

Maki Associates, Shinjuku Station Development, Tokyo, 1960
In this early project, shopping centre, office precinct and entertainment zone are brought together on a raised platform to create an overall composite composition employing 'group form' principles.

Fumihiko Maki



The Japanese Pritzker Prize winning architect Fumihiko Maki is credited with coining the term 'megastructure'. Here, Jennifer Taylor describes how he has refined it, and defined a specific way of handling urban megacompositions that he calls 'group form', over the course of a career spanning more than four decades.

The thinking of Fumihiko Maki was seminal to the radical avant-garde of the 1960s, which turned to the notions of technology and Futuristic structures of great size to cope with the urban problems facing the cities of Europe and Japan. Maki was chosen as the 1993 Laureate of the Pritzker Architecture Prize,¹ and his concepts are the basis of much urban thinking today.

Maki's urban theories need to be positioned alongside the state of mind in the profession in the 1960s, when Team X's structuralist theories were propounded by the radical avant-garde of Europe. Further, Maki's early work has to be seen in the context of Japan in the postwar era when the search for answers to the Japanese urban crisis was real and pressing. He first became well known as one of the Metabolists, a radical group of Japanese architects who proposed many visionary solutions. His concepts on adaptive planning were given public voice in his contribution, with Masato Ohtaka, to the Metabolist

Group's publication *Metabolism: Proposals for New Urbanism*, released in 1960.² The writings and schemes of the Metabolists were primarily concerned with new forms of urban order that would accept the conditions of a nuclear world and lead to the revitalisation of the Japanese city. While these Futuristic proposals relied on advanced technologies, the concepts were basically organic, as the city would be continually regenerated by continuous replacement of parts on a 'metabolic cycle', as in nature.

The ideas of Metabolism were elaborated on by Maki in his writing of 1964, *Investigations in Collective Form*,³ where he identifies three possibilities for accommodating the superhuman scale of modern systems and units by systems of 'collective form': conventional 'composition', 'megastructure' and 'group form'. These ideas have been expanded upon in *Japan Architect*,⁴ and his practice profile, with Maki concluding that 'group form'



was the most appropriate strategy for the handling of megaprojects in a dynamic, open-ended way.⁵

While Maki was involved in exploring the megastructure in the design studios at Harvard, and is credited as the first to use the term, he rejects it in favour of 'group form'. In this approach, a project is designed in such a way that the overall governing structure is evident, and brings cohesion, while the parts that lead to the whole are related in a state of 'dynamic equilibrium', open to addition and subtraction.

These theories were first applied in an exploratory project for the Shinjuku Station Development, Tokyo, in 1960. At Hillside Terraces, Tokyo, from 1969 Maki designed a sequence of residential additions over several decades, with the development dynamically growing and evolving through time.⁶ The same design principles underlie the megaprojects of the 1980s and 1990s, such as the Tokyo Metropolitan Gymnasium (1990), treated as a cluster of diverse, yet related,

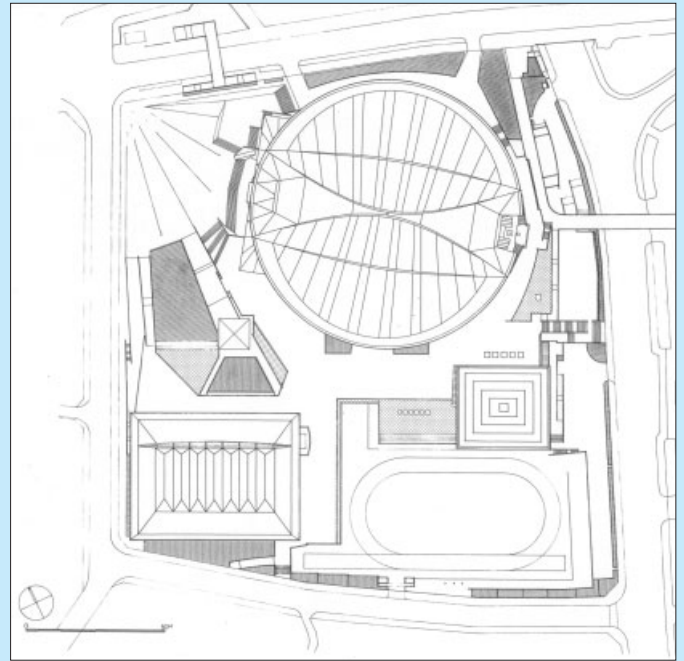
Maki Associates, Republic Polytechnic, Singapore, 2005

The buildings of this 'group form' complex are located on the basis of function and desirable accessibility with a central nucleus 'Learning Hub' and satellite supporting facilities, all linked by bridges and covered walkways. The Learning Hub consists of 11 identical pods and one administration unit supporting two central elliptical open terraces that provide connections, and recreational and specialised teaching units.



Maki Associates, Tokyo Metropolitan Gymnasium, 1990

This inner-city sports centre is typical of Maki's large-span megaprojects, with the bulk of the complex broken down into individual parts – the main arena, small arena, swimming pool and ancillary structures – all related in an open-ended composition.



buildings united, but remaining open to change. The Republic Polytechnic, Singapore (2005), with its uniting suspended platforms that tie the central elements together, provides an exemplar of Maki's intentions in

planning such architectural projects as receptive, open, yet engaged interventions.

Since the early thinking of the 1960s, in Maki's work the megaproject has been treated as a collective form of

many parts. This approach allows for an overriding cohesive 'bigness' based on a policy of accepting and accommodating the large, through strategies of grouping, incompleteness and the rejection of closure.⁷ ▢

Notes

1. www.pritzkerprize.com/maki2.htm, accessed 1 September 2005.
2. K Kikutake, N Kawazoe, M Ohtaka, F Maki, and N Kurokawa, *Metabolism: The Proposals for New Urbanism*, Yasuko Kawazoe (Tokyo), 1960.
3. Fumihiko Maki, with Masato Ohtaka and Jerry Goldberg, *Investigations in Collective Form*, Washington University School of Architecture (St Louis, Mo), 1964.
4. Fumihiko Maki, 'Notes on Collective Form', *Japan Architect*, winter 1994, pp 247–97.
5. Maki and Associates, Gary Kamemoto, Mark Mulligan, Tohru Onuma and Geoffrey Moussas (eds), *Fumihiko Maki: Buildings and Projects*, Princeton Architectural Press (New York), 1997, pp 206–17.
6. www.hillside terrace.com/english/history-story.html, accessed 3 August 2005.
7. Jennifer Taylor, *The Architecture of Fumihiko Maki: Space, City, Order and Making*, Birkhauser (Basel), 2003.



Approaches to collective form: compositional form, megaform and group form respectively.