, brick rubble, and pumice. Building on this knowledge, Chinese researchers conducted extensive testing of various aggregates, yielding promising results. In Beijing, for example, experiments with fly ash, slag, and other industrial byproducts for producing silicate concrete large wall panels began in 1964. By 1974, these panels had been applied in 82 residential buildings, totaling 160,000 square meters. One example of this is the Tiantan Housing Complex in Beijing, with a total floor area of 74,000 square meters. (Editing Committee of Construction Technology, 1975) [FIGURE 06].

In fact, the ability to apply empirical, local knowledge instead of adhering to the scientific doctrines established by Western countries was considered an advantage of the socialist development approach. The Chinese representative at the international conference on concrete held in Leipzig in 1962 concluded that "western scholars research to create formulas", while scientists in the
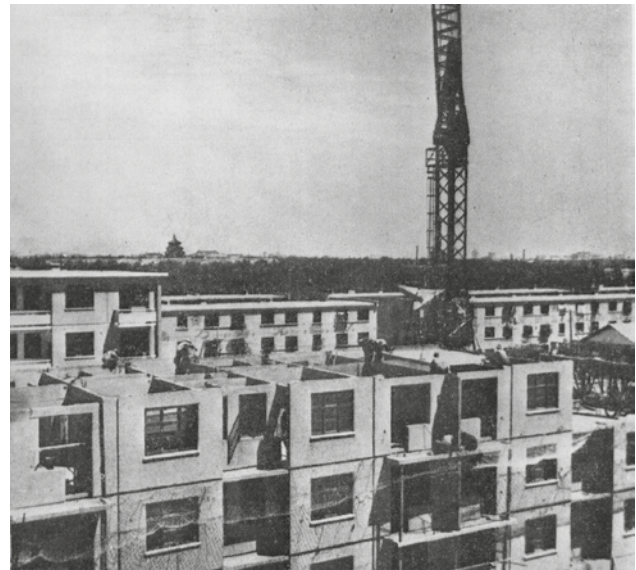
06 Construction of Tiantan Housing Complex in Beijing. © Architectural Journal, 1973 (01), p. 32.

socialist countries research "to solve practical problems". The author further concluded that "the blind faith in doctrines and rules will limit the development of science and technology" (Wu, 1962, p. 173).

CONSTRUCTION: HYBRID SYSTEMS

The prefabricated concrete panel system, widely utilized in the Soviet Union and Western countries after the Second World War, was regarded as the epitome of modern society. Achieving the same level of industrialized housing production has been the goal in China since the 1950s, as evidenced by the State Council's 1956 statement, which proposed 'industrialization', 'standardization', and 'mechanization' of the architectural industry (State Council, 1956). However, the reality was that, by 1970, approximately 90% of residential buildings in China were still constructed using longitudinal load-bearing brick walls with reinforced concrete floors (Huang, 1988).

There were several reasons for the relatively limited application of prefabricated panel systems. The high cost of production was an important factor. Factories that were able to manufacture prefabricated panels required a significant upfront investment; however, frequent design modifications hindered factories from standardizing modules and manufacturing them in sufficient quantities to achieve economies of scale (Zhang, 1983). Additionally, the limited availability of concrete and steel further impeded the development of more advanced systems. Until the 1970s, the Lagutenko panel, developed by Soviet engineer Vitaly Lagutenko in the 1950s, remained the favored system for prefabricated housing projects in China. Its popularity stemmed from its efficient use of materials. With edge ribs to enhance load-bearing capacity, the panels can be exceptionally thin, averaging 7 centimeters in thickness, with the body sections measuring only 2 to 4 centimeters.

While the fully prefabricated concrete panel system was only applied in limited pilot projects, construction methods

that combined the advantages of prefabrication with tra-ditional brick systems emerged during the late 1950s and 1960s and quickly gained wide application. Two prom-inent examples of these methods are the vibrated brick block system and the silicate block system.

The vibrated brick block system involved combining standard clay bricks with binding materials to form larger blocks through a vibrating mold. This process eliminated air bubbles within the mortar, resulting in blocks that were denser and stronger than traditional hand-laid brick walls. The method required minimal technical expertise, thereby reducing the demand for industrialized equipment, while achieving a level of prefabrication comparable to that of concrete panels. From 1959 to 1966, several hous-ing projects in Beijing, including Longtan, Zuojiazhuang, and Huayuanlu, used this construction system (Beijing Architectural Engineering Research Institute, 1975).

Silicate blocks made with industrial waste provided another alternative to reduce concrete consumption. Shanghai pioneered the research and industrial pro-duction of silicate blocks, achieving success by 1963. These blocks were produced using fly ash, slag, and other byproducts from the city's power plants. The materials were mixed with lime gypsum, cast into molds, and cured with saturated steam to produce blocks of roughly the size of over 40 clay bricks (Shanghai Municipal Bureau of Construction and Engineering, 1974) [FIGURE 07].

While both systems represented significant technologi-cal advancements tailored to China's specific conditions, they were often viewed as transitional steps toward the adoption of a fully modernized prefabricated industrial system. It was believed that "the trend of development is from longitudinal load-bearing systems to latitudinal load-bearing systems, from brick walls to block walls, and finally to concrete panels" (Industrial and Civil Building Research Laboratory, Academy of Building Science, 1960).

However, the trajectory of housing construction in China was far from linear. While the panel system itself contin-ued to develop at a steady pace, other systems proved to be more economical and suitable for China's indus-trial level. Especially by the mid-1970s, as the country gradually emerged from the Cultural Revolution, high-rise housing started to develop. Lagutenko panels and the block systems had only been used on 4 to 5-story mid-rise buildings and encountered technological challenges in high-rise buildings. In the 1970s, the formwork system was developed for high-rise housing projects. Steel form-works were used to manufacture cast-in-place concrete walls and floors on-site [FIGURE 08]. It was also common to build the outer wall with the block system to maximize the advantages of both systems and adapt to the level

07   First silicate block building in construction in Shanghai. © Architectural Journal, 1960 (03), p. 3.
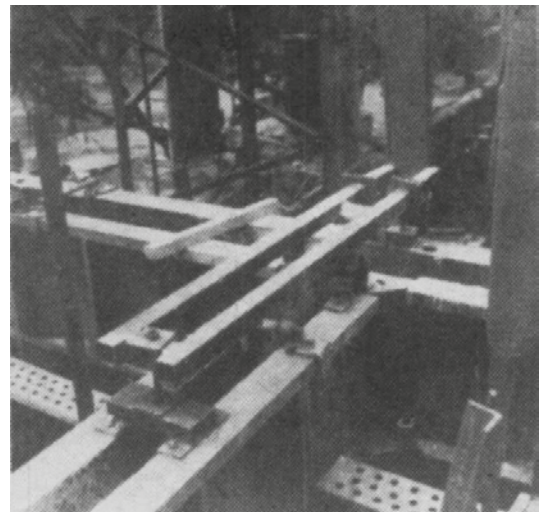
08   Steel formwork in construction. © Architectural Journal, 1975 (02), p. 28.

of technology and management. Between 1974 and the 1980s, 2,120,000 square meters of housing were con-structed using the formwork system (Chen, 1986).

CONCLUSION: RETHINKING THE TRADITION OF MODERNISM

Housing in Maoist China was neither designed with the utmost creativity nor constructed using the most advanced technologies, highest standards, or finest materials. In the modernist tradition that prioritizes architectural aesthetics, spatial quality, material innovation, and technological advancement, it is challenging to reconcile the idea that imperfect design solutions were integral to the history of Modernism. However, the failed experiments, par-tially labor-intensive construction systems, and imperfect designs should not be viewed merely as transitional stages on the path to modernity but as authentic representations of Modernism itself.

If we accept that adapting to scarcity through local, empirical know-how constitutes a legitimate tradition within Modernism, we gain a critical lens for engaging with the built environment today, particularly in light of the ongoing

climate crisis. The reemergence of discussions on mini-mizing concrete use in recent years shows the continued relevance of these issues. While it is important to acknowl-edge that much of the scientific research conducted in the 1950s and 1960s was ideologically driven and may not meet current academic standards, the case of housing in Maoist China invites a reframing of Modernism not as the pursuit of perfection, but as a dynamic process of adapta-tion to specific material, social, and economic conditions.

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DIGITIZING MODERNIST HERITAGE

Interdisciplinary Approaches to the Conservation of Miguel Ángel Roca's Architecture

Victoria Ferraris, Carla Ferreyra, Anna Sanseverino, Luisa Smeragliuolo Perrotta

ABSTRACT: This study investigates the vulnerability of modernist architectural heritage and the multifaceted challenges it faces in contemporary society. The analysis focuses on the inherent difficulties of conserving these structures, considering their cultural and historical significance alongside the need for adaptation to current social, functional, and regulatory requirements. Through the lens of a key case study, the architectural legacy of the distinguished Argentine architect Miguel Ángel Roca, the research examines how digitization can address these challenges by generating multi-scale and multi-resolution models that support detailed analysis and conservation strategies. The research stems from an interdisciplinary collaboration among the National University of Córdoba in Argentina, the University of Salerno, and Federico II University of Naples in Italy. It showcases the potential of digital tools for modernist heritage conservation, providing innovative solutions for its management, enhancing community engagement, and establishing a comprehensive digital archive. This archive ensures the long-term preservation and dissemination of Roca's work, contributing to future research and educational initiatives. By integrating digital technologies, the study addresses the technical, social, and economic challenges associated with heritage conservation. The creation of detailed digital archives offers a sustainable framework for managing modernist architecture, ensuring its adaptability to contemporary demands while preserving its historical integrity. Furthermore, this research aligns with the objectives of the journal's special issue, Imperfect Modernism, by exploring how changing social and political conditions across different countries shape contemporary attitudes toward modern architecture. It explores weaknesses in preservation and protection practices that can affect its legacy, and the challenges and solutions inherent in its conservation, and highlights how the interdisciplinary and digital methodologies introduced set new standards for the sustainable management of architectural heritage, promoting a balance between conservation and the need for modernization in response to evolving societal needs.

KEYWORDS: Community engagement, digital archive, interdisciplinarity collaboration, Latin American architecture, Miguel Ángel Roca

INTRODUCTION: This study explores the vulnerability of modernist architectural heritage, with a specific focus on the work of renowned architect Miguel Ángel Roca (M.A.R) in Córdoba, Argentina. Roca started his career in the 1960s under the profound influence of his mentor, Louis Kahn. In Latin America, Roca's architectural projects are seen as symbols of progress, innovation, and social transformation. However, his work faces significant challenges in today's society, which are driven by urban pressures, shifting cultural values, and evolving social demands.

Modernist architecture, which started to emerge in the late 1950s, marked a departure from traditional design ideals, championing functionality, simplicity, and the use of new materials and technologies. For Roca, Modernism was both a technical and artistic pursuit, shaped by his familial influences and his time working with Louis Kahn, whose work represented a synthesis of humanistic values with innovative design principles [FIGURE 01].

This work investigates how modernity entered South American culture and the complex legacy it presents today, particularly through the figure of Miguel Ángel Roca (*1936).

An internationally renowned architect and professor of architecture, Roca has always balanced his professional practice with a passion for teaching and the progression of the university academy. He has taught at

01 Louis Kahn and Miguel Ángel Roca. Kahn's architectural influence was key to Roca's work. © Authors' elaboration.

02 Roca's projects, depicting the effects of time, urban transformations, and social neglect. © Authors' Elaboration.

several universities, including the Faculty of Architecture, Urbanism and Design of the National University of Córdoba, where he served as dean for ten years (1992-2002) (Roca, 2025).

In addition to his academic career, Roca's architectural works are predominantly found in Córdoba, though his practice has spanned globally, including projects in France, South Africa, Singapore, Hong Kong, Uruguay, Morocco, Bolivia, and Chile (Roca et al., 1981; Roca, 1984; Roca et al., 2000; Taylor, 1992).

Today, while his figure and work are studied in the most prestigious schools of architecture, Roca is involved in an Architecture design studio at the Faculty of Architecture, Design and Urbanism at the University of Buenos Aires

as a consulting professor (Roca & Sardin 2025). Deeply committed to promoting architectural culture both within Argentina and internationally through seminars and conferences, he generously welcomes hundreds of students every year to his Summer House in Calamuchita Valley, near Córdoba, which is considered a manifesto of his architectural philosophy (Fiszman, 2007).

Roca's digital archive is being developed through collaboration between universities in Argentina and Italy; an innovative project for an architect still alive and one of the few of its kind for architects of the last century.

While modernist architecture's mature form struggles to be acknowledged as heritage, its recognition is even more challenging in regions where it was absorbed by distinct cultures at different times with varying outcomes (Roca, 1995; Roca, 2005).

The digitization of Roca's archive is not only a crucial preservation tool, ensuring the continued relevance of his original work amidst evolving social needs, but also a vital means of safeguarding unpublished materials that document key urban transformations and political contexts spanning several decades [FIGURE 02]. Moreover, this archive acts as a bridge to modernize Roca's pedagogical legacy, offering a valuable resource to inspire and inform future generations of architects.

This is possible by creating a multidisciplinary working group that combines different expertise, with a strong focus on digital tools. The team also involves young researchers and students who, through this work, can develop new studies, interpretations, and future research opportunities across several countries and different higher educational institutes.

The aim of the work is to propose Roca's digital archive as a best practice for addressing the topic of imperfect Modernism and to approach it from a different perspective that combines legacy, knowledge, and the transmission of values for the next generation of architects and scholars.

ROCA & THE IMPERFECT MODERNISM

In one of the books dedicated to Roca's work, the Italian architect Giancarlo de Carlo mentions his first meeting with Roca (Roca, 1994). During their conversation, de Carlo asks whether Roca considers his work influenced by Spanish architectural traditions, suggesting the possible handover of European architectural principles to America as a legacy of colonialism. Roca responds that he has never asked himself this question, emphasizing that he is an Argentine architect. De Carlo then reflects on the issue of the globalization of architectural principles, recognizing instead in Roca's work a specific personal character, a lesson of Modernism absorbed and transferred within the local context with original characters.

This story is meaningful in relation to the topic of the perception of the modernist lesson beyond the geographical areas where it was born and where its most important protagonists worked.

In this context, the Roca's role has a special profile. He was born in Córdoba in 1936; he was educated at the historic university of his hometown, where he graduated from the Faculty of Architecture in 1965; he obtained a master's degree in architecture and urban design (1966/67) at the University of Pennsylvania (Roca, 2025).

His studies were influenced by the modernist movement, from which he distanced himself, achieving autonomy and a distinctive character, which makes it difficult to categorize his work within a single style. In this sense, rather than trying to precisely define him belonging to a historical style, the aim is to emphasize the continuity of his research, which begins with Modernism and, with continuity, informs and structures his thinking on architecture and the city throughout his career as both a professional and an academic.

He believes that his father, Jaime, also an architect, had very little influence on his own style (AA.VV., 2005). Jaime Roca was an important architect and professor at the National University of Córdoba, where he served as dean for several years. Jaime is credited with having a strong influence on the search for local authenticity in the spread of modernity in Argentina (Rúa et al., 2016). Miguel, on the other hand, acknowledges his mother, Rosa Malvina Ferreyra de Roca, a distinguished artist from Córdoba, her work as a painter, and her circle of artist friends who frequented their home, as a strong influence (AA.VV., 2005). Roca first developed a passion for painting and initially applied to the Faculty of Philosophy, but after a trip to Italy, still very young, he decided to become an architect [FIGURE 03].

In 1968, Roca was in Philadelphia, where he worked at Louis Kahn's studio, having met the architect as a professor during his master's years at the university in the same city. Their relationship had a significant influence on his work. As Roca himself states, although they were not particularly similar, they recognized and valued their differences (Roca, 1984).

From Kahn's lesson, he learnt the relationship with modernity, which is not a negation of history, but rather a search for continuity that goes through the exploration of forms and motifs reinterpreted in a modern key. In this sense, as emphasized in his book about Kahn, modernity is read in continuity with history and as an essential part of the architectural tradition (Roca, 1984).

In Roca's opinion, architecture must necessarily involve a specific phase–that in which the project is built–and designers are embedded in their contemporary world of
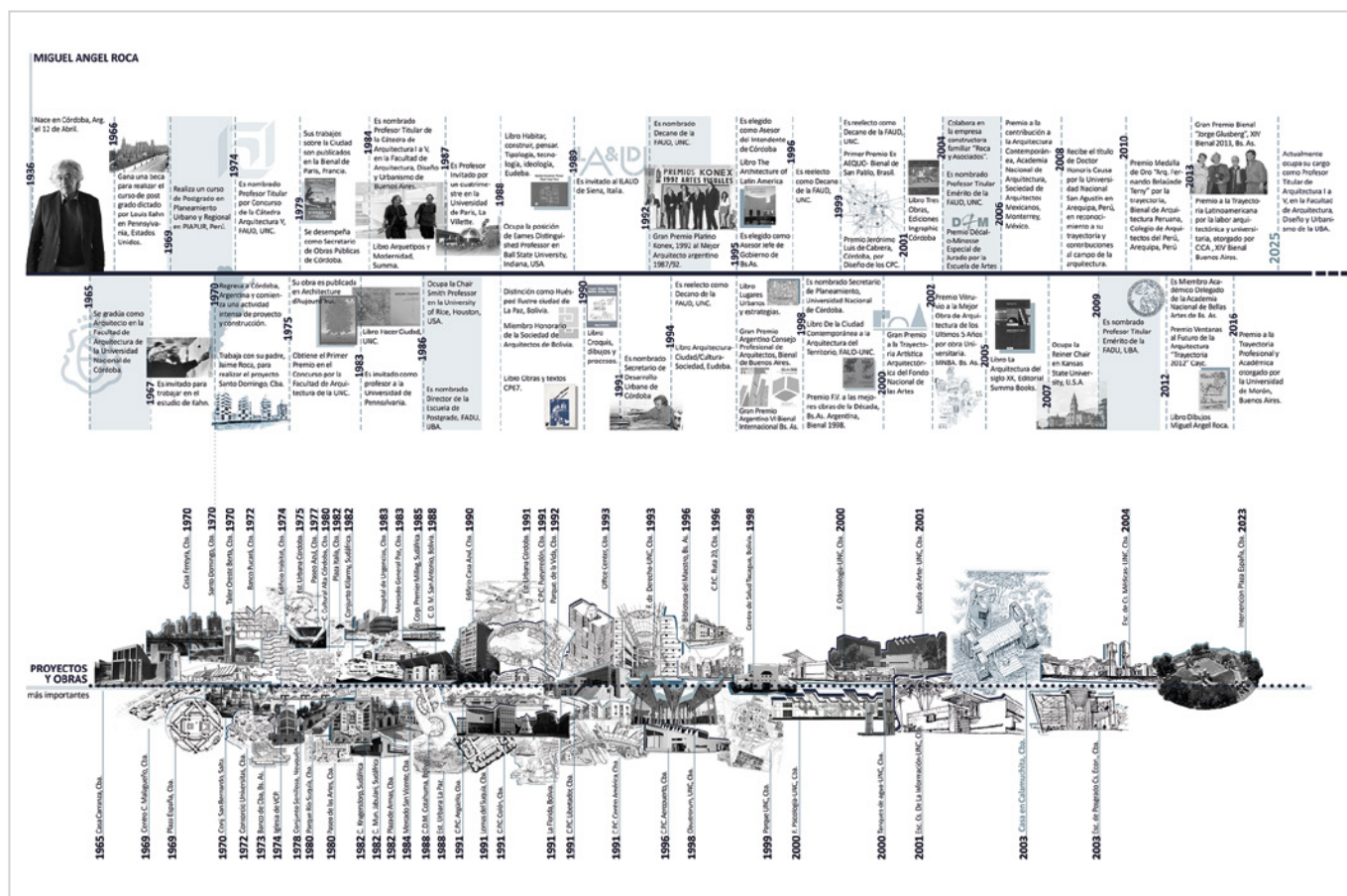
03   Timeline of Roca's architectural journey. © Keila Nahir Trevisan, 2025.

construction materials and connections with the workforce and their lives on the construction site (Roca, 1988).

Córdoba, his city, has had the greatest impact on his work. Especially during his public assignments as Secretary of Public Works of Córdoba in the 1970s and 1980s and, ten years later, as Secretary of Urban Development of Córdoba (Waisman, 1973; Waisman, 1982; Roca, 1989). These experiences allowed him to develop essential plans for transforming the city, modifying its character and anticipating ideas and trends in urban design that subsequently influenced many cities in Europe and America (Gaggiano, 1976; Roca, 1985).

In the first part of the public works program, continuing the work of architect Hugo Taboada1 he carried out an important project for the pedestrianization of the historic center, with punctual projects for the renewal of squares, such as *Plaza de Armas,* and the reuse of disused buildings, such as the *Mercado de la República de San Vicente*, to transform them into public spaces with a symbolic value for the city and into cultural centers (Glusberg, 1982; Waisman, 1987; Wagner, 1984). The project includes a new park around the Suquía River as a structuring element of the city's urban pattern.

The second part of his program focused on the periphery, with the decentralization of services and the construction of CPCs—Centros de Participación Comunal (Participatory Community Centers)—as symbolic places for community building (Gaggiano, 1994). The CPCs are

characterized by purist volumes and bold forms to contrast the informality of the suburbs, bringing his designs closer to the principles of postmodernism and the works of architects such as Aldo Rossi, Giorgio Grassi, Robert Venturi, and Denise Scott Brown.

Roca also designed a significant number of housing and university buildings, banks, and other public facilities, as well as city parks and urban planning projects in Argentina and beyond (Roca, 2006; Naselli & Bergallo, 2002).

Roca's work absorbed the lessons of Modernism, characterized by pure forms, simple volumes, and materials used with sincerity, with a personal vision that departs from the style of his father and his own master, Louis Kahn. Throughout his career, with autonomy, he designed consistent solutions that interpreted the program and the place, starting from common principles but always finding a different character, somehow denying the appearance of a single style and instead affirming a continuity in design research that has led him to explore different paths. With a visionary spirit, Roca always viewed the city as a continuous space, with each project contributing a piece to the larger urban mosaic. Through this perspective, his architectural contributions have helped shape Córdoba's urban landscape, reinforcing the idea that architecture and urban design are deeply interwoven with cultural and historical contexts.

ROCA'S LEGACY FROM THE CONSTRUCTION OF HIS DIGITAL ARCHIVE

The project is dedicated to preserving, enhancing, and promoting Roca's architectural legacy by creating a virtual museum that incorporates advanced digital tools to document and safeguard his work, especially his sketches and drawings [FIGURE 04]. The development of a digital archive aims to provide a user-friendly, continuously updated platform, making his contributions more accessible while offering innovative tools for deeper analysis and broader dissemination. A key feature of this initiative is its focus on interoperability, ensuring compatibility with other digital platforms, thus fostering data sharing and engaging a wider audience.

Given Roca's significant influence on modern architecture and urban planning, it is crucial to preserve his legacy in formats that go beyond traditional physical archives. As global trends in digitization, exemplified by initiatives such as Europeana and Google Arts & Culture, increasingly shape the conservation of cultural heritage, this project aligns with these trends, ensuring that Roca's work is both preserved and made more accessible. By merging cutting-edge technologies with established archiving methods, this initiative seeks to reshape how Roca's work is studied, understood, and shared.

The preamble of the Seville Principles – International Principles of Virtual Archaeology, drafted by ICOMOS, emphasizes that the London Charter is the most up-to-date international document on the digitization of cultural heritage (Brusaporci & Trizio, 2013; ICOMOS, 2017). Notably, this document offers a set of principles to guide the development of digitization applications as best practice (Apollonio & Giovannini, 2015; Denard, 2009). Rather than proposing a single implementation methodology, it lays the groundwork for each research group to develop a visualization system with academic rigor, enabling the research results to communicate both the results of the digitization process and the rationale behind it to the end users.

While the first principle of the London Charter emphasizes the importance of drawing up recommendations for each research community, the third and fourth focus on research sources and documentation, thereby addressing the need for the proper selection and cataloguing of sources such that the datasets collected can be effectively translated into information by flowing into a structured database that can be accessed according to well-defined guidelines.

In this context, the Eindhoven-Seoul Declaration, adopted under the auspices of DOCOMOMO (2014), underlines the fundamental importance of documentation in the conservation of cultural heritage. In line with the principles of the London Charter, it emphasizes the need for comprehensive, accurate, and accessible documentation as a foundation pillar of informed and sustainable conservation strategies. Both frameworks advocate structured and academically rigorous systems to ensure that digitization processes effectively support both the

05 Digitization of Roca's work, archiving images, sketches, models, and technical drawings to preserve his legacy. © Authors' elaboration.

preservation and meaningful communication of cultural heritage. Within this framework, Miguel Ángel Roca's digital archive emerges as an invaluable resource. By preserving the material authenticity of Roca's architectural contributions through meticulous documentation and the integration of digital tools, the archive not only safeguards his legacy but also enriches the understanding of its broader historical and social significance.

In documentation processes, alongside the notion of data, information regarding the criteria that underpin their generation must also be conveyed via metadata and paradata. Metadata is information about a dataset (data about data), i.e., formalized statistical data, required to search for, display, and analyze datasets. They differ from straightforward data and comprise the concept of schema, which represents how the data are mapped. On the other hand, paradata concern formalized data on methodologies, processes, and quality associated with the production and assembly of said statistical data. They also involve estimating a degree of uncertainty. Therefore, the technical networked semantic documentation of 3D models (metadata) in 3D repositories should always be linked to explicit documentation of the creative process behind the virtual representation (Münster et al., 2024). Backing up documentary collecting and cataloguing with this type of information helps ensure the long-term sustainability of the research activities conducted and, above all, prevents the loss of this constantly increasing tangible and intangible cultural heritage.

Several case studies on structured digitization are presented in the literature, ranging from single architectural assets (Maietti et al., 2017) to entire parts of

cultural landscapes recognized as World Heritage Sites (Dell'Amico, 2022; Picchio et al., 2020), for which, following a thorough data collection, a digital simulacrum is envisaged to bind archive data either through ad hoc platforms (Gros et al., 2023; Patankar et al., 2025) or by means of established information systems. The common objective is to increase accessibility to graphic and textual resources that complement mere geometric data by implementing user-friendly interfaces. Hence, the HBIM (Heritage BIM) and HGIS (Heritage GIS) methodologies fit perfectly into the three-dimensional modelling phase of the built and unbuilt heritage while also providing a tool to connect diverse data from once the proper structuring process of the information database has been carried out (Apollonio, 2016; Galeazzo, 2024; Lovell et al., 2023; Murphy et al., 2013). Accordingly, the ongoing experimentation spans the phase of rearranging the documentary sources in Miguel Ángel Roca's extensive archive and structuring a cloud-based digital repository. This repository is being prepared to standardize the networking system of this invaluable documentary heritage within a prototype digital museum, aiming at possible future automation.

The creation of the virtual museum follows an interdisciplinary approach that blends advanced technological tools with expertise from multiple fields. A central aspect of the process is the digitization of physical materials, including project documentation and records, using advanced surveying techniques. Additionally, the integration of Building Information Modeling (BIM) ensures accurate architectural representations, while immersive tools like Virtual Reality (VR) and Augmented Reality (AR) enhance the experience [FIGURE 05]. A key feature of the
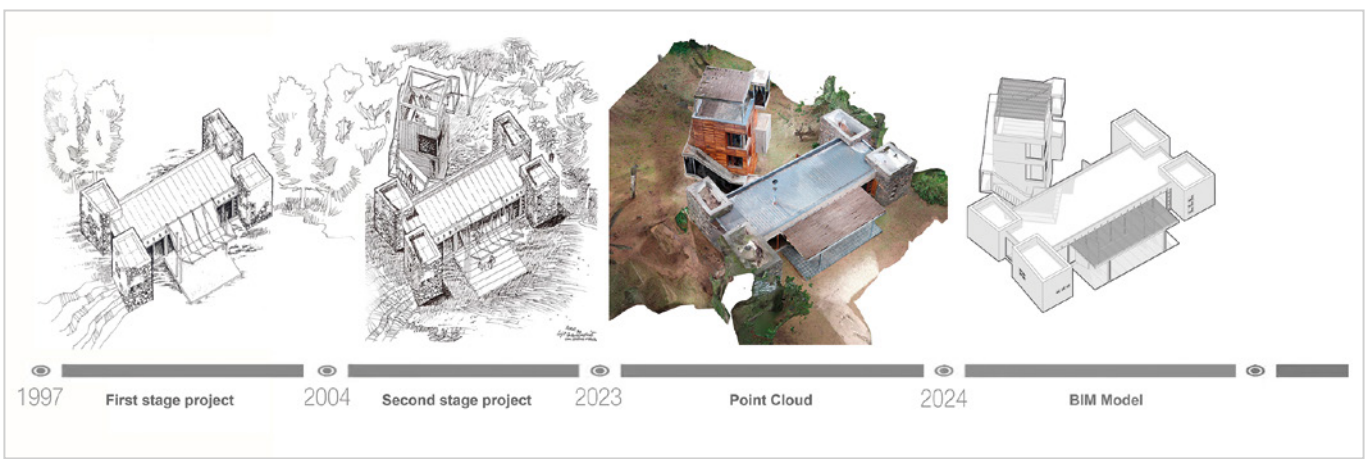
06   House in Calamuchita. From ideas to reality, from drawing to modelling. © Authors' elaboration.

project is the development of a dynamic digital catalog that allows for continuous updates and promotes interdisciplinary collaboration. The catalog facilitates efficient information retrieval and enhances user engagement with the extensive collection of Roca's work. The platform will be designed to be intuitive and web-accessible, also incorporating AI-driven assistance, ensuring the digital archive evolves through ongoing contributions from experts in both architecture and technology.

The complexity of the archive stems from the diverse types of materials it houses, which comprise architectural works, theoretical writings, conference texts, and other documents. This richness gives the archive a multi-layered character, but the current focus is on the project archive. Future developments will expand the scope of the archive to include connections between theoretical works, pedagogical contributions, public events, and commissions, further enriching the archive's depth. Given the broad scope of Roca's work, spanning both realized and unrealized public and private projects, it is difficult to categorize his style into a singular form. This complexity reflects the multifaceted nature of his contributions to architecture and highlights his versatility as a designer.

This initiative aims to deliver transformative outcomes by strategically leveraging advanced technologies, prioritizing accessibility, and emphasizing sustainability. At its heart is the virtual museum, an immersive web platform showcasing Roca's work while integrating cutting-edge technologies such as Digital Twin (DT), BIM, VR, and AR to provide an engaging and educational experience [FIGURE 06]. Virtual reconstructions of selected projects, including unrealized designs, will offer a comprehensive analysis and visualization of his architectural contributions.

To this end, the research activities involve students and researchers from Italian universities and the National University of Córdoba to develop synergic collaborative strategies that benefit from the international exchange of knowledge for the creation of a true digital ecosystem (De Luca, 2024; Parrinello et al., 2023) for the continuous updating and dissemination of Roca's digital archive.

The dynamic digital catalog, central to the project, will evolve through ongoing updates, incorporating a diverse range of files, images, 3D models, and metadata to facilitate efficient interdisciplinary collaboration and resource access. Sustainability is a cornerstone of the project, with continuous updates ensuring the catalog's relevance and longevity. Additionally, the project adheres to data interoperability standards, enabling seamless integration with other digital platforms and establishing the virtual museum as a central hub for interdisciplinary exchange.

The creation of the virtual museum dedicated to Roca marks a significant improvement in the preservation and dissemination of modern architecture. By leveraging digital technologies, this project not only safeguards original materials but also enhances the accessibility and relevance of Roca's work, enriching both academic research and public engagement. The initiative highlights the importance of continually updating the catalog, thereby effectively bridging the gap between expert scholarship and broader public interest. It also serves as a pioneering model for future architectural digitization efforts. This platform enables students and researchers to explore Roca's design philosophy, architectural process, and creative vision from anywhere in the world. Through virtual tours and in-depth analysis of his work, the project fosters a deeper connection with his architectural legacy, revitalizing his teachings and ensuring their lasting significance for future generations [FIGURE 07].

CONCLUSIONS

As we have seen, modernist architecture faces a range of vulnerabilities, primarily driven by urbanization, neglect, shifting cultural values, and a lack of legal protection. In South America, as cities like Córdoba continue to expand, many modernist buildings are at risk of demolition or alteration to accommodate new developments, fueled by urban growth and gentrification. Additionally, the innovative—sometimes untested—materials used in these structures often result in inadequate maintenance, leading to physical deterioration over time. Furthermore, as societal tastes evolve,
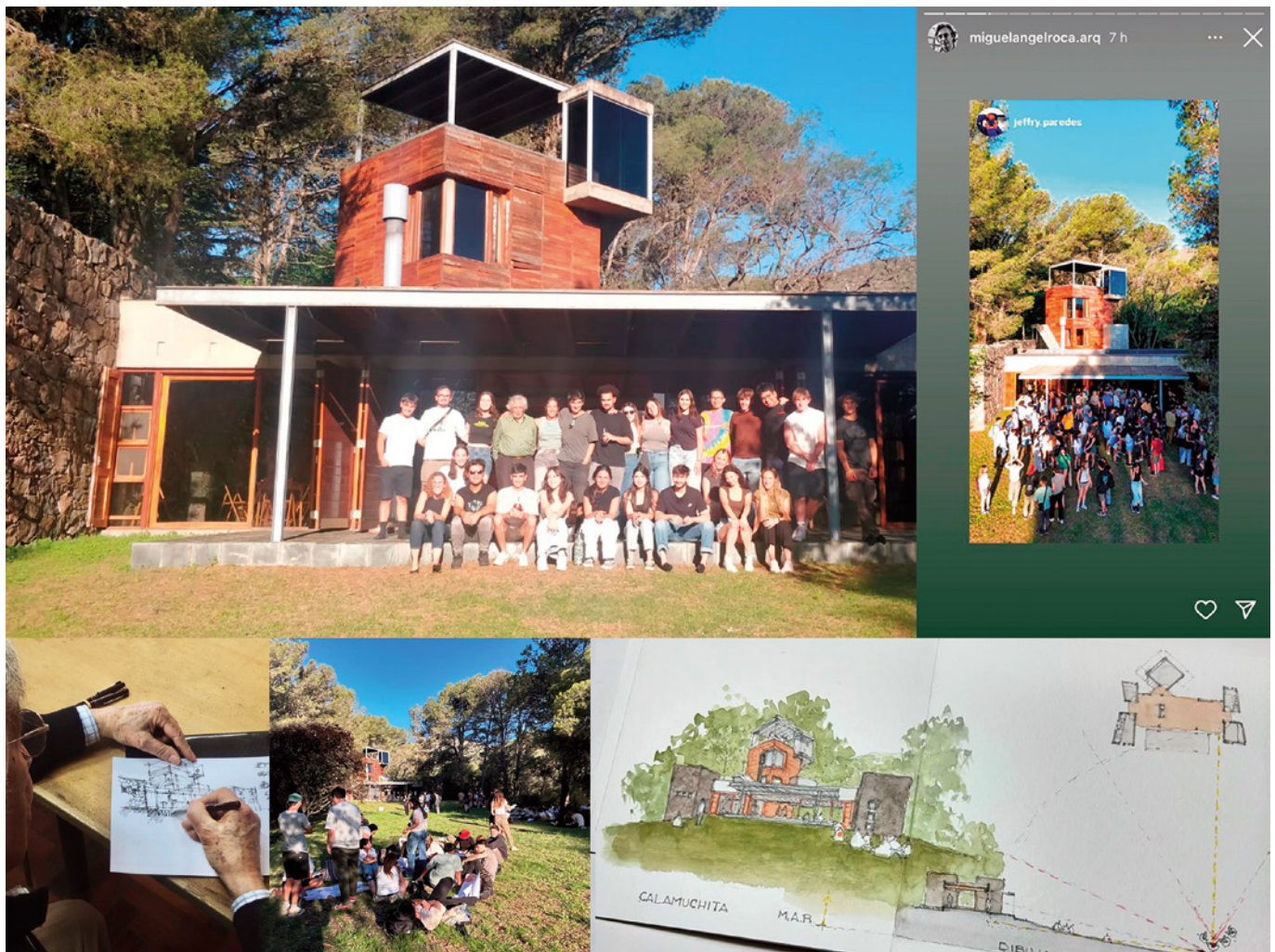
07   House in Calamuchita with students. Manifesto of Roca's architectural philosophy and vision. © Authors' elaboration.

modernist designs, once emblematic of progress, may now be seen as outdated or irrelevant, contributing to their neglect or destruction. Finally, without robust legal frameworks to safeguard them, these buildings remain vulnerable to the pressures of redevelopment, which often prioritize economic and urban growth over cultural preservation.

The primary focus of this study is the documentation of architecture, emphasizing the critical role of digitization in creating multi-scale and multi-resolution models that enable detailed analysis and effective conservation strategies. Digitizing architectural works preserves materials that would otherwise be at risk of deterioration, especially considering the diverse forms and materials that may decay over time. In the case of public works, this process provides administrators with essential tools to understand the structures and intervene in future maintenance and preservation efforts. The digitization of Roca's architectural archive includes the creation of virtual models that not only document but also offer great potential in terms of management and use. By integrating advanced digital platforms, such as GIS and BIM for heritage, this project creates a comprehensive, dynamic system that supports both immediate and long-term conservation goals.

The integration of these digital tools enables a complex system that unites various digital information platforms, creating a cohesive framework for ongoing management. These technologies facilitate detailed documentation, modeling, and analysis, enhancing accessibility, improving resource management, and fostering interdisciplinary collaboration. By incorporating these tools, the study addresses the technical, social, and economic challenges inherent in heritage conservation, while showcasing the potential of digital solutions to manage and protect modernist heritage.

The creation of detailed digital archives offers a sustainable framework for managing modernist architecture, facilitating its adaptation to contemporary needs while preserving its historical integrity. The interdisciplinary and digital methodologies advanced in this research aim to set new standards for the sustainable management of architectural heritage, promoting a balance between conservation and adaptation in response to evolving societal demands. Roca's architecture in Córdoba, deeply intertwined with the city's transformation, blends modernist and postmodernist influences with local cultural contexts. His buildings are not merely aesthetic expressions; they reflect the socio-political dynamics of their time, making them integral to the city's identity.

In Córdoba, a city that balances colonial and modern architectural elements, Roca's designs represent an effort to bridge the past with a progressive vision for the future.

However, the modernity that defines his work also exposes his buildings to the pressures of urbanization and shifting cultural values. As the city continues to grow and evolve, the survival of Roca's buildings—and architecture more broadly—becomes increasingly uncertain. Ensuring their preservation requires a comprehensive and multifaceted approach that includes legal protection, cultural recognition, and a renewed appreciation of their historical and cultural significance. Only through such an approach can these architectural icons be safeguarded for future generations.

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KURNĖNAI SCHOOL

A Unique Example of Interwar Lithuanian Modernism and Its Preservation

Margarita Janušonienė

ABSTRACT: This article presents the history of the funding, construction, and restoration of Kurnėnai School in the Alytus district—an exemplary project of interwar Lithuanian architecture. In 1934, Laurynas Radziukynas, a Lithuanian American born and raised in Kurnėnai, donated 160 thousand litas for the construction and furnishings of an elementary school in his hometown. The project for the school was drafted in the U.S. Most of the construction materials and furnishings were also bought in the U.S. and brought to Lithuania by sea. The school was equipped with highly modern plumbing for its time, including central heating, a biologically processed sewage system, and a shower. Next to the school, a wind turbine was built, with a pump that pumps water from an artesian well (97 meters deep) up into a water tower reservoir. The school tower was adorned with a ceramic Vytis (Lithuanian coat of arms) designed by Vytautas Brazdžius (1897-1969). There was also a schoolyard for physical exercise and a garden. Against the architectural backdrop of interwar period educational facilities, the school of Kurnėnai stood out as exceptionally modern. In 1990, the school's architectural ensemble was entered into the Register of Cultural Properties of Lithuania and is considered a protected heritage piece of regional significance. The school was closed in 2008, following a demographic decline. As the building fell into disuse, its condition steadily declined, and it was restored from 2019 to 2020. This article discusses the construction, use, and restoration of the school in a chronological manner, in line with the principles of formal and historical analysis, as well as the factors enabling the preservation of this school as a time capsule with perceptible interwar optimism and maximalist pursuit of modernity.

KEYWORDS: Lithuania, Kurnėnai school, Laurynas Radziukynas, interwar architecture, restoration.

INTRODUCTION Following the introduction of compulsory primary education in Lithuania in 1928, there was a serious shortage of suitable facilities for teaching purposes throughout the country. During the interwar period, much attention was paid to the design of new schools and their network development. Construction particularly intensified after 1932, when Lithuania was recovering from the global economic crisis. In a couple of decades, many new schools were built in independent Lithuania. The development of the school network and the architecture of educational buildings underwent dynamic changes. The school network gradually became denser and more regular, and the school buildings themselves evolved in at least a few aspects: size, materiality, planning and spatial arrangement, technological and functional equipment, as well as architectural expression of façades and interiors. During the two decades of the interwar period, efforts were made to replace the traditional vernacular architecture of wooden farmhouses with brick schools designed by professional architects with a rational layout of the premises. Most of the schools were built with public funds, but there were also exceptional cases when private persons financed the school construction. One such rare case is the history of the construction and provision of the Kurnėnai School with modern technological equipment, which was funded by Laurynas Radziukynas, a Lithuanian American. This article aims to present the history of the construction, use, and restoration of this privately funded school, distinguishing and analyzing three main stages: interwar, Soviet, and the ongoing present (after the restoration of independence in 1990).

The main source of information about the construction of the Kurnėnai School and its builder Radziukynas is a booklet prepared by the former school principal Antanina Urmanavičienė: *The Laurynas Radziukynas school in Kurnėnai is 60*. Other publications about the

Kurnėnai School are mostly based on the data presented in Urmanavičienė's text. In 2017, the author of this paper published a detailed article about the historical and cultural value of the Kurnėnai School, but back then the restoration works hadn't been carried out. The current article provides a detailed description of the restoration of the School building, carried out in 2019-2020, based on approved exterior and interior renovation projects.

THE SCHOOL DURING THE INTERWAR PERIOD

Knowledge about the life of school founder Radziukynas (1881-1966) in Lithuania and his years of studies and emigration to the United States is scarce and fragmented. Radziukynas was born on April 22, 1881, in Kurnėnai, Alytus County, to a peasant family. There was no school in Kurnėnai, so Laurynas attended the elementary school in Miroslavas, a ten-kilometer walk away. Later, Radziukynas studied at the Warsaw Institute of Technology and acquired a speciality degree as an engineer. After his studies, he moved to the U.S., worked in zinc mines and smelters in Sondoval, Illinois, then in Russia, in the Ural Mountains, before returning to the U.S.. From 1922 to 1966, he ran a family business in Chicago. The school's founder died in 1966 and was buried in Florida. In America, Radziukynas changed his first name to Laurent V. Radziukynas and acquired the Hindu Incense Mfg. Co in Chicago in 1923, which continues to operate on behalf of Genieco Inc.[1] The factory produced incense for the home and hotel market. Business went well, yet Radziukynas did not forget his homeland. In the 1930s, Radziukynas visited Lithuania and learned that there still was no elementary school in his native village, and decided to build a modern school in Kurnėnai. Radziukynas's determination to devote everything that was most advanced and of the highest quality to the education of his young, emerging country was a sign of patriotic optimism. In his personal vision, the future held an opportunity to consolidate and expand Lithuania's statehood; the threat of imminent occupation was not yet felt at that time.

Radziukynas donated 160 thousand litas (16,000 USD at the time) for the construction and installation of the Kurnėnai school, and the county board contributed another 11 thousand. Construction of the school began in the summer of 1934. Most of the data about the construction process is known from the memories of Vladas Leščinskas, who led the timber construction work. According to him, the project for the school building was developed in the United States in the English language and included two apartments for teachers and two classrooms. Drawings were made on green paper in white ink, very detailed, even with human figures, and clear detailing.[2] This project could not be found in the Lithuanian archives, and it is not

01   The Kurnėnai School, 1936. © Unknown, from Urmanavičienė, 1996.

clear whether it has survived. In the file *Project approved by the Kurnėnai Primary School of Alytus County* in the Lithuanian Central State Archive, there is a Lithuanian version of the project, which contains only a general layout plan of the buildings on the plot, plans of the basement and the first and second floors of the school building, façade drawings, and a section of the building.

All the materials and inventory needed for the construction were purchased in the U.S., transported from Chicago to New York, and then by sea from New York to Klaipėda. From there, they were transported from Klaipėda to Alytus by train, and from Alytus to Kurnėnai by horse. Three sizes of school benches, doors, window frames, and pieces of glass of complex construction, parquet, school boards made of special wood fibreboard, a wind turbine including its metal constructions, finished wall panels imitating ceramic tiles, radiators, furnaces, and all plumbing equipment (toilets, sinks, baths, taps, etc.) were brought. Bricks and roof tiles were purchased in Marijampolė. The construction of the school was led by American architect Pranas Medziukas, woodwork by carpenter Leščinskas, and other works planned in the project were carried out by craftspeople from the village of Balkūnai.[3]

Construction of the school was completed in 1936 [FIGURE 01]. In October, 51 students started to learn there. It was distinguished from other schools by its amenities, with a large gymnastic hall installed on the ground floor and a buffet operating nearby for students to have lunch. On the first floor, the classrooms were spacious, with large windows, lined with parquet. On the second floor, there were three classes, teachers' apartments, a bathroom, and a kitchen. The school was equipped with advanced technological equipment purchased in the U.S., including central heating, biologically handled sewerage, showers, washbasins, and baths. A wind turbine—a pump used to pump water from an artesian well 97 meters deep into a reservoir in a water tower—was built next to the school building. At that time, the Kurnėnai School was the most modern in Lithuania. Near the school, a site for the development of physical culture was built, and a garden was planted.

02 The main façade of the school. © Margarita Janušonienė, 2024.

03 The weathercock. © Margarita Janušonienė, 2020.

The school tower was topped by a colorful, ceramic Lithuanian coat of arms (Vytis), designed by Vytautas Brazdžius [FIGURE 02, FIGURE 04]. In the post-war years, the coat of arms became a target of destruction and was repeatedly shot at. A weathercock with the added function of a lightning conductor had the shape of a sailing ship; a reference to the fact that the Kurnėnai School was not just an ordinary building, but a school that had crossed the Atlantic [FIGURE 03].

When the school was opened in autumn 1936, it was filled with life: the story of the Kurnėnai School began. Until 1957, the principal of the school was Motiejus Ražanskas, who devoted his life to environmental management and greening. The school was built on a bare field, so Ražanskas immediately started to grow a garden near the school and planted the site with trees. With the help of students and their parents, a large number of fruit trees, spruce trees, and poplars were planted over several years. By 1940, the planting of a large sports field near the school was completed.

THE SCHOOL IN THE SOVIET ERA

There is no evidence that the Kurnėnai School building was significantly damaged during World War II. During the post-war years, under Ražanskas' leadership, strict discipline was maintained. Students were taught to respect the school inventory and environment, and to protect and cherish the school benches brought by Radziukynas from America. The principal tried to make the school a center of Kurnėnai's culture. All the area's youth gatherings and evenings took place here. Teachers and students were active amateurs and staged numerous performances.

During the Soviet era, the school was subjected to ideological dictates just like other educational institutions. It was transformed into a Soviet school with an eight-year education. The teaching process was ideologized, making it safer not to discuss the school's founding history and its founder. American benches were removed from the classes, and standard Soviet ones were installed. The wind turbine with a pump ceased to be used in 1975. In the same year, an order was received from the local authorities to dismantle the Vytis relief. Thanks to the efforts of Urmanavičienė, the principal of the school at the time, funds were received for major repairs to the school, and the entire building was re-plastered. The Vytis was hidden under a layer of plaster. Minor functional changes made during the ongoing repairs did not cause substantial damage to the building. Around 1978-1979, the intention was to cover the clay tile roof of the school with common, red Soviet asbestos slate, but due to the opposition of the parents' committee, only a few tiles were replaced where there were leaks.[4]

Despite ideological constraints, the teachers' team tried to continue the tradition, which had already begun in the interwar period: to treat the school as a precious gift and try to preserve as many authentic details as possible. The teachers brought together the local community for cultural activities, focusing on local history studies, and in 1979 established the Museum of Nature, which exhibited stuffed animals and birds, herbaria, and interesting rock samples. A lot of attention has always been paid to fostering the environment (planting trees), sports, and developing a sense of community. Students collected exhibits for the school museum, studied the flora and fauna of the surrounding area, and took care of the food supplies of wild

animals and birds in the winter. This attitude was crucial for preserving the school spirit. At that time, the only course of action was to remember the school's founding legend and resist the destruction of its authentic elements through accessible forms of resistance.

The change for the better began in the days of the liberation movement *Sąjūdis*. In 1988, the plastered-over coat of arms of independent Lithuania, Vytis, was uncovered on the school tower [FIGURE 04]. The American benches returned to school, having been stored in the attic until then. Unfortunately, there were only enough for one class [FIGURE 05].

THE SCHOOL IN THE PERIOD OF RESTORED INDEPENDENCE

With the restoration of Lithuania's independence, there were hopes for reviving the Kurnėnai School, but emigration and the challenges of the demographic situation also affected Kurnėnai. After a significant drop in the number of students, the school closed in 2008.

Kurnėnai School was not included in the official list of architectural monuments until 1990. Although the school was undoubtedly unique both in its construction history

and advanced American technological equipment from the time of its construction, it was not included in the lists of cultural monuments during the Soviet period, probably for ideological reasons, as during the Soviet period attempts were made to ignore and decontextualize the heritage of independent Lithuania. The building complex of Kurnėnai School, consisting of the school and the wind turbine, was entered into the Register of Cultural Heritage in 1990 and declared a state-protected object of cultural heritage in 2005 [FIGURE 06, FIGURE 07].

The school suffered severe damage in December 1996, when radiators froze during the winter holidays due to improper operation. Some authentic American radiators burst, and were replaced with new ones (standard locally produced), and boiler room equipment was renewed.[5]

In 2016, commemorating the 80th anniversary of the school, its rapidly deteriorating state was made public and highlighted by the efforts of the public and by scholars in the Alytus region. The established society of Kurnėnai Laurynas Radziukynas School actively raised the issues of school abandonment, neglect, and the need to start work management in the public space, and initiated tours around the building. The proactive and civic attitude of the

04 The coat of arms of independent Lithuania (Vytis) on the Kurnėnai School tower. © Margarita Janušonienė, 2020.

05 The school desks and modern blackboard. © Margarita Janušonienė, 2024.

06 The school courtyard façades. © Margarita Janušonienė, 2024.

07 Southwest façade of the school. © Margarita Janušonienė, 2024.

08 The hall. Before (a) and after (b) the restoration. © Margarita Janušonienė, 2016 and 2024.

09 The school's staircase.Before (a) and after (b) the restoration. © Margarita Janušonienė, 2016 and 2020.

10 Parquet floor in the teachers' room. © Margarita Janušonienė, 2024.

11 The kitchen stove. © Margarita Janušonienė, 2024.

society's members led to a faster start in school management work. The school's management, the Alytus District Municipality Administration, took concrete steps and commissioned an assessment of the current condition of the school's façades and roof and the preparation of projects for heritage conservation works. In 2016, during the preparation phase, additional studies were carried out:

12 The washbasin. Before (a) and after (b) the restoration. © Margarita Janušonienė, 2016 and 2020.

13 The drinking water fountain. Before (a) and after the restoration (b). © Margarita Janušonienė, 2016 and 2024.

architecture (designed by Vytenis Zilinskas) and a chemical and granulometric analysis of the façade plaster (by Asta Grubinskaitė). Studies on polychromy in the school interiors were conducted in 2017 (by Indrė Valkiūnienė).

In 2018, during the preparation of the project of the school's internal conservation and restoration works (project manager Viltė Janušauskaitė), visual architectural studies were carried out, structures were investigated, microbiological studies were performed, the condition of heating system pipelines and cast-iron radiators, heating boilers, water supply and sewage pipelines, ceramic sanitary appliances and metal plumbing elements were assessed. The main heritage conservation works at the Kurnėnai School were executed from 2019 to 2020 under two separate—exterior[6] and interior[7]—projects.

Before the commencement of restoration work, the school was in a very bad condition. The greatest threat to wooden elements was posed by hazardous mold fungi, which began to spread on wooden surfaces on the ground floor. The microfungi genera *Penicillium, Mucor, Serpula, and Aspergillus* were identified, but the most harmful was the wide-spread *Serpula lacrymans*. The plan was to remove all infected wood, apply germ-killer to the remaining and newly used wood, and disinfect the plaster affected by mold to stop the spread of aggressive infection to other floors. The leaking roofing caused rot in the ceilings: they were in an emergency condition and in danger of collapse. Humidity and biological pests caused significant damage to the plaster of both external and internal walls, as well as to the wooden and metal elements of fixed equipment. To preserve as many of the remaining authentic structures and elements as possible, different types of heritage conservation works were selected, taking into account the physical condition of the managed elements (preservation, restoration, repair, and elimination of the risks of accidents).

The school's exterior, interior, and all internal equipment restoration work was carried out by Paveldo sprendimai, a company headed by Rolandas Janulis. The most difficult task was to restore decades-old plumbing, ceramics, and chrome-plated metal plumbing parts, cast iron radiators, tile stoves, fragments of polychromatic wall décor, windows and doors, parquet and board floors, stationary furniture, school benches and impressive size class-boards made of special wood fiberboard (masonite) [FIGURE 08, FIGURE 09, FIGURE 10, FIGURE 11].

Most devices, including all sinks, baths, taps, and water systems, remained in the school, but nothing worked. Therefore, the restorers were concerned not only with restoring the appearance of the devices but also with ensuring their functioning [FIGURE 12, FIGURE 13].

14 The school classroom restored 'Silentite' window. © Margarita Janušonienė, 2020.

The restoration of the windows, which featured an extremely complex design, required a lot of patience and ingenuity since such insulated windows in Lithuania. 'Silentite' windows, produced by the Curtis Companies, were introduced in the U.S. in 1932 as a revolution in the window industry, and two years later, they were already installed in the Kurnėnai School [FIGURE 14].

Another challenge was that the tile-imitating wall panels were made of asbestos, the use of which had long been banned worldwide due to harmful effects on human health. During restoration, asbestos panels were replaced with non-hazardous special wooden panels that also imitate tiles. After the implementation of the project, not only were all authentic building elements restored, but a lot of valuable information about known and newly discovered artefacts during destructive research was revealed. Thanks to the efforts of the work supervisor, R. Janulis, the following information about the manufacturers of authentic elements has been identified and clarified: plasterboard (USG Corporation, or the United States Gypsum Corporation, a company that has been in operation for 119 years and still exists); plumbing (Standard Sanitary Manufacturing Company, now American Standard Company; the company is more than 140 years old, still in operation); asbestos panels (Johns-Manville Asbestos flexboard); parquet (J. W. Wells Lumber Company); locks, handles, door closers (all fittings, Reading Hardware Company); windmill engine with pump (Aermotor Windmill Company;

the company is 118 years old and is still in operation); windows (Curtis Company; the company closed in 1966); water tank (Hall-Woolford Tank Company was established in 1854; the company is 166 years old and is still in operation). The most advanced materials and technologies of the time were used in the construction of the school, and all of them were catalogued, and publications were issued.[8] It turns out that those companies whose materials were used for Kurnėnai School equipment more than 80 years ago are almost all still operating.

The restored school has been adapted for educational, cultural, and cultural tourism activities. Education, open-air happenings, conferences, various celebrations and cultural/educational events take place here, but the concept of the most appropriate uses is still being clarified, because much of the potential of this legendary school is still untapped.

CONCLUSION

Kurnėnai Primary School, built in 1934-1936 on the initiative and with the funds of L. Radziukynas, a Lithuanian American, is a unique and significant object of interwar educational architectural heritage, distinguished from other Lithuanian schools of that time by the harmony of architectural forms, rational planning of premises, and modern technological equipment. Except for bricks and roof tiles purchased in Lithuania, all other materials used for the construction of the school and the wind turbine were brought from the U.S.A, so the school was often called the only school in Lithuania that had crossed the Atlantic. Kurnėnai School is significant and noteworthy in several aspects:

▮ It serves as an example of elevated and inspiring patronage;
▮ The history of the school's construction is special, using the most modern high-quality materials and equipment from the U.S. manufacturers of that time;
▮ The school always had a community that cared about keeping it as authentic as possible.

During the years of World War II and Soviet occupation, the school was not significantly damaged, and only minor changes took place during maintenance repairs. Paradoxically, the problems of the school building began after the restoration of independence. In 1996, a heating system accident occurred, during which some of the authentic radiators burst. The wooden parts of the ground floor became infested with mold fungi, causing significant damage.

The school underwent restoration work in 2019-2020. The restoration was carried out to a very high standard, following a professionally prepared project. The restorers

carried out research, identified the manufacturers of construction materials and equipment, and detailed the most significant aspects of the object. The result achieved was not only a sensitive and highly professional restoration of the individual, unique elements, but also the preservation of the architectural expression of the school as it had been at the time of its construction. Even today, the school still fascinates, with all its American modernity. Restoration rarely succeeds in revealing the *genius loci* of a building quite as well as in this case, but here it succeeded perfectly, and the restoration works must be considered a resounding success.

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ENDNOTES

1 (Indreika, 2016). Most of the information about Laurynas Radziukynas' life in the United States and his family was collected by Gediminas Indreika. G. Indreika is a volunteer at the Lithuanian Research and Studies Center, in Chicago, USA. He was the first to identify the descendants of the Radziukynas family. The owners of Kurnėnai school contacted them and invited to visit the newly opened school building. In the summer of 2024, Ben Radkins visited the Kurnėnai school.

2 (Urmanavičienė, 1996, pp. 12–13).

3 Ibid.

4 Janušonienė, M. Personal communication with the former school principal Antanina Urmanavičienė, September 6, 2016. Personal Archive of Margarita Janušonienė.

5 Ibid.

6 Project for heritage conservation works (repair, restoration) of the façades and roof of the school building of Kurnėnai school complex. (No. 16014), located in Kurnėnai village, Miroslavas ward, Alytus district municipality. Project manager Irena Kliobavičiūtė (Vilnius, 2016).

7 Project for heritage conservation works (repair, restoration, conservation, elimination of the threat of accident) of the school building of Kurnėnai school complex. Project manager Viltė Janušauskaitė (Vilnius, 2018).

8 (Janulis, 2022).

THE HYPA BUILDING IN ŠABAC

Challenges and Strategies for Protecting Modern Heritage in a Changing Socio-Political Landscape

Marko Gavrilović

ABSTRACT: This paper explores the architectural and social significance of the Homes of the Army in the Socialist Federal Republic of Yugoslavia (1945–1992), a specific typology of objects, built and managed by the army, yet utilized by citizens across generations as community and cultural centers. The Homes of the Army represented the materialization of the doctrine of the Yugoslav People's Army in strengthening the unity of the young multi-ethnic nation. In this sense, their design emphasized monumentality, while also promoting openness, following the trends of Western European modernist practice of the time. However, with the change in socio-political circumstances in the early 1990s, the disintegration of Yugoslavia, and the deregulation of public space in a corrupt system, in which political instruments are used to support the economic interests of private investors, the fate of these buildings—which had become focal points in the social and cultural life of cities—was, in many cases, left to the market. Preservation efforts, led by architects and cultural activists from the local communities, are focused on the potential of these buildings as spaces for culture and community interaction. The paper presents a case study of the protection of the Home of the Yugoslav People's Army in Šabac, one of the seven most endangered heritage sites listed by Europa Nostra for 2024. By analyzing this example, the paper offers insights into current challenges as well as strategies for protecting modernist heritage across former Yugoslavia. Analyzing the pressure of the market on the one hand and the preservation of local identity on the other, this paper provides a critical analysis of the contemporary narrative on the rehabilitation and reuse of modernist structures that no longer align with contemporary economic frameworks. These insights offer lessons that can be applied to similar conservation efforts globally, making the case study relevant to the broader international context of modernist architecture conservation.

KEYWORDS: community space, Home of the Army, modern heritage, Yugoslav Modernism.

INTRODUCTION: The term Home of the Army may evoke images of barracks or other military facilities to readers outside the cultural and symbolic context of former Yugoslavia. For Yugoslavs, however, these buildings are often associated with social gatherings, rock concerts, and cultural events. They represent a specific typology of structures, built and managed under military administration, yet serving as cultural centers open to all generations of citizens. This was part of what could be described as the Yugoslav People's Army's 'soft policy', aimed at fostering closer ties between citizens and military personnel,[1] while promoting unity within a multi-ethnic nation (Ignjatović, 2005). Given their open character and prime urban locations—typically in central areas of cities—these buildings evolved into focal points of social and cultural life of the local communities.

However, with the dissolution of the country in the early 1990s, the post-socialist transition, and the reductions in defense budgets, many of these buildings were closed and left to market forces (Tadić, 2012). However, the transformation of the economic system did not alter the needs of citizens. Once-established public spaces remained objects of aspiration and public interest for reactivation.

Through the use of archival materials, newspaper articles, interviews, and surveys, this paper examines the history of the Home of the Yugoslav People's Army (HYPA) building in Šabac, its significance in both the local and broader European context, as well as the ten-year struggle of the local community to preserve it. It raises the question of whether modernist architecture, through its struggle for preservation, can become a gathering place for the broader professional community.

01 The HYPA Šabac nearing completion. © Dragutin Petrović Archives, 1962.

02 The HYPA Šabac close to completion seen from a distance on a postcard from Šabac, 1962. © unknown.
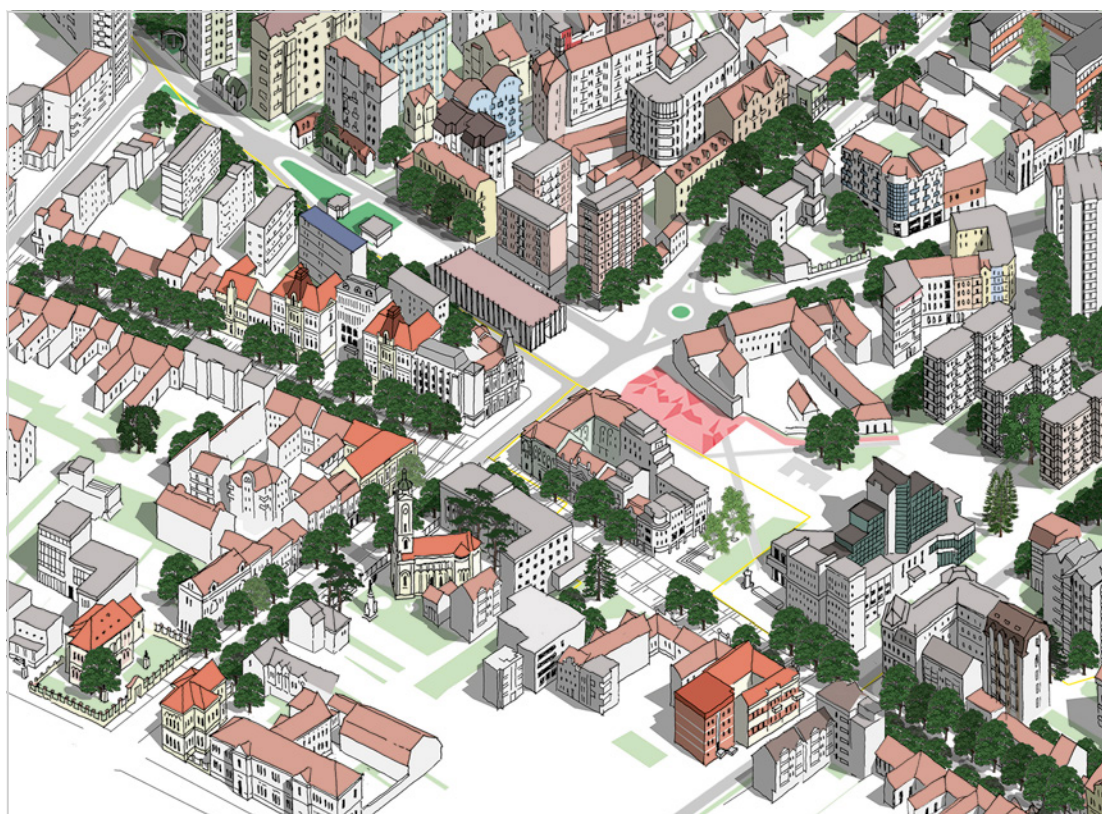
03 Illustration of the central zone of the city of Šabac, with the HYPA building next to the roundabout on the top right. © Aleksandar Stanojlović, 2019.

HOME OF THE YUGOSLAV PEOPLE'S ARMY (HYPA) IN ŠABAC

The HYPA Šabac, like other buildings of this typology, was designed in the spirit of the International Style of modern architecture. Through its geometric clarity, horizontal emphasis, and minimalist façade, alongside its functional spatial organization, HYPA Šabac represents one of the most significant examples of modern architecture in Šabac [FIGURE 01]. The building's triangular plot is masterfully exploited to create a dynamic interplay of volumes, while the cantilevered rooftop garden and expansive glazed lobby embody modernist principles of transparency and connection to the urban environment. Its main façade defines the view from one of two principal urban axes, complementing a series of key cultural institutions, including the National Museum and the City Library. As it blends into its surroundings, forming an inseparable part of the city's architectural ensemble, it serves as a visual and symbolic landmark [FIGURE 02, FIGURE 03].

The investor was the Yugoslav People's Army, and the contractor was the construction company 'Izgradnja', a newly established public enterprise that, in the subsequent period, became engaged in the construction of the city's most significant infrastructure, public, and residential buildings (Gavrilović, 2023). The conceptual design for the building was created by Dr. Vladimir Bjelikov, a professor at the Faculty of Architecture in Belgrade and one of the most notable Yugoslav theorists in the fields of architectural and urban design and analysis. The project architect was engineer Gavrilo Drakulić, while the structural engineer was M. Stefanović.[2]

The construction of a building of this scale and method was an ambitious undertaking for Šabac at the start of the 1960s, making this building important not only in terms of

04 Siteplan of the HYPA building in Šabac, 2016. © Save HYPA Initiative, 2016.
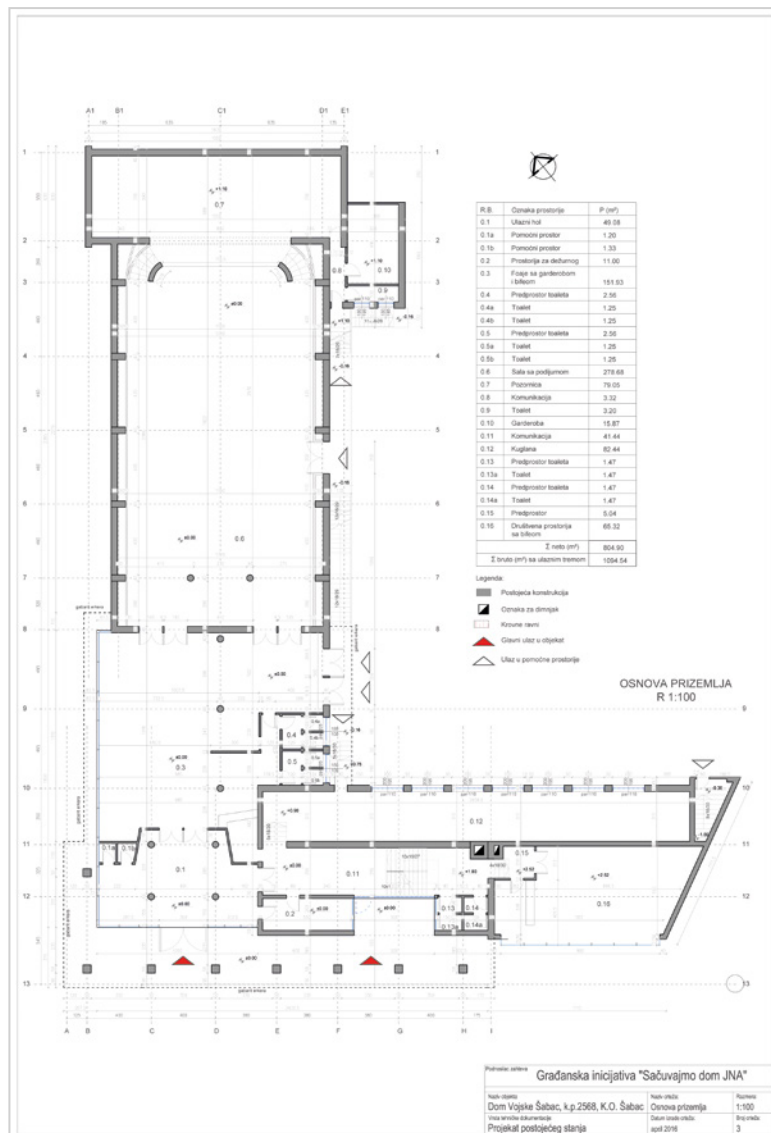
05 Ground floor plan of the HYPA building in Šabac, 2016.
    © Save HYPA Initiative, 2016.

06 Part of the front façade of the HYPA. © Gavrilović, 2023.

its function and location but also in its technical execution and materialization. It served as a benchmark for many other buildings constructed in Šabac in the following years and remains one of the most significant construction projects of its time (Gavrilović, 2016).

The HYPA Šabac was opened on Army Day, December 22, 1962 (U Šapcu je svečano otvoren Dom JNA [The Home of the YPA was officially opened in Šabac], 1962). It housed the following facilities: a lobby/gallery, a multifunctional hall with a stage for performances, concerts, cinema, a bowling alley, meeting rooms, a café-restaurant with a rooftop garden, a chess room, a reading room with a library, a billiards and table tennis room, and offices. The building also had a spacious courtyard with a summer garden and a stage that could be set up when needed [FIGURE 04, FIGURE 05].

A newspaper article published at the onset of the construction predicted that the building would become the most representative cultural institution in the city (Počela izgradnja Doma JNA u Šapcu [Construction of the Home of the YPA in Šabac has begun], 1960). Throughout its operation, the building played a significant role in the social life of Šabac. It hosted dances, celebrations, concerts, film screenings, and other events that added new layers of memory for generations of residents. According to writer Ivan Glišić, the HYPA was always welcoming to young people, offering opportunities for groups that, for political reasons, could not perform elsewhere.[3] This

approach resulted in the paradox that in smaller towns across the former country, Homes of the Army evolved into centers of alternative culture.

The original appearance of the building has been entirely preserved to this day [FIGURE 06]. From its construction until the early 2000s, when it was maintained by the Army, the building remained in good condition, despite no major repairs or restoration work being carried out. However, after the City of Šabac purchased the building in 2008, it became a target for thieves who gained unrestricted access and stole furniture, equipment, and even installations. Additionally, some windows have been broken. Despite these issues, thanks to the completely intact metal roof and the high quality of the construction, the building remains structurally sound.

Following the purchase, a competition was announced for the design of a commercial building on the site of the HYPA (Miljuš, 2018). However, the building remained under city ownership. At the end of 2015, the City Assembly decided to sell the building. In response, 30 architects from the city took action by sending a letter to the mayor,[4] thereby forming the Save HYPA initiative.

THE SAVE HYPA INITIATIVE

The Save HYPA initiative did not emerge suddenly. Since the sale and closure of the Home of the Army, discussions had been ongoing about the possibility of utilizing the space, primarily by cultural workers and for cultural

07   Roundtable in 2016. © Dimitrijević, 2016.

08   Roundtable in 2024. © Gavrilović, 2024.

purposes. The building's premises and its potential to meet the city's cultural needs were well recognized.[5] Today, the city lacks a proper art gallery, cinema, concert and event halls, a chess club, social gathering spaces, and venues for collaboration among various civil society organizations.

It was precisely these civil society organizations that submitted a proposal to the mayor for the building to be used as a Youth Center,[6] where art associations, music groups, and various civil society organizations would gather. This proposal would not require initial investments from the local government to adapt the space, but it was not accepted.

The Initiative has since focused on three main areas of action. Gathering support from professional organizations, cultural institutions, groups, initiatives, and public figures; raising public awareness about the importance of protecting the modern architectural heritage and the power of citizens to oppose government decisions; and submitting a proposal to the relevant Institute for the Protection of Cultural Monuments to have the Home of the YPA protected as a cultural monument. All these activities by the Initiative flowed concurrently, often interrelating with one another.

Retrospectively, the Initiative's temporal course was marked by the support of two major international organizations: Docomomo (Erić, 2016) and Europa Nostra in 2023[7]. As part of securing support from these organizations, roundtables were organized in Šabac,[8] where experts in the field of architectural heritage preservation discussed future plans and activities [FIGURE 07, FIGURE 08].

Following the first roundtable, held in 2016 at the Šabac Library, a comprehensive proposal was submitted to the Institute for the Protection of Cultural Monuments to include the Home of the Yugoslav People's Army in Šabac on the list of immovable cultural assets. This proposal was adopted, and the building has since been protected by law. Although this does not definitively eliminate concerns about the potential destruction of the building—especially given the current (adverse) stance of the Serbian

authorities toward heritage protection institutions, which are often perceived as obstacles to investor-driven urbanism—it does restrict investors' opportunities to pursue complex and potentially risky circumventions of the law.

The Initiative focused not only on the architectural value of the building but also on its former and potential future use as a social and cultural center, in accordance with the Faro Convention[9]. The decision to include this aspect was natural, given the history of the HYPA, but also useful due to the still insufficiently established valuation of Modern architecture, both institutionally, despite the Council of Europe's 1991 recommendation, and within the general public. By insisting on the preservation of HYPA with an emphasis on democratic participation, activists employed an approach that challenges neoliberal urbanism, advocating for heritage as a tool for social equity rather than reducing it to economic capital (Meskell, 2018).

Precisely because of its social significance, the Initiative to preserve the Home enjoyed strong public support from the very beginning. This was evident in reactions on social media and in conversations with citizens during public events organized by the Initiative. The emotional connection people had with the building, along with overwhelming community support, has continued to fuel the Initiative's determination to persist in its efforts. Additionally, the Initiative actively maintained communication with citizens to broaden its support base and instill hope that restoration was possible, all with the intention of pressuring authorities into committing to the building's reconstruction.

Over the years, numerous public events have been organized, primarily on the square in front of the HYPA building. The common goal of these activities has been to remind or inform citizens about the various facilities the building could offer. So far, film screenings, concerts, exhibitions, workshops, and drawing competitions [FIGURE 09] have been held in front of the building. In addition, a petition for the preservation of the building was launched in 2016, instantly gathering more than 10,000 signatures from the citizens of Šabac [FIGURE 10].

09 A drawing competition for high school pupils in front of the HYPA building. © Simović, 2024.

10 Signing the petition in front of the HYPA building. © Manjenčić, 2016.

Beyond these events, the Initiative engaged in extensive media outreach, publishing articles, giving interviews for radio and television, and producing short video messages featuring support from prominent figures. Additionally, a documentary film was made, featuring past and potential future users of the building.

The Initiative also received public support from cultural institutions in Šabac, as well as professional associations, including Docomomo Serbia, the Society of Conservators of Serbia, the Ministry of Space, the Association of Serbian Architects, Europa Nostra Serbia, and Expeditio Kotor, as well as civil society organizations, magazines, and music groups.

All this resulted in the hope among citizens that restoration was possible.

The online survey conducted by the Initiative in July 2023 shows that the citizens of Šabac are highly interested in protecting architectural heritage and support the Save HYPA initiative.[10] Most respondents attribute the greatest responsibility for architectural heritage to the local government. According to citizens, successful initiatives for the protection of cultural monuments are characterized by the persistence of the initiative members, their ability to mobilize a large number of citizens, and the involvement of experts. Additionally, citizens believe the city would be significantly richer in content if the HYPA were reconstructed. They miss concerts and cinemas the most, but all other former uses of the building are also represented in their responses.

As a result of the Initiative's actions, the city administration decided in 2018 to restore the building and reinstate its purpose as a community and cultural center. The following year, the documentation for the project was completed, and a request for a construction permit was submitted. The city's budget for 2019 allocated EUR 425,000 in funds for this purpose.[11] It can be assumed that this plan was initially hindered by the COVID-19 pandemic and subsequently by local elections, which resulted in a change in the local administration. Funds were allocated for the same purpose in the budgets for 2020, 2021, and 2022,[12] but the restoration of the building has not begun.

After the new administration gradually discontinued the project, 50 engineers from Šabac sent a letter in September 2023 advocating for the restoration.[13] However, no response was received. Meanwhile, the Initiative continued its activities.

In response to the nomination by the Initiative, the HYPA was named one of Europa Nostra's 7 Most Endangered Heritage Sites in Europe for 2024.[14] Experts from Europa Nostra, along with representatives from the European Investment Bank Institute, visited Šabac to tour the building and meet with the mayor, the Delegation of the European Union to the Republic of Serbia, and representatives of the Institute for the Protection of Cultural Monuments.[15] Separate meetings were held on August 28 and 29, 2024, and a joint conference on February 4, 2025, in the Town Hall, involving all interested parties [FIGURE 11]. During these discussions, the EU Delegation representative encouraged a commitment to the restoration of the building, and it was agreed that the members of the Initiative, together with experts from the Municipality would prepare the documentation and apply for EU grants.[16]

Involving experts from the 7 Most Endangered Program not only enhanced the visibility of the HYPA building throughout Europe but also fostered dialogue with key stakeholders, paving the way for a potential solution.

CONCLUSION

The case of the Home of the Yugoslav People's Army in Šabac highlights the precarious position of modernist architectural heritage in post-socialist societies, where changes in the social system, privatization, and institutional neglect have led to the endangerment of buildings that once were part of a collective identity and a sense of progress. The Šabac case is not isolated, but rather reflects tensions across Eastern Europe, where modernist heritage—often discredited as a "socialist relic"—is facing destruction in favor of neoliberal urban development

11 Conference Home of the HYPA Šabac — the Way Forward © The City of Šabac, 2025.

(Czepczinski, 2008; Kulić, 2019). As a representative of a specific typology of buildings, but also of Yugoslav modernist architecture, the story of the HYPA transcends local borders and challenges the Western-centric stereotype of Eastern European countries as passive recipients of ideological narratives, rather than as active producers of public spaces for civic participation (Todorova, 1997; Normand, 2021).

Despite market pressures and administrative inertia, the ten-year struggle to preserve the building—through legal protection, sustained community pressure, and support from international organizations—provides lessons for reclaiming modernist heritage and public space. This case highlights the need for proactive heritage conservation strategies and calls for further research into sustainable models of joint struggle that will ensure that modernist heritage contributes to a better future.

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ENDNOTES

1   ˮWe would not want the new Army House with its social facilities to serve only military personnel. On the contrary, it should become an institution where access will be free for all citizens. Only through close cooperation and daily connections between Army members and citizens, and especially with our youth, the Reserve Officers' Association, the Veterans' Alliance and other socio-political organizations, will we achieve the moral strength of the people and the army – which is a decisive factor in the fighting strength of our country in a possible modern war," is part of the speech by Lieutenant Colonel Zdravko Nenić, at the ceremonial opening of the JNA House in Šabac, reported in the local newspaper Glas Podrinja, on December 22, 1962.

2   After the closure of the company, the documentation of the social enterprise "Izgradnja" was transfered to the Inter-Municipal Historical Archive in Šabac.

3   See interview with Ivan Glisic in the documentary "Ivan Glisic in the Home of the YPA", available at: https://www.youtube.com/watch?v=UMHBYqskXJY, Accessed Mar. 5, 2025.

4   See "Pismo gradonačelniku Šapca" November, 2015.

5   Referring to the parameters of the General Regulation Plan "Šabac" – revision, Official Gazette of the City of Šabac, 2015, 18/15, Marija Milosavljević in her Master's thesis "Revitalization of the Home of the YPA", Faculty of Technical Sciences, University of Novi Sad, 2017, states that the city lacks approximately 1,700 square meters of space designated for culture, which is slightly less than the area of the HYPA.

6   See "Dom omladine Šapca", December 2015, available at: https://www.academia.edu/104114366/Dom_omladine_Šapca, Accessed Mar. 5, 2025.

7   See Evropa Nostra Srbija, Podrška inicijativi „Sačuvajmo Dom JNA", August 2023.

8   See Podrinske, Okrugli sto o sudbini zgrade Doma JNA u Biblioteci šabačkoj, March 2016 and Podrinske, Čuvari nasleđa – za očuvanje Doma JNA, March 2024

9   See Council of Europe Framework Convention on the Value of Cultural Heritage for Society, Council of Europe Treaty Series – 2005, 199.

10 See Gavrilović, M. 2023. "Rezultati istraživanja o stavovima građana Šapca na temu zaštite graditeljskog nasleđa i o Inicijativi Sačuvajmo Dom JNA". Available at: https://www.academia.edu/128021525/Rezultati_istraživanja_o_stavovima_građana_Šapca_na_temu_zaštite_graditeljskog_nasleđa_i_o_Inicijativi_Sačuvajmo_Dom_JNA, Accessed Mar. 5, 2025.

11 See Odluka o budžetu grada Šapca za 2019. godinu, od 17. 12. 2018. Available at: https://sabac.rs/dokumenta/budzet/, Accessed Mar. 5, 2025.

12 See Odluke o budžetu grada Šapca za 2020, 2021. i 2022. godinu. Available at: https://sabac.rs/dokumenta/budzet/, Accessed Mar. 5, 2025.

13 See Gavrilović et al. 2024. Pismo Skupštini grada Šapca, Gradskom veću i gradonačelniku Šapca.

14 See 7 Most Endangered list for 2024 at: https://www.euro-panostra.org/europa-nostra-and-eib-institute-announce-europes-7-most-endangered-heritage-sites-2024/, Accessed Mar. 5, 2025.

15 See Technical Report on the HYPA building: https://7mosten-dangered.eu/sites/home-of-the-yugoslav-peoples-army-in-sabac-ser-bia/, Accessed Mar. 5, 2025.

16 See Conference held on February 4, 2025, for instance: https://sabac.rs/vesti/delegacija-eu-izrazila-spremnost-da-finansi-ra-obnovu-doma-jna-u-sapcu/, Accessed Mar. 5, 2025.

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INTERNATIONAL SPECIALIST COMMITTEES

Docomomo International has six International Specialist Committees (ISC) comprised of experts on Registers, Technology, Urbanism+Landscape, Education+Training, Interior Design, Publications working under Docomomo International's supervision. An ISC will consist of approximately five specialists of different countries as well as a chairperson appointed by the Council.
https://docomomo.com/iscs/

ISC/REGISTERS

The docomomo ISC/Registers was created to engage national/regional chapters in the documentation of modern buildings and sites. Its mission is the development of an inventory of modern architecture, including both outstanding individual buildings and 'everyday' examples.
- Louise Noelle (co-chair, docomomo Mexico), louisenoelle@gmail.com
- Horacio Torrent (co-chair, docomomo Chile)

ISC/TECHNOLOGY

The mission of the docomomo ISC/Technology is to promote documentation and conservation through studies of, and research into, technology, and into the material qualities of modern architecture. The committee organizes seminars; it also supports and participates in workshops related to the technology of modern buildings.
- Rui Humberto Costa de Fernandes Póvoas (co-chair, docomomo Iberia/Portugal), rpovoas@arq.up.pt

ISC/URBANISM & LANDSCAPE

The mission of the docomomo ISC/Urbanism+Landscape is to promote research, documentation and protection of modern ensembles and environments, as opposed to individual 'setpiece' monuments. In practice, our current work focuses almost exclusively on research and documentation.
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ISC/EDUCATION & TRAINING

The docomomo ISC/Education+Training has the mission of educating to protect "by prevention". This means to preserve not by action-reaction to specific threats, but by creating a general awareness and appreciation of modern buildings in the younger generation, general public and the society at large. The workshops in the framework of the Docomomo International

Conferences are increasingly successful and prove that young people like to be involved in assignments concerning modern heritage. The ISC on Education and Training would like to provide these young people the possibility to excel in the Documentation and Conservation of modern heritage.
- Andrea Canziani (co-chair, docomomo Italy), andrea.canziani@polimi.it
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ISC/INTERIOR DESIGN

The docomomo ISC/Interior Design focus on Interior Design, an issue of major relevance for the Modern Movement and Modern Living. Interior Design gives us important spatial, ideological and aesthetic information necessary for a full awareness and experiencing of Modernity. The Modern Movement considered Interior Design as being in close relation with architecture and the other arts. This implied the demand for a new aesthetics in response to new technology and a need for a total work that embraces all the expressions into a unitary (and also utopian) environment for humanity. The Modern Interiors' identity is characterized by a strong and coherent style which results from a unity between architecture, furniture, design, decorative arts, utilitarian objects, equipment, textiles and light.
- Bárbara Coutinho (co-chair, docomomo International), barbara.coutinho@tecnico.ulisboa.pt
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ISC/PUBLICATIONS

In order to have more coordination between the ISC's and other docomomo bodies regarding publications, the Advisory Board unanimously agreed on the creation of a Docomomo International ISC/Publications, integrating all the ISC chairs and the Docomomo International Chair. This may concern their content and editing status (indexed) but also the use of funding and external resources and the contacts with publishing houses.
- Ana Tostões (chair, docomomo Iberia/Portugal)

National Bank of Ethiopia,
Addis Ababa, 1965.
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