AN EMERGENT ASIAN MODERNISM: THINK TANKS AND THE DESIGN OF THE ENVIRONMENT — H. KOON WEE

There are legitimate claims that the work of William S. W. Lim and the think tanks he had co-founded in the 1960s can be understood within the framework of nationalism in Singapore and the regional professional networks around Asia. Deeper resonances can also be felt across nationalism emerging in Asian cities in their corollaries of modernisation and urban development between the 1960s and 1980s. This process was often coupled with the search for and legitimisation of a cultural identity. In developing Asia, these urban forms were ambitious and large-scale. The visions of architects were co-opted as part of the state's technological narrative of urbanisation. Projects were envisioned and built with a mentality of post-war development thinking, and increased professionalisation in architectural and multidisciplinary skill sets. The agenda was to use architecture and the city to aid in the making of a consumerist middle-class population while whetting their appetite for automobile ownership, private luxury housing, shopping, and other appurtenances of modern living. Governments were often the initiators of such colossal urban reorganisation, as urbanisation and urban renewal were the primary engines of economic growth and social control. Architecture had to be inventive—more technologically oriented, and internalised to simulate urban functions dominated by shopping centres, cinemas, entertainment venues, hotels, offices, luxury housing, and transportation centres.

There were critical intellectual projects summoned through the formations of think tanks such as the Singapore Planning and Urban Research Group (SPUR) and the Asian Planning and Architectural Collaborative (APAC), which operated on national and regional levels, respectively. While Lim was among the key initiators of these think tanks, he was influenced by them in equal measure. There was a very small window in the 1960s in which one could describe the work of SPUR and APAC as an emergent Asian avant-garde. The explorations established in this period would set the tone for the decades to come. The protagonists discussed in this essay would prefer to describe this as a specific Asian or non-West modernism.[1] The context for this can be understood through Lim's breakthrough project in Singapore—the Singapore Conference Hall and Trade Union House. He won the project with Malayan Architects Co-Partnership (MAC) through an open design competition. Led primarily by his MAC partner Lim Chong Keat, this project was a part of the narrative of nationalism—as the first postcolonial building designed by local architects, out-competing British firms dominating the profession up till the 1960s. There were anti-colonial sentiments amongst the professionals and intellectuals during that period, and this episode was considered a moral victory.[2] MAC disbanded in 1967, two years after the completion of this building. Lim went on to form Design Partnership (DP) with Tay Kheng Soon and

Koh Seow Chuan, and together they would pour considerable intellectual resources into the further projects associated with this period of nationalism.[3] The early work of DP was aligned with Singapore's national framework, which had strong roots in the social democracy of its first independent government.

The visionary approaches by SPUR of extreme high-density urban conditions set them apart from architectural discourses dominated by the West. SPUR's experiments had a high regard for the historic fabric, while searching for a new typology of super high-rises that could accommodate an unprecedented population explosion in Asia. Hence, Rem Koolhaas belatedly suggested in 1995 that the work of urban think tank SPUR ought to have been part of the avant-garde movement of the 1960s, describing it as the "first time in over 3,000 years that architecture has a non-white Avant-garde."[4] Mainstream architectural discourse has long established the post-war architectural movement known as Metabolism from Japan as the only avant-garde of Asia. The ideas of the Metabolists were mostly theoretical and large-scale in nature, questioning the cultural and technological position of architecture in Japan, while emboldened to propose projects as large as Tokyo itself. Kenzo Tange took the lead to suggest, in his Plan for Tokyo in 1960–2025, that the city could accommodate populations of more than 10 million by spanning a new 80-kilometre linear city across the entire Tokyo Bay. Through Tange, the Metabolists found their first audience at the 1959 Congrès Internationaux d'Architecture Moderne (CIAM) in Otterlo in the Netherlands, prior to a fuller introduction of all the work of Metabolist architects at the 1960 World Design Conference in Tokyo. The Metabolist architects were the leading proponents in Asia, playing a symmetrical role to Team 10 in Europe, as CIAM's work came to a close.

Both Metabolism and Team 10 were reacting to the traumas of widespread urban renewal and reconstruction of cities after World War II, critiquing

the singular dominance of functionalism and economy in architectural discourse. The urban research and advocacy work of SPUR and APAC ought to be framed within the same aspirations as Team 10 and the Metabolists. These post-war think tanks had a utopian interest in greater forms of network in the urban realm, with a more humanising rationale in the inadvertent rise of technological power. It is important to realise that there was a sophisticated transnational flow of ideas, as the expanded architectural realm merged with the urban realm in specific Asian discourses. There were brief entanglements with the aforementioned predecessors, but the issues were framed strictly within a set of Asian problems. It is imperative to trace the formative episodes emerging in Asia through the pedagogy brought by CIAM members Josep Lluís Sert, Sigfried Giedion, and Jaqueline Tyrwhitt to the Harvard Graduate School of Design (GSD), where a number of the key protagonists were trained. A transdisciplinary urban-design approach within the confines of architecture was being formulated, in order to claim a greater responsibility for architecture in the larger urban and civic realms. Taught by Tyrwhitt and exposed to influential figures such as Victor Gruen, Jane Jacobs, and others who lectured at the two inaugural Urban Design Conferences at Harvard,[5] Fumihiko Maki (GSD '54), Lim (GSD '57), and Koichi Nagashima (GSD '64) and Tao Ho (GSD '64) would eventually form APAC.[6] APAC's commencement can be traced back to 1969, when Nagashima took a break from working for Maki in Tokyo between 1969 to 1971 to take up the task of setting up a postgraduate urban planning programme at the University of Singapore. Maki was the elder founder of APAC, while Nagashima and Lim were the unspoken leaders of the group. Sumet Likit Tri & Associates and Tao Ho Design Architects & Designers joined in 1973, and APAC would begin to compete with the predominantly western and state-led efforts in urbanisation in Asia. [A] Charles Correa joined

1   William Lim and Jiat-Hwee Chang, ed., *Non West Modernist Past: On Architecture and Modernities* (Singapore: World Scientific, 2011).

2   Mark Crinson, "Singapore's Moment: Critical Regionalism, its Colonial Roots and Profound Aftermath," *The Journal of Architecture* 13, no. 5 (2008): 592.

3   Lim and his practice DP developed a parallel relationship of urbanisation and nationalism in Singapore. This observation was made directly by DP Architects, as the publishing of *DP Architects on Marina Bay: Evolution of a Civic Downtown* in 2015 was planned to coincide with the celebration of Singapore's 50th year of independence. DP Architects describes their five decades of growth as part of the evolution in tandem with the building of our nation.

4   Rem Koolhaas, "Singapore Songlines: Portrait of a Potemkin Metropolis...or 30 Years of Tabula Rasa," in *Small, Medium, Large, Extra-Large*, ed. Rem Koolhaas and Bruce Mau (New York, NY: Monacelli Press, 1995), 1054. Notably, Koolhaas's intrigue in this Asian modernity led to a subsequent research project that culminated in the *Project Japan* project. See Koolhaas and Hans-Ulrich Obrist, *Project Japan: Metabolism Talks* (New York, NY: Taschen, 2011).

5   Harvard Graduate School of Design News, Fumihiko Maki et al., "Mary Jaqueline Tyrwhitt: In Memoriam: The Harvard Years, 1955–1969," *Ekistics* 52, no. 314/315 (September/October–November/December 1985), 436–41.

6   Koichi Nagashima, ed., *Contemporary Asian Architecture: Works of APAC Members, Process: Architecture* no. 20, Tokyo (November 1980).

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several years later. Despite not winning a single commission as a group, each member was massively influential within his own territory of practice. This was a group that came from a lineage of CIAM and Team 10, and they would gradually shed their American and European ideological roots.

In their formative years, Tyrwhitt would continue to interact with APAC, and even mentor them during her frequent travels to Asia, through her academic, professional, and governmental advisory roles ranging from *Ekistics* to the United Nations (UN). She was invited as a curriculum advisor to various university programmes in Asia—from Tokyo, Singapore, Bandung, and other Indian and Southeast Asian cities—benefiting from Nagashima and her niece Catharine Huws-Nagashima's bases in Tokyo and Singapore.[7] Such pan-Asian mobility also allowed the Nagashimas to join up with the discourses led by Lim and SPUR in Singapore, while conceptualising the formation of APAC. Nagashima's involvement in shaping up the urban-planning programme would also see them bring Tange to the University of Singapore. [B] With Tange still in the frame, winning prestigious projects commissioned by the state government of Singapore, the built works and urban theories expounded by SPUR and APAC could be considered reformist ideas, following CIAM. The architectural and urban scales commingled in a specific moment where architects were able to engage bigness in architecture, with vivid visions of megastructures and other collective forms. To this end, Maki and Lim would consider some of the collaborative efforts of APAC as a version of Team 10 in Asia.[8]

Compared to APAC, the membership of SPUR was much more mixed at its inception in 1964, which included policy makers, professionals, and researchers. Lim and Tay invited the Nagashimas to join in 1969. The most provocative work by SPUR was found in the manifesto-like essay entitled "The Future of Asian Cities" in SPUR's journal publication in 1967. This vision of an Asian super-dense and super-tall linear megastructure form was, in fact, part of the

SPUR studio taught at the University of Singapore in 1966, and it was first published as "Our Cities Tomorrow" in *Asia Magazine* in Hong Kong.[9] [C] Taught by Lim and Tay, the studio was divided into three groups, producing three iconic drawings of different linear city forms that would become the most identifiable visions of SPUR.[10] Graduating as one of the top students from the SPUR studio, Chan Sui Him vividly recounted the exhilaration and nationalist sentiments brought through such an innovative pedagogy. Chan was invited to join DP immediately upon graduation in the late 1960s. By setting the test site along Upper Cross Street in Singapore's historic Chinatown, the studio brief was a close simulation of the complex urban renewal process experienced by the young nation.[11] Lim, Tay, and SPUR advocated an increased density adjacent to the colonial shophouses, with little or no demolition of the historic fabric, because "demolition of these buildings does not and cannot solve the problems of the slum dwellers."[12] Lim argued that it was "slum psychology" that prevented modernist planners from properly addressing the real issues of a lack of incentives for landlords to upkeep their properties, and a general lack of income and poor education in the working-class tenants. It was easy to condemn the historic fabric as slums based on poor hygiene, high crime rate, and dilapidation as a justification to tear them down. Tay added that a slum "is a living laboratory of how people adapt to their high-density environment conditions."[13] The old city was engineered to fail based on these modernist definitions. The real motive was to consolidate urban land into larger city blocks with higher densities, so the government could profit and build a new economy around them.

The immense density and height of these visionary proposals were not only shocking in the mid-1960s, but they were also positioned to make specific claims about a unique demographic, cultural, and climatic response for Asia. [D] This was much like the avant-garde of the early 20th century, where new architectural forms were similarly shocking. Architects

7   Ellen Shoshkes, *Jaqueline Tyrwhitt: A Transnational Life in Urban Planning and Design* (New York, NY: Routledge, 2013), 198.

8   *Interview with Fumihiko Maki* (by author), Singapore, 10 October 2017.

9   Singapore Planning & Urban Research Group, "Our Cities Tomorrow: Sky-High Structures May Solve Population Problems," *Asia Magazine*, May 1966, 4–7. Reworked and republished in *SPUR*, "The Future of Asian Cities," *SPUR 65-7* (Singapore: Eurasia Press, 1967), 5.

10   SIA, "News and Comments: Poly Urban Rehabitation," *Journal of the Singapore Institute of Architects* no. 5, 1966. "Poly" refers to the Singapore Polytechnic, where the SPUR studio took place.

11   There were other accounts of the politics of urban renewal as advocated by Lim, such as the People's Park Complex site. See Eunice Seng, "People's Park Complex: The State, the Developer, the Architect and the Conditioned Public, c.1967 to the Present," in *Southeast Asia's Modern Architecture: Questions of Translation, Epistemology* and *Power*, ed. Jiat-Hwee Chang and Imran bin Tajudeen (Singapore: NUS Press, 2019), 236–73.

12   Lim, "Urban Redevelopment: The Humanist Point of View," *Equity and Urban Environment in the Third World: With Special Reference to ASEAN Countries and Singapore.* Singapore: DP Press, 40.

13   Tay, "Outspoken 'Third-fourth' Generation Architect," interview by Pauline Khng, *Asian Building & Construction*, October 1976, 30.
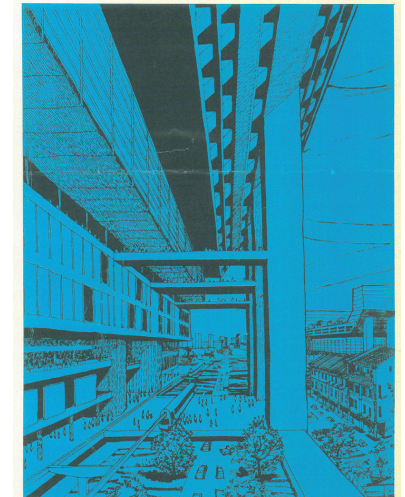
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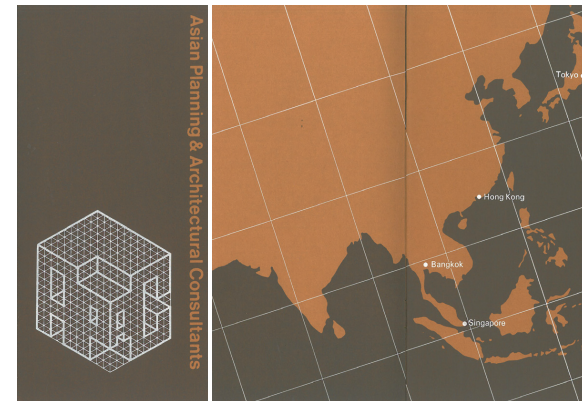
A   Brochure of APAC from the 1970s, introducing their inter-Asian outlook with professional expertise. APAC was registered with the World Bank and Asian Development Bank, targeting large governmental projects in developing countries in Asia.

B   Kenzo Tange's Visit to the University of Singapore in 1971 (L–R) Patrick Ngan (Malaysia), Chan Shi Dean (Taiwan), unnamed staff, Koichi Nagashima, Kamiya (Japan), unnamed staff, and Otto Golger (Germany).
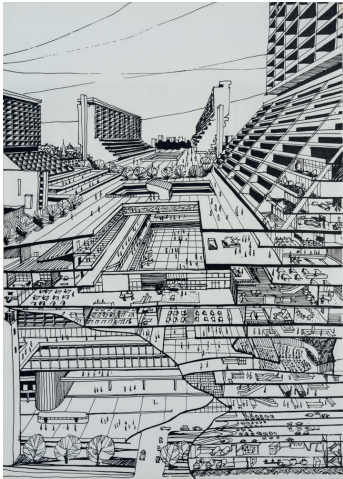
C   Concept Sketch of "Our Cities Tomorrow" showing the co-existence of a megastructure adjacent to historic downtown fabric in Singapore, avoiding urban renewal, 1966.

D

E

D　Concept Sketch of "Our Cities Tomorrow" showing the intense density and the linear stepped megastructure.

E　Concept Sketch of "Our Cities Tomorrow" showing continuous linear form, and innovative and safe modes of urban transportation, 1966.

F

F　Predecessor of DP Architects, Design Partnership, led by William S. W. Lim (L) and younger architects Koh Seow Chuan (M) and Tay Kheng Soon (R), with the photograph of the model of the Golden Mile Complex.

were compelled to give a novel aesthetic to the identity of a new democratic society. They denounced all classical conventions of architecture by severing ties with ornamentation and traditional forms, and identified speed and economy as the new reasons for architecture. Lim shared these avant-garde agendas, but with a deeper understanding of the human condition and an unfair distribution of urban wealth after World War II. Decolonisation, social movements, and the promise of an enlarged civic sphere were the critical issues many newly formed Asian governments were grappling with. SPUR articulated the potential of unrestricted growth of a linear city with the same relentlessness and heroism, in an effort to design a responsive and innovative urban form for Asia. Apart from echoing the familiar persuasions of "economy" and "frictionless expansion," SPUR had an obsession with new modes of urban transportation and continuous circulatory systems, and they actively developed new monorail systems [C] and top-hung monorail pods, [E] with well-sheltered pedestrianised passages suitable for the tropical climate of harsh sun and torrential thunderstorms. These public-transit ideas resembled the exhilarating forms of a city that embraced new modes of travel, providing alternatives to the automobile city, such as the central railway station and airport in La Citta Nuova by Antonio Sant'Elia. The affinity to speed and dynamism with an implied nationalism would also echo other manifestos
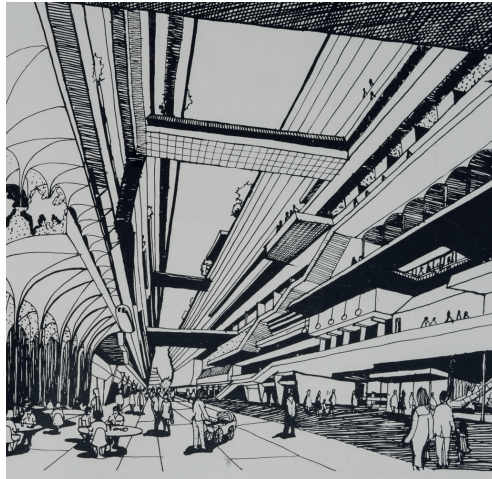
from European avant-garde movements, but SPUR did not evoke the necessity for war and revolution.

Instead, SPUR raised a similar question of class segregation in society, as it described their adoption of the linear city as a response to the industrialisation of cities: how "our industrial working-class cities have been freed from these considerations (of traditional constraints) with the progress of modern technology—road transportation, piped supply."[14] Lim's work leaned heavily on the necessity of industrialisation in a rapidly urbanising Asia. Even though Lim and SPUR did not refer to socialist regimes—as they were developing their ideas at the height of the Cold War period—there are reasons to compare the linear forms of SPUR with the Soviet socialist visions inspired by factory assembly lines, such as the 1920s linear-city proposals documented in the Sotsgorod (The Problem of Building Socialist City) by Nikolay Alexandrovich Milyutin, and the 1930 unbuilt Green City of Moscow by Moisei Ginzburg and Mikhail Barshch of the Organization of Contemporary Architects (OSA).[15] The linear Ville Radieuse by Le Corbusier was much more directly discussed by Lim in his writings, and perhaps rightly so, as Le Corbusier's 1930 Ville Radieuse was developed from his *Reply to Moscow* after his engagements with the Soviet intelligentsia.[16] Ville Radieuse was evidently a linear revision of his concentric Ville Contemporaine, which can be understood as the formalism of industrial assembly production informing

how a city ought to expand. Lim was cognisant that modernisation, that only favoured automobile ownership and the upper middle class who could afford it, would leave a large industrial working class and urban poor population behind, hence Lim's linear forms would not rely on private automobile travel.[17]

Lim and DP's first prominent built projects were concrete manifestations of both nationalist and avant-garde agendas. The People's Park Complex and Golden Mile Complex experimented with social urban forms such as super-large interiorised city rooms and linear stepped forms of urban expansion. By adopting these forms, Lim would denounce the other forms of western social utopia, such as the suburban Garden City vision by Ebenezer Howard. Lim deplored them as "cultural obsolescence! These so-called park developments and garden estates," making no apology for the necessity of a super-dense city in Asia. He added, "If we look into our own Asian cities you will find that Asians have been conditioned to live in a highly concentrated manner. What we want is to find the right living pattern for our present needs and the right symbols to satisfy our present cultural aspirations."[18] There was a discernible

connection between the fiercely socialist sensibility in Singapore's nationalism, evidenced by its unwavering public-housing programme. Hence the Housing Development Board (HDB) remains the highest ranked statutory body even today. While SPUR's vision did not necessarily portray shopping as the primary activity, it is important to note that the deployment of these linear forms for housing and shopping functions were testaments of an emergent globalised consumerist economy. They bore the same aspirations towards social-levelling functions of technological innovation and affordable modern consumption shared by other post-war avant-gardes such as the Archigram in the 1960s, as appraised by Lim.

Lim and DP were initially able to command a great deal of control over urban development and architecture in Singapore, in part because they could advise clients about the connections between land sales pricing and building economics, and reportedly even advise the government on planning parameters and plot ratio when the northeastern corner plot on which the Golden Mile Complex was being tendered.[19] For this project, Lim calculated

14　*SPUR*, "The Future of Asian Cities," *SPUR 65–7*, 11.

15　Nikolai Miliutin, *Sotsgorod: The Problem of Building Socialist Cities*, trans. Arthur Sprague, ed. George R. Collins and William Alex (Cambridge, MA: Press, 1975). Original Russian edition published in 1930. See also Oleg Yanitsky and Olga Usacheva, "History of the 'Green City' in Russia," *Journal of History Culture and Art Research* 6, no. 6 (2017): 125–31.

16　Jean-Louis Cohen, *Le Corbusier and the Mystique of the USSR: Theories and Projects for Moscow 1928–1936* (Princeton, NJ: Princeton University Press, 1992).

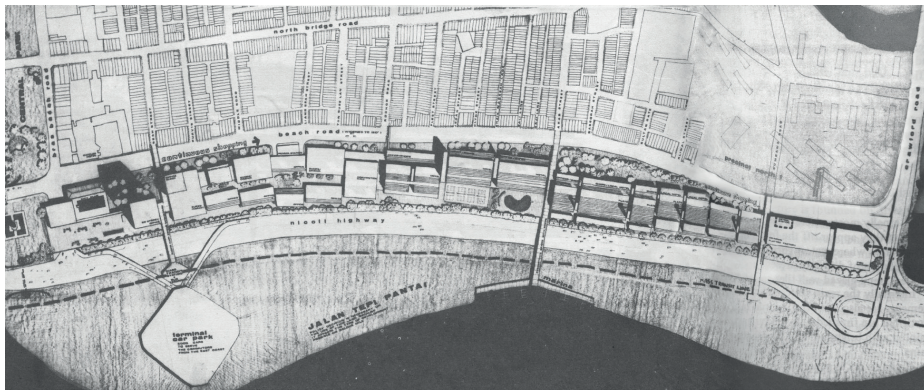17　Lim, "Urban Redevelopment: The Humanist Point of View," 51.

18　*SPUR*, "The Future of Asian Cities," 9.

19　*Interview with Chan Sui Him (by author),* Singapore, 4 August 2016.

G

H

G   Comprehensive development of Golden Mile (Unbuilt) by Design Partnership, 1969.

H   City core and Surrounding Area and location of Golden Mile by Design Partnership, 1969.

the economic returns as a condition for the optimised scales to build in, along with the required urban-control measures. Lim rejected the original feasibility study with three pencil towers of luxury housing, as envisaged by Alan Choe and Urban Renewal Department (URD) in 1967.[20] Instead, DP developed an innovative stepped megastructure that could combine a mixed-use function, likened to the city of streets, retail on the lower floors, and housing above. Lim was, in fact, exploring new urban forms in reaction to the newly released strata-title building code of 1967.[21] These interdisciplinary skill sets came through Lim's Harvard training in urban economics and policy making, taught by Lloyd Rodwin and Charles Haar. According to Chan, there were not many experienced developers or urban economists when URD first launched its land sales in 1967. In order to bid for the Golden Mile Complex site, the general contracting firm Woh Hup Pte. Ltd. transformed itself into a real-estate developer Singapura Developments,[22] and relied heavily on DP's role as both the architect as well as the development consultants.[23] Due to the high level of control over the professional expertise surrounding the project, Lim, Tay, and Koh [F] were also able to work out new structural engineering solutions with Ove Arup and Partners. Steel railway tracks were adopted as foundation piles due to surpluses in the region, and an unfavourable long lead time for standard steel piles.[24] DP managed to keep construction costs considerably

lower than those of conventional buildings of the same scale, despite the fact that the Golden Mile Complex had an unusual structural system and form.[25] The nature of these contractor-developer-architect conglomerates facilitated the emergence of mega-projects in Singapore and, in the words of their owners, they were keen to contribute to nation-building efforts.[26] This increased level of professionalisation was indispensable in equipping projects with a complete set of new disciplinary knowledge.[27]

Prior to the commissioning of the Golden Mile Complex, Lim and DP developed a master plan of the entire Golden Mile District as a feasibility study that put them in pole position to persuade the developer Singapura Developments to tender for URD's first private land sales. The issues were studied in two different urban scales, both of which demonstrated a critical notion of horizontality, which resisted the authority's idea of vertical luxury housing high-rises.[28] In the first urban district-level scale, Lim and DP focused on a continuous megastructure form, while attaining vertical density at the same time. The importance of linear expansion was discussed at length by Lim in his writings,[29] and in this master plan, he demonstrated it through an urban design of two rows of 15 connected megastructures along the entire reclaimed strip between Nicoll Highway and Beach Road. [G] The pedestrianised corridor along the Golden Mile District was marked as "continuous shopping," moving
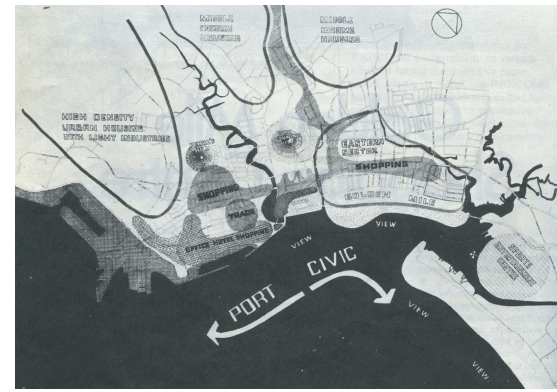
gradually from the "global" functions of hotels, offices, shops, and convention halls in the southwestern end, to the "local" functions of flats, local hotels, and even a flatted factory towards the northeastern end adjacent to the Crawford public-housing slab blocks. This large factory would be a source of employment for local residents, connecting to the Kallang industrial zones to the north. Most unexpectedly, Lim and DP envisioned these global and local functions to co-exist to such an extent that they would share the same stepped megastructure form. An annotation at the bottom of the master plan read, "policy decision is necessary for the use of this land because it affects the type of development possible on Golden Mile," as a

prompt to the planning authorities to ensure that good policies would have to be in place to aid good design.[30]

The second urban scale was the broader "civic" shopping urban plan. [H] It showed a larger area surrounding the context of the Golden Mile District, connected amorphously with the linear "shopping" bubble of Chinatown District to the west, where Lim and DP were also building the People's Park Complex (parallel to the CBD area to the southwest marked as "trade"). To the east of the Golden Mile District, there would be potential for the shopping function to connect with the "sports entertainment center," and to the north, there were connections to the "shopping" bubble towards Bras Basah and Orchard Road.[31]

20   SIA, "14 Urban Renewal Sites," *Journal of the Singapore Institute of Architects* no. 13/14 (June/July 1967), 9.

21   Building Construction Authority (BCA), *Strata Living in Singapore* (Singapore: BCA, 2005).

22   "Unusual Landmark," *The Straits Times*, 30 August 1971, Singapore (Microfilm Reel NL6778, National Library Board), 14.

23   A.G. Barnett, ed., "Golden Mile Shopping Center," *Asian Architect and Builder* 1, no. 4 (June 1972, Hong Kong): 20.

24   Interview with William S. W. Lim by author, Singapore, 24 May 2013.

25   Ibid., 19.

26   "Firm Formed to Help in Nation building," *The Straits Times*, 28 January 1972, Singapore (Microfilm Reel NL6966, National Library Board), 21. This article celebrated the desire of the original founders of Singapura Developments (Pte.) Ltd in 1963 to take on the courageous role of developing large-scale projects to boost consumption such as the Golden Mile Complex. This was described as the desire of Yong Yit Lin and her husband Yong Nam Seng. Other similar projects by Singapura

would include Katong Shopping Centre and Queensway Shopping Centre.

27   This team of developer, building contractor, and architect would combine again to do a number of large projects, including the mixed-use Katong Shopping Centre.

28   Chia Poteik, "Gleaming Golden Mile: Two $12mil Hotels, Luxury Apartments and Shops – All within Next Three Years," *The Straits Times*, 20 June 1967, 7.

29   Lim, "Urban Redevelopment: The Humanist Point of View," *Equity and Urban Environment in the Third World*.

30   H. Koon Wee, "The Emergence of the Global and Social City: Golden Mile and the Politics of Urban Renewal," *Planning Perspectives*, 2019.

31   Collin Anderson, ed., *DP Architects on Orchard Road: Evolution of a Retail Landscape* (Mulgrave: Images Publishing, 2012). After Lim's departure, DP Architects would progress to contribute considerably to the immediate environs of this first linear city strip of the Golden Mile, from Marina Centre, projects on Orchard Road to the Kallang Sports Hub.
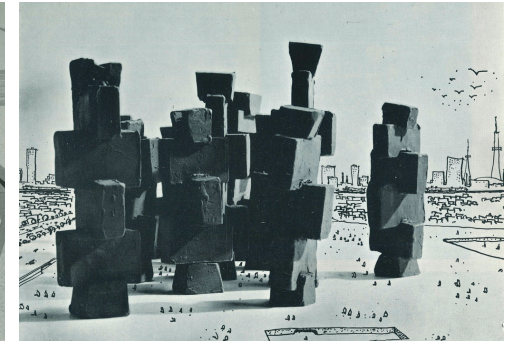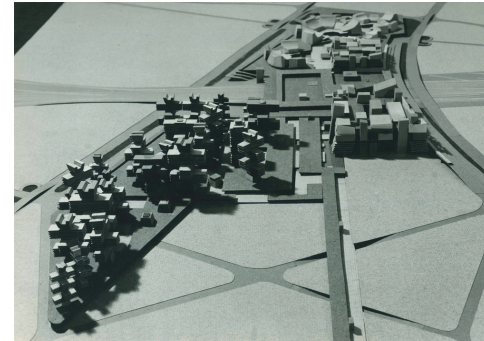
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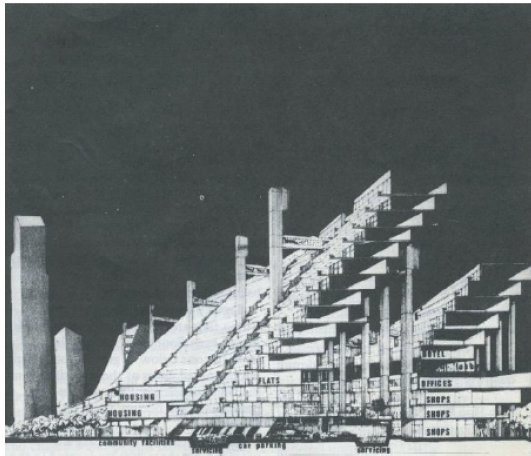
I   Unbuilt Study Sections of the Golden Mile District Megastructure by Design Partnership, 1968–69.

J   Unbuilt Shinjuku Station Redevelopment Project and the concept of a Master Form by Fumihiko Maki and Masato Otaka, 1960.

J

Despite the successes in building mixed-use shopping centres, Lim's explorations of the architecture and city of consumerist functions[32] would receive severe criticism from Constantinos A. Doxiadis. In fact, he was so critical and embarrassed by Lim's 1974 *Ekistics* article of his built shopping centres that he described it as "criminal" and too "fashionable" to the extent that the human values and ethics of what *Ekistics* stood for were compromised.[33] From Lim's perspective, he was advocating such shopping mixed-use typologies as a new model of urbanism because they could bring greater equality to the city by spreading affordable consumption and small-shop ownership right across the population involved.

The unbuilt megastructures of the Golden Mile District were explicit in their roles as the shaper of an intensified and highly tactile urban experience that kept automobile traffic out of the entire mile-long district. Automobiles had to be deposited in the diamond-shaped "car park terminal" to the southern end, and rely on semi-covered pedestrianised streets and electric monorails. [G] Lim cited the arguments used by Gruen quite extensively in his theoretical writings, and literally adopted the idea from the partially realised 1956 Fort Worth Downtown Revitalization Plan.[34] Since encountering Gruen at the First Urban Design Conference at Harvard in 1956,[35] Lim embraced the potential of urban complexes as "citadels" that had a big urban impact, because of their diversity

of office, shopping, housing, and recreational functions. The density and fortification of the Golden Mile "citadel"[36] possessed a robust Brutalist character that assimilated the ruggedness of the city, including its open network of streets. Residents and consumers could move about safely in pedestrianised and cover-ed streets and multi-level corridors in a naturally ventilated tropical environment.[37]

In the context of working primarily for private developers in the United States, Gruen believed in land privatisation in reinvigorating the city, because of the risks and burdens of overrelying on public planning.[38] The planning of the Golden Mile District witnessed a major point of contention between the recommendations made by the UN Technical Assist-ance Team in 1963,[39] compared with the executed plans of HDB and URD. HDB followed the UN recommendations of a publicly funded resettlement housing project by demolishing a large section of the old city fabric to accommodate it. URD then sold the sea-front plot in a fully private land sale for maximum profit. The 1963 UN recommendations foretold the difficulties of attracting private investments for such a large complex. Not a single bid from the private sector was made in the first sale on the Golden Mile, which was a source of embarassment for the inexperienced government aiming to become a global city as quickly as possible.[40] The sectional drawings [I] reveal that Lim was experimenting, as early as 1968, with strata-

title and mixed-use functions for the district as a whole. The Golden Mile Complex was one of the first test cases in Singapore since the passing of the Land Titles (Strata) Act in 1967. Under this act, private developers were allowed to sell the commercial and shop units to recover their cost relatively quickly. Truly, the ultimate beneficiaries were the shop-unit owners, because there was the possibility of a more equitable distribution of ownership and wealth across the city. The experimental nature of these explorations revealed that Lim and DP did not get it right in the first iterations. Lim was testing two- and three-storey low-rise housing facing Nicoll Highway, and a second row of stepped megastructure with a hotel component, but these experiments were not eventually adopted.

The enormity and urban responsibility of these megastructures were unmistakable. It corresponded

with an epoch that believed that it was possible to intervene meaningfully on a large urban scale, and architects were considered to be active participants in the design of such urban environments. As Lim reacted to the new urban design pedagogy espoused at Harvard, his worldview was always at the level of the developing Asian condition. Lim understood the relevance and persuasion of skilful planning, administration, and building economics, especially given the lack of such expertise in emerging countries. At the same time, a new breed of multi-scalar and multidisciplinary administrator-planner-architect figure emerged not only in the United States, but also in Asia. In a recent interview, Chan Sui Him described Lim as the philosopher and development economist, while Tay was into left-wing politics. Koh was an impeccable professional who connected with the

32   Lim, "Shopping Centres," *Ekistics* 37, no. 219 (1 February 1974): 114–15.

33   Lefteris Theodosis, "Victory over Chaos? Constantinos A. Doxiadis and Ekistics, 1945-1975," PhD dissertation (Barcelona: Universitat Politècnica de Catalunya, 2015), 209–10.

34   Gruen, "Cityscape and Landscape," *Arts & Architecture Magazine*, September 1955.

35   Eric Mumford, "The Emergence of Urban Design in the Breakup of CIAM," in *Urban Design*, ed. Alex Krieger and William Saunders (Minneapolis, MN: University of Minnesota Press, 2009), 24.

36   Victor Gruen and Larry Smith, *Shopping Towns USA: The Planning of Shopping Centers* (New York, NY: Reinhold Publishing, 1960), 218–19.

37   Unfortunately, the original natural ventilation has since been enclosed, and the large linear skylight was similarly covered up. The current

experience in the main shopping corridor is dark and relies on an oversized air-handling unit with unnecessary ducts running everywhere. The attempt to interiorise the four levels of shopping betrayed the original goal of the complex.

38   Victor Gruen, *Centers for the Urban Environment: Survival of the Cities* (New York, NY: Van Nostrand Reinhold Company, 1973), 217.

39   Charles Abrams et al., *Growth and Urban Renewal in Singapore: Report prepared for the Government of Singapore*, United Nations Program of Technical Assistance, Department of Economic and Social Affairs, 1963.

40   William Campbell, "Selling the Golden Mile, Part Three of the Story of Singapore's Urban Renewal," *The Straits Times*, 27 March 1969 (Microfilm Reel NL5831, National Library Board Archives), 9.

K   APAC Brochure.

L   Yau Ma Tei Typhoon Shelter
designed by Tao Ho's urban
design students at the
University of Hong Kong, 1988.

K
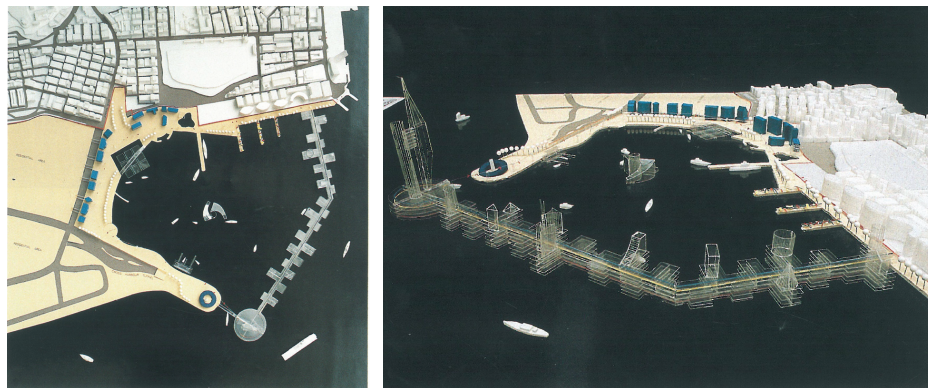
L

grassroots.[41] DP became successful because each could play a strategic role towards the making of a complex urban proposition. This capacity to think and design big was shared by many architects practising in Asia, facing post-war trends of massive urbanisation, unchecked rural-urban migration, urban expansion that encroached on rural fringes, and also a renewed hope that the city would bring about a better life. Hence Lim's leadership at SPUR and DP must continue to be studied in the context of APAC.

The foremost member of APAC was Maki, having won the Pritzker Prize in 1993, and having theorised the earliest version of bigness as early as 1960 in his essay "Group Form" published in the first publication of Metabolism with Masato Ohtaka.[42] As discussed earlier, Maki was a part of the Metabolist movement. In a hierarchical society like Japan, he was outwardly respectful of Tange's leadership, but was also formulating a revisionist response towards Tange and the generation from CIAM. After Tange, Maki was the second Japanese to join up with Team 10 in Europe in 1960. Kurokawa was also invited as an observer on one other occasion. Apart from a lone Japanese participant in these Eurocentric think tanks, the understanding and appreciation of Asian urban issues were extremely weak in mainstream architectural and urban discourses. Despite identifying himself with Team 10, Maki took a decisive turn from technological, infrastructural, and globalised forms of modernism towards a cultural and localised form. In another sense, he turned away from Tange's interest in the agency of the state and its political legitimacy to the agency of society and culture, and its civic legitimacy. Like Lim's seminal work of the linear pedestrianised city discussed earlier, Maki's idealised group form was evident in the vertically enhanced "master form." In the unbuilt Shinjuku Station Redevelopment Project, Maki and Ohtaka were searching for a reflexive system in architecture that had a dense mixture of shopping, entertainment, offices, and other urban functions. [J] Maki described the importance of "human association" in generating the elements and systems of architecture. He desired to "create an image through

grouping of elements that is a reflection of growth and decay in our life process—a metabolic process. This is to conceive a form in relationship to an everchanging whole and its parts. This is also an attempt to express the energy and sweat of millions of people in Tokyo, of the breath of life and the poetry of living."[43]

All APAC firms boasted of similar multi-scalar expertise, from a highly integrated understanding of urban design, regional planning, infrastructure, and transportation systems design, to policy making, economic planning, systems science, and public administration. [K] Nagashima described the work of APAC as representing "what looms larger and larger in the group's approach to problems," and this was magnified by the fact that Asia was undergoing massive change, where "architecture cannot be separated from larger issues of environmental design."[44] Both Maki and Lim articulated this concept of bigness vis-à-vis the "environmental" scale in their respective writings from the 1970s. Maki's earlier exploration of collective forms in the 1960s was to anticipate that architecture would require greater design and civic responsibility in the handling of larger aggregations at the urban scale because post-war technological changes were reaching their peak. "Forms in group-form have their own built-in link, whether expressed or latent, so that they may grow in a system. They define basic environmental space which also partakes of the quality of systematic linkage."[45] Maki further suggested that the aspirations for megastructures engendered a new form of "environmental engineering."[46]

There is evidence that both Lim and Maki learned from this phenomenon of bigness in the way it transpired in the work of Gruen. Gruen formulated the same ethical and socially conscious[47] environmental realm by 1973, by expanding his practice to include advocacy and research work, culminating in the formation of a research foundation for environmental planning.[48] He further developed experimental solutions to meet the needs for new expertise to account for large-scale parameters such as "human ecological planning" that go beyond any single deterministic factor.[49] By 1967, Lim argued for the possibility of a

41   Toh Bee Ping, "An Interview with Chan Sui Him," *Design in Print: The Chan Sui Him Issue* 6, no. 4 (2016): 24–27.

42   Fumihiko Maki, *Investigations in Collective Form, Special Publication of the School of Architecture* (St Louis, MO: Washington University, June 1964).

43   Maki, *Investigations in Collective Form*, 59.

44   Nagashima, "Editorial," *Contemporary Asian Architecture: Works of APAC Members*, 4.

45   Maki, *Investigations in Collective Form*, 19.

46   Ibid., 13

47   Leonardo Zuccaro Marchi, "Victor Gruen: the Environmental Heart," *Journal of Public Space* 2, no. 2 (2017): 75–84.

48   Gruen, *Centers for the Urban Environment*.

49   Alex Wall, *Victor Gruen: From Urban Shop to New City* (New York, NY: Actar, 2005), 241.

comprehensive, multi-agency, and multi-expertise kind of "environmental planning" in Singapore,[50] reaching a climax in the SPUR "Environmental Exhibition," that pushed for greater public participation in the urban future of Singapore.[51] Despite an embedded critique of the state for the public to be more involved in policy making matters, SPUR and Lim received endorsement from the state, when the prime minister agreed to be the patron of the 1967 exhibition. In the same eventful year, Lim carefully excerpted Gruen's 1964 *The Heart of Our Cities* book in an issue of the *Journal of the Singapore Institute of Architects*. This came at a time when Singapore was undertaking massive urban renewal, and Lim borrowed Gruen to caution the state and practising professionals against the "false friends of the city"—the "Traffickist," the "Bulldozerite," the "Segregator," the "Projectite," and the "Economizer."[52]

The other APAC members formulated very similar groundbreaking work in large-scale projects, especially in re-narrating late modernism in favour of a more Asian genealogy. Based in Bangkok, Sumet Jumsai was active in *Ekistics* circles because of his mentor Buckminster Fuller, and he attempted to situate Southeast Asian architecture and culture by rewriting the history of human settlements through a reconsidered archaeology of water-borne techniques and forms.[53] Through his treatise, such architecture and urban forms can become "colossal, self-sufficient and timeless,"[54] and even capable of negating modernisation in the western sense. Tao Ho was almost immediately involved in academia upon his return to Hong Kong, after working for Walter Gropius and the Architects' Collaborative (TAC). Similar to Lim's SPUR studio, Ho developed the Yau Ma Tei Typhoon Shelter studio brief when he was teaching at the University of Hong Kong in 1988.[55] [L] The protective barrier of the typhoon shelter became an opportunity for urban expansion, as students proposed modular integrated high-rise towers of housing and transportation on these barriers, reminiscent of Tange's MIT Boston Harbor studio. APAC would eventually be joined by the late Charles Correa, who was serving as the chief architect in charge of Mumbai's urban development between 1971 to 1975, with a focus on low-income housing and urbanisation. He received the Aga Khan Award in 1998 for one of his seminal projects, the Vidhan Bhavan, the new State Assembly Complex for the state government of Madhya Pradesh. Functioning like a city, the massive complex is etched on the landscape like a mandala, the Hindu cosmic organisation of spatial sequences and functions.[56]

This unambiguously modern complex has cultural forms such as a Buddhist stupa that marks the main assembly hall, and the rest of the complex contains offices for ministers and governmental staff, concert hall, and library interspersed with gardens and shaded courtyards for rest and contemplation. The professional friendship forged through APAC would see Correa and Maki receive significant commissions from the Aga Khan Foundation in subsequent years.

Despite their professed professional interest, it was the writings of APAC members that would shed most light in the formation of their architectural thought. Because this group's friendship was first founded on discourse and academic exchanges, first at Harvard and *Ekistics*, and later on the platforms of the UN and the Union of International Architects (UIA), this professional focus would gradually give way to a broader search for cultural identity in architecture. Huws-Nagashima observed that the name change from "consultants" to "collaboration" was destined, as APAC became a venue for the exchange of ideas. In fact, given the members' intellectual and sometimes anti-establishment positions, they were better able to maintain their integrity through APAC. Each member embraced their intellectual association with APAC, while developing very successful private practices within their national domains. Perhaps the anticipation of transnational projects was ahead of the times, and APAC meetings would remain infrequent and opportunistic.[57] Despite its inter-Asian advantages, no built projects came out of APAC.[58] Thankfully, there was enough resolve in APAC's academic and theoretical endeavors, that Nagashima could pull everyone together for two important publications—the 1980 *Process Magazine Special* Issue 20 featured the works of APAC members, and the 1985 APAC "Architectural Identity in the Cultural Context" symposium at the United Nations University (UNU), that concluded with the APAC Declaration.[59] The ambitions of APAC continued at the large architectural and urban scales, but APAC was already moving towards the all-encompassing scale of humanity and its habitation.

The move towards the highly abstract notion of "architectural identity" was, in a way, an escalation to an even broader scale. However, as an increasingly individualistic society confronted a globalised world, the notion of identity can be very idiosyncratic and pluralistic. This suggests that APAC was identifying a crisis on two levels. First, the decolonisation project was still incomplete, and APAC found it crucial to assert Asianness in its search for legitimacy in

architectural forms. More precisely, APAC was building up a resistance against the uniformity of globalisation and the linguistic games of post-modernism. Second, CIAM and the modern movement remained the counterpoint for APAC, and this brought APAC much closer to ethos of Team 10, where there was a persistent search for the "language of building." Both Team 10 and APAC were transcending the urban scale towards the non-visual or cultural aspects of architecture—the "structure of a community" and "human character of the built-up environment," respectively.

> **APAC: Towards a Declaration** (*Excerpts from UNU / APAC Meeting on Architectural Identity in the Cultural Context*)[60]
> The western planning processes as laid out by CIAM etc. are basically static, finite plans. To cater to the evolution of change, and to address the 21st century, we need a continuous/timeless scale in terms of planning. It could be that the informality, open-endedness and use of "order in chaos" of Eastern cities is more resilient to change, more adaptable to crises than visible organized structures. (...)
> The common concern is the habitability of this world, the liveability and human character of the built-up environment, whether rural, semi-rural, urban or mega-city. It is recognized that no particular architectural approach is valid for all. We have to think in global terms while we stand with our feet in our own local situation.

The Aim of Team 10 (*Excerpts from Team 10 Primer*)[61]
They came together in the first place, certainly because of mutual realization of the inadequacies of the processes of architectural thought which they had inherited from the modern movement as a whole, but more important, each sensed that the other had already found some way towards a new beginning.

This new beginning, and the long build-up that followed, has been concerned with inducing, as it were, into the bloodstream of the architect an understanding and feeling for the patterns, the aspirations, the artefacts, the tools, the modes of transportation and communications of present-day society, so that he can as a natural thing build towards that society's realization-of-itself.

In this sense Team 10 is Utopian, but Utopian about the present. (...)

Team 10 would like to develop their thought processes and language of building to a point where a collective demonstration (perhaps a little self-conscious) could be made at a scale which would be really effective in terms of the modes of life and the structure of a community.

Maki's high regard for modernism remained unwavering, but he continued to critique and re-interpret the values of modern architecture by going beyond the movements of abstract art, economy of mass production, utilitarianism, and the industrial

50   Lim, "Environmental Planning in a City State," in *Singapore: The Way Ahead*, ed. George Gray Thomson (Singapore: Adult Education Board, 1967). This essay was republished in Lim, *Equity and Urban Environment in the Third World*.

51   Singapore Planning & Urban Research, *SPUR 65-7* (Singapore: Eurasia Press, 1967), 57.

52   Victor Gruen, "The Heart of Our Cities by Victor Gruen (Book Excerpt)," *Journal of the Singapore Institute of Architects* no 18/9 (November/December 1967), 14–19.

53   Sumet Jumsai, *Naga: Cultural Origins in Siam and the West Pacific* (Singapore: Oxford University Press, 1988).

54   Abidin Kusno, *Behind the Postcolonial: Architecture, Urban Space and Political Cultures in Indonesia* (New York, NY: Routledge, 2000), 196.

55   Tao Ho, *Tao Ho Design: Searching for Order within Chaos* (Milan: L'Arca Edizioni, 1999).

56   Budi Sukada, "Technical Review of Vidhan Bhavan," *The Aga Khan Award for Architecture*, 1998.

57   In the few meetings between APAC members, Maki, Nagashima, Ho, and Lim would tend to meet in Hong Kong because it was the mid-point between the various cities where the members were based. See Maki and Nagashima, "Cultural Exchange through Architecture in Asia," *Contemporary Asian Architecture: Works of APAC Members, Process: Architecture* no. 20, 9. Chan Sui Him recounted that the trips taken with

Lim were especially eye-opening for a young architect. See Toh, "An Interview with Chan Sui Him," 26.

58   Even though APAC did not win any design commissions, Nagashima revealed that Maki's Kota Kinabalu Sport Complex and Park in Sabah, East Malaysia in the 1970s had come through a former student at the University of Singapore who was working at the Sabah Public Forestry Agency, and they consider this an APAC connection. Maki wanted DP to be the executive architect on this project, which would have marked it as the first APAC collaboration. Unfortunately, the client declined. See Maki and Nagashima, "Cultural Exchange through Architecture in Asia," *Process Magazine*, 10. Maki would eventually develop a number of projects with DP in Singapore from the 2000s onwards, but it would be with the successors of Lim at DP. In 2012, Maki penned the preface to DP's Orchard Road monograph. See Maki, "Preface," in *DP Architects on Orchard Road: Evolution of a Retail Landscape*, 3.

59   Catharine Huws-Nagashima, ed., *UNU/APAC Meeting on Architectural Identity in the Cultural Context, Symposium Proceedings* (Tokyo, 29–30 July 1985). Only Correa could not attend the UN University Symposium, but APAC invited Wu Liangyong and Yuswadi Saliya from China and Indonesia, respectively.

60   Huws-Nagashima, ed., *UNU/APAC Meeting on Architectural Identity in the Cultural Context*, 52.

61   Alison Smithson, ed., *Team 10 Primer* (London: Studio Vista, 1968), 3.

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aesthetics.[62] To achieve this, he reinterpreted Sigfried Giedion's 1941 *Space, Time and Architecture* by reinvigorating modern architecture with more subtle sensibilities. Clearly, Maki subscribed to Giedion's reference to how time was embodied in architecture, where "Architecture reflect the inner tendencies of the time and therefore may properly serve as a general index."[63] In lectures as recent as 2017, Maki was still discussing new definitions and possibilities for architecture through the analytical lens of time and space, transforming it into a question of collective experience rather than dogma of aesthetics. This deeper questioning of modernism was shared by many architects from the period. Lim's former partner Lim Chong Keat described "the sort of modernism [of the fifties] that had very little relationship to what was already there."[64]

Maki's Reflections on the Modern Movement[65]

Time and Architecture
- Time offers a fertile ground for personal memories and experiences.
- Time is a mediator between city and architecture.
- Time is the final judge of architecture.

Space and Architecture
- Space has no differentiation between interior and exterior.

- Space accommodates a given function and generates new uses.
- Space, not form, fosters delight (venustas) for people.

The evolution of Maki's position on modern architecture was more contingent and people-centred. He was consciously trying to reconnect the alienating effects modern architecture had on society, when modern architects became more utopian and dogmatic about the high degree of abstraction and utilitarianism. Nagashima observed that architects in Japan had the choice to remain outside the machinery of politics by focusing on the civic realm and contributing to civil society with their professional expertise. He said, "politically, only professionals do not play up to the powers." The general intelligentsia, as Maki called them, had to define themselves in various ways by building in developing states that confronted diversified problems inherent in regions, cultures, and beliefs. This responsibility was a heavy burden. Perhaps a better solution in this context would have been to just "have exchanges with local intelligentsia of those countries," keep a limited degree of intervention in design, but anticipate "the beginning of a new horizon of intercultural development."[66] This sensibility marked a strong deviation from Maki and Nagashima's predecessors when they operated in the wider Asian spheres. "If Tange's architecture in ASEAN

M   APAC Members at Tao Ho's solo exhibition at the University Museum **insert full-stop** & Art Gallery, HKU on Sep 11, 1995. (L–R) Fumihiko Maki, Barry, Will's former student, Tao Ho, Sumet Jumsai and William S. W. Lim.

[Association of Southeast Asian Nations] countries was the consequence of political cooperation, with the governments of the developmental states authorizing its universal legitimacy, then Fumihiko Maki's contribution appeared to be a purely civic activity, with less will for power and thus preserving more of his 'mannerisms' in defining space through his own ideology. Compared with Tange's powerful 'think big' image, Maki preferred to 'think small.' "[67]

In fact, APAC specifically targeted the developmental needs of Third-World countries in search for an appropriate "language" and "structure" for national identity in a period of rapid decolonisation. APAC also sought to steer these Asian countries away from western urban solutions. In many ways, it anticipated Michael Hardt and Antonio Negri's criticism of the hegemony of western development models, and the need to overhaul Eurocentric theories of dependency.[68] There was no reason to be trapped in the power structure of the West, by having to grow from the "Third World" to the "First World" ~~as~~ required

incremental steps that would always entail borrowing funds and services from the powerful. The prevailing conditions of the 1970s saw many of the developing countries in east, south, and Southeast Asia in the process of intensive modernisation and urbanisation, and APAC's objective was to support them by revealing that there was an over-reliance "on specialists in the field of urban development programs" and build confidence in these emerging economies for them to realise they had been "developing a professional capacity of their own, particularly through their national educational institutions."[69] APAC was attempting to legitimise Asian professional expertise and self-empowerment as the preferred solution for Asian urbanisation and national-identity projects. The need to keep western values at bay impelled APAC members to better define the cultural specificity in their work, and this search coincided with the decades of nation building. APAC members' profess-ional work tend to be exemplary and well published, but in their growing reputation, Ho and Jumsai were also drawn into deeper explorations in other art forms, from painting to sculpture. [M] All APAC members came from privileged backgrounds, ~~and~~ were schooled in elite institutions, and often ~~were~~ considered too distant, ~~and~~ even too bourgeois, from the society they were serving to be truly effective. A number of APAC members became more inward-looking, and their practice eventually carried less socio-political agency for architecture despite a dominant start in the first two decades of returning to Asia.

The phenomenon of bigness in architecture in this unique period powerfully situated the work of Lim, SPUR, and APAC in the broader realm of mega-structures, architectural complexes, pedestrianised urbanism, and interiorised cities. This logic of bigness continued to be relevant, as Koolhaas would borrow once more from this genealogy in his problematising of extra-bigness in the 1990s. He observed that there was a disappearance of urbanism when he traced the anti-urban ideas as direct descendants of developer-architect John Portman's Atlanta, and Lim and DP's Singapore. Koolhaas's "Singapore Songlines"

62   Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition* (Cambridge, MA: Harvard University Press, 1952), 215.

63   Ibid., 872.

64   Lim Chong Keat, "Urban Design and Context in Singapore and Malaysia," 60.

65   Maki, *Keynote Lecture for the DP50 Symposium*, Singapore, 10 October 2017.

66   Nagashima, ed., *Contemporary Asian Architecture*, 144.

67   Charlie Xue and Jing Xiao, "Japanese Modernity Deviated: Its Importation and Legacy in the Southeast Asian Architecture since the 1970s," *Habitat International* no. 44 (July 2014): 227–36.

68   Michael Hardt and Antonio Negri, *Empire* (Cambridge, MA: Harvard University Press, 2000), 264.

69   APAC, "Objectives," *Asian Planning & Architectural Consultants*, 12-page brochure.

and "Generic City" essays were not only placed adjacent to the "Atlanta" essay, but the polemics on bigness connected the two cities as well. Atlanta was largely understood as a city without a centre, but the multiple centres would each produce its own interiorised commercial and civic logic. Portman was based in Atlanta, and districts such as the Peachtree Center would inspire the paradigm shift observed by Koolhaas. Built incrementally from 1965 to 1985 as a super-large district of pedestrianised and interconnected hotels, convention halls, shopping centres, and offices, the Peachtree Center was often blamed for interiorising all urban life and killing urbanism. Portman would experiment further with the Embarcadero Center in San Francisco and the Renaissance Center in Detroit in the 1970s.[70] By the 1980s, he arrived in Singapore to develop the Marina Centre in collaboration with the future members of DP after Lim and Tay's departure. As Portman's first big foray into Asia, the development contained the same suite of interconnected functions as earlier developments, namely, Marina Square, Marina Mandarin Hotel, and Mandarin Oriental Hotel. [N] The Marina Mandarin Hotel would share a familiar stepped megastructure as the Golden Mile Complex, but rotated in plan rather than linear in form. Portman's self-contained pedestrian city of the 1980s was also considered a direct descendant of the Lim's internal pedestrian street of the 1960s.[71] The dramatic interiorised atrium connected to the lobby and other pedestrianised spaces for shopping. The messy city was abandoned in favour of a well-organised interior, better suited for a large middle-class population shopping in the comfort of an air-conditioned space.

This focus on bigness was an invention of a particular period. And the logic of development thinking that had given form to an urban identity was still prevalent. There was only a small window where intellectual efforts and visions were mobilised to lift up a population through the activities of affordable shopping, but this has given way to globalised consumerism. Singapore and other Asian cities were at a point where they had to look to gargantuan architecture as the harbinger and form-giver of the new urban economy. Perhaps it would be appropriate to conclude this analysis of avant-gardism and the power of think-tank collaborations by referring to a latter-day collaboration between APAC protagonists. The friendship and professional relationship between Lim, DP, and Maki proved particularly enduring.

N   Marina Centre with the original group of three buildings sitting atop a connecting podium that included the stepped form of the Marina Mandarin Hotel (L).

O   Republic Polytechnic by Fumihiko Maki and DP Architects, 2007.

Nearly four decades after Lim had left DP, DP would become Maki's architect-of-record for his Republic Polytechnic Campus in Singapore. [O] Completed in 2007, Maki described this project as having been designed using the 1960 principles of group form. Connected by a giant plinth of interaction spaces, the 12 near-identical learning blocks were somehow less sculptural and flexible than the hallmark collective forms of Hillside Terrace. This was perhaps because there were no topographical conditions, no layers of time or phasing, no complex mixture of programmes, no intrinsic urbanism, no nationalism or cultural inflection, and no contingencies of a city. Republic Polytechnic was simply an incredibly well-executed complex designed with circumspection around a strict institutionalised programme. Admittedly, it would be most unfair to judge this exemplary project based on the exigencies between the 1960s and 1980s.

70   In his analysis of Singapore's urban development, Lim Chong Keat compared Singapore's lack of intensity with the Peachtree Center and developments of Hong Kong. See Lim Chong Keat, "Urban Design and Context in Singapore and Malaysia," in *Design for High-Intensity Development*, ed. MB Sevcenko (Cambridge, MA: Aga Khan Program for Islamic Architecture, 1986), 59.

71   Colin Anderson and Ian Choo, *DP Architects on Marina Bay: Evolution of a Civic Downtown* (Singapore: ORO Editions, 2015), 75.

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REFERENCES

Abrams, Charles, Susumu Kobe, and Otto Koenigsberger. *Growth and Urban Renewal in Singapore: Report Prepared for the Government of Singapore*. United Nations Program of Technical Assistance, Department of Economic and Social Affairs, 1963.

Anderson, Collin, ed. *DP Architects on Orchard Road: Evolution of a Retail Landscape*. Mulgrave: Images Publishing, 2012.

[insert comma]

Anderson, Colin and Ian Choo. *DP Architects on Marina Bay: Evolution of a Civic Downtown*. Singapore: ORO Editions, 2015.

APAC. "Objectives," *Asian Planning & Architectural Consultants*, 12-page brochure.

Barnett, A.G., ed. "Golden Mile Shopping Center," *Asian Architect and Builder* 1, no. 4 (June 1972, Hong Kong).

Campbell, William, "Selling the Golden Mile, Part Three of the Story of Singapore's Urban Renewal," *The Straits Times*, 27 March 1969, Microfilm Reel NL5831. Singapore: National Library Board Archives, 9.

Cohen, Jean-Louis. *Le Corbusier and the Mystique of the USSR: Theories and Projects for Moscow 1928–1936*. Princeton, NJ: Princeton University Press, 1992.

Crinson, Mark, "Singapore's Moment: Critical Regionalism, its Colonial Roots and Profound Aftermath," *The Journal of Architecture* 13, no. 5, 2008, 592.

"Firm Formed to Help in Nation building," *The Straits Times*, 28 January 1972, Microfilm Reel NL6966. Singapore: National Library Board, 21.

Giedion, Sigfried. *Space, Time and Architecture: The Growth of a New Tradition*. Cambridge, MA: Harvard University Press, 1952.

Gruen, Victor, "Cityscape and Landscape," *Arts and Architecture Magazine*, September 1955.

____, "The Heart of Our Cities by Victor Gruen (Book Excerpt)," *Journal of the Singapore Institute of Architects* no. 18/9 (November/December 1967): 14–19.

____. *Centers for the Urban Environment: Survival of the Cities*. New York, NY: Van Nostrand Reinhold Company, 1973.

Gruen, Victor and Larry Smith. *Shopping Towns USA: The Planning of Shopping Centers*. New York, NY: Reinhold Publishing, 1960.

Hardt, Michael and Antonio Negri. *Empire*. Cambridge, MA: Harvard University Press, 2000.

Huws-Nagashima, Catharine, ed. *UNU/APAC Meeting on Architectural Identity in the Cultural Context*, Symposium Proceedings. Tokyo, 29–30 July 1985.

Jumsai, Sumet. *Naga: Cultural Origins in Siam and the West Pacific*. Singapore: Oxford University Press, 1988.

Koolhaas, Rem, "Singapore Songlines: Portrait of a Potemkin Metropolis...or 30 Years of Tabula Rasa," in *Small, Medium, Large, Extra-Large*, ed. Rem Koolhaas and Bruce Mau. New York, NY: Monacelli Press, 1995.

Koolhaas and Hans-Ulrich Obrist. *Project Japan: Metabolism Talks*. New York, NY: Taschen, 2011.

Kusno, Abidin. *Behind the Postcolonial: Architecture, Urban Space and Political Cultures in Indonesia*. New York, NY: Routledge, 2000.

Lim Chong Keat, "Urban Design and Context in Singapore and Malaysia," in *Design for High-Intensity Development*, ed. M. B. Sevcenko. Cambridge, MA: Aga Khan Program for Islamic Architecture, 1986.

Lim, William S. W., "Urban Redevelopment: The Humanist Point of View," *Equity and Urban Environment in the Third World: With Special Reference to ASEAN Countries and Singapore*. Singapore: DP Press.

____, "Environmental Planning in a City State," in *Singapore: The Way Ahead*, ed. George Gray Thomson. Singapore: Adult Education Board, 1967.

Lim, William S. W. and Jiat-Hwee Chang, ed. *Non West Modernist Past: On Architecture and Modernities*. Singapore: World Scientific, 2011.

Maki, Fumihiko. *Investigations in Collective Form*, Special Publication of the School of Architecture. St Louis: Washington University, June 1964.

Maki, Fumihiko and Koichi Nagashima, "Cultural Exchange through Architecture in Asia," *Contemporary Asian Architecture: Works of APAC Members*, *Process: Architecture* no. 20.

Maki, Fumihiko, Klaus Herdeg, Charles M. Haar, William Lim, Koichi Nagashima, William Doebele, and Thomas H. Jenkins, "Mary Jaqueline Tyrwhitt: In Memoriam: The Harvard Years, 1955–1969," *Ekistics* 52, no. 314/315 (September/October–November/December 1985), 436–41.

Marchi, Leonardo Zuccaro, "Victor Gruen: the Environmental Heart," *Journal of Public Space* 2, no. 2 (2017): 75–84.

Miliutin, Nikolai. *Sotsgorod: The Problem of Building Socialist Cities*, trans. Arthur Sprague, ed. George R. Collins and William Alex. Cambridge, MIT Press, 1975.

Nagashima, Koichi, ed., *Contemporary Asian Architecture: Works of APAC Members, Process: Architecture* no. 20. Tokyo, November 1980.

Poteik, Chia, "Gleaming Golden Mile: Two $12mil Hotels, Luxury Apartments and Shops – All within Next Three Years," *The Straits Times*, 20 June 1967, 7.

Seng, Eunice, "People's Park Complex: The State, the Developer, the Architect and the Conditioned Public, c.1967 to the Present," in *Southeast Asia's Modern Architecture: Questions of Translation, Epistemology and Power*, ed. Jiat-Hwee Chang and Imran bin Tajudeen. Singapore: NUS Press, 2019, 236–73.

Shoshkes, Ellen. *Jacqueline Tyrwhitt: A Transnational Life in Urban Planning and Design*. New York, NY: Routledge, 2013.

Singapore Institute of Architects, "News and Comments: Poly Urban Rehabilitation," *Journal of the Singapore Institute of Architects* no. 5, 1966.

____, "14 Urban Renewal Sites," *Journal of the Singapore Institute of Architects* no. 13/14 (June/July 1967), 9.

Singapore Planning & Urban Research Group, "Our Cities Tomorrow: Sky-High Structures May Solve Population Problems," *Asia Magazine*, May 1966, 4–7. Reworked and republished in *SPUR*, "The Future of Asian Cities," *SPUR 65-7*. Singapore: Eurasia Press, 1967, 5.

Smithson, Alison, ed. *Team 10 Primer*. London: Studio Vista, 1968.

Sukada, Budi, "Technical Review of Vidhan Bhavan," *The Aga Khan Award for Architecture*. 1998.

Tao Ho. *Tao Ho Design: Searching for Order within Chaos*. Milan: L'Arca Edizioni, 1999.

Tay Kheng Soon, "Outspoken 'Third-fourth' Generation Architect," interview by Pauline Khng, *Asian Building & Construction*. October 1976.

Theodosis, Lefteris, "Victory over Chaos? Constantinos A. Doxiadis and *Ekistics*, 1945–1975," PhD dissertation. Barcelona: Universitat Politècnica de Catalunya, 2015, 209–10.

Toh Bee Ping, "An Interview with Chan Sui Him," *Design in Print: The Chan Sui Him* 6, no. 4 (2016): 24–27.

"Unusual Landmark," *The Straits Times*, 30 August 1971, Microfilm Reel NL6778. Singapore: National Library Board, 14.

Wall, Alex. *Victor Gruen: From Urban Shop to New City*. New York, NY: Actar, 2005.

Wee, H. Koon, "The Emergence of the Global and Social City: Golden Mile and the Politics of Urban Renewal," *Planning Perspectives*, 2019.

Xue, Charlie and Jing Xiao, "Japanese Modernity Deviated: Its Importation and Legacy in the Southeast Asian Architecture since the 1970s," *Habitat International* no. 44 (July 2014): 227–36.

2021 note: Extracting these pages from a previous version of Acrobat messed up some comments and annotations, so I had to add them in again to reflect the PDF submitted. Except for this note, the changes are thus not an after-thought or recent additions.