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Title: **Prime Objects**

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Subjects: Architectural/Design
Building Case Study

Keyword: Urban Design

Publication Date: 2000

Original Publication: Architecture & Identity 2000

Paper Type:

1. **Book chapter/Part chapter**
2. Journal paper
3. Conference proceeding
4. Unpublished conference paper
5. Magazine article
6. Unpublished

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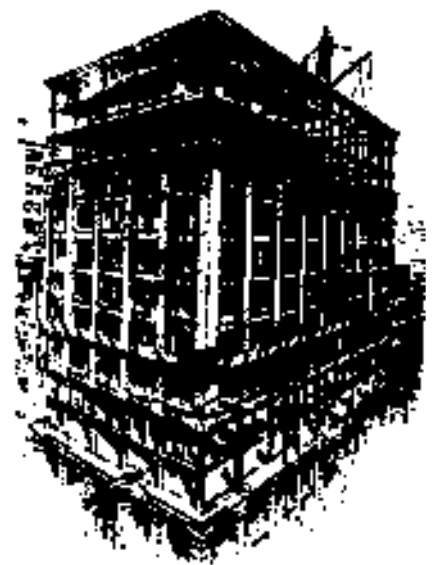
15 PRIME OBJECTS

Aside from the automobile, the high-rise office building, whether tower, slab or block, is probably the most easily recognizable symbol of modernity the world over. Like the former, it is also just as much a focus of popular abuse as of admiration. Yet while architects might be blamed for the specific failings of their own designs, they can hardly be blamed for the type itself. Much as they may like to claim the credit for such things, modern building types are generally the product of economic, social and technological forces beyond architects' responsibility or power of control. By the same criteria, whereas the first tall buildings in Chicago would have grown just as tall without the aid of Louis Sullivan's embellishments, they could not have done so without the invention of the steel frame or the mechanical elevator.

But if Chicago's upwardly mobile skyline was shaped more by a combination of central city land prices, corporate needs, and engineering and mechanical ingenuity rather than aesthetic considerations, individual designers have since made significant modifications to the basic office form, often going well beyond the skin-deep attentions to which we have become accustomed. The result has been a number of innovative deviations from the standard 'kebab' of stacked floors around a service core, each of which in turn has spawned replicas of its own. As such these exceptional buildings merit the special designation of 'prime objects'¹ in the development of twentieth-century architecture.

BREAKING THE MOULD

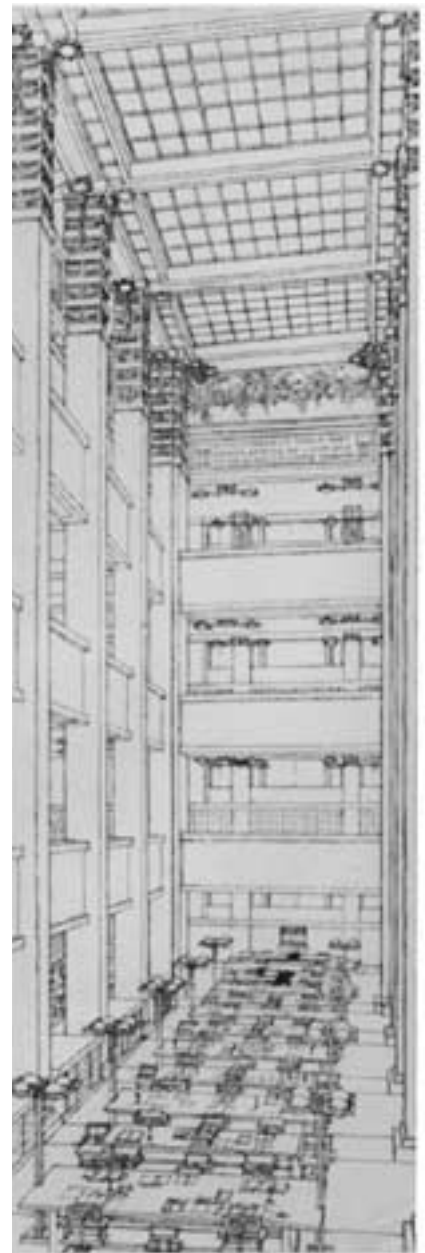
The first to break the original mould was George H. Wyman, with his Bradbury Building in Los Angeles, completed in 1893.² Instead of a solid core, Wyman created a top-lit, atrium-cum-circulation space considerably enhanced by the iron lacework of the exposed lifts and stairways. Aside from this major innovation, however, the surrounding cellular offices maintained the same spatial and visual separation between office workers characteristic of the standard tower. It was left to Frank Lloyd Wright, with his Larkin Company Office Building (1904) in Buffalo, to go the next step. Wright literally turned the standard form inside out, replacing the solid central core with a full height atrium, and moving the vertical circulation systems and services into hollow towers and ducts placed around the perimeter of the building.³ He also left each floor completely



15.1.
New York Life Building, Chicago, 1894–5.
Architect: Jennie and Mundie. From Ada
Louise Huxtable, *The Tall Building
Artistically Considered*, 1992.



15.2.
Bradbury Building, Los Angeles, 1889–93.
Interior of atrium. Architect: George H.
Wyman. Photo: Chris Abel.



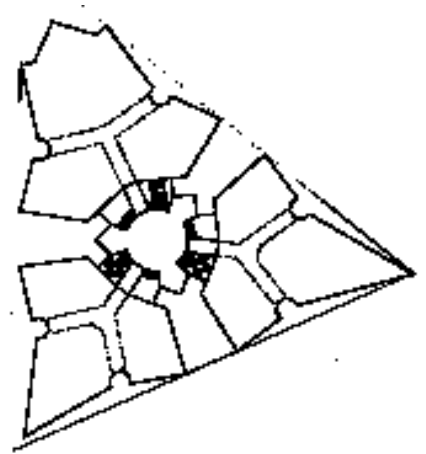
15.3.
Larkin Building, Buffalo, 1903. Interior of
atrium. Architect: Frank Lloyd Wright.
From Scully, 1960.

open to the atrium, creating a vast unitary space from any point of which it was possible to see into most other parts of the building.

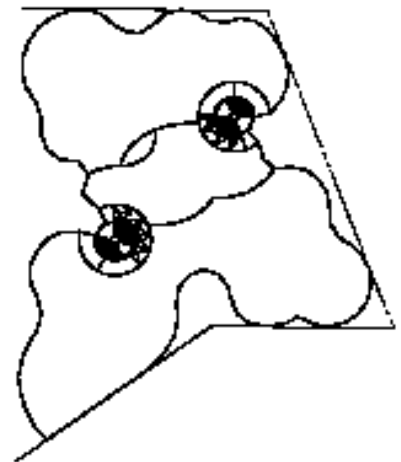
Wright's primary aim was undoubtedly the creation of a new kind of continuous space – a vertical version of his horizontal experiments – but the open interior also had the result of introducing a new sense of corporate unity to the office environment. Previously, all employees were spatially, visually and socially separated into vertical strata and connected between floors only indirectly by lifts and stairways. Specifically designed for one corporate owner, the Larkin Building changed all that, making each and every employee dramatically aware that they belonged to a larger – and no doubt in executive eyes – more significant whole.

The second major deviation to impact on office design was Mies van der Rohe's sharply angled Glass Skyscraper project (1919) in Berlin, which was followed soon after by a second similar project based on a curvilinear plan.⁴ Though both projects shared irregular plan geometries Mies adhered to the standard arrangement of identical floors radiating out from a central core (split into twin cores for the second project). The originality of the two projects lay more in the use of an all-glass skin, displacing the conventional stone cladding with a daring new transparency. As both the drawings and models demonstrate, Mies also clearly understood the potentially expressive qualities and reflective properties of glass, capable of mirroring both surrounding buildings and an ever-changing sky.

It was Gordon Bunshaft, however, who, as chief designer for Skidmore Owings and Merrill, gave the Glass Skyscraper its definitive form thirty years later in the curtain-walled Lever House (1952) in New York. Air-conditioned to be habitable in all weathers, the all-glass Lever House was swiftly adopted as the standard corporate home and is the primary source of all those thousands of crystalline replicas dotted



15.4a.
Glass Skyscraper project, Berlin, 1919.
Architect: Mies van der Rohe. From
Spaeth, 1985.



15.4b.
Glass Tower project, Germany, 1921.
Architect: Mies van der Rohe. From
Spaeth, 1985.



15.5.
Lever House, New York, 1952. Architect:
Gordon Bunshaft for Skidmore Owings
and Merrill. Photo: Ezra Stoller ©.



15.6.
National Commercial Bank, Jeddah, 1982. Architect: Gordon Bunshaft for Skidmore Owings and Merrill.

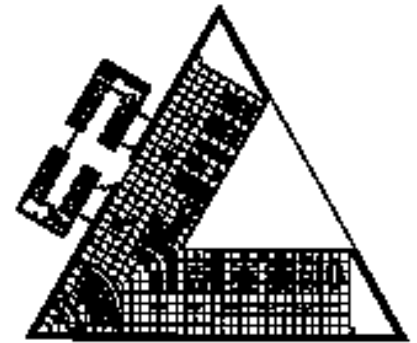
around the world, which have done so much to negate climatic and cultural differences. Yet at the time it was built, the design was quite unique. Not only was it the first to realize Mies's earlier visions of a glass architecture, but the dynamic composition of a thin vertical slab mounted over a floating horizontal podium was also directly in the revolutionary, anti-classical spirit of early Modernism, though a great deal more subdued than any Constructivist exercise.

The National Commercial Bank,⁵ Jeddah, also designed another thirty years later by Bunshaft for SOM, presents the third major deviation from the standard form. The design represents not only a complete turnabout in its architect's philosophy, but also a radical shift in Modern architecture, away from universality, towards a regionalized Modernism. While the triangular building shares the same purity of form as its Modern predecessors, it also introduces a number of innovations specific to its location, including several features designed to modify the impact of the intense sun on the surface of the building. Thus all glazed surfaces are recessed and face into three shaded 'skycourts' or 'hanging gardens', making deep incisions into the otherwise monolithic block, two on one side, one on the other, alternating vertically in a spiral arrangement. All other external surfaces are covered with a well-insulated stone cladding. A vertical shaft in the centre of the structure formed by the overlapping 'V'-shaped floor plans facilitates the upward movement of air through the courtyards, further cooling the glazed walls.

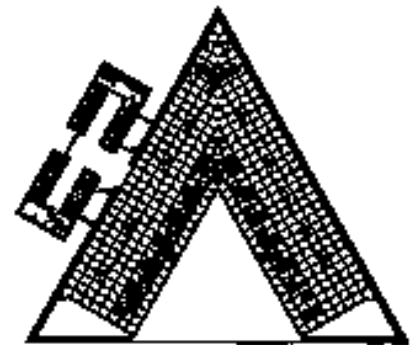
The idea of the skycourts was partly inspired by regional courtyard building typologies, and if the change in scale makes the visual connection seem somewhat remote, there is no doubting the effectiveness of the solution as a form of climate control, as well as a sheltered recreational space, which is also just what traditional courtyards provide. For all its obvious modernity, therefore, SOM's tower represents a significant step in the development of a localized, high-rise architecture.

VARIATIONS

While the Larkin Building, the Lever House, and the NCB Building are all the first of their kind and may therefore be properly described as prime objects in their respective series, later architects have also introduced innovations of their own which have led in turn to significant variations, without breaking the essential continuity of the series. They may also, by introducing variations of this kind, have helped to sustain the line in a changing cultural and technological environment. Thus Mies van der Rohe and Philip Johnson's Seagram Building, with all its neo-classical refinements and subtleties, helped to make the glass and steel tower series more acceptable to a prestige-conscious clientele. Built on New York's Park Avenue across from the Lever House, Mies's much modified version of his own earlier visionary projects presents a markedly different impression to SOM's building. In place of the former's horizontally and vertically opposed slim-line slabs, Mies offers a single, dominant tower of stouter proportions, set well back from the street line so as to offer the best possible view of the free-standing structure. If not as obvious a neo-classical design as some of Mies's



15.7a.



15.7b.



15.7c.

15.7a and b.

National Commercial Bank. Plans showing alternating triangular configuration.

Architect: Gordon Bunshaft for Skidmore Owings and Merrill.

15.7c.

National Commercial Bank. Section.

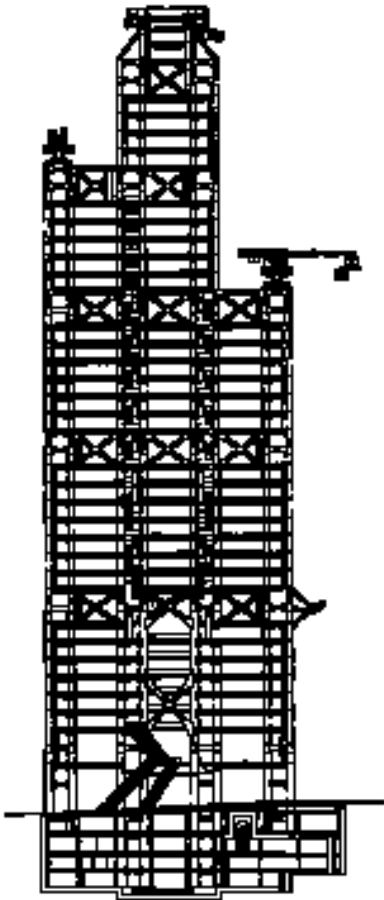
Architect: Gordon Bunshaft for Skidmore Owings and Merrill.

**15.8.**

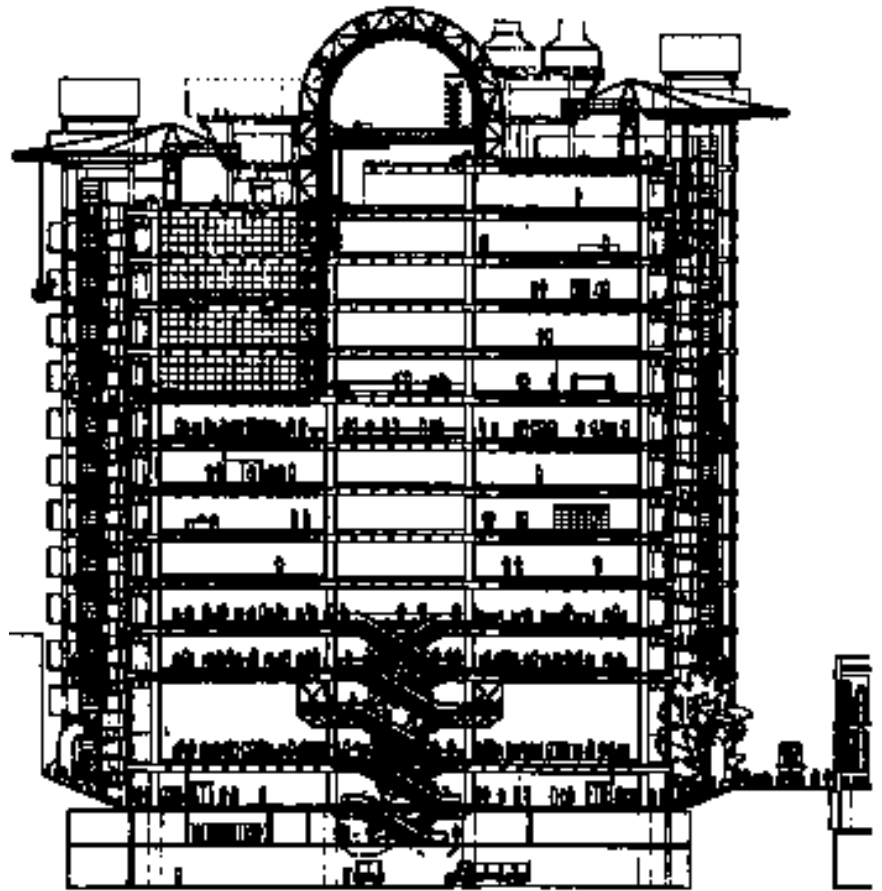
Seagram Building, New York, 1954–8.
Architect: Mies van der Rohe with Philip
Johnson. Photo: Ezra Stoller ©.

other works, the Seagram Building's simplified form, solid composition and proportions, all fronted by an open 'piazza', represents a parallel development and updating of the classical ideal of pure form and geometry, now in the service of corporate America, lending a much-valued image of timeless authority.

More recently, both Sir Norman Foster and Sir Richard Rogers revived a previously moribund atrium series with their radical designs for the Hongkong and Shanghai Bank and Lloyd's HQ.⁶ Like the Larkin Building, both focus an open floor layout on spectacular internal atria, supplemented by a host of technological innovations which helped to breathe new life into the form. These include an exposed megastructure and a dual vertical circulation system comprising high-speed lifts for long journeys and moving escalators for short journeys. Aside from the convenience, the highly visible localized movement system was purposefully designed to increase social



15.9.
Hongkong & Shanghai Bank, 1986.
Section. Architect: Foster Associates.



15.10.
Lloyd's Building, 1986. Section. Architect: Richard Rogers Partnership.

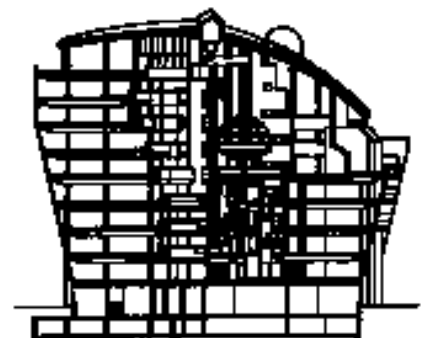
contact between the building's occupants, thus consolidating one of the major features of the series associated with the Larkin Building. Though belonging to the same series, they also differ in significant ways from each other. Where the Lloyd's HQ replicates the Larkin Building's internal orientation with its mostly opaque skin covered in service ducts, the Hongkong Bank achieves an external as well as internal transparency which owes as much to Mies's early projects as to Frank Lloyd Wright's and takes full advantage of the splendid views of Hong Kong. Where also the spatial and corporate unity of the Lloyd's HQ is confirmed by the full height atrium, the unity of the bank is substantially modified by the structural division into batches of suspended floors separated by double height floor spaces, which also serves to accommodate the organizational divisions within the bank.

Ralph Erskine's 'Ark' in London marks the latest development in the same series, towards greater spatial and social complexity.⁷ Whereas the Larkin Building, the Hongkong and Shanghai Bank and Lloyd's HQ were designed primarily for their single owners' use, the 'Ark' was conceived as a speculative office development for multiple occupancy. While only the top floors were closed off from the atrium at the official



15.11.
 'Ark', London, 1991. Interior of atrium.
 Architect: Ralph Erskine. Photo: Chris
 Abel.

opening for purposes of smoke control, similar modifications can be made to any of the other floors, should any client so desire it. The changing floor plan up through the building has also been designed to accommodate a large variety of functional configurations, from open 'landscape' and cellular offices to exhibition spaces, in keeping with the flexible and informal needs of offices in the information age. The key to Erskine's social conception of the office as a 'village' lies in the central free-standing structure rising up through the atrium space, which is intended as a kind of community centre, and indeed looks much like a combined village pub and church tower. Serving all users, the centre provides both a visual and social focal point for an increasingly itinerant working population.



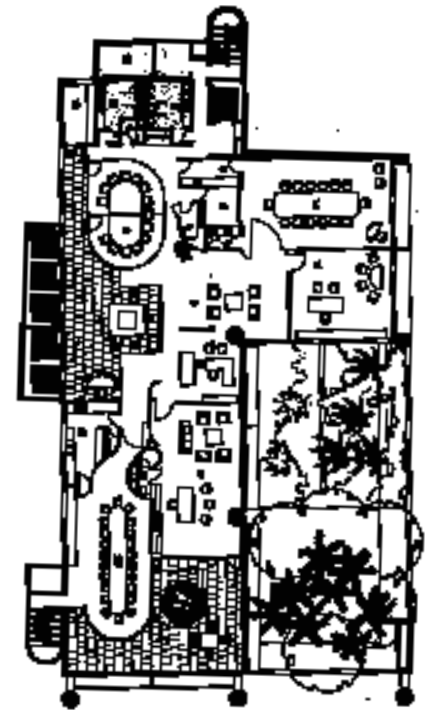
15.12.
 'Ark'. Section. Architect: Ralph Erskine.
 From *Architects' Journal*, June 1992.



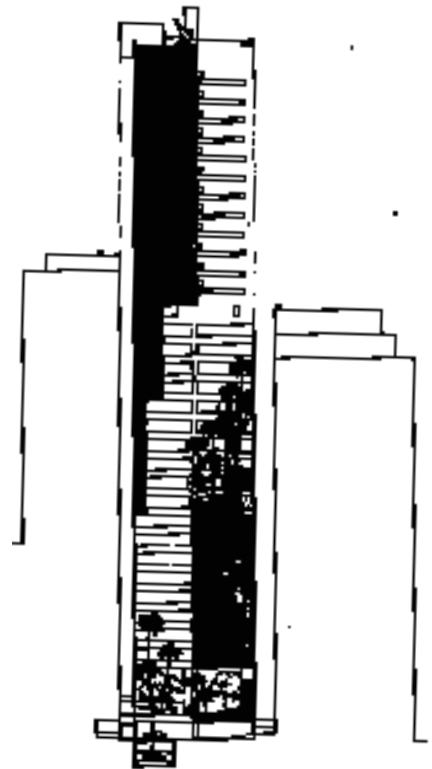
15.13.
Menara Mesiniaga Building, Kuala Lumpur, 1992. Architect: Hamzah and Yeang.



15.14a.
Capita Centre, Sydney, 1989. Architect and photo: Harry Seidler.



15.14b.
Capita Centre. Plan. Architect: Harry Seidler.



15.14c.
Capita Centre. Section. Architect: Harry Seidler.

The NCB building also now has its own innovative followers, confirming its potency as a prime object in the series capable of begetting healthy and independent offspring. Foremost among these is Hamzah and Yeang's tropicalized office tower built in 1989 near Kuala Lumpur for Menara Mesiniaga,⁹ an affiliate of IBM. The main features of the NCB building, it was noted, were the large-scale external incisions made into an otherwise monolithic block. Yeang's tower takes the process of fragmentation a step or two further, starting this time with a basic cylinder. This simple form is drastically corrupted by the irregular stepped incisions made by the skycourts, their spiral arrangement perfectly matched to the geometry of the cylinder. The surface texture is further complicated with numerous forms of climate control devices covering the outer skin, which vary in direct relation to orientation. An exposed megastructure similar to Lloyd's serves to contain the fragmentation and surface variation. Many if not all of these features are the outcome, like SOM's tower, of a conscious attempt to adapt a universal building type to a specific and difficult climate and were inspired by local building forms as well as by other models in the series.⁹

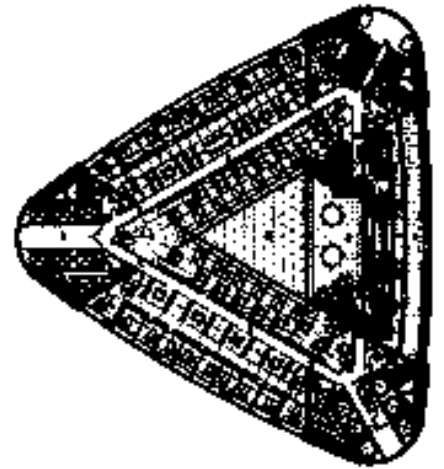
Harry Seidler's glass and steel Capita Centre¹⁰ in Sydney continues the series, based this time on a rectilinear geometry. The broken outline creates a striking impression and appears at first sight quite different from the previous works. However, the design of the Capita Centre was created in much the same fashion as the Jeddah and Kuala Lumpur towers out of a simple basic geometry, which has then been carved into by its designer, so to speak, to create a spiralling series of articulated blocks of offices fronting onto landscaped skycourts. As with Yeang's building, an exposed megastructure frame helps tie the fragmented form together.

Foster's Commerzbank¹¹ in Frankfurt confirms the durability of this series, and returns many 'foreign' innovations to the West. The basic form, once again, is the equilateral triangle, and we also see what is by now the characteristic feature of the series: a spiralling 'staircase' of deep incisions in the block, creating numerous, generously landscaped skycourts. As with the former towers, the design is shaped as much by energy-saving considerations as by other factors. The skycourts and central airshaft will help to maximize natural ventilation in all seasons, while a glazed windbreak will allow occupants to open external windows even in adverse conditions.

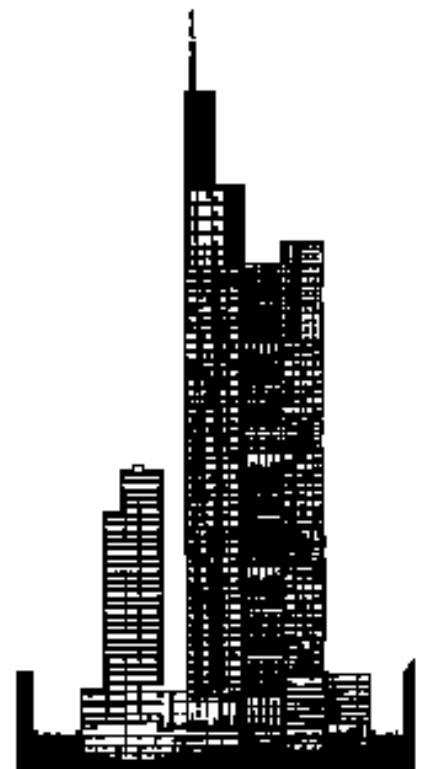
Ken Yeang's most recent project for the Hitechniaga Corporation¹² (so named for its data communications business) in Kuala Lumpur, heralds what may be a still further and even more radical stage in the evolution of the office tower. While all the above designs are based on a regular geometrical figure which has then been modified, albeit sometimes drastically, the Hitechniaga Tower¹² abandons any pretence to geometrical regularity. Instead, what we see is an odd assortment of irregular blocks of floors, terraces, stairways, ramps, metallic 'visors' and other projections loosely hung upon an exposed structural frame. The whole assembly looks as though the frame has been magnetized and then waved over the corner of some giant metal workshop. Despite appearances, however, the same rigorous design principles govern these innovations as shaped Yeang's earlier designs, showing that a rational response to climate need not necessarily lead to either dull or uniform architecture.

INCREASING SPECIFICITY

Looking through these linked solutions, we can see ample evidence of the sorts of continuities and discontinuities which characterize the birth and life of a new series, and the interactive nature of precedent and innovation. For every specific feature there is always a model, whether it derives from earlier buildings in the same series, as with the use of a glazed skin in the Lever House, or from a confrontation or analogy with a different series, as with the sudden emergence of skycourts in the Jeddah tower. Over and above any specific changes of form, however, a general pattern may be detected in the direction of increasing specificity, possibly reflecting an emergent new order of cultural complexity at a deeper level. It is most apparent in the new series introduced by SOM with their NCB tower and its hanging



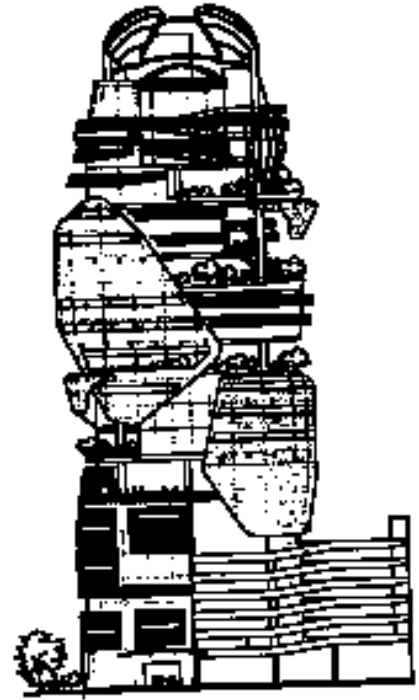
15.15a.
Commerzbank, Frankfurt, 1996. Plan.
Architect: Foster Associates.



15.15b.
Commerzbank. Section. Architect: Foster Associates.

gardens. No matter how daring the internal spatial and social changes wrought by Frank Lloyd Wright and later architects, the relation of the atrium tower form to its surroundings and its urban status as a detached object remain relatively unaffected. For all its reflective or 'invisible' properties, the same might also be said of the Glass Skyscraper. The NCB tower could be counted as the most radical departure from precedent this century in that for the first time a secondary ground level was created in the form of a large external incision in the building. More than any other previous development this single innovation changed the relation of internal to external space for tall office buildings. No longer were occupants condemned to look down onto a distant and vertigo-inducing ground. Instead, they could enjoy the relative security of a well-planted terra firma at close proximity. That the same incisions and unusual geometry were the product of a direct response to the local harsh climate is also no coincidence, but signifies a new level of exchange between a tall building and the local environment it occupies.

How much these new problem solutions reflect the pressures for energy conservation, changes in cultural and environmental values, or changes in the nature of the business institutions which occupy all of these buildings, remains an open question. Most likely it is a combination of all of these factors. What is beyond question is that what started out as a standard solution to be applied indiscriminately around the globe has been lately skilfully adapted to many different situations and climates.



15.16.
Hitechniaga Corporation Building, Kuala Lumpur, designed 1994. Elevation.
Architect: Hamzah & Yeang.