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Modernist urban visions and the contemporary city

The future of the city is underground, says the Urban Underground Space Center of Japan (USJ, 2016). And Japanese politicians clearly agree. In 2001, the Diet passed a law about the use of the extreme underground (daishindo), allowing some development of areas below 40 meters for public services without negotiations with owners of the land aboveground. Underground constructions are already everywhere throughout Japan. Beneath one of the densest and most crowded urban centers (Hongo, 2014), for example, Tokyo Station is connected through more than four kilometers of passageways to neighboring locations, including other major stations. They anchor another bustling city. Long passageways of underground shopping malls with restaurants are connected to subway entrances and to the high-speed Shinkansen Station. Aboveground, the land has seen extensive remodeling, from careful restoration of the old train station facing the Imperial Palace (Fig. 1) to the creation of new skyscrapers (Fig. 2) and a new entrance towards the Ginza shopping area (Figs. 3 and 4) (Tokyo Station, 2016). But below, the new Tokyo Station City, with its old and super-modern elements, attracts tourists and shoppers, not just passengers (Figs. 5 and 6). It has become an attraction in itself. Tokyo Station is not an exception: many other underground shopping malls lie under the capital's major stations. Close to 3 kilometers of underground passages connect Shinjuku to the Tokyo Metropolitan Government office and other corporate skyscrapers, hotels, and department stores in its vicinity (Figs. 7, 8, and 9).

Tokyo is not only extending into the earth, it is also growing in other dimensions. Bustling Shibuya, a node on Tokyo's ring-rail road, the Yamanote line, is tied on multiple levels to numerous crossing railway lines and nearby shopping malls (Fig. 10 and 11). Many giant skyscrapers in Tokyo have new pedestrian bridges connecting buildings in the air (Fig. 12). Such innovation even engage the sea. Tokyo Bay itself is crossed by the Tokyo Bay Aqua Line, 14 kilometers of new highway with both bridge and tunnel sections (Fig. 13). These developments are not unique to Japan. A huge number of multi-level highways crisscross many Asian metropolises on multiple layers and well-known land reclamation projects include Dubai's palm tree islands, while students from Rice University are designing floating cities off the shore of Brazil to host the oil drilling industry. These visions and the new architectural projects that realize them point towards a multi-storied city of the future, closely integrating infrastructure and buildings. Whether underground, in the air, or on the water, cities still have room for many new developments, including more comprehensive ocean urbanization and perhaps even flying districts.

Visionary projects actually have a long history, going back to the the 1950s and even earlier. Projects for covering Tokyo Bay by Kenzo Tange and several of his colleagues in the 1950s first imagined megastructures, architecture at the scale of the city (Fig. 14) (Riani , 1970). The Bay may not have been filled entirely, and Tokyo isn't yet covered by platforms,

Fig. 2a Tokyo Station above ground with International Forum. @ author.

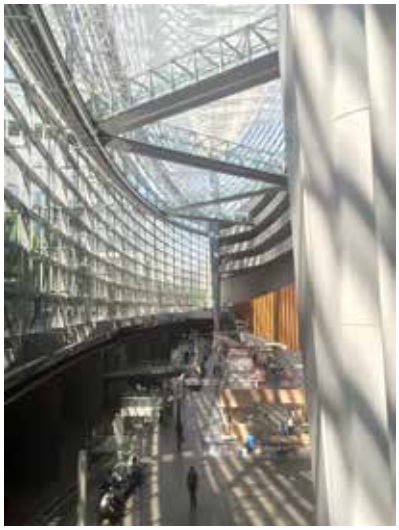

Fig. 2b The international Forum by Rafael Vinoly, with its internal walkways, is adjacent to the central station. © author.

Fig. 3 The Yaesu side development and the new skyscrapers from the top floor of the international Forum. © author.

Frontispiece (Fig. 1) The 100-year old Tokyo Station facing Marunouchi, designed by the Japanese architect Tatsuno Kingo in Western style, has been carefully restored. © author.

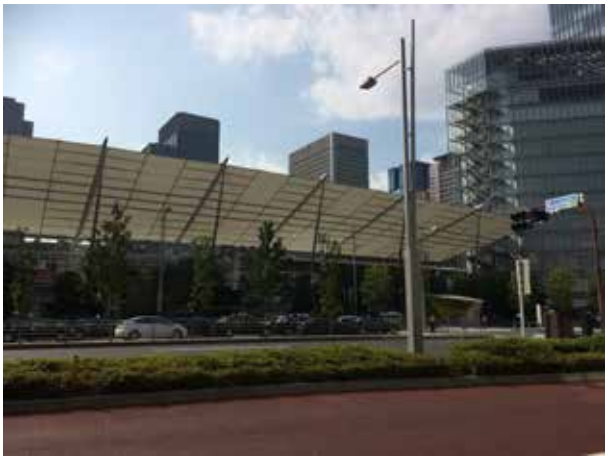

Fig. 4 A new exit by Murphy & Jahn opens the station on the Yaesu site amidst new skyscapers. © author.

Fig. 5a A view of the underground shopping mall recently finished underneath Tokyo Station. © author.

Fig. 5b, c and d The Tokyo Character Street, featuring shops for Pokemon, Hello Kitty, and Moomins (TBD). © author.

Fig. 6 The Tokyo Station City shopping mall. © East Japan Railway Company/Tokyo Station City Management Council. (http://www.tokyostationcity.com/pdf/yubi_english_web.pdf OR: http://www.yaechika.com/_common_lang//map.png).

Fig. 7 Aboveground shopping street near Shinjuku Station. © author.

Fig. 8 Tokyo Metropolitan Government with the poster for the 2020 Olympics. © author.

Fig. 9 Tokyo from Shinjuku Tokyo Metropolitan Government Tower, with a view of the new Cocoon Tower and the Skytree. © author.

Fig. 10 Shibuya Crossing at night. © author.

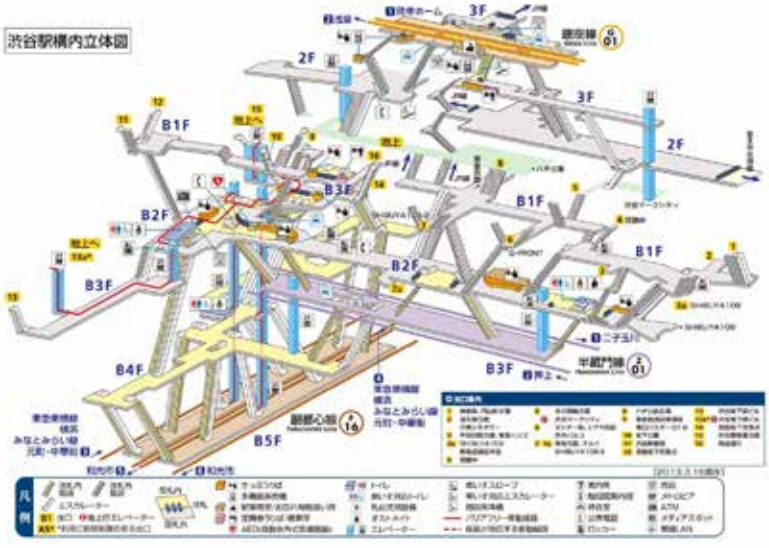

Fig. 11 The multiple tunnels and staircases connecting the various railroads crossing each other in Shibuya (http://cdn.deepjapan.org/content/images/.user/_image2_1_iM_OAg1396409208484.jpg).

Fig. 12 Aerial bridge in Shibuya connecting skyscrapers. © author.

Fig. 13 The bridge section of the Tokyo Bay Aqua Line connecting Chiba and Kanagawa (By Hideyuki KAMON from Takarazuka, Hyogo, Japan – Flickr, CC BY-SA 2.0, https://commons.wikimedia.org/w/index.php?curid=10253322).

Fig. 14 Tange Kenzo, Tokyo Bay Project (http://classconnection.s3.amazonaws.com/856/flashcards/749856/png/tokyo_bay_plan1322588087010.png).

but the extensive land reclamation from Tokyo Bay and the scale of the underground malls comes close to this vision. But contemporary buildings differ from earlier visions in one crucial respect: Today's developments are primarily private undertakings, expressions of capitalism or celebrations of nationalism. Their visionary predecessors were more often driven by the desire to reshape the present for a better future, and often the wish to use new technologies to create a better and more just society.

Visionary projects did exist before the emergence of formal planning, but with industrialization and planning came a belief in technology and growth that led to an increase in the number of such designs. Among the early visions that were influential were modernist designs from the Bauhaus or its teachers. These planners translated the hope of better living conditions for the working class into designs for housing. In Berlin and many other socialist municipalities of Europe, these visions inspired the construction of large housing estates. The CIAM (Congrès International des Architectes Modernistes) group of modernist architects and planners continued this line of thinking, with many of its leaders creating urban visions: Le Corbusier's Cité Voisin celebrated the car, Arthur Korn promoted the Linear City, Ernst May imagined cities in Russia. Independently, Frank Lloyd Wright imaged Broadacres, a city that included flying objects that would carry inhabitants through the American suburban dream. The destruction of World War II inspired many planners to expand on these well-published visions and to imagine completely restructuring the city. Disaster was paradoxically an opportunity. For Hans Scharoun, then in charge of the rebuilding of Berlin, the war was a "mechanical plowing of the soil," and the head-planner of Tokyo at the time, Hideaki Ishikawa similarly commented that the destruction of Hiroshima was a chance in a hundred years (Hein, Diefendorf, & Ishida, 2003). Visions for slum clearance and urban renewal in cities not touched by the war were intimately connected to these visions and similarly based on a desire to improve the industrial city. In 1951, the groundbreaking for Penn Center started with a five-year old girl, a descendent of William Penn, waving a Geiger counter over a box and provoking a small explosion with a mushroom cloud and "atomic fallout" starting Urban Renewal in Philadelphia (Hassebroek, 1999). Meanwhile Time Magazine (The City, 1964, pp. 60-75) highlighted the "bombed-out look" of Manhattan opposite of Philadelphia's Society Hill project.

Post-war reconstruction inspired a new set of visionary projects, as evident for example in 1957/58 Hauptstadt Berlin competition entries: Hans Scharoun's linear city, a 1.5 kilometer long megastructure, to be imposed on the center of the city; the platform covering the city's center, accessible through mechanized transportation by Peter and Alison Smithson; and the core-wall buildings by the Dutch designers van den Broek en Bakema (Figs. 15, 16 and 17) (Hein, 1991; Hein, 2017). At about the same time, post-war reconstruction proposals in Japan

Fig. 15 Hans Scharoun's project for the capital Berlin Competition 1957/58 featuring a drive-in megastructure in the Southern area of the city ('Gesamtbericht über das Wettbewerbsergebnis', in: *Hauptstadt Berlin. Ergebnis des Internationalen Städtebaulichen Ideenwettbewerbs*, Bonn: Bundesminister für Wohnungsbau / Berlin: Senator für Bau- und Wohnungswesen 1960).

Fig. 16 Peter and Alison Smithson's project for the capital Berlin Competition 1957/58 suggesting a platform network to cover the center of Berlin, keeping the historical street layout intact.('Gesamtbericht über das Wettbewerbsergebnis', in: *Hauptstadt Berlin. Ergebnis des Internationalen Städtebaulichen Ideenwettbewerbs*, Bonn: Bundesminister für Wohnungsbau / Berlin: Senator für Bau- und Wohnungswesen 1960).

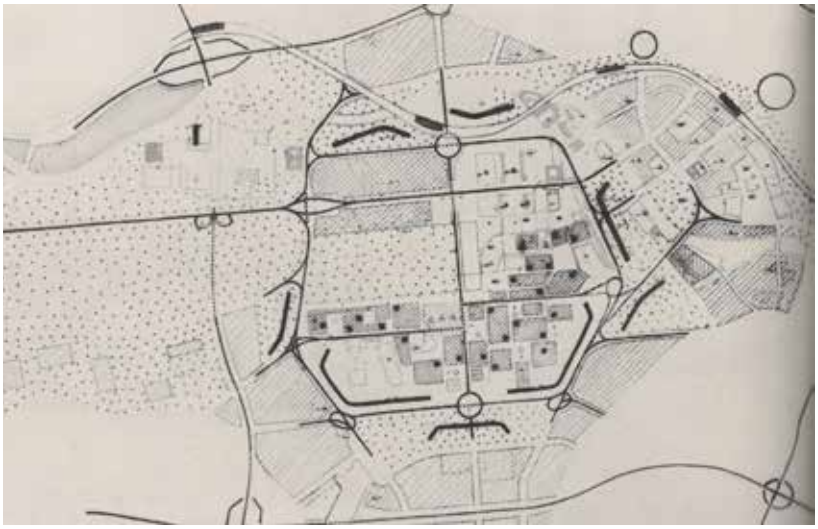

Fig. 17 Van den Broek en Bakema's project for core-wall buildings surrounding the rebuilt center of Berlin, contribution to the Hauptstadt Berlin competition 1957/58. ('Gesamtbericht über das Wettbewerbsergebnis', in: *Hauptstadt Berlin. Ergebnis des Internationalen Städtebaulichen Ideenwettbewerbs*, Bonn: Bundesminister für Wohnungsbau / Berlin: Senator für Bau- und Wohnungswesen 1960).

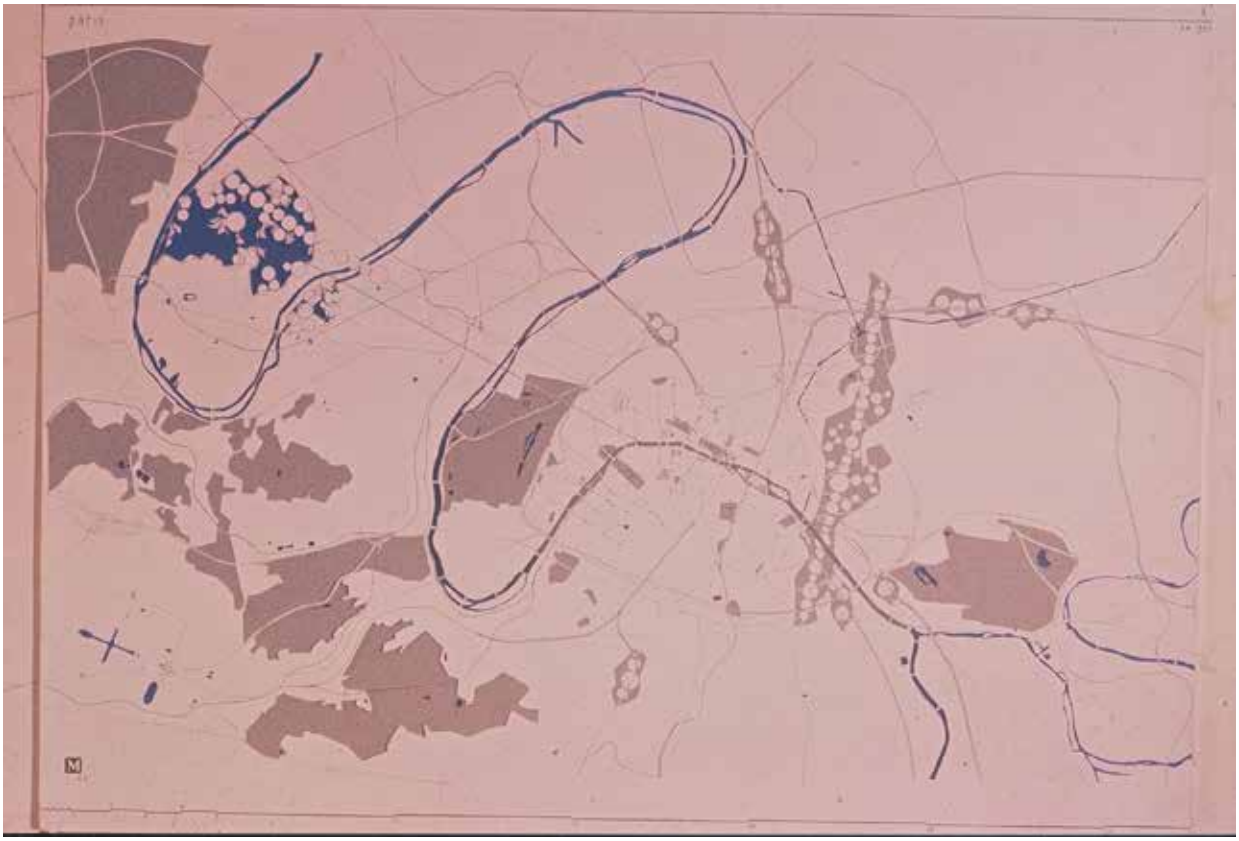

Fig. 18 Paul Maymont's project for a floating city on the Plaine de Montesson near Paris.

included another set of megastructural projects by Kenzo Tange and several of his friends, including a floating structure on the Tokyo Bay to solve the problems of the rapidly expanding Japanese capital. Planners around the world took these designs as an inspiration. In Paris, Paul Maymont proposed a floating new Paris on the Plaine de Montesson (Fig. 18) In Montreal, several pavilions of the Expo 67 featured megastructural features. Japanese cities saw some megastructure-inspired architectural realizations such as the City Hall in Miyakonojo from 1966, the Shizuoka Press and Broadcasting Center building of 1967, both by Tange or the Nagakin Capsule Tower by Kisho Kurokawa. With the construction of the Berlin Wall the Hauptstadt Berlin proposals disappeared in drawers, the oil crisis of the 1970s and 80s together with the growth of citizen opposition put an end to many megastructural projects.

These modernist projects may not have been realized as such, but paper plans often have an astounding staying power. The concepts live on and many have since been realized at the hand of public institutions and corporations in a piecemeal fashion. The impact of the post-war modernists was thus great if not direct. Many of the early visions originated in Europe and America, but much of the new megastructure development has taken place in Asia and the Middle East, where rapidly growing economies or oil funds permitted new urban designs.

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