WORLD ARCHITECTURE

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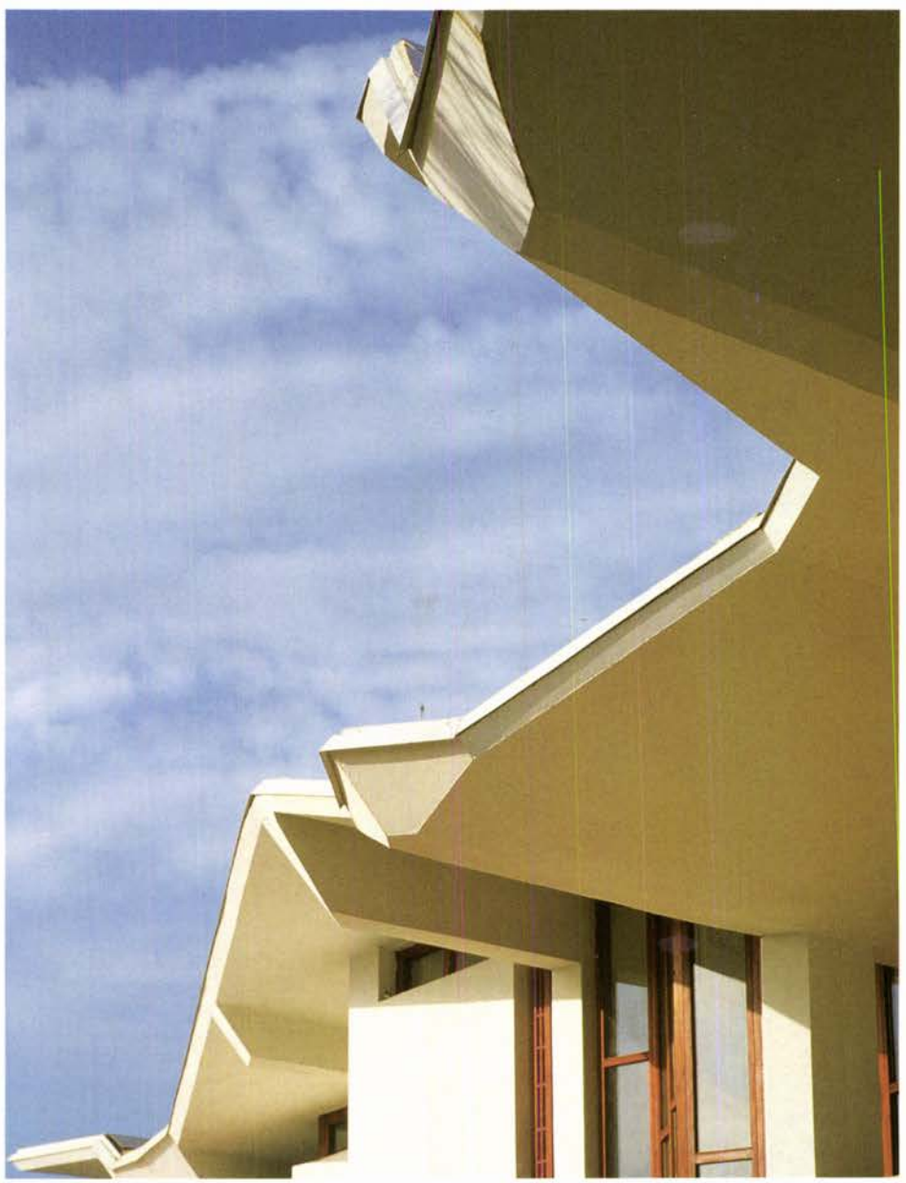

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WORLD ARCHITECTURE

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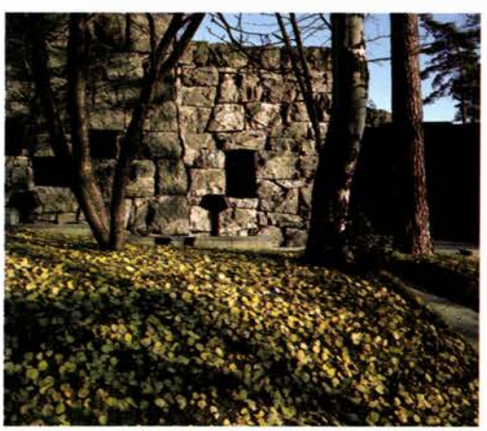

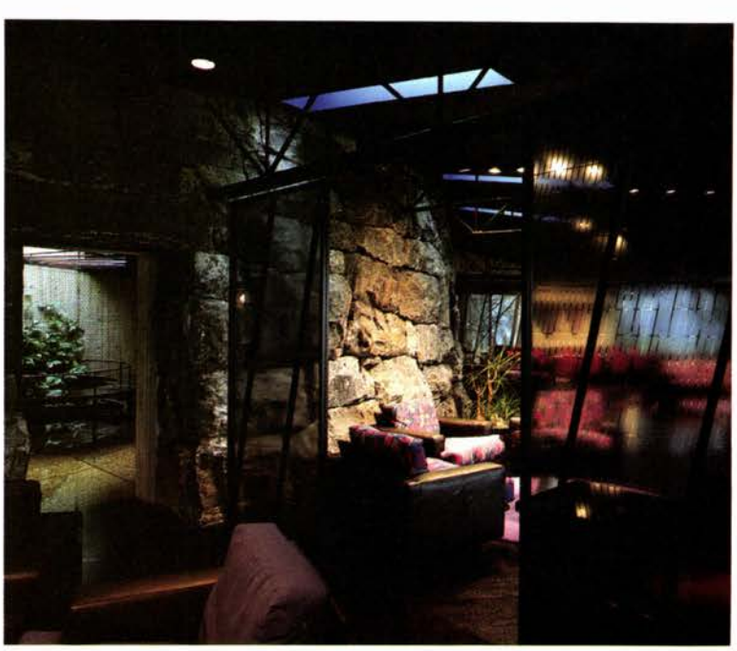

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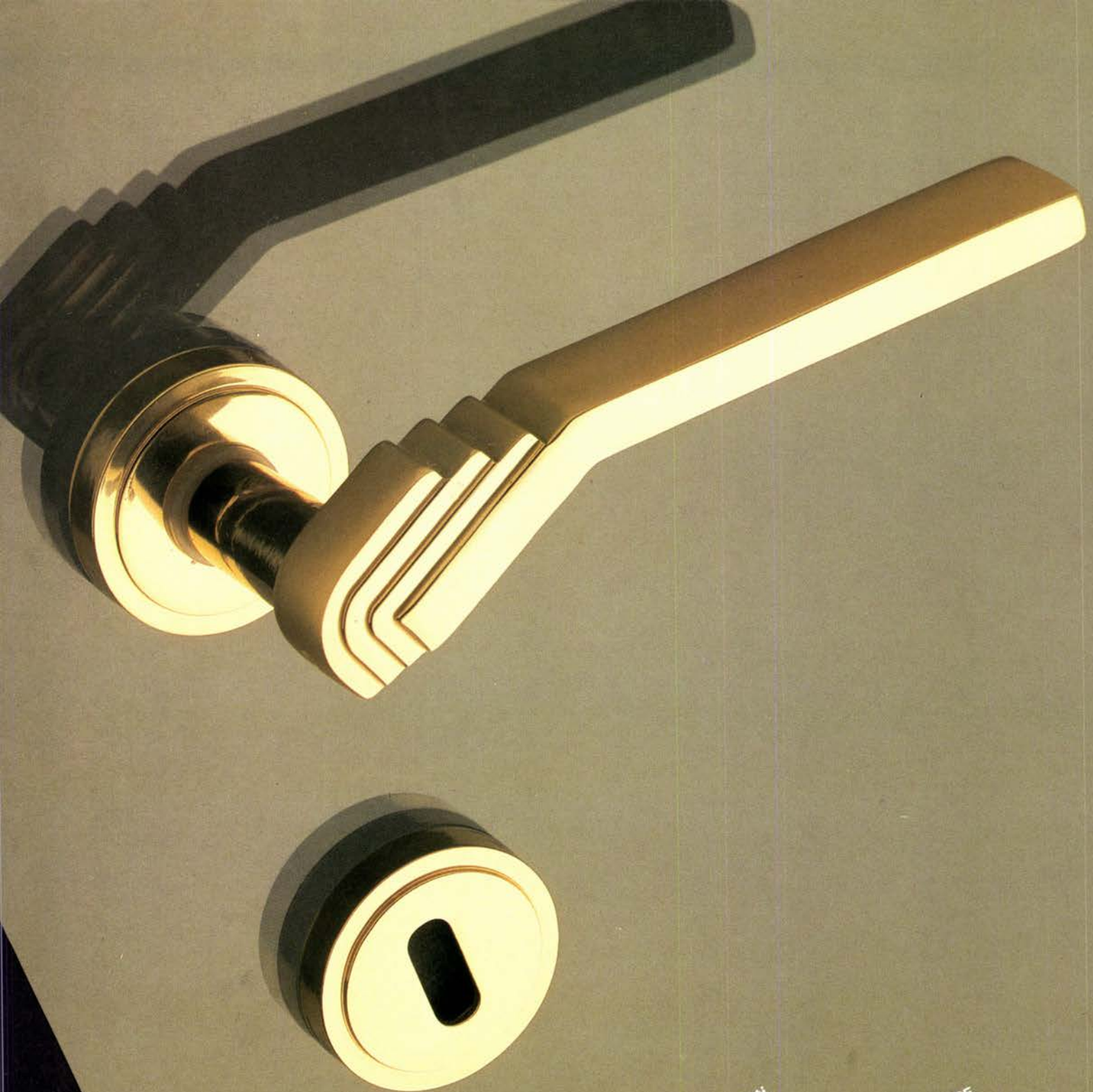

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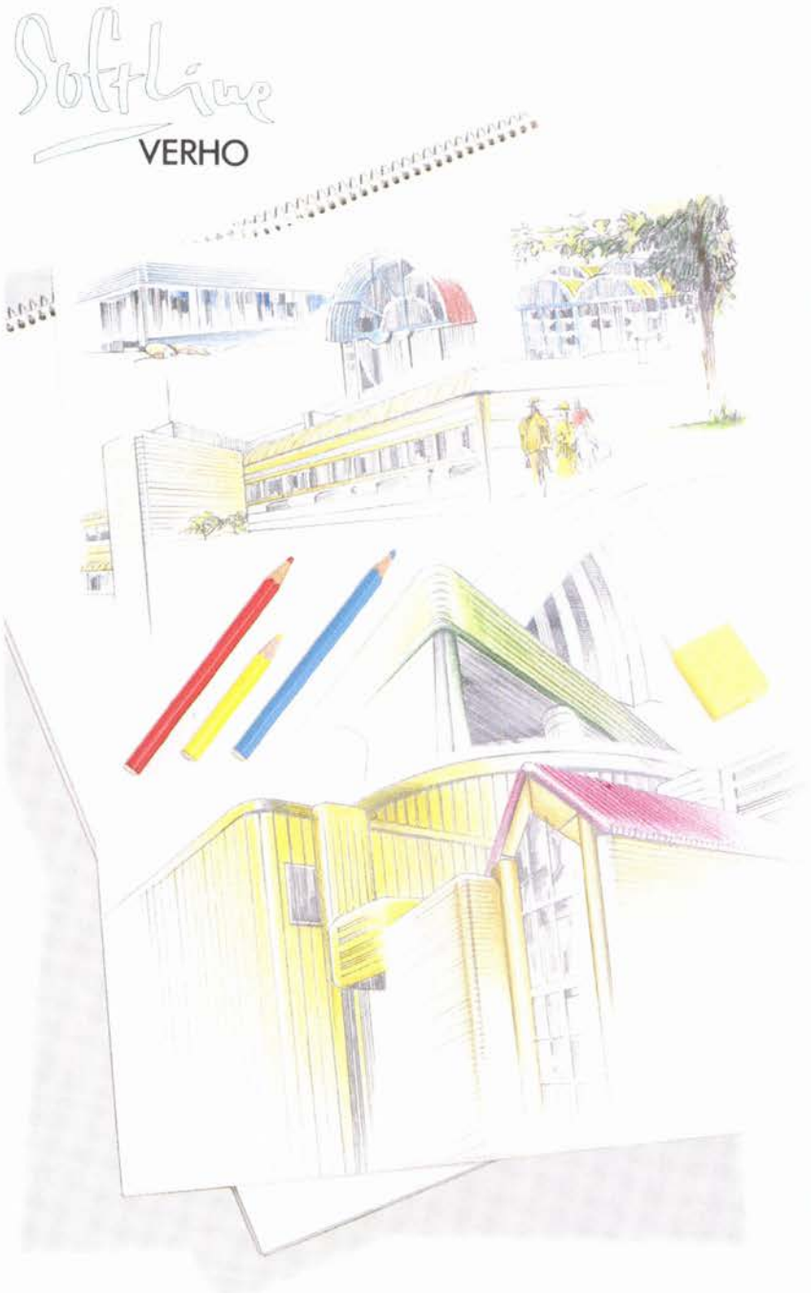

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WORLD ARCHITECTURE

As we enter the last decade of the century there is an overwhelming desire to begin an audit on the twentieth century. It would be presumptuous to attempt that audit here and now but, in reviewing the contents of this issue of World Architecture, one may be struck by two things. First, modernism is alive and well. Defining modernism is difficult, it has so many disparate parts but one thread unifies modernists – a belief in progress, and a belief in the possibility of improving the world for human beings. And, more particularly relevant to architecture, there is a belief in the possibility of making modern buildings that express a commitment to the present and the future.

The visual arts (architecture included) are not, any longer, an *avant-garde*. The men and women working on the frontiers are physicists, mathematicians, biologists – perhaps even philosphers – but not artists. However, the rich vocabulary of modernist art and architecture that was created for us in the first three decades of the century, has been barely exploited. This we can see in this issue in the work of Reima Pietilä on the one hand and Zaha Hadid on the other. Pietilä is an Academician of the International Academy of Architects (IAA).

Second, the economic centre of the world and the new hub for architectural patronage and possibilities has shifted from its old stamping grounds of Northern and Western Europe, and North America. Japan, the richest country in the world, is the hub of modern culture. In an introductory essay about Tokyo, John Thackara, a regular visitor to Japan, sees in Tokyo an actual, living metaphor of the new moderism. But, as Thackara points out, the new modern condition is characterised by unease as much as faith in the future. Unease is a consequence of the speeding up of change. Coping with constant change is a challenge for architects. People are excited by the new, they (us) also require the familiar as a constant framework. The desire, the need for the familiar, is a part of the debate about modern architecture led by Prince Charles. IAA academician Pierre Vago takes the last word in this issue by discussing Princes Charles' ideas, ideas denounced by some as both reactionary and ill-informed.

World Architecture is a young magazine, not yet an adolescent, and it is still finding its way. A readership survey of the first three issues has been extremely positive but we have strengthened the editorial team by appointing Professor Dennis Sharp as executive editor. He takes up his post with effect from the next issue of World Architecture. Dennis Sharp, academic, critic – and practising architect – is also a distinguished author and curator. He has lectured all over the world and he is a Director of CICA (International Committee of Architectural Critics). He was made a professor of the IAA in 1987 and jointed the editorial board of World Architecture in 1989. □

REIMA PIETILÄ

André Schimmerling analyses Pietilä's architecture in the light of the various schools of modernism in which it is rooted.

All photographs and illustration, unless otherwise credited, supplied by Raili and Reima Pietilä

The captions are based on those provided in the catalogue "Pietila: intermediate zones in modern architecture", Museum of Finnish Architecture, Helsinki 1985

Reima Pietilä belongs to that generation of architects which formed the modern architecture movement during the post-war period, dedicated to exploring new avenues within the context of this movement. A graduate of the Helsinki Institute of Technology in 1953, he joined the Finnish group of the International Congress of Modern Architecture (CIAM), led by Aulia Blomstedt, both theorist and builder, who through his writings contributed to establishing the modern movement in Finland on a firm base.

It was within this group that Reima Pietilä, with a view to deepening and broadening his formal vocabulary, began his "morphological explorations" – works which displayed a determination to conceptualize the architectural process. But, over and above this intellectual preoccupation, Pietilä's early architectural works created during this period reveal a particular sensibility in the setting of his buildings in the midst of the natural Finnish landscape of forests, lakes and rocks. It is very likely that the young Pietilä was influenced by the post-war works of Alvar Aalto who shared the same preoccupations.

Pietilä's development up until the present day is best summarized by the comments of Dominique Beaux and Michel Mangematin published recently in the columns of *le carré bleu:*

Pietilä's ideas and works, from the Finnish Pavilion in the Brussels exhibition (1958) to the Tampere library (1981), continue to surprise and "shake" our habits. It is difficult to define them directly; unconcerned by fashion and exclusive doctrines, they give rise to much questioning – often puzzling – and as great a variety of unsuspected discoveries.

Among the different aspects that form a complicated whole, giving precious food for thought, one can clearly detect the following:

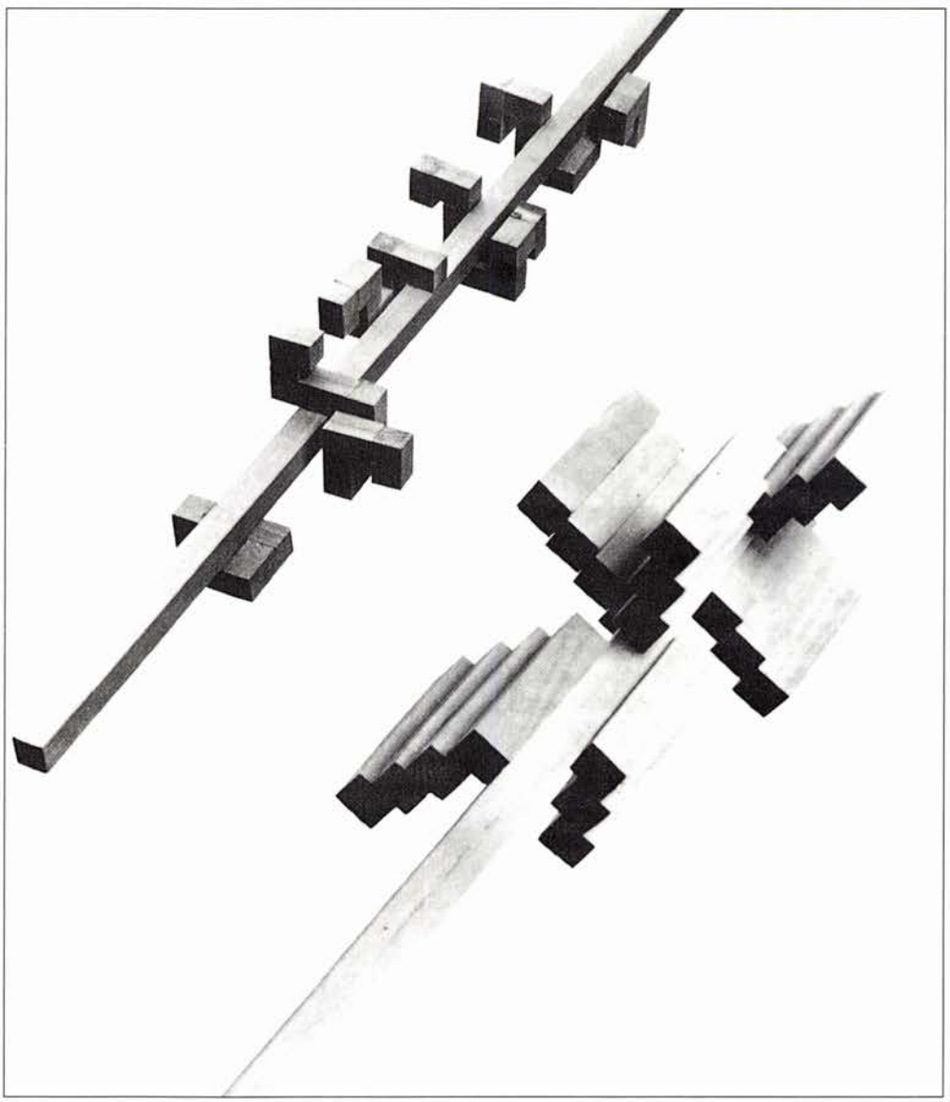
- Each work is treated as a powerfully inspired architectural poem.
- The traditional opposition Nature-Culture is reduced.
- "Primaeval" natural space and architectural space are merged.

- The building is rooted in its location and culture.
- Geographical and cultural localism takes on a new meaning, bearing no resemblance to folklore.
- Morphological liberation of the "consecrated model" – and of Euclidean neutrality.
- The topology and dynamism of architectonic space are investigated, freeing any typology from conformism.
- An environmental layout or "staging" replaces the architectural object.
- An architectural equivalent to the abstraction of form common to painting and sculpture.
- The face of architecture adapted to the times, capable of guiding the future.

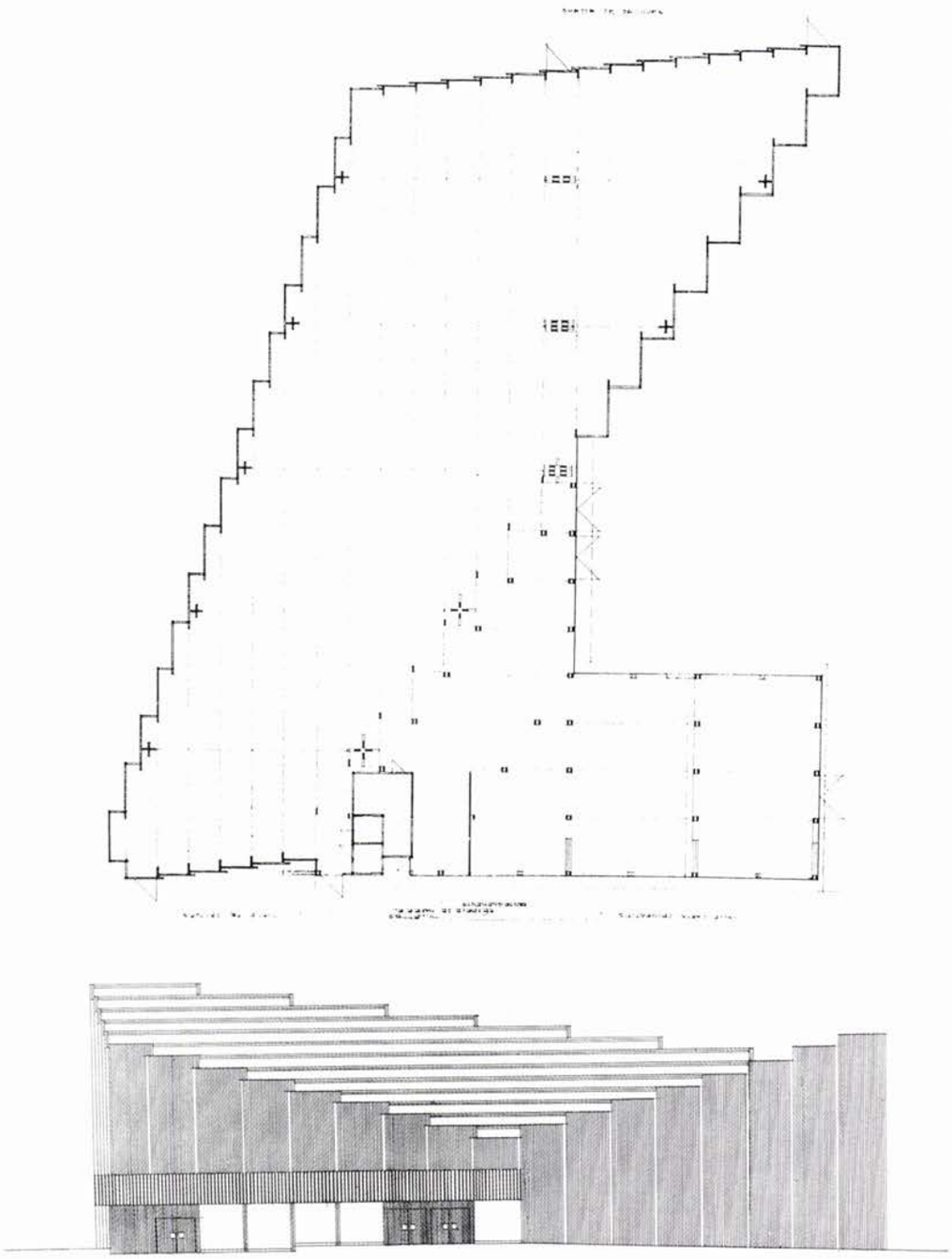
Pietilä's early period was dominated by the application of his research of "spatial dynamics": the *Finnish pavilion at the Brussels World Fair* (first prize in a national competition) is the expression of a combination of standardized elements. The architect succeeds in impressing an "ascending" dynamic character on space.

Pietilä's latest research brings him to the conceptualization of free forms. The use of these forms distances him somewhat from the "Stijl" tendency of the modern movement and brings him closer to the expressionist school. Throughout his career Pietilä has been dedicated to deepening and renewing this formal vocabulary and pushing it to its utmost limits. The first application of this process is his *Club Dipoli* project at the Helsinki Institute of Technology, which also won a competition presided over by Alvar Aalto (1961). Here it is a question of a deliberate break with classic composition, based on the juxtaposition of architectural volume and the natural landscape. Pietilä attempts to merge the two entities. As the author of the project himself states: "natural space is rarely transformed into a constructed space, but this project aims to show that there can be a continuation of nature in architecture. Functionalism goes in the opposite direction."

The approach aiming to express the *genius loci*, the spirit of the place, uses a geo-morphological vocabulary which is regional in essence. One enters the club at ground level through a lobby which at first floor level communicates with a central space leading off to the various dining rooms and meeting rooms. This is lit from above by openings in the roof and by glass walls



Morphological studies: the stick studies shown here are exercises in the operation of space. "Each represents a short trip into this infinite world of spatial relations."



Plan and elevation of the Finnish Pavillion. Built entirely of Finnish wood products, timber frame sheathed in vertical pine with 1 inch birch plywood panels inside.

affording views of the neighbouring forest.

The plans for the *Finnish Embassy in New Delhi* go back to 1963, although it was built only a few years ago. This project combines the rigour of a "functional" design with a formal freedom in the composition of the interior spaces and of the exterior of the building. The volumes of the building are heavily inspired by the essentially Finnish "nature-architecture" approach as exemplified by the Otaniemi Club.

The volume of the *Kaleva* church at Tampere (1965) represents a variant of free – and of course dynamic – composition applied by the architect. The nave, in a single unitary volume, has a monumental character emphasized by the convex/concave surfaces of the pillars. These forms are accentuated by the lighting which enhances the harmonious impression of the walls.

The project for the residential complex of *Suvikumpu* (competition 1967, built 1981) at Tapiola, a satellite city of Helsinki situated on the coast and close to the archipelago, shows Pietilä's ability to play in several registers – if the need is felt. Here the approach of the neo-plasticians is dominant, contrasting with the adjacent forest.

The project for a multi-purpose leisure centre in Monte Carlo, which exceptionally has not won a prize, is a continuation of the themes begun by the architect's sculptural approach (1969).

The Municipal Library of Tampere (competition 1978, built 1981-85) represents one of the most significant high points in the development of Pietilä's approach (from this point on he has worked with his wife Raili). This project is the result of an approach where the architectural form reflects an image contained in the memory and plays the role of a *symbol*. In this instance, Pietilä sees the germ of the form in the impression produced by vestiges of Celtic ornaments he saw on a trip to Ireland. This impression suggested to the architect the spiral form of the layout of the whole of the project. The exploratory work for the structure of the project continues on a formal level, giving rise to even more precise images. Pietilä describes this approach, which in a way invokes images buried in our subconscious, as "morphology of culturalism".

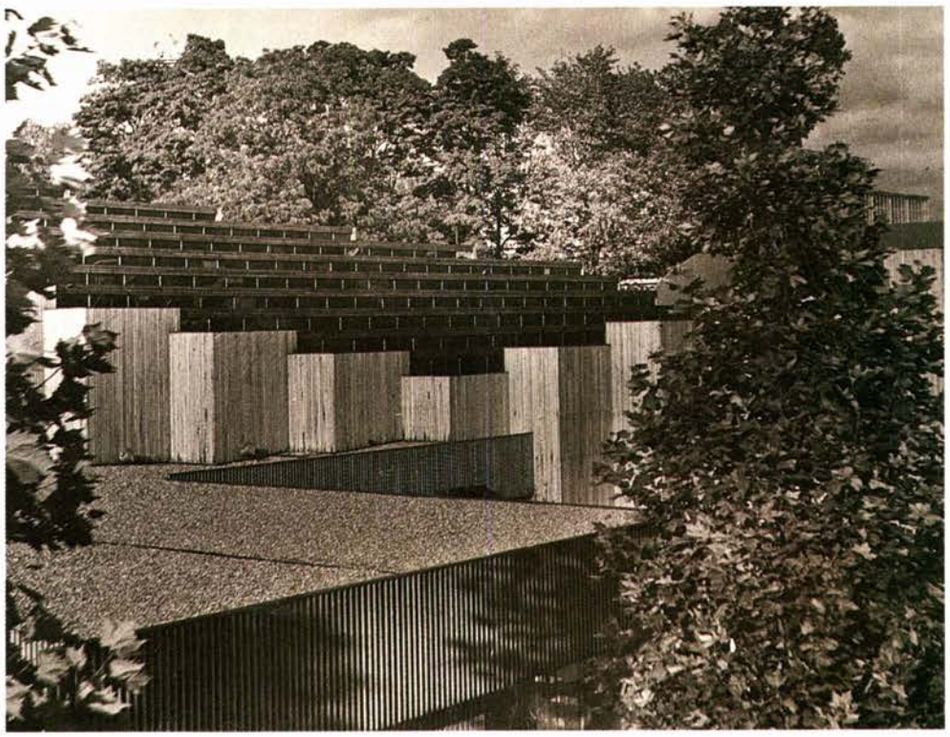
The library is located at the end of a tree-lined avenue, in a shady rectangular square which acts as a buffer area between it and the adjacent buildings. To the eyes of the

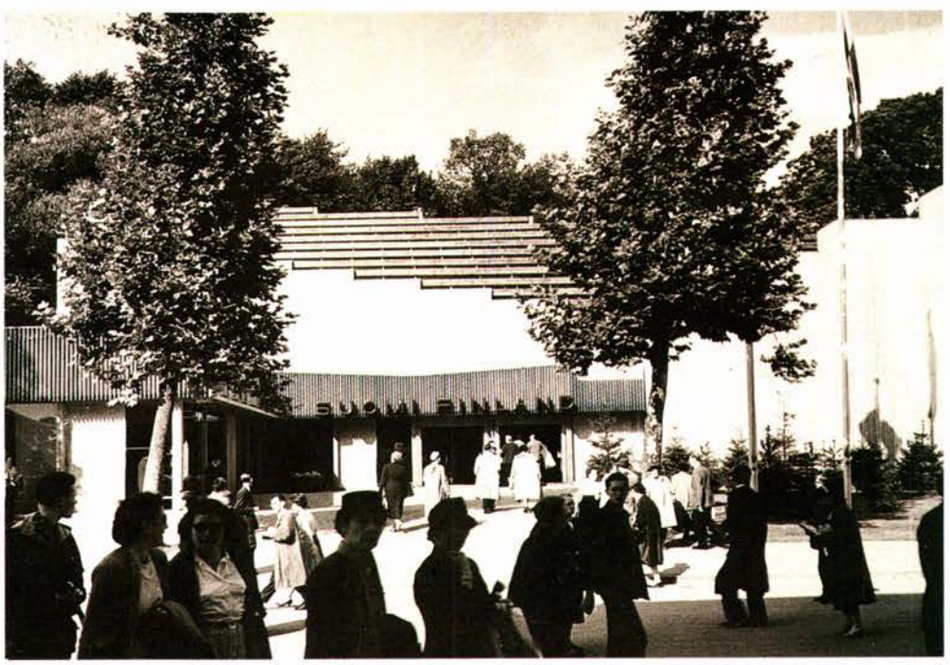
passer-by, this building looks like a huge sculpture with undulating forms. The structure is of reinforced concrete covered with materials such as local stone, copper and glass. The base and the stairs leading to the entrance are covered in granite (also local).

The architect goes on: "The spiral forms are experimentally tautened but not rigid, and are not determined by constraints. There are two movements: the first part of the interior ascends vertically then changes level; the second starts from the outside through the main entrance, transforms itself into an interior movement for a moment and goes out again. To be successful, the kinetic dynamic of the composition must both have its own rules and have no desire to broaden them to satisfy a 'Euclidian' simplification."

Among his major projects of the last few years is that of the *Centre for the Satellite City of Hervanta* at Tampere (1975-1979), more geometric in character because it embodies an urban complex. The architect has still insisted, however, on highlighting the location of the centre, close to the forest and a typical Finnish landscape, by his choice of materials and the layout of the buildings.

One of the Pietiläs team's latest and most noteworthy projects is the *Finnish president's residence*, to be built beside the Helsinki archipelago, amid beautiful natural surroundings. This project is a direct descendent from the *Club Dipoli* at Otaniemi. It is the architectonic equivalent of moraine deposited on the ground by the retreat of a glacier. The body of the building stretches rhythmically from east to west and is divided into different functional parts: the living spaces, reception areas and lastly the offices situated at the end. The base is built of local stone and the glass walled building rises towards the trees. The layout of the rooms evokes a walk through the forest. This project, like the others, is the outcome of a competition (1981). □





Finnish Pavillion at the Brussels World Fair, 1956-58. The pavillion was appraised from two completely different points of view: on the one hand, there seems to have been found there both national and local features, and on the other hand it has been regarded as a purely abstract composition.

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"Il labirinto dei Sabba: l'architettura di Reima Pietilä", Carmine Benincasa, Dedalo libri, Bari 1979.

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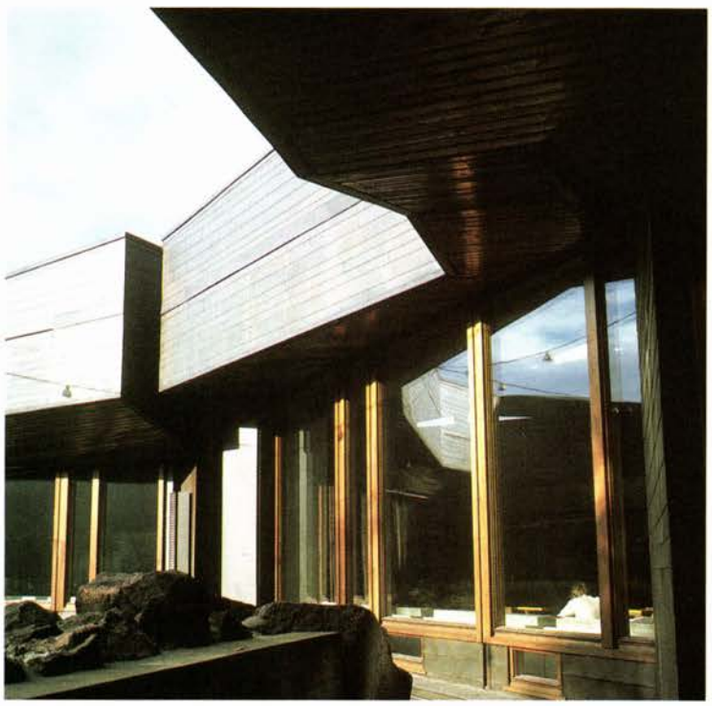
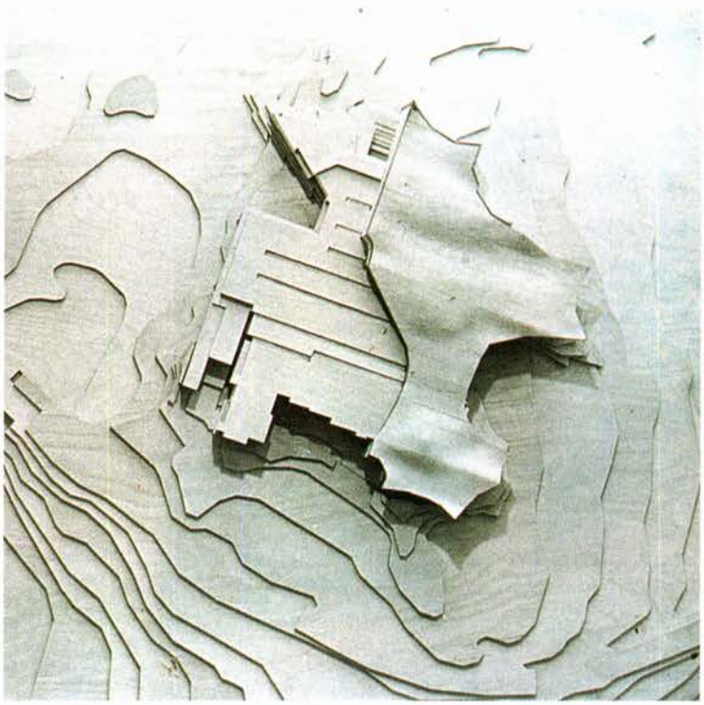
Dipoli, Students' centre, Espoo 1961-66. Dipoli might be a torso. It is unsettled architecture. At the same time as being like a materialized sketch, it is a sketch of architecture. Dipoli is contrary to preconceived good taste; styleless (in as much as style is the consistency of convention).

The question was, is it possible to design a surrealistic building that is functionally adequate?

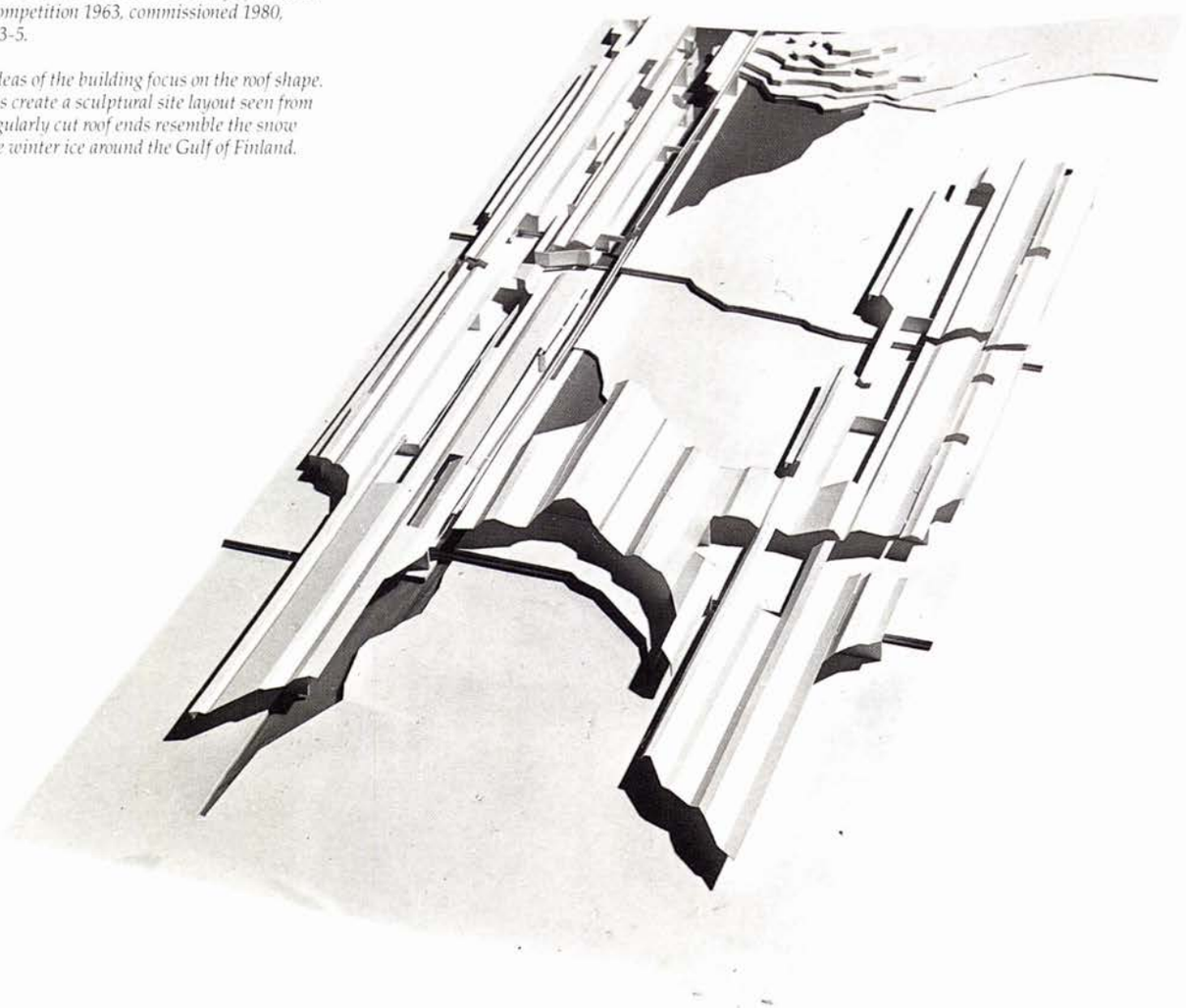
The building is constructed from cast in-situ reinforced concrete. Exterior sheathed in copper with timber panelling and large granite boulders. Interior of exposed concrete surfaces with pine finishings and furnishings. Roof structure of poured concrete.



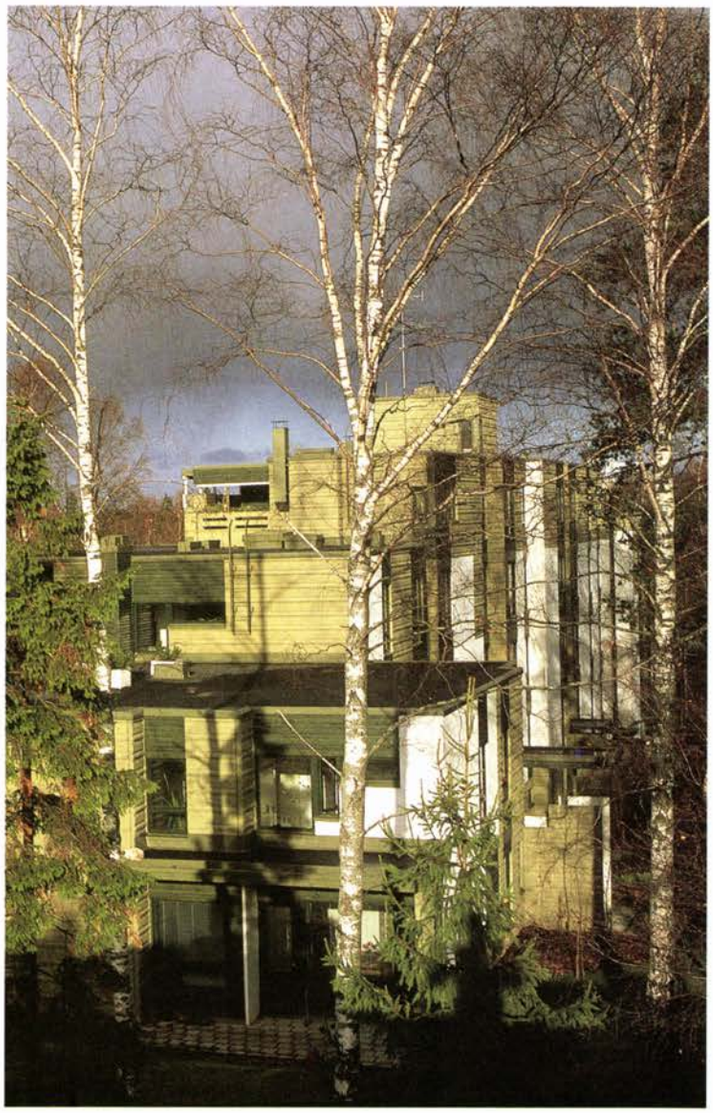


Previous page and below, New Delhi, Embassy of Finland, designed for a competition 1963, commissioned 1980, constructed 1983-5.

All the design ideas of the building focus on the roof shape. The roof patterns create a sculptural site layout seen from the air. The irregularly cut roof ends resemble the snow sculptures in the winter ice around the Gulf of Finland.



Suvikumpu Housing, Savituuli Housing, Espoo 1962-69; 1979-83. The disposition of the mass of the buildings is isomorphic with the topographical forms of the site. The mass is broken down like irregularly eroded rock, responding in the isomorphoses of the horizontal and vertical directions to the form of the rock.



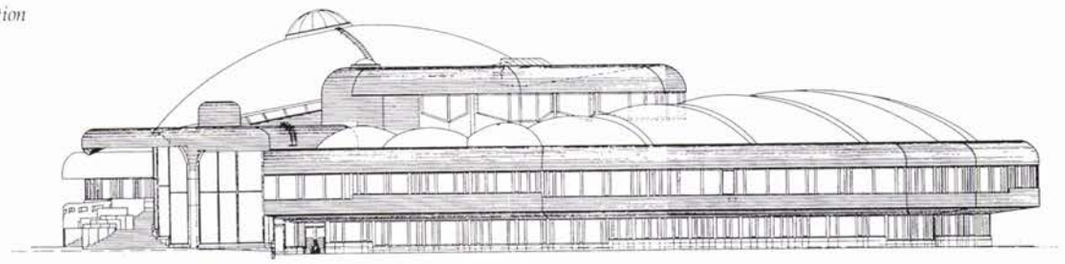
Savituuli Housing

Suvikumpu Housing

Kai R. Lehtonen

Previous page, "Metso" Tampere main library 1978-86. External walls are sheathed in copper with rough hewn, granite base, black felt roofing, wooden window mullions with copper outside.

Elevation



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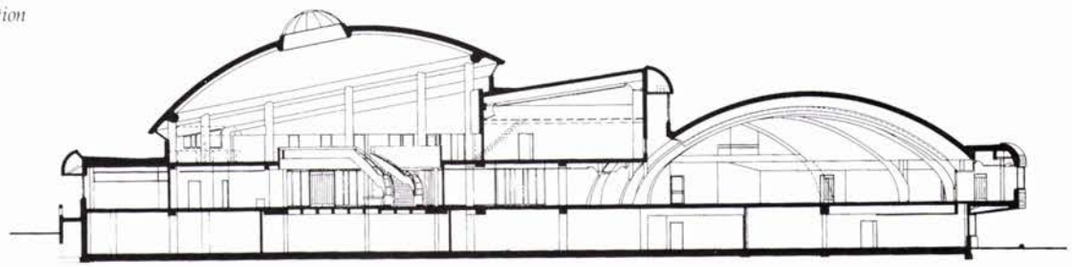
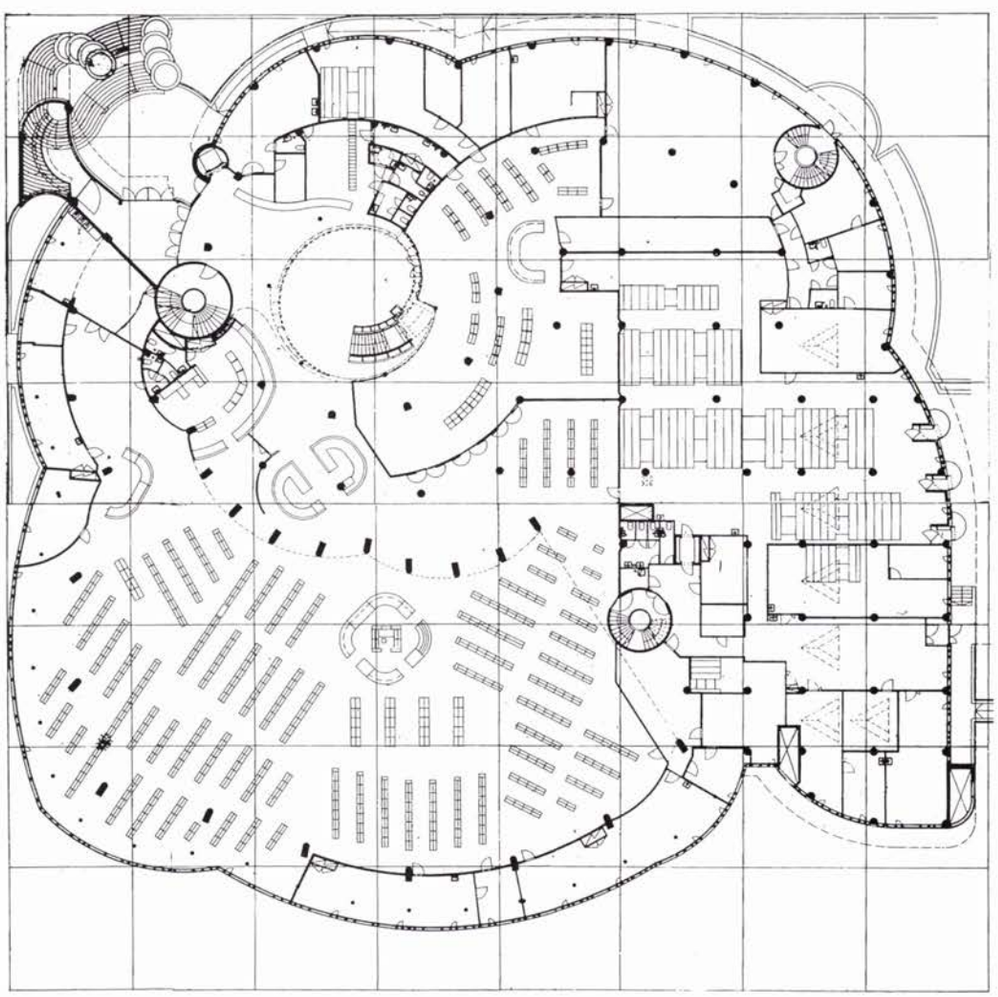
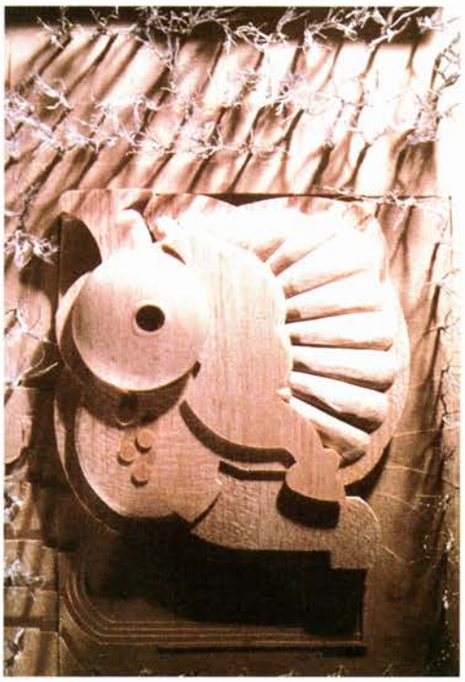


Plan



Tampere main library. "A ground plan of unequalled design always creates an architectural syllabus and a paradigm of its own." Use: main lending and reference library, school lending library, reading rooms, lecture facilities. Natural Science Museum, exhibition spaces, childrens' room, puppet theatre, hobby rooms and administration area.

Wooden model for Tampere main library.

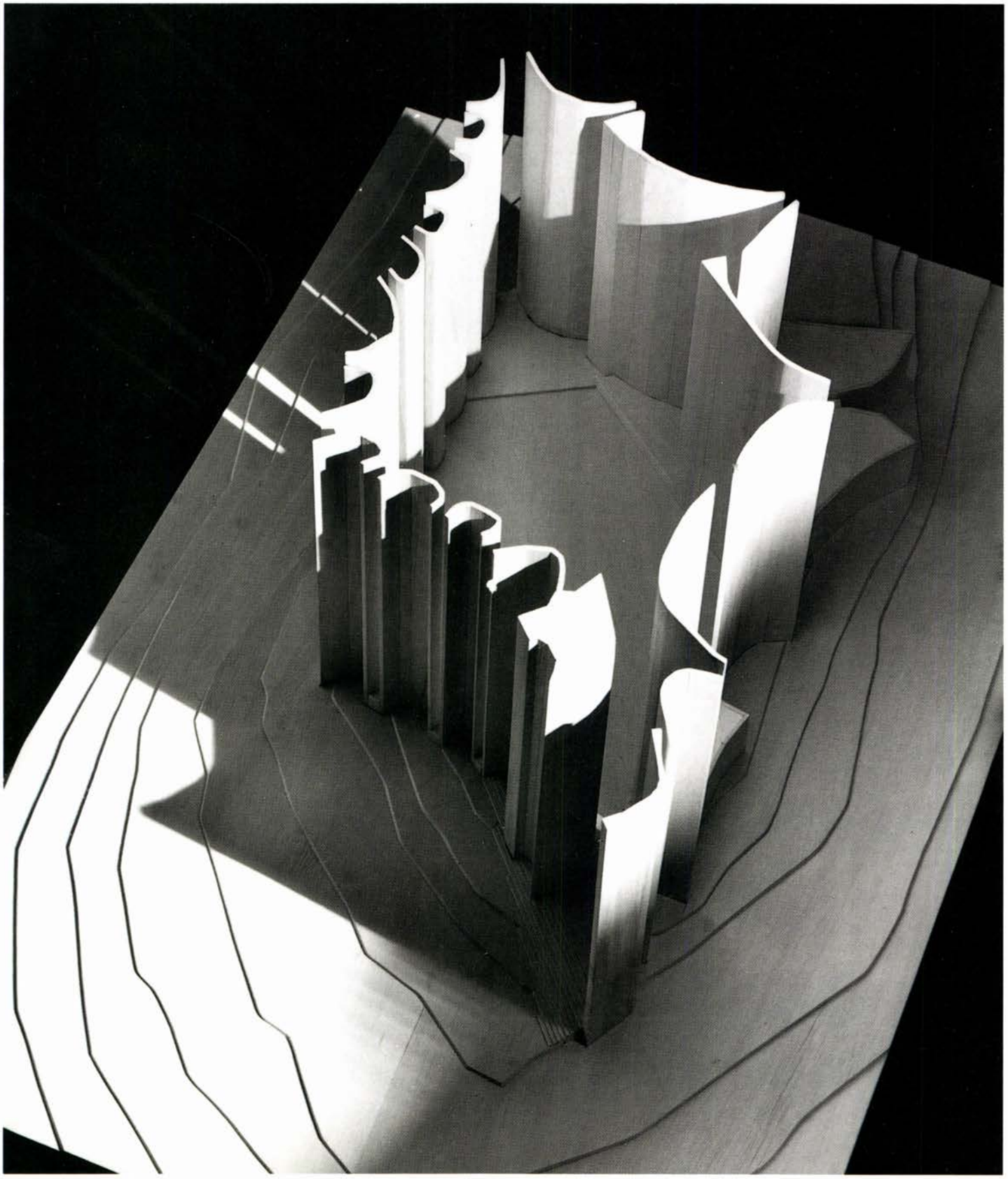


Sketches for Tampere main library.

Interior, main library.

The main central staircase, its spiral form echoing the plan of the library itself.

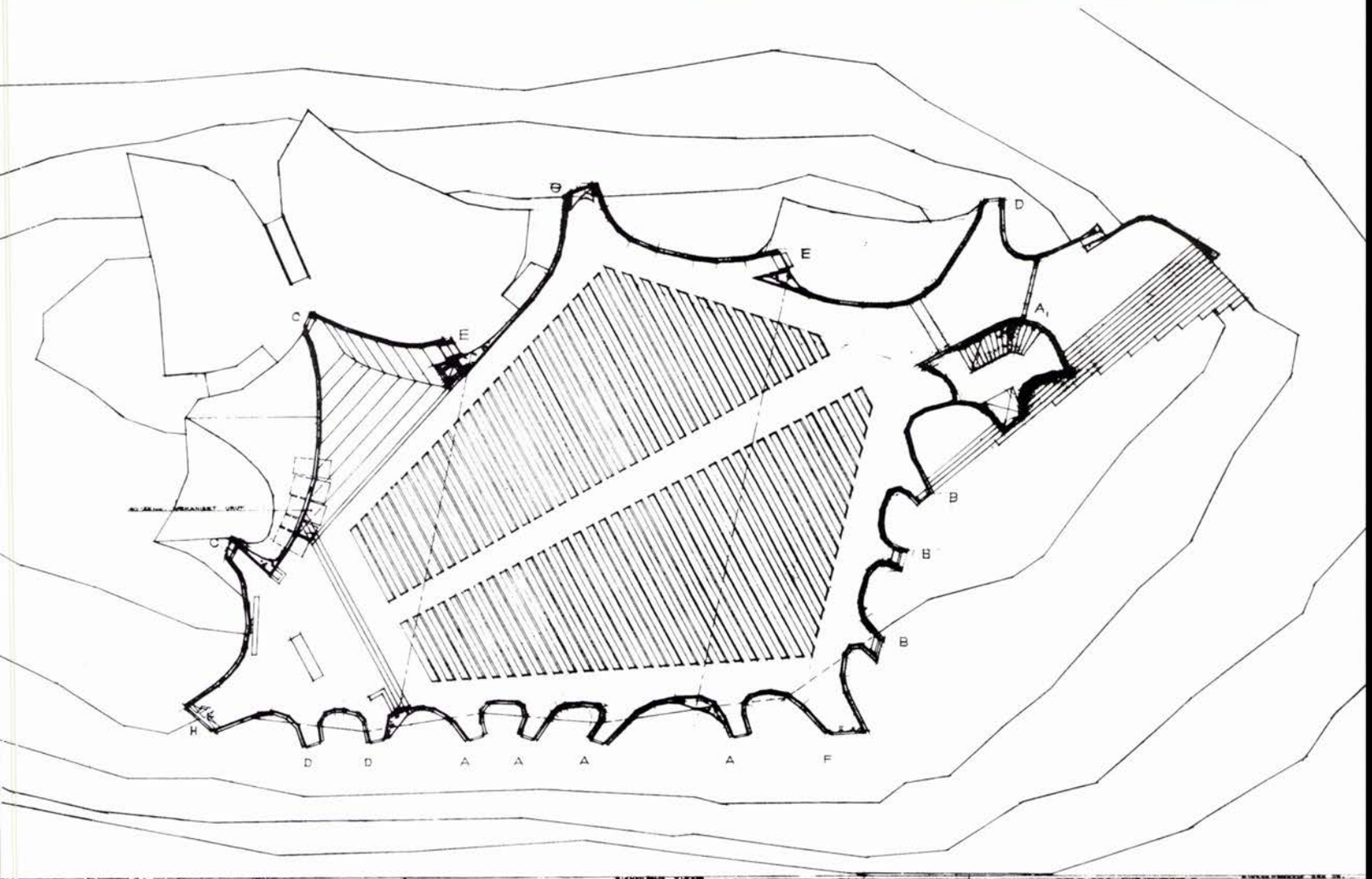
Kaleva Church, Tampere 1959-66. "Kaleva Church is a functionalistic building if we accept that its function is to be a metaphor of metaphysical ideas and that its artistic form can then follow that."



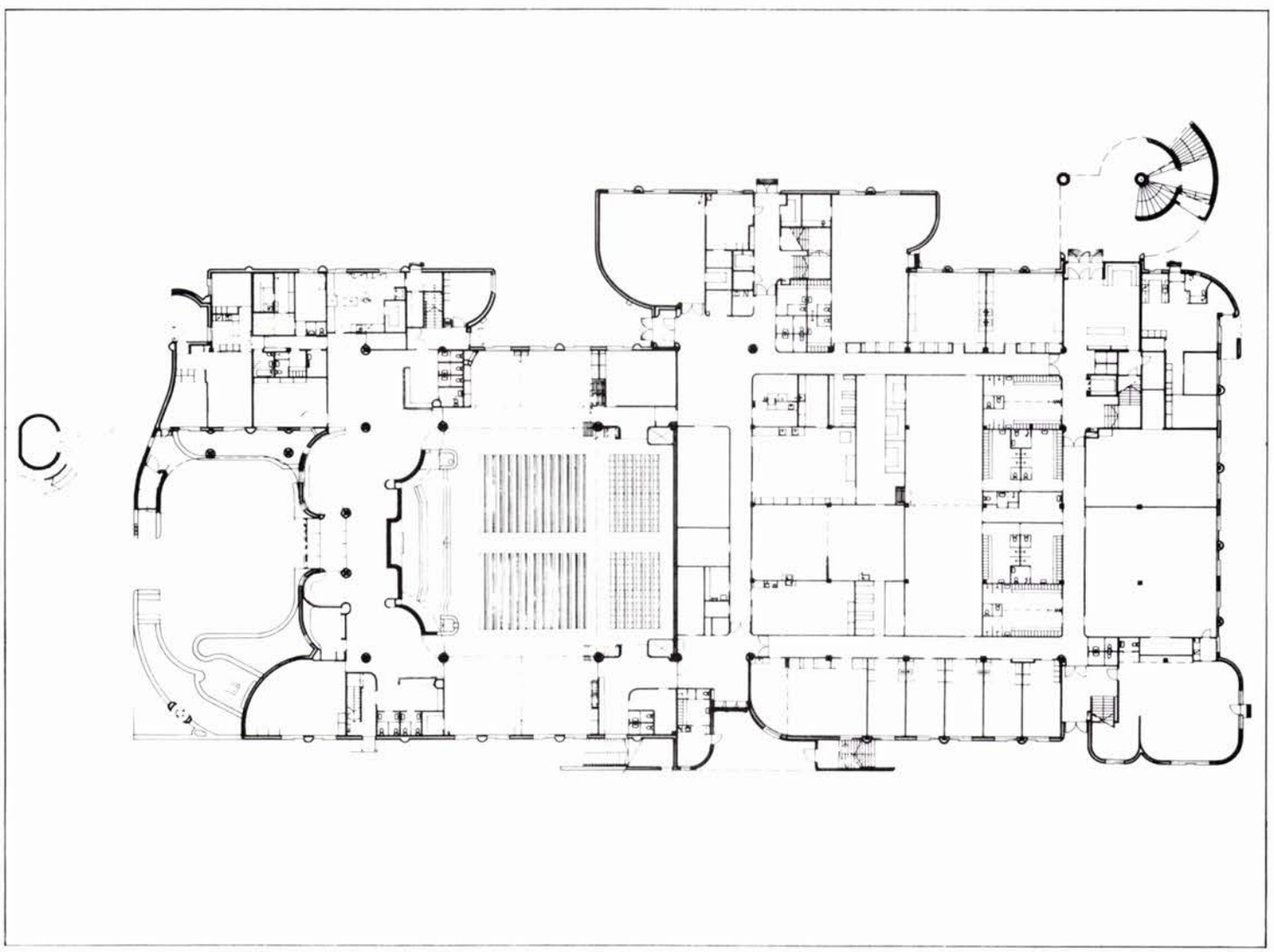
Museum of Finnish Architecture

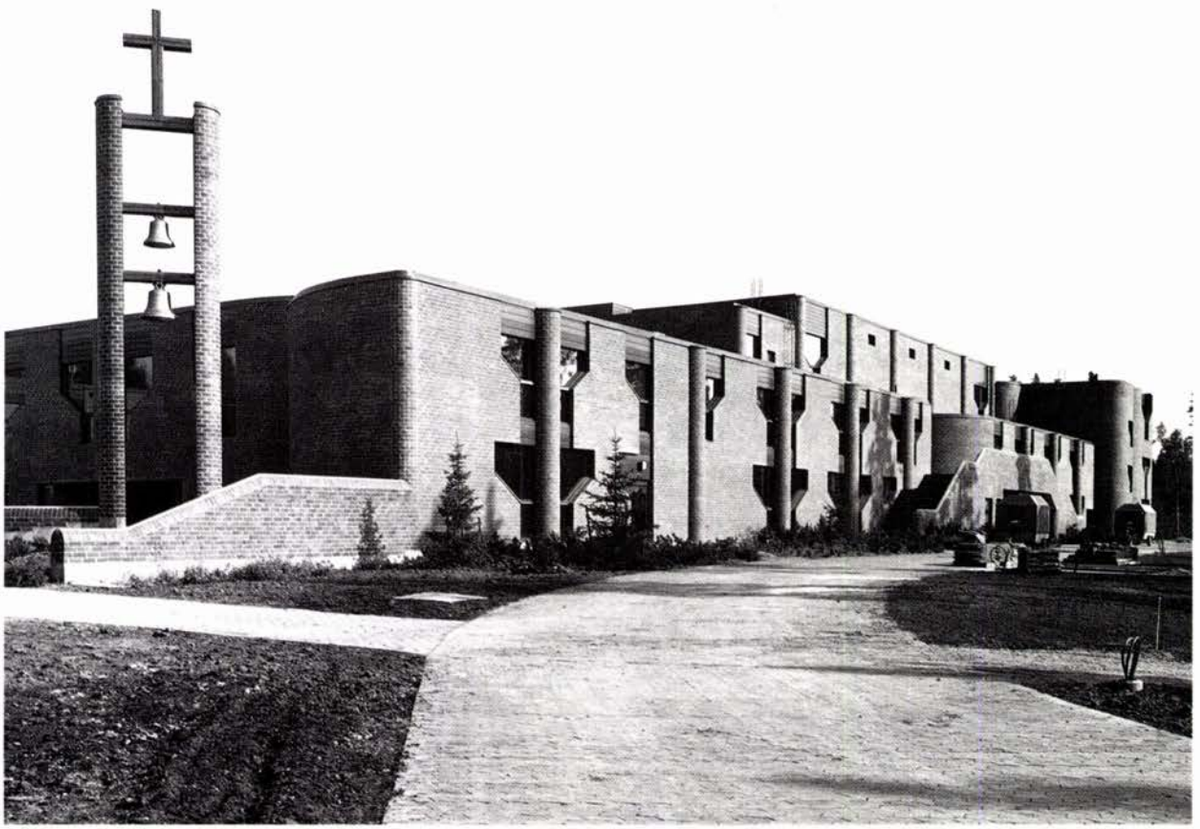
Exposed concrete wall interior with light yellow tiles on the exterior. Vertical window elements of thermoglass with wooden sashes. Trim and furniture are of pine, with a sand brown clinker forming the floor.

Martti Jaatinen



Congregational and Leisure time centre, shopping centre at Hervanta New Town, Tampere. Constructed 1978-79. The congregational centre is for liturgical uses; it has spaces for meetings and administration. The leisure centre combines athletic facilities with classrooms and offices for community organizations. The shopping centre has commercial and retail and catering facilities.

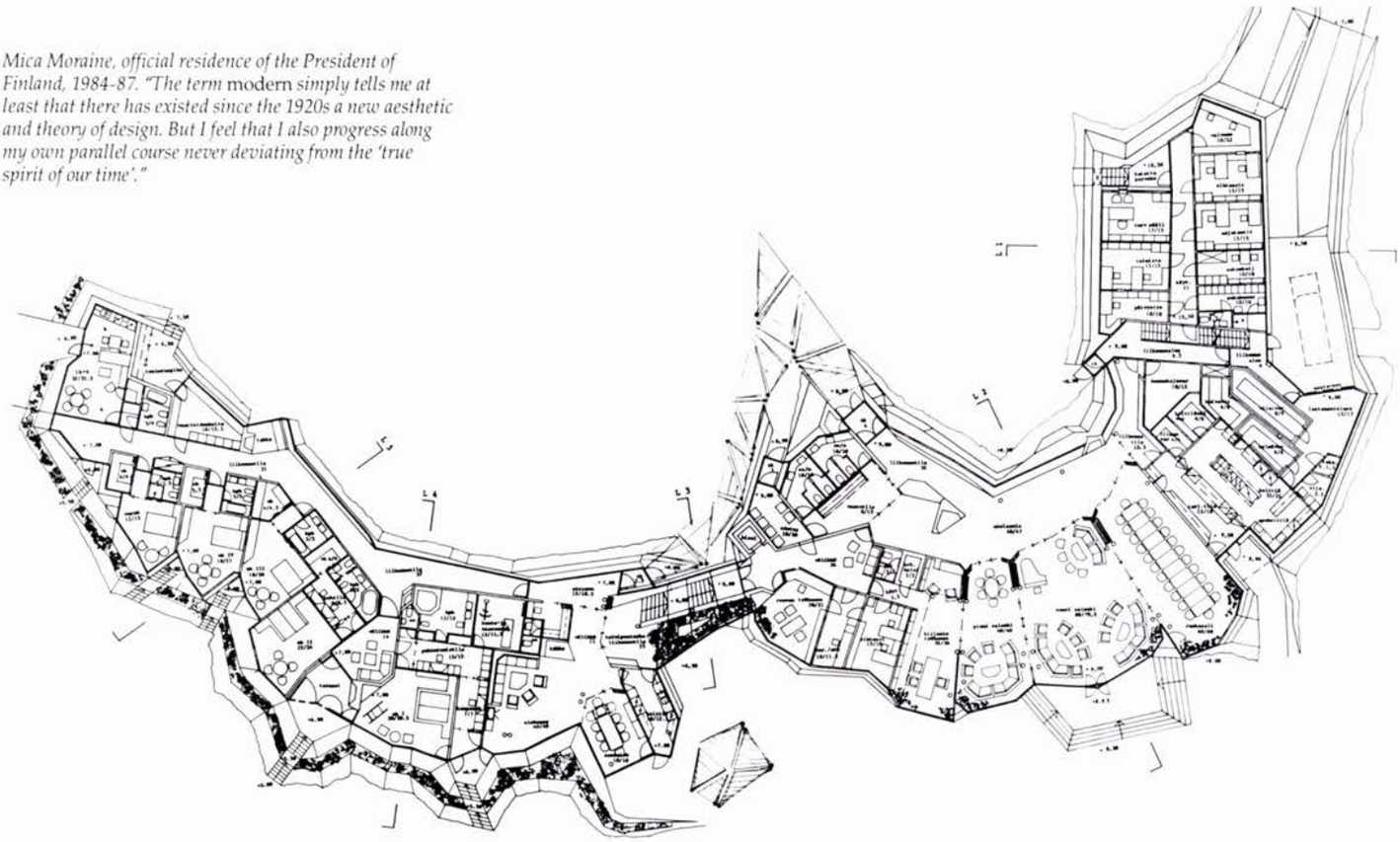




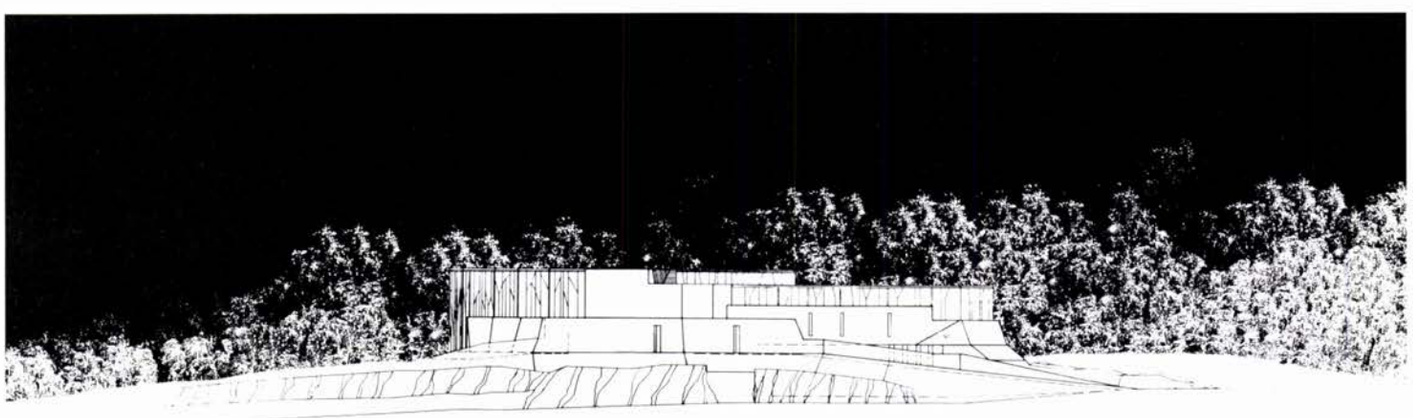
Johann Rocksola / Museum of Finnish Architecture

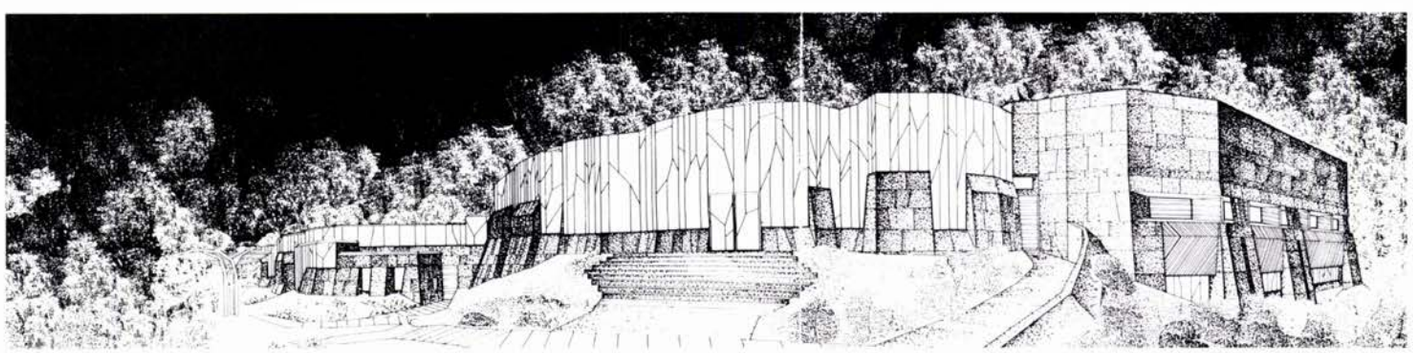
Reddish hued bricks have been used extensively throughout the building. External metal surfaces have been painted blue and red. Exterior aluminium doors have rounded wooden sash and trim.

Mica Moraine, official residence of the President of Finland, 1984-87. "The term modern *simply tells me at least that there has existed since the 1920s a new aesthetic and theory of design. But I feel that I also progress along my own parallel course never deviating from the 'true spirit of our time'."*

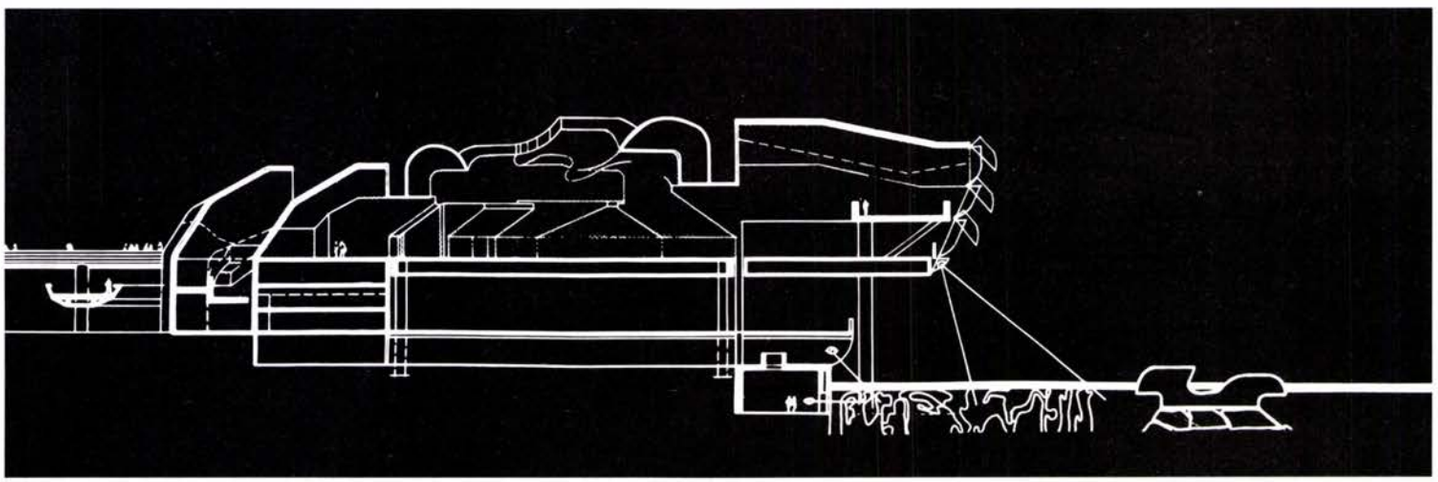


Constructed on a large stone plinth varying in height with extensive use of glazed areas subdivided into a filigree branch pattern of mullions.





Monte Carlo Multi-purpose centre, Monte Carlo, Monaco designed for a competition in 1969. A marine biological metaphor: the sea crab and the mouth of a polyp, pebbles along the seashore. Designed for internatioanl congresses, the interior spaces have been thought through with flexibility in mind. Both roof and floor have moveable sections.



Reima Pietilä – BIOGRAPHY

Reima Pietilä was born in Turku, Finland, in 1923. He graduated in architecture from the Institute of Technology, Helsinki. From 1953 to 1960 was employed in the public sector, in the planning department of the city of Helsinki, and later in the Building Administration office for the State of Finland. In 1960 he established a private practice with his wife Raili (nee Paatelainen) in Helsinki. His key buildings and designs include the following:

- Finnish Pavillion, Brussel's World Fair, Belgium designed 1956, completed 1958.
- Kaleva Church, Tampere, Finland, 1959.
- Brander Cafe, Tampere, Finland 1963 (demolished 1984).
- Summerhouse for Mr J. Nilla, Luonnonmaa, South Finland 1961.
- Suvikumpu Housing, Suvituuli Housing, Kukkatalo at Tapiola, Espoo City 1967-69 and 1981-2.
- New Delhi Embassy of Finland, New Delhi, India. Designed 1963, commissioned 1980, built 1983-5.
- Dipoli Centre, Institute of Technology, Otaniemi, Finland, designed 1961, built 1966.
- Monte Carlo Multi-Purpose Centre, Monaco designed 1969.
- Master Plan for the Deira Sea Corniche, Dubai 1974.
- Hervanta Congregational and Leisure Time Centre, Shopping Centre, Hervanta New Town, Tampere. Built 1978-9.
- Sief Palace Area Buildings, Kuwait City, Kuwait 1978-82.
- Intelsat Headquarters, Washington D.C. designed 1980.
- Lieksa Church, Lieksa, East Finland built 1982.
- Pori Old People's Home, built 1985-87.
- Mica Moraine, The Official Residence of The President of Finland, Mantyniemi, Helsinki, built 1985-87.

He is an honorary member of the Swedish Royal Academy of Liberal Arts (1969); Professor of Arts, Finland (1971-74); and an honorary life member of the American Institute of Architects. Pietila was presented the Prince Eugene Medal for artistic achievements in 1981. He was made an academician of the IAA (International Academy of Architects) in 1987.

All photographs by Dennis Sharp

Peter V. J. Klint exercised a style that brings expressionism and the north European gothic together – as here in his startling Gruntvig church in Copenhagen. It is a tour de force of brickwork.

Jonathan Glancey reviews the influence of Sweden and Denmark in twentieth century architecture. It is, he believes, an influence of good manners.

SCANDINAVIAN INFLUENCES

During the Second World War, Sweden was the one European country in which Modern architecture progressed. To war weary French, English, Dutch or Danish architects, Sweden must have seemed like some twentieth century Arcadia. Moreover, many of these new wave Swedish buildings were the product of social-democratic thinking and located in beautiful sylvan settings. From the heavily bombed and recently occupied cities of continental Europe, from the debacle of Nazi Germany itself and from ration book Britain, civilised architects could only gaze with admiration at black and white pictures, shown in what remained of the progressive press, of rational, well crafted, sane, clinical, low-rise social housing blocks, low cost lakeside restaurants, mountain hotels, ski resorts and co-operative stores.

When the war ended, books and magazines devoted to new Swedish architecture were legion. As Europe began to rebuild and until the late 1950s, the Swedish influence was out of all proportion to the size and importance of a country that had been predominantly rural until the early 1930s. Through its wartime neutrality, Sweden was able to develop a socially responsible and thoroughly modern architectural idiom well ahead of its southerly European neighbours.

Swedish architecture made its first international impression with the Stockholm Exhibition of 1930. Designed by Gunnar Asplund (1885-1940), this exhibition set the pace for a new white, "international" architecture that held a direct appeal for young architects throughout Scandinavia, Germany, Britain and the Low Countries. During the 1930s Swedish and Danish architects produced some of the most restrained, yet moving twentieth century buildings. In a well starred marriage between Neo-Classicism and Modernism, architects such as Gunnar Asplund developed an approach to building that, at the end of the 1980s, again looks fresh now that the late Modern spirit is engaged in a titanic struggle with a renascent Classicism. The Scandinavian experience of fifty years ago shows how a dynamic resolution can be achieved between what have been described, wrongly, as opposing forces.

In 1924 Asplund pointed the way when work started on his Stockholm City Library. Completed three years later, this hugely influential building demonstrated how a stripped-down, yet exquisitely crafted version of classical Roman architecture could work as a distinctly twentieth century contribution to the art of building. After the Stockholm Exhibition of 1930 Asplund was said to have become a fully paid-up Modernist. But he was never quite that. His late and perhaps greatest building, the crematorium in the Stockholm Southern Cemetery (1935-40) is a poignant work that demonstrates the great power and harmony of a truly twentieth century classicism.

It has taken the Swedes some while to reach this point of architectural equilibrium. The saddest thing is that, having reached such a high yet humane architectural plateau, the demands of postwar industrialisation and of a rapidly growing population prompted Sweden to produce some of the most banal of all pre-fabricated new housing. A "new town" like Vallingby outside Stockholm (Sven Backstrom and Leif Reinius, 1953-55) now seems intensely depressing. But then Sweden was hardly alone in making such mistakes.

But it does seem that Swedish architecture reached a high point before 1950 and the image of that graceful, intelligent, socially responsible architecture has stuck in the minds of European architects ever since. At the turn of the century Swedish architecture tended towards the flamboyant. The "National Realist" school adapted from the British Arts and Crafts movement, spawned a school of decorative structure that culminated in Stockholm City Hall (Ragnar Ostberg, 1911-23). Ostberg's masterpiece was already showing clear signs of impending Classicism. It was just a small step from Ostberg's City Hall to Asplund's City Library and from there to the eventual marriage between chaste classicism and rational modernism.

In neighbouring Denmark the transition from traditional to Modern architecture was, if not seamless, less ragged still. The Danes had developed their own abiding

The Town Hall in Stockholm, designed by Ragner Ostberg, has been influential in Britain – the use of the tower symbolises church, state, look-out and beacon.

architectural principles centuries before. Buildings in diverse, successive and overlapping styles were characterised by a sense of simple order, honest workmanship, propriety and proportion. It can be argued that the Danes have always been functionalists and that the "Romantic National" movement (again influenced by the British Arts & Crafts) was a short-lived aberration. The best Modern movement architects in Denmark have employed the same materials and exploited the same high level of craftsmanship as found in traditional and classical architecture.

When Danish architects have gone over the top in terms of architectural expression, they have nevertheless remained true to the craft tradition. Jensen Klint's extraordinary Grundtvig church in the Copenhagen suburbs (1913, 1921-40) stretches the artistic and structural potential of a medieval Danish village church to its outermost limits. Yet, although preposterous, the building is also memorable, not least for its magnificent brickwork. Somewhere between five and six million hand-made bricks were laid to such fine tolerances (so unlike most contemporary brickwork throughout the world in which all too often the pointing seems as deep as the bricks themselves) that ancient Rome has nothing more fair to show.

Equally, when the influential postwar Danish architect Arne Jacobsen (1902-71) paid homage to Mies van der Rohe in the design of his cuboid steel and glass tower for the Scandinavian Air Services headquarters and the Royal Hotel in Copenhagen (1958-60), the structural quality of this atypical Danish building helped it to stand on its own without fear of prejudice. In fact the only hostility shown towards Jacobsen's steely tower was occasioned by the unsympathetic gutting of its memorable mid-1950s interiors and their replacement by Post-Modern schlock in 1983-84.

A third unlikely Danish designed building is the outlandish Sydney Opera House (1956-73) designed by Jorn Utzon (b.1918). But in this case one has the feeling that Utzon was deliberately breaking the bounds of a pure and sometimes puritan architectural tradition and giving vent to suppressed fantasy. Well outside the Danish experience of building, Utzon was forced to leave this complex concrete building in 1966 for others to finish.

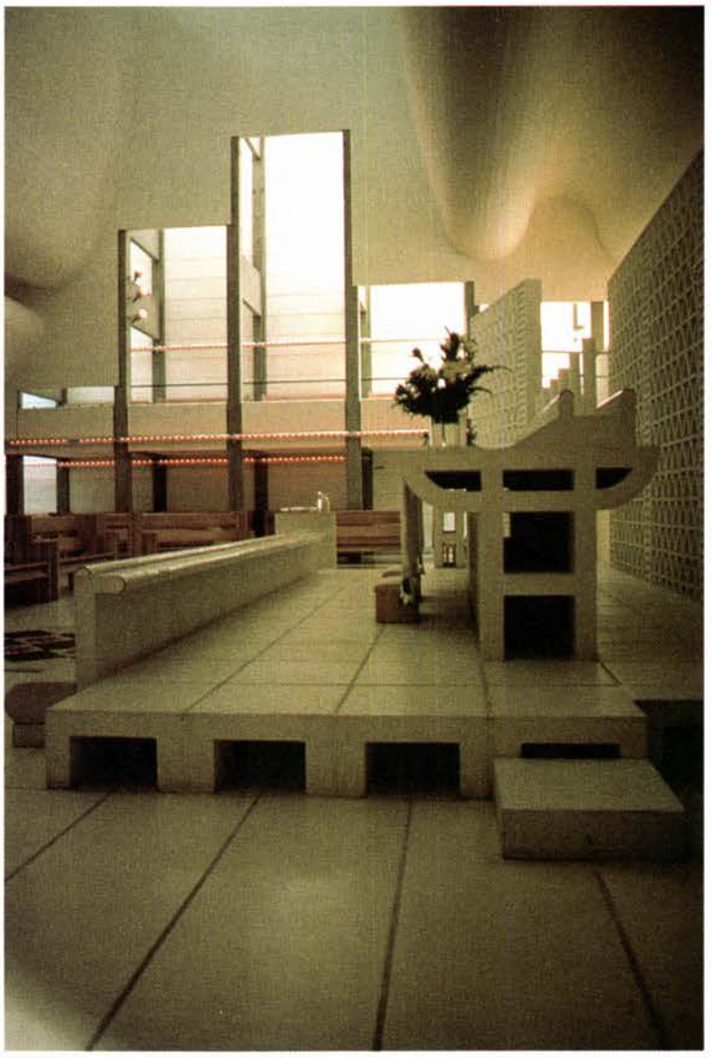
Of far greater significance than these three buildings is the chaste and ultimately beautiful Louisiana Museum in Humleback, completed in 1958 to the designs of Vilhelm Wohlert and Jorgen Bo. The visitor's experience of this simple brick, glass and timber building is of a walk in the woods. The plan of the building weaves (albeit by strict ninety-degree turns) through old woodland. Trees brush up close against the museum. Here, if anywhere and in the well-tempered environment of a building that could not be mistaken for anything other than mid-twentieth century, one feels that the Academy of antiquity has been recreated. Not surprisingly the Louisiana Museum attracted architects from Europe and the United States in much the same way as had the progessive and humane architecture built in Sweden during the late 1930s and throughout the 1940s.

It is easy to spot direct influences from Scandinavia in the work of architects from other European countries. Taking the British experience alone, one can see the

Church at Dagsveard near Copenhagen. Designed by Jorn Utzon the exterior gives little hint of the extraordinary beauty of the interior's undulating ceiling which takes the light like cumulus cloud.

influence of Gunnar Asplund in the dignified and acclaimed sequence of stations Charles Holden (1875-1960) designed for the London Underground and in the cemeteries he designed in France and Belgium for the soldiers of the British Empire killed in the Great War. Along with Edwin Lutyens, Holden is probably the greatest architect Britain has produced this century. His debt to Scandinavian design is unmistakable.

One can see the immediate influence of Swedish ideas in such public spirited post-Second World War buildings as the Royal Festival Hall on London's South Bank (LCC Architects' Department under Leslie Martin) and in dozens of low key public housing schemes. The Louisiana Museum formed the basis for Barry Gasson's romantic and popular Burrell Museum outside Glasgow (1971-84), while Scandinavian architects themselves have won several prestigious commissions in postwar Britain, notably with the design of St Catherine's College Oxford by Arne Jacobsen (1960-64) and the Byker housing, Newcastle-upon-Tyne by Ralph Erskine (1969-80). Erskine was born in London in 1914, but has lived and worked in Sweden since 1939. He was attracted by those very qualities – social consciousness, a commitment to Modernism and a high standard of craftsmanship – from which Swedish architecture was to earn its worldwide reputation during the Second World War.



Interior of Utzon's church at Dagsveard.

The Swedish influence repeated in the United States (the works of Jacobsen, Aalto and the Saarinen brothers spring immediately to mind) and reverberated gently throughout the western world. But since then Scandinavian architecture has made few headlines. Sweden made unwholesome mistakes with prefabricated buildings in the sixties and seventies and sad attempts at gimcrack Post-Modernism (best left to the Americans) in the 1980s. But given the current reaction to the wilful excesses of Post-Modernism and a renewed interest in distinctly modern themes, Scandinavian architects might just find the time is right to reconnect with the high points of their own history and begin to impress the rest of the world all over again. □

NORDIC NUANCES

Social architecture and social design are taken to be a seamless entity in the social welfare states of the Scandinavian countries. Here the Norwegian design historian, Professor Fredrik Wildhagen, examines the values of Scandinavian design. He argues that there is much evidence to show that the Nordic designer works hard at serving other people but designers have yet to think more deeply about the broader issues that make up the environmental debate. Humanist design does not necessarily mean green design.

When the Danish "02" (Green) design group held a presentation at a symposium at the prestigious Louisiana gallery outside Copenhagen in Autumn 1988, little impression was made upon its audience.

02 argued that to produce successful and environmentally aware consumer-orientated products, designers must develop new approaches in technology, production and materials. The existence of a damaged ozone layer, deforestation, and industrial and urban pollution demands a fundamental change of attitude on the part of designers and, it follows, architects.

It will surprise non-Scandinavians, used to thinking of Scandinavia as the region most interested in environmental matters, to learn that the Nordic design community has reacted to the environmental threat with silence. The issue is on the political agenda of the four countries (Denmark, Finland, Norway and Sweden) but not on that of the designers.

Utopia Silenced

The only project to see the light of day is the *Norden 2030* book written and published by the visionary Fenno-Swedish designer, Henrik Wahlforss in the early 1980s. The book outlines one of the few Utopias to be conceived in Scandinavia. His approach, when applied to products, is ergonomic. He was one of the founders of the prominent *Ergonomi Design Gruppen* in Stockholm. His book was silenced to death by the reproving Nordic design community. They disapproved of his deviation from the mainstream of consumer-related Nordic design.

Few people can doubt the need for a thorough discussion of pollution, the survival of the earth, and the need for people to live at peace with themselves and surrounding nature. But there has not been a single seminar, issue conference or discussion organized by designers, to debate the issue.

Semantics and Management

Instead there are highly professional symposias with themes such as "product semantics treated as the new and rational tool for designers to improve product performance quality" and design management conferences organized by design institutes to bring designers and businessmen together. A new and strong unity between designers and industry is developing.

These initiatives seem to be triggered by the success of design of the last two decades, and by the immediate challenge of the magic year 1992 when the European Community drops most of its internal trade barriers. There is a paramount need on the part of the Nordic industrial companies to improve product quality in order to survive and succeed on the international market.

But companies and designers have not shown a particular interest in the immediate threats from the deteriorating environmental conditions. The action has mostly been carried out by young people and activist groups – and thus the issue is not considered fully acceptable. The generation of designers in the 1960s –

which now manages design throughout the region – has become both pragmatic and established. Obviously these designers are less attracted by that which is in fact newer than that which they rebelled against years ago. Nothing makes you feel older than the sight of youth regarding your own rebellions as either irrelevant or damp squibs.

In any case, the environmental issue requires a good deal of conceptual thinking and redefinition by the designers. As I see it we are in a latent period of transition: the issue is bound to be released, but needs a strong releasing factor. Designers are basically doers – they are makers of things, not concepts.

The Makers

Nordic designers are the offspring of the century-old art and craft tradition, rather than the children of academic and theoretical training. They are workshop oriented, sensitive to how things work, are joined and put together. Scandinavian designers have an intimate knowlege of materials and processes, of handling details and surfaces, materials and performance. This valuable attitude implies, however, that as long as there is a national or regional consensus of value and directions, designers do a good job based on those shared values. But, confronted with the silent revolution of the microchip and the need to adapt to the perspectives of the Brundtland commission (a United Nations environmental review called "Our Common Future" was chaired by the Norwegian Prime Minister Gro Harlem Brundtland), designers in Scandinavia are whirling like erratic weathercocks.

Design Programmes

This non-conceptual, workshop oriented approach is confirmed by the Scandinavian design education system. In Nordic countries design courses are run by a series of respectfully old institutions dating back to the mid-19th century. (Newer design institutions do exist – the latest is the Umea design department at the regional university in Northern Sweden – but none of them are key institutions in the capitals.)

Some designers have been recruited

Jens Nielsen/DSB Design: IC/3 Inter city coach, produced by Scandia Randers, Denmark, 1989.

Jens Frederiksen

Iacob Heiberg/NSB Design: WLAB/2 sleeping car, produced by Stømmens Vaerksted, Norway, 1989.

Jan Trägårdh: Personal telephone AP 6112, weight 480 grams, Philips, Denmark, 1989.

from the crafts – like the highly outstanding Danish furniture designer Hans Wegner, or the much younger yet famous Finnish designer Yrjo Kukkapuro. Design students are brought into an uncompromisingly humanistic tradition and trained as practical problem solvers. They do have, however, a tendency to work outside-in rather than inside-out, even if they like to argue the other way round: workshops are overcrowded while the institutions' well-equipped libraries are mostly used for their illustrated magazines and glossy books in the search for visual stimulations.

It is, however, an invigorating fact that in these design institutions, crafts, fine arts and product design exist side by side, allowing the possibility of cross stimulation. Over the past few years designers have taken up the challenges from the crafts people and small-sized production series. This new diversity and cross-fertilization has opened the way to the other fields of the visual arts: the barriers – almost iron curtains – between craft and design in the 1960's and 70's have broken down and new roads opened up.

Regional and Contemporary

In the mid-1980's Peter Opsvik was commissioned by a Norwegian West coast container factory to devise a new production range: the fisheries had dried up and the company which made wooden barrels for salted fish was about to go out of business. Opsvik, a furniture designer, suggested they continued producing the cylindrical wooden structures, and he would use them to design cupboards and chairs for a limited serial production. The product concept was based on combining craft quality and design values: the chairs were to express their craft based regional origin and the quality of contemporary design. The Swede, Ake Axelsson, has shown a similar regional approach in his conscious emphasis on traditional carpentry and material quality, found in his exposed construction.

Simplicity in production is also visible in Finnish furniture design, as in Scandinavian design in general: Nordic furniture companies are not as sophisticated in terms of production machinery as the leading continental factories with a much higher production volume. As a result, chairs by Finnish designers like Simo Heikkila, Yrjo Wiherheimo or Ben of Schulten are not based on hi-tech production systems but on the designers' highly advanced language of form.

Classicists and Romanticists

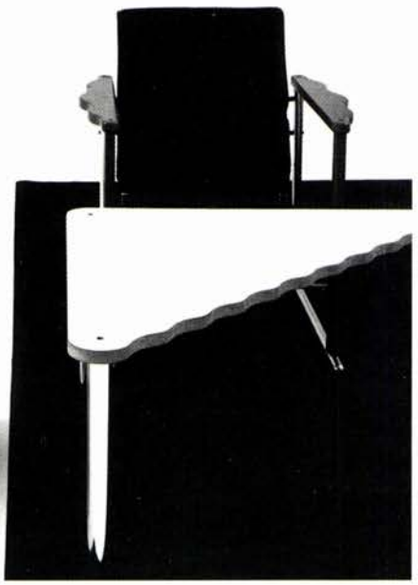
In his rather free-style classicism, the Danish Peter Hiort-Lorenzen has developed tête-a-tête sofas emphasizing the additive rather than the integrated approach, and using strong clean colours to visually separate the independent moulded parts. With his Danish sense of classicism, his solutions and those of Anders Hermansen – a young Danish designer of the new generation – are convincingly disciplined and straightforward: another expression of the designer's language form.

With Svein Gusrud's *Stand In* chair-like construction we can identify another general characteristic in Nordic design – its space-related quality. Designers are primarily space oriented in the sense that furniture is related to rooms, be they public or private. *Stand In* is questioning the quality of public spaces: if you are in a bank or a post office you should not be met by a cosy fire-place and comfortable sofas as if you were at home. *Stand In* tries to visualize what a public space wants to express through the act of waiting.

Project and Product

There are equally visible national differences of approach to be found in industrial product design. The Swedish innovative ambulance stretcher, which received the Alfa Design Award in 1987, embodies the needs of the ambulance personnel as much as those of the patient. The construction is light, a colour scheme identifies frame and stretcher, and each functional element has been carefully developed. It is an easily identifiable product based on a fundamentally ergonomic approach – an approach which has brought much success to the Stockholm based *Ergonomi Design Gruppen.* Another of their design projects, a kitchen knife and cutting board unit originally designed for the manually handicapped, has proved its integrity in general use all over the Western world. A rare case where design has lent dignity to a product for the disabled which few specialized tools ever obtain.

But when these projects are compared, for instance, to the Danish designer Jan Tradgardh's mobile telephone set designed



Avarte

Manne Stenros/Avarte

for Philips, the results are quite different. Where the EDG group is coarse, Tradgardh is soft, but both have a highly professional attitude and approach to design. While the Swedish designers are *project* oriented, the Danish are *product* oriented.

With sponsorship from the Norwegian government, Kirsten Osmundsen designs clothes for people with deformed bodies. The clothes are designed to be both modern and easy to wear, as well as easy to put on – even when sitting in a wheel chair. Similar design projects have been carried out by the in-house design group at the Norwegian Kelly-Hansen company producing work clothes for fishermen, survival suits for off-shore use and clothing for children's outdoor playing.

Social and Public

Scandinavian designers have deliberately maintained a commitment to social design, an attitude put into perspective at an Italo-Scandinavian design conference a few years back. The Scandinavian designers were concerned with the development of design activities in the far Northern calotte region, but received no response from the Italians: their concern was not for the underdeveloped region of Southern Italy, but for the opportunity to work freely and creatively with innovative design solutions for a sophisticated international market.

A solid collaboration between designers and public bodies has shown itself in a wide range of commissions for the public transport system throughout Scandinavia. Jens Nielsen has been responsible for the design programmes for the national Danish railroad company since the beginning of the 1970's. More recently he developed a new InterCity train with a more spacious interior, comfortable seating facilities and a smooth ride. The same approach has since been adopted by the Norwegian railroad company. Their design office has come up with substantial improvements over the years in terms of rolling stock and stationery. Their latest wide body sleeping car is a highly interesting project.

Designers in Scandinavia are doers. Their projects merit the recognition they get, but they lack the vision needed to meet the challenges of the new and invisible: the hi-tech post-industrial informations society, the green wave, and the more down to earth challenge from the ever more competitive open international market with less and less home market protection. □

Left to right:
Anders Hermansen: Chair, steel and leather, Paustian A/S, Denmark, 1988.
Anders Hermansen: Full scale metal thread model of armchair, Denmark, 1988.
Yrjö Kukkapuro: Sirkus chair, steel, wood and plastic, Avarte, Finland.
Yrjö Kukkapuro: Experiment chair, painted wood, leather and steel, Avarte, Finland, 1989.

Painting by Nigel Coates

PLEASURES OF UNEASE

Beginning with a review of the six principles which, says John Thackara, shape the modern city, our guide through the thickets of post-modern chaos takes us on a tour of Tokyo.

The experience of urban modernisation is both traumatic and contradictory. Traumatic, because of the pressures imposed on citizens by the constant change generated by economic and technical progress; and contradictory, because it is this very unease and instability that gives modern cities their energy and excitement.

The question is: is the modern metropolis a disease of modern life that we should attempt to "cure"; or is it the inevitable corollary of a dynamic economy, and one which we should adapt to, and appreciate?

There are a number of issues:

Cartography: The modern metropolis has become too physically extended to be contained within the traditional boundaries of a city map. The idea of a "city limits" has been superceded by the growth of metropolitan areas hundreds of miles across – Los Angeles, New York – Washington, Mexico City, Greater Bombay – we can no longer *enclose* our cities by clear cartographic means, and face what the philosophers call a "crisis of representation" in the city.

Planning: The last 20 to 30 years have seen the progressive collapse of attempts by governments (city or national) to organise the growth of major cities in a planned way. For two reasons: first, that traditional "grand planning" techniques have been shown to fail; and second, because, ideologically, conservative administrations in Europe, America and Japan have believed that "planning" acts as a constraint on the natural growth of a free market – and that market forces, not planning procedures, should dictate the way cities grow.

Finance: Historically, the social and geographic organisation of cities was determined by the nature of their economies: some cities were the nexus of trade routes; others were noted for the exploitation of nearby raw materials; some developed because they were easy militarily to defend. But in recent years, the internationalisation of business has made the matter of geography less important in a city's development – a city's location in *time* is now more important than its location in space in determining its economic position.

Travel: The fact that people may now travel around the world in a matter of hours changes their perception of a city; "far" and "near" have changed their meaning – and with that change, so a city's self-image changes too. Sydney, for example, once had a rather insular, inward looking character simply because it took so long physically to reach anywhere else; today, Sydney acts and feels more like other metropolitan centres, because it's "nearer" the world's other centres.

Technology: Technology changes the spatial organisation of a city: in much the same way that the motor car created suburbs in the European and American city, so the arrival of networks of distributed communications renders potentially obsolete the need for people to be physically concentrated in one place (the city centre) in order to carry out their work. Digital technology not only redistributes work – it can destroy jobs altogether. The actual size of the workforce – another determinant of "urban mass" – is challenged by the new technologies.

Society: The impact of these "technical" aspects of modernistion has a catastrophic effect on many sectors of the population dispossessed or threatened – whether with the loss of work, or even the loss of living space as escalating land prices make it harder for ordinary citizens to live in the city at all. The ghettoisation of cities such as Los Angeles leads to the introduction of "siege architecture", whereby issues of policing and public order begin to influence the design of buildings and whole zones.

The cumulative impact of these overlapping changes is to create a series of crises for those professionally involved with the modern city:

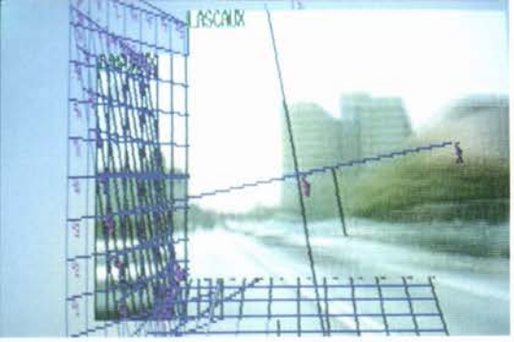
A *crisis of representation* – how should we "picture" this sprawling, ever-changing mass?

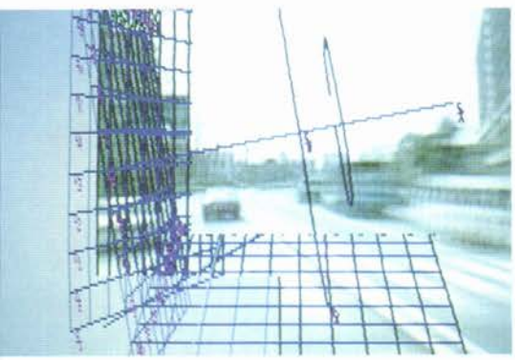
A *crisis of control* – is it possible even to consider planning the development of cities, or must we retreat into consideration of discrete fragments and individual buildings?

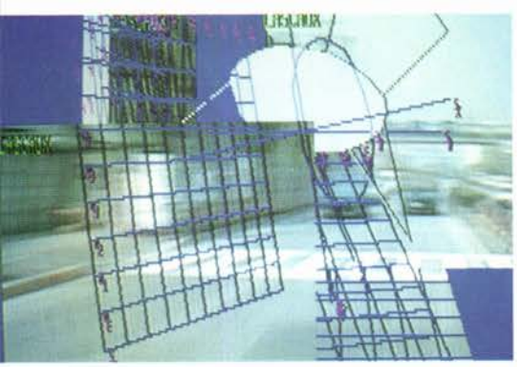
A *crisis of design* – many architects were trained in the modernist tradition with its emphasis on the very ideas of *totality* (city planning, whole buildings conceived by rational means) that are being challenged by the current changes outlined.

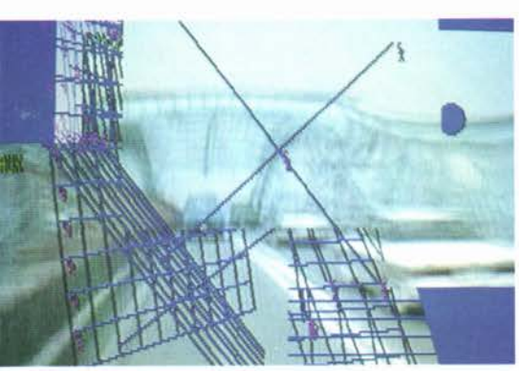
Modernism in design implies a clear vision of the big picture, and, in consequence, a degree of aesthetic clarity – but this knowledge, this clarity, seems to have been subverted by events. What can designers fall back on?

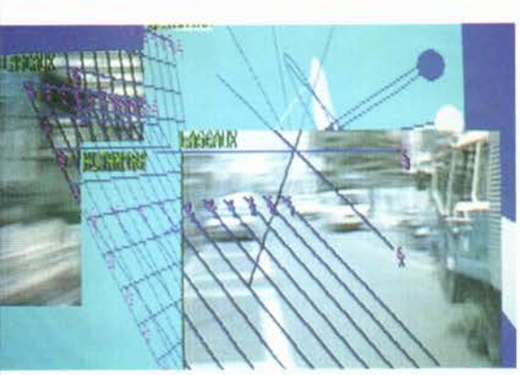
It is this sense of *unease*, caused by the sweeping away of our old certainties about design, architecture, planning and the city that this article addresses. My question: can we find, in Philip Johnson's words, "pleasure in unease"? And can we develop an *architecture and planning of change* which does not simply hand over control of our environments to the forces of business and development, but which can rescue our modern environments for social and cultural values, too?

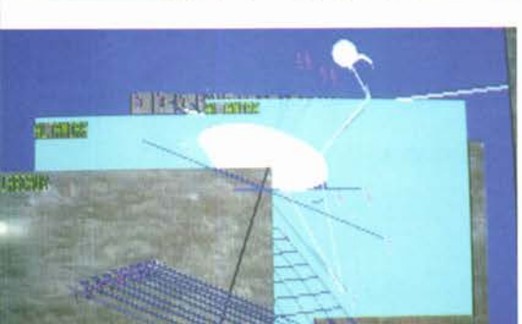












Ke'iche Irie's "Homage a Lascaux" project involves the use of computer programmes to "subvert" the rigid thinking of traditional architecture. Here, random number programmes distort the on-screen "grid", which is, in turn, superimposed on images of the city; for Irie, technology frees his thinking from the constraints imposed by traditional architectural training.

Travels in Tokyo

In Tokyo, cement trucks sport the slogan, "Begin The Next". Buy sellotape at the corner shop, and the bag carries a slogan: "Perhaps We Are At The Beginning Of A New Renaissance". Ride Honda's new Dio motorcycle and an entire text on the faring declares, "Movement. The City is a 24-hour stage where we act out a life. Be it day or night, we go out anytime looking for something new".

Hardly surprising that they call Tokyo the Printed City, the Sea of Desires: its citizenry revel in continuous change and innovation. In the West, we whinge about our insecurity, and the ephemerality of all we hold dear; in Tokyo, they exhilarate in the perceptual white noise of an information-rich environment.

Small wonder that the city has become the centre for a new phenomenon: post-modern tourism. Tokyo today is like America during the 50s: you go there to wonder, childlike, at a fantastical world where everything works – only in Tokyo's case, it's not just the phones, but a whole new culture.

Getting Real

Scene: the basement of Cleos, a very dingy nightclub in Roppongi, Tokyo's fashion and entertainment district. By 3 am, Cleos is packed, its clientele almost exclusively Western models, photographers, stylists and other camp followers of the fashion circus. They take drugs like popcorn and dress expensively. But their confident manner cannot disguise a sense of desperation: there's panic in the air. Even the hard ones are *Tokyo crazy.* Psychologically, Tokyo is like New York: you have to be born to it, or it takes a toll.

The new geography

Scene: any street. Tokyo lacks a visible *plan,* of the kind that we choose to find reassuring in London, Paris or Vienna. Tokyo is the paradigm of the modern de-centered metropolis. It's not so much that is disorients you – you never get oriented in the first place. Tokyo is a place-by-place place – how each location relates to the last remains obscure. Lacking vistas and grand plans, you have no sense of travel between points: rather, you leave one experience, and start another

somewhere else. The intervening motion is out of place and time.

Europe's boulevardes and ringstrasses were built by tearing the hearts out of the old town; Tokyo, in contrast, has evolved chaotically. From the top of Tokyo Tower, you see none of the neat radial lines that denote the hand of one dictator or another in Europe – the "Great Weavers", as Giles Deleuze calls them, bulldozing wefts and warps across whole districts and underclasses. Tokyo is a patchwork, added onto bit by bit.

Soft Buildings

Post-modern Tokyo has fostered a remarkable design and architecture revival – but you have to see it in context. Over here we remain in thrall to the stereotype of Japanese design as exquisite minimalism. This idea is the legacy of work during the 70s and early 80s by architects like Tadao Ando, who refined an aesthetics of order, and designed perfectly-formed little worlds (and some big ones) as refuges from the chaos and disorder of the street. Ando's stark, concrete walls and interiors are a miracle of spatial control, and they're beautifully finished – but it's not what Tokyo, now, is about.

The sea-change was marked for some by a famous argument when Nigel Coates, the radical western architect, was hired to design the interior of an Ando building. Coates represents not just western street credibility, but, more importantly, an attempt not to hide from, but to welcome, change.

The new sensibility, according to Ke'iche Irie, one of several brilliant new Japanese architects to challenge the old guard. He said, "I value the fact that Tokyo is like a computer program that ceaselessly keeps on adding new subroutines. Whereas western language itself, and western aspirations for buildings, emphasize order and clarity, and seem to us to be like a straitjacket. We don't believe in moulding life to the straight lines of an ideal building."

The new architects flourish on a diet of theory, fashion, and stupendously rich clients. The reason: so heated is Tokyo's real estate boom that any device that can add value to even small patches of land is worth paying for. Hence the concept of buildings as "news" – objects possessed of sufficient design or fashion charisma that they attract attention to the surrounding area which becomes smarter – and more valuable. In Roppongi, for example, one developer spent $40 million on a nightclub, "Turia", that "paid" for itself before its doors even opened – just because adjacent small lots, which he also owned, shot up in price.

Comme Des Fire Hydrants

Another star of Tokyo's building-as-icon boom is Shin Takamatsu, famous for designing a dentist's studio in Kyoto that looked like an aluminium steam engine, and a club in Osaka that looked like nothing on earth. It is extremly satisfying to discover that Takamatsu, live, matches one's fondest stereotype of a fashionable Japanese architect – dressed from head-to-toe in Comme des Garcons, surrounded by beautiful assistants, and ready to drop references to Kafka, Mishima and fractal geometry in conversation. Takamatsu speaks of buildings as "objects", well aware that in Tokyo, buildings are indeed commodities – bought and sold, made and destroyed, in a frenzied bazaar.

But just because buildings are icons and may soon be torn down again, does not mean they are badly made. On the contrary; although Tokyo's vistas appear confused – cluttered and insubstantial to western eyes – the quality of detail in things small is a miracle to observe. Door handles, fire hydrants, tiling on doorsteps, all can be exquisite. Even Takamatsu, master of the ephemeral building, points out that "hard materials have power: the problem with western design is the poor quality of the facade – in Japan we believe in the concept of deep surface, no matter how short a building's life".

Thin Skins and Disappearing Buildings

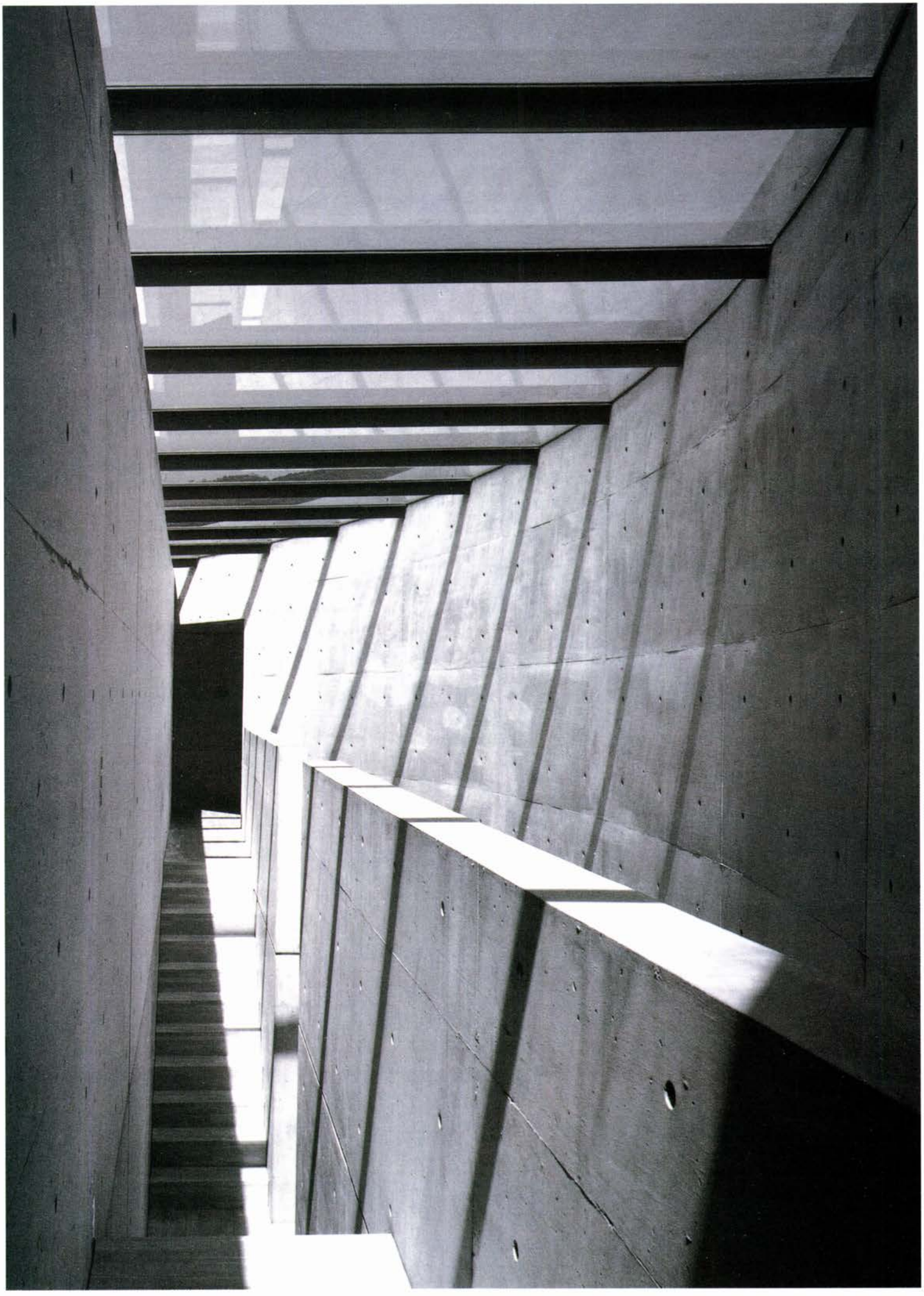
If the new urban sensibility in Tokyo recalls Marshall Berman's remark that "the modern project is to make yourself at home in this maelstrom, to make it your *own*", then another of the key players on Tokyo's urban landscape, Toyo Itoh, is particularly comfortable. Itoh has made flux and ephemerality in architecture the basis of his work. His extraordinary Toky Tower in Yokohama, for example, a 30 metre high membrane-covered structure, software controlled, changes its very mass according to the wind, amount of daylight, even the density of the crowds which surround it. "Our obsession with walls has been replaced by a search for *openness* and *transparency* in buildings, to be positive towards the outside world". Itoh is a leader in the use of thin-skins, or membranes, to make buildings permeable – to make them "disappear", as he puts it. "Buildings are like clothes – sometimes we feel sensual, and feel like going naked."

Modern Movement

Getting to one of Itoh's naked buildings tends to be a life event in itself. If Tokyo's overall plan is opaque, its transport arteries are, at first, a complete mystery. Tokyo's roads stride along on huge earthquake-proof legs – some, hundreds of feet up in the air. As you crawl along in an interminable jam, you can see straight into the twentieth floor of the skyscrapers, where thousands, tens of thousands of identically-dressed salarymen work away until late at night. This sight alone must dismay arriving businessmen – a vast human beehive buzzing with effort, never stopping.

Another surprise: the cars are so *big*. In the central districts, there are hundreds of 560 Mercs with tinted windows – these belong to the Yakusa; recently, so heated has one-upmanship among the gangsters become, they've started stretching their Mercs, adding six fur-lined feet or more. They leave them in rows outside the clubs, engines running, keys in the lock – a million dollars' worth of cars that nobody takes.

And the taxis. They're all called Cedrics, or Glorias – dumpy great Nissans purring around. You realise that Japan exports all those buzzy little cars to the gullible West, keeping a whole array of heavy, silent, *comfortable* tanks for themselves. And all so clean: buy a gallon of petrol and a swarm of guys wash the whole car. Taxi drivers wear white gloves – whether to signify hygiene, or as protection from infection, is never clear. In contrast, taxis are painted in jolly pastel colours, with Chinese lanterns on the roof. The fancier ones have backlit turquoise numberplates.



Tadao Ando has taken the control of space and the detail of surface to a high level of refinement. With his understanding of space as an active, live medium, an Ando building stands apart from the chaos and tension of the street.

Sometimes, when not admiring the cabs, you see – again overhead – the bullet trains heading off for other cities. The Shinkansen are elegant, and their rounded brilliant white noses carve through the sky in high speed silence.

Under Ground, Out of Time

Tokyo boasts a brilliant, perfectly run system of co-ordinated private underground railway lines which is almost completely mystifying to foreigners. Entering Shinjuku Station, a vast 500 acre interchange, you encounter an information landscape of stunning beauty and mystery – tens of thousands of Japanese typographic characters, on signs, on ticket machines, on TV monitors. Beneath them, hundreds of thousands of human Japanese characters move purposefully about, avoiding the foreigners who gaze about blankly, like whales stranded on the icecap.

Even the ordinary underground railway trains are attractive. Each line has its own company colours – but whatever the livery, trains gleam, as if someone had just polished every handrail. This is probably because some one just did. (In department stores, they employ doll-like girls to stand each side of the escalator, polishing the handrails.)

They Nurture Neon

Tokyo's skyline at night is literally flashy, thanks to the remarkable columns of neon that adorn the sides of most buildings – particularly in Shinjuku, where the commercial nightlife is based. The sharpness and high definition of these neon signs combine with the squareness of Japanese calligraphy to produce a stunning effect. Many of the signs are programmed, so that bars of light pulse up and down the columns of light like heartbeats. The signs are light-filled analogues of the buildings they are attached to: in Tokyo, shops, clubs and bars are stacked up high, storey upon storey – the pulses of light going up and down the neon columns remind you of lifts.

But just when you figure out some vague correspondence between what things look like and the way they are, Tokyo feints. For example, the addresses on peoples' cards and letters refer to three-dimensional points in space. No doubt an extremely sensible system if you are a pigeon, but not for the rest of us. It induces, once more, a sensation of displacement. The ritual of following directions (you have to write down verbatim things like "head past the red door, turn left at the blue hut and look up for the 'I feel Coke' sign – we're the third window along from that"). The fallibility of the system – odds are, someone will have painted the door – ensures that western visitors soon understand eastern thought processes, and in particular their tendency to arrive at a conclusion by a roundabout route.

Consuming passions

Tokyo displays all the symptoms you'd expect of a patient neurotically addicted to consumption. In discussions with business people you realise that they see "lifestyle" purely in terms of the products you consume. Companies disguise this behind strange corporate slogans that they add, free of charge, to what is already an information-saturated landscape. Sharp adds "New Life People" to its packaging; NEC plasters "Computers and Communications For Human Life" on its terminals; JVC, most puzzling of all, simply says "Charming" on everything. In Tokyo, sociology is a shopping list. A man from the Hakuhodo Life and Living Institute shows me a book called "Keeping Up With The Satos" which tells you how many "confident theoretical Japanese" give their grandmothers seaweed for Christmas (56%) – but tells you precious little about how they feel when doing so.

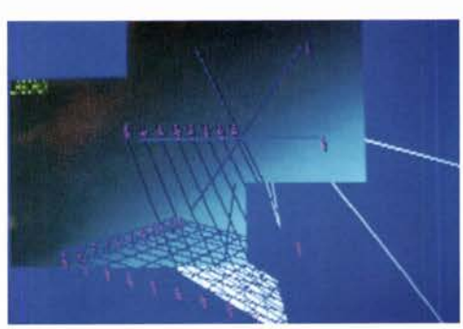
Everywhere, unlikely people tell you they want to know how to get into the information era *now*. A town planner from one of Tokyo's localities told me that "we have ten years to complete the transformation of Tokyo from a hardware to a software city". The architect, Takamatsu, says he sees Tokyo in the future as "a cloud, an ephemeral city".

Infor-mania

The only cloud on Tokyo's rosy post-modern horizon is the lowering threat of a terminal information glut. Hiroshi Sakashita, who runs Sharp's design centre, speaks of "information illnesses", and refers to "the sword and the vase: western thought is linear; you establish a line of questioning, and then attack it straight on, like fighting with a sword. This enables you to ignore extraneous matter. In Japan, our minds are more like a vase, filling up with all the data available – then we wait to see what grows out of it".

Information floods Tokyo – visual, intellectual, sensual; this, plus its cartographic obscurity, explains why it is so hard to comprehend as a visual or conceptual unity. Our very vocabulary in the West is spatially biased – we have more words to describe measurements than we have to describe feelings. What we certainly lack is the emotional apparatus needed to understand the interaction of space, time and process that marks out Tokyo, and other post-modern cities like it, as a new phenomenon.

Pondering it all, the dazed departing visitor passes, on the way out at the airport, a graphic symbol of Tokyo's position at the centre of something we can't quite put our finger on, a vast map of the world, on which key cities are highlighted not just by names, but by digital readouts of their different local times. Beneath, a single arrow says: "This Way".



WITH GRACE AND GRAPHICS

The models of late twentieth century architectural decoration created by the West have been lamentable, post-modernism produced only novelty confectionary. Samir Mahmood, engineer and chairman of an architectural and engineering practice which works throughout the world of Islam, demonstrates a finer way. Balraj Khanna, painter and novelist, found himself in sympathy with the ages old philosophy of this ultra-modern company.

Detail of laser-cut wood panel.

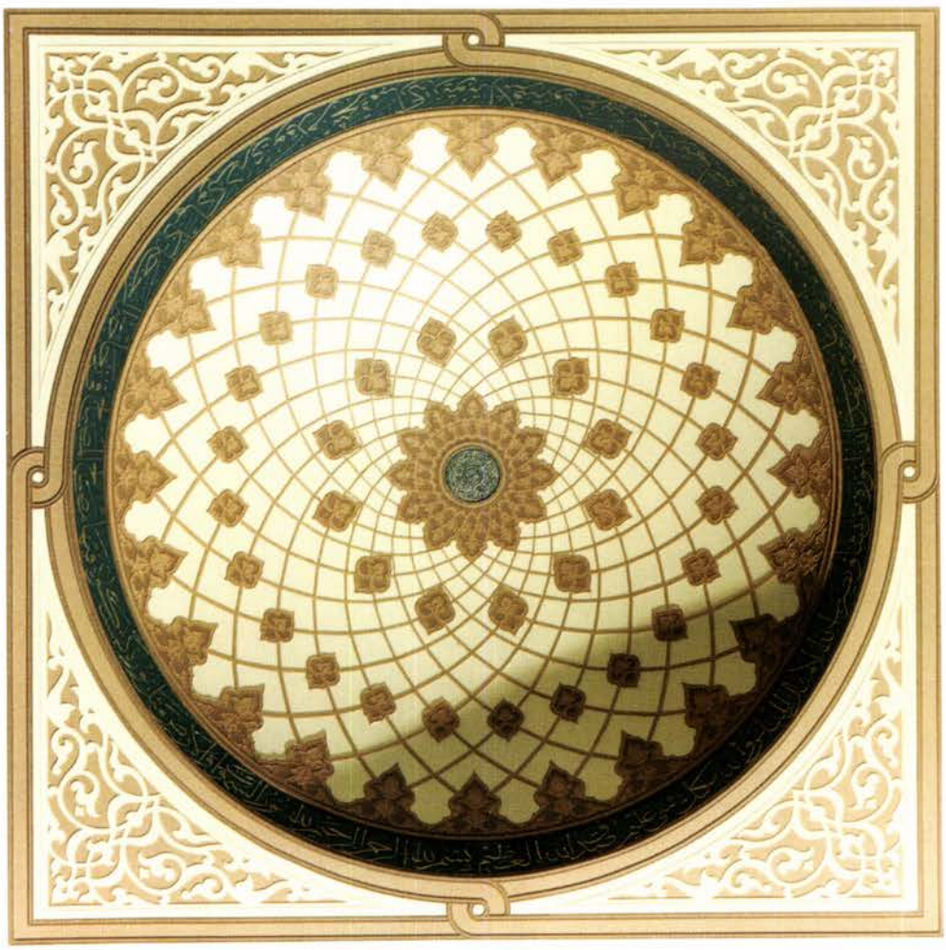
All photographs and illustration supplied by Turath Ltd

Turath is an Arabic word. It means heritage, Arabic/Islamic heritage. This heritage is one of the oldest and the most glorious in the world. As we approach the millennium, a design and architecture firm which specialises in building for the Middle East – aptly named Turath Ltd – takes up the challenge of ushering it into the new era by using the tools and techniques of the new era. Through an imaginative use of computer-aided design and advanced technological processes, Turath has revitalised some of Islam's most ancient arts, most notably its calligraphy and arabesque decoration.

Islam has an unbroken artistic tradition which spans centuries, continents and cultures, giving it an extraordinary sophistication and diversity. Yet there are forces and tendencies inherent in its makeup which accord to it a convincingly unified character, most visibly manifest in its decorative arts throughout the Islamic world.

These forces and tendencies spring from the universally held belief in the Faith, in the Word brought to the Muslims by the Prophet. The word was beautiful. Therefore it had to be rendered beautifully, whether it was in ink or stone. From the very beginning, Muslims considered that rendering the word beautifully was the noblest of arts. Their holy book, the Holy Qu'ran, reinforced this. It accorded the *qalam* (pen) its due importance by its reference to it in the first *surah* (chapter). At the same time, it spurned statuary which the Prophet equated with pagan idols. Allah was the true "fashioner", *musawwir.* He alone filled *His* creation with the breath of life, not the human *musawwir* – the painter or the sculptor. Therefore figural representation was not to be encouraged.

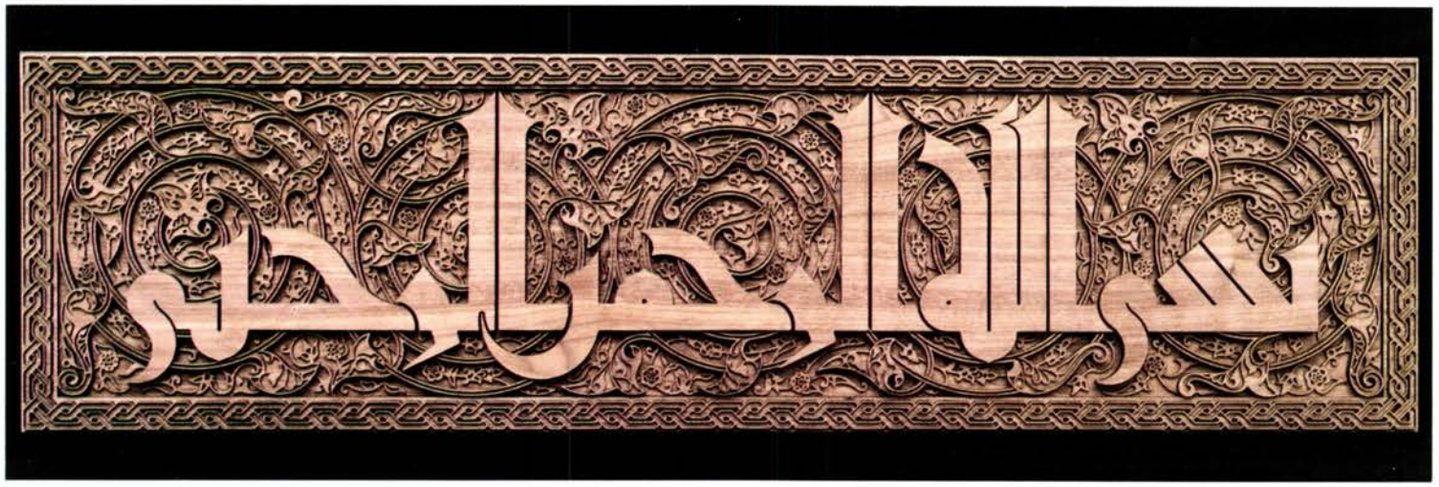
From early on, these principles established the direction Islamic Art was to pursue. They inspired the Islamic artistic genius and led it into the realm of abstract thought, finding its ultimate expression in calligraphy and pattern-making. Both lie at the core of Islamic Art and both are widespread throughout the Islamic world – the mosque and the minaret may differ from region to region, but calligraphy and pattern-making remain universal from Morocco to Malaysia, from Jeddah to Jakarta, transcending racial, linguistic and cultural differences, homogenizing the arts of Islam.



Model of a wooden dome. Laser-cut decoration 18 m × 18 m.

In the development of Islamic calligraphy, the very nature of the Arabic script in which the Holy Qu'ran is penned, has been a determining factor. For it has qualities peculiar to it which allow for endless transformations of it without sacrificing any of its salient features. Paul Klee probably had the Arabic script in mind when he made that oft-quoted remark about taking the line for a walk – this script is admirably suited for such an exercise. The permutations and combinations for inter-mixing its alphabet are as inexhaustible as geometric pattern-making. The upright strokes and the curved languor of the letters make for easy, graceful manoeuvering, creating linear rhythms of immense virtuosity,

Laser-cut wood panel in Mamlouk style. Kufic calligraphy and floral background in 4 levels. Designed and implemented using CAD/CAM.



External ceramic panel for Makkah Gate, Saudi Arabia. Thuluth calligraphy. Approx. 6.5 m × 1.7 m.

charm and visual excitement. Their geometric structure, too, adds to their supple interosculation.

Traditionally, three forms of embellishments were indulged in: the calligraphic, which highlights pertinent quotes from the Holy Qu'ran; the geometric, representing the laws that govern the universe; and the floral as a homage to the living world. At first, the calligraphic inscriptions were intended as symbols addressed to the Almighty rather than the faithful. In due course the reason for their creation became one of providing a beautiful affirmation of the Faith.

This is the artistic legacy Turath has inherited and aspires to build on. It also shapes its moral philosophy. From its smart but unpretentious studios in London Turath tries to reach out to the great wide world of Islam from sand-swept Saudi Arabia to countries as far afield as Pakistan. Its chairman, Samir Mahmood, is a man with a mission. The soft-spoken Iraqi in his mid-forties is deeply conscious of his cultural identity, but he also admits to being a man of the world, qualities essential to succeed in aims that are laudable, in an enterprise which is more than a little challenging.

From an early age, Samir held a passion for the time-honoured art of his ancestors – calligraphy – which he avidly practised as a schoolboy in Baghdad. But it was not an ephemeral schoolboy fad. For, years later, he would return to it with a newfound zeal and purpose. Samir graduated in electrical engineering from Durham in Britain in 1965 and went on to

Internal ceramic panel for the Data Darbar Mosque, Lahore, Pakistan.

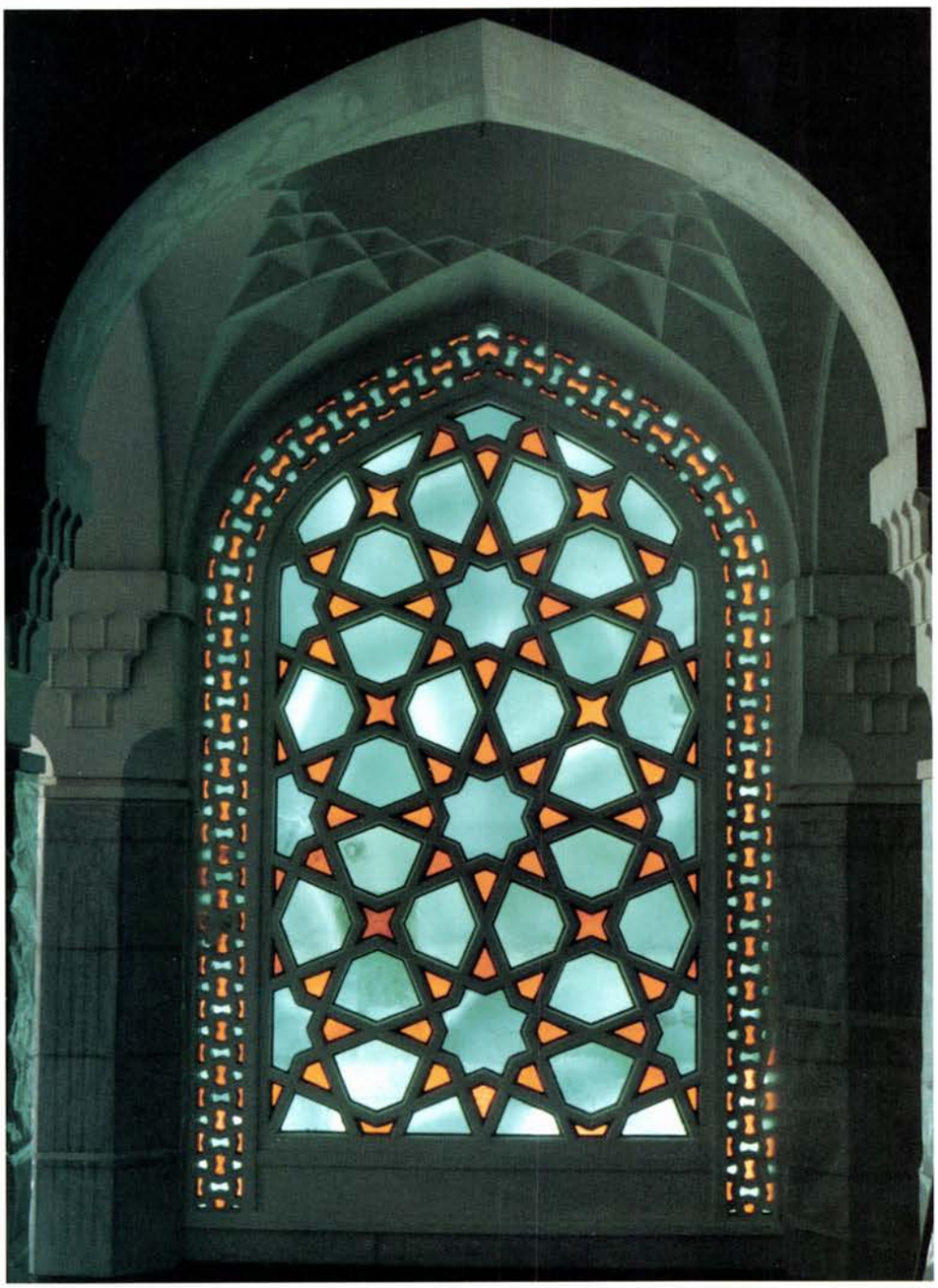
study computer science which he found much to his liking (he was one of the first to work on the introduction of the Arabic script to the computer). At a relatively early stage while working with the computer, he visualised the vast potential it held in transforming the ancient arts of Islamic calligraphy and pattern-making into something supremely suitable for the architectural and technological advances being made in the late twentieth century and, thus, of taking Islamic Art into the twenty-first. "It seemed they were made for each other. The question was how to arrange a marriage between them? It was a dream," muses Samir.

After a great deal of hard work and heartaches, the dream began to come to fruition with his founding of Turath Ltd in January 1987. Ever since then there has been no looking back. Samir has a team of about twenty architects and designers. They include the highly talented American, Jay Bonner, who has a degree in Islamic Art from the Royal College of Art. Their offices exude an air of competence and a quiet confidence. They also reflect good taste – their rooms abound in examples of art and artefacts from all over the Islamic world. A brief visit there offers you the privilege of seeing, among other things, some exquisitely carved wooden doors and windows – *jharokhas* – from eighteenth century India, and superb *qalam* work by the eminent contemporary calligrapher, Rashid Butt, from Pakistan.

Turath's approach to its work is noteworthy. Wherever the work is, usually thousands of miles away from its studio, it conscientiously takes into account its historical, cultural and environmental perspective. The design for embellishing the building – calligraphic and/or others, that is, geometric and floral – depends entirely on the building of which it must form an integral part. Turath also goes out of its way to encourage, involve and employ local talent – wherever his work takes him, one of the first inquiries Samir makes is to find out who is the best local calligrapher or illuminator.

Yet, often, the project in hand requires skills, expertise and materials not available in the countries where the work is commissioned. Sometimes, designs arrived

Design development detail for above.



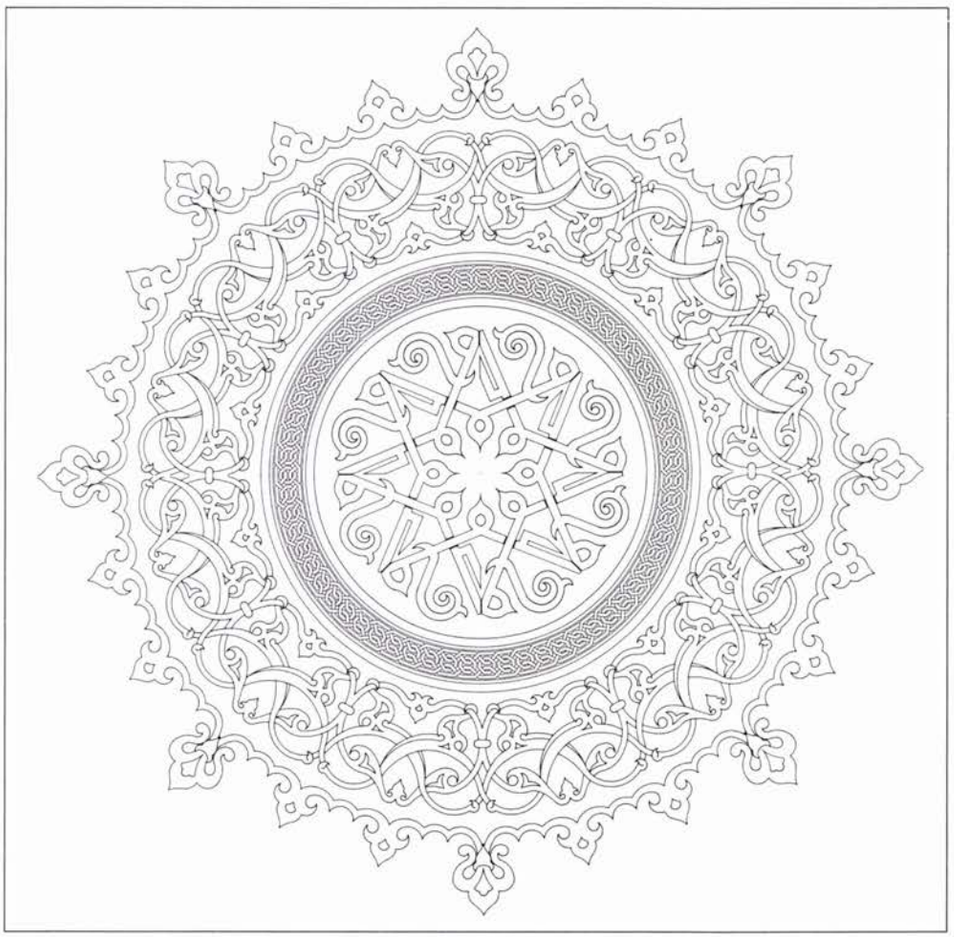
Glass re-inforced gympsum vaulting in the Rasmi style with Muqarnas and stained glass.

at in London are turned into actual ceramic tiles in Istanbul by the renowned Aziz Gorbon Isle, for a site in Mecca or Medina, by imported talent. Each and every job or commission has aspects unique to itself. A project in Hijaz in Saudi Arabia may well require a Mamluk flavour because of Egypt's historical ties with the area. Similarly, a contract in Karachi in Pakistan, such as the Aga Khan Teaching Hospital or University, would necessitate a shift of emphasis to a Moghul, or rather Persian, scheme of art because Persian influence on the Indian sub-continent shaped much of its art and architecture since it was introduced there by Moghul emperors, Hummayun and Akbar the Great, in the sixteenth century.

This flexibility in approach to suit the country and the culture is demanding but essential. In achieving this end, their ample library and the computer play an all-important role.

Turath uses a general draughting software system (AUTOCAD) in all its computer design facility. Each designer and architect has his own colour work station based on an IBM AT compatible micro computer with 286 or 386 processors, linked together in a network which provides access to central files and the design library, links to plotters and laser printers and achieves the necessary security for sensitive projects. This combination of hardware and software offers generous flexibility in both design and fabrication. By combining its specialist knowledge of Islamic design and architecture with this CAD (Computer Aided Design) system, Turath has significantly enhanced its scope of creativity and speed of production.

The computer is, on the one hand, a very convenient tool for drawing and designing, providing an otherwise unobtainable accuracy and flexibility in developmental processes. On the other hand, it easily and quickly allows for a high degree of design manipulation, lending itself to changes of scale, proportion and rapid comparisons of different design details in addition to modifications as part of the design and fabrication process. These general attributes of CAD are all the more useful to Turath considering the



Cast brass decorative roundel for timber door – 1.9 m diameter.

various specialist software programmes it employs. For example, it is able to place scanned images of detailed freehand drawings and calligraphy straight into the computer for swift and highly accurate digitisation. This gives it a unique capability in not just design and presentation drawings, but also manufacturing.

The ability to link directly with computerised manufacturing (CAM) has proved highly successful. This enables the original drawings, developed throughout the design process, to be used directly by computer controlled manufacturing equipment including laser engraving and cutting, water jet cutting, CNC routing and milling etc. This achieves an extremely rapid delivery schedule, outstanding accuracy and repeatability, and great cost effectiveness.

Turath believe that hand craftsmanship is aesthetically superior to machine made components. However in large building projects, the cost and delivery for hand crafted solutions are not normally acceptable. By hand finishing machine made components the quality can be comparable (and even superior) to the most highly skilled craftsman.

The ability of Turath to produce authentic regional and historical designs for existing buildings, combined with the potential to develop solutions appropriate to contemporary buildings, plus the supply and installation of the finished product to the highest standard, on time, and within budget should ensure Turath maintain their position as leaders in a market where mediocrity is often the norm. It is the aim of Turath to combine the best of one of the world's greatest art traditions with the very latest technological methods to produce works to the highest possible standards. Their reputation is illustrated in their current involvement in some of the most prestigious construction projects in the Muslim world. □

THE GEOMETRY OF SPACE

Wendel R Wendel describes the logic, history and future of spaceframe technology.

Spaceframe systems are a product of technology; they do not represent a style of architecture. A spaceframe may be introduced as a component of a building – to create, for example, an atrium, skylight or canopy – or it may be used to create an entire building such as a hangar, an exhibition hall or a stadium. The advantages are: flexibility of form and shape, the potential for creating large spans, the capability for creating "climatic envelopes" and, inherent in the engineering, the beauty of geometry.

As its name implies, a spaceframe is a structural network. Its basic component is the triangle, and with this a highly efficient three-dimensional form can be created.

The strut and hub components carry axial loads and have the capability of load shedding and load sharing to create a system that will not fail – if properly designed. As any single member of this network of components reaches its capacity, other members pick up and carry additional loads to make the whole system function as an integrated and interdependent network. The forces always follow the stiffest and most direct route to the support points. In addition, the triangle network of spaceframes produces geometric units that are essentially non-deformable; that is, the length of a member must be changed in order for the geometry, and hence the network, to change also.

In engineering, a "space truss" is a three-dimensional network that has hinged connections with no moment or rotational resistance at the hubs and no moment in the strut members. "Spaceframes" have rigid connections at the hubs that cause moment and torsion to develop in the members. The term "spaceframe" is typically used to refer to both systems, and, in actual use, spaceframes behave and are analyzed as space trusses.

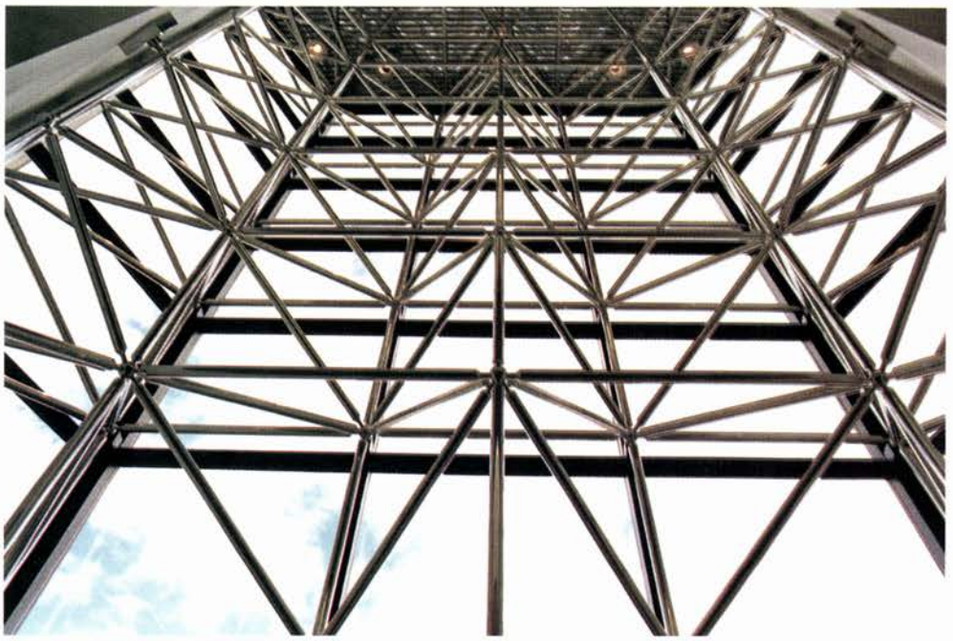
The particular geometry of a spaceframe varies and depends upon several factors such as the cladding, the span and the support conditions. All spaceframe systems use the basic triangular shape in various forms to join together polygonal forms. The three most typical polygons are the triangle, the square and the hex – these may be joined together with the basic triangle form to create a spaceframe network. The basic building blocks are the tetrahedron and the octahedron, two of five basic platonic solids. Both are often used to create efficient structural networks.

Firma MERO – Wurzburg

Oposite and above:
A spaceframe used as the structure of a building – the dome of the "Sport and Culture Centre", Stockholm, Sweden

The history of spaceframes has its roots in the work of many creative designers and engineers, often in areas outside the building industry. An early use of the triangular form was in the development of large span bridges. In 1570 the Italian architect Andrea Palladio in "A Treatise on Architecture", described the use of a number of wooden truss forms developed in Switzerland and Germany during the Middle Ages. Palladio expanded on the simple queenpost truss design to build a 33 metre (108 feet) clear span wooden truss bridge. Subsequent developments occurred between 1800 and 1880 in the USA where many types of covered bridges led to the innovative use of the triangular form. In America there were craftsmen/entrepreneurs who each developed their own systems of basically 2D truss types built out of wood (and later wood and iron) to create the bridges required in the expansion of the USA.

Some of these systems, such as those developed by Ithiel Town, used



Starnet Structure Inc.

Above and right:
A spaceframe used as a component part of a building – "The Triad Center", Gulph Mills, Pennsylvania (Arch. Rhett Hamilton Jones Associates)

overlapping triangular forms to create a two dimensional trusswork with a large span capacity – Town's systems remain among the simplest and easiest to fabricate. Other bridge builders were Burr, Long and Howe.

But while the Americans were working with wood (which was then in plentiful supply), the Europeans were developing the use of iron. The world's first iron bridge was built in England at Coalbrookdale by Reuben Turner in 1779. In the century that followed, Turner was succeeded by the great engineer Isambard Kingdom Brunel whose Covered Viaduct and Britannia Bridge developed the use of steel trussed structures.

A key influence was that of the French engineer Gustave Eiffel whose spectacular tower (finished in Paris, 1889) is a three-dimensional spaceframe made from steel beams rivetted together. The tower was developed from his work with steel truss bridges. He had developed a simple, portable type of bridge for which he issued a catalogue. The bridge was designed to be shipped anywhere in the world; it was made up of a limited number of parts and was easy to assemble by unskilled workers. The bridges had pre-fabricated two dimensional components that were rivetted together. Eiffel was almost in the standardized component spaceframe business.

As the nineteenth century unfolded, the science of metallurgy began to grow. Iron and then steel improved in quality and engineers experimented with a variety of structures and fixings. The first iron dome was built in Paris in 1811, and the concept was taken up by the German structural engineer J. W. A. Schwedler in Berlin in 1863 who made a triangular single layer dome.

Of course, Joseph Paxton's Crystal Palace, completed in London in 1851, is often cited as an outstanding innovation which preceded the development of standardized spaceframe component systems. Crystal Palace included many of the features that characterize the modern systems. The palace was developed around a 2.43 metres (8 feet) system, built from standardized truss lengths of 7.31 metres (24 feet), 14.40 metres (48 feet) and 21.94

Unistrut Space Frame Systems

Two examples of spaceframes being used both functionally and decoratively
Above left: Los Angeles Detention Center, Los Angeles, California, USA
Above right: Augusta Mall, Augusta Georgia, USA

metres (72 feet). It had a hub system to pin all the columns and trusses together and was revolutionary in that it was designed so that it could be taken down and reconstructed on another site. Indeed, once the 1851 Great Exhibition (which the palace had been designed to house) had finished, it was taken down and moved to another site. Another pre-spaceframe feature of this innovative building included its integrated glazing, fast assembly and the off-site fabrication of all components.

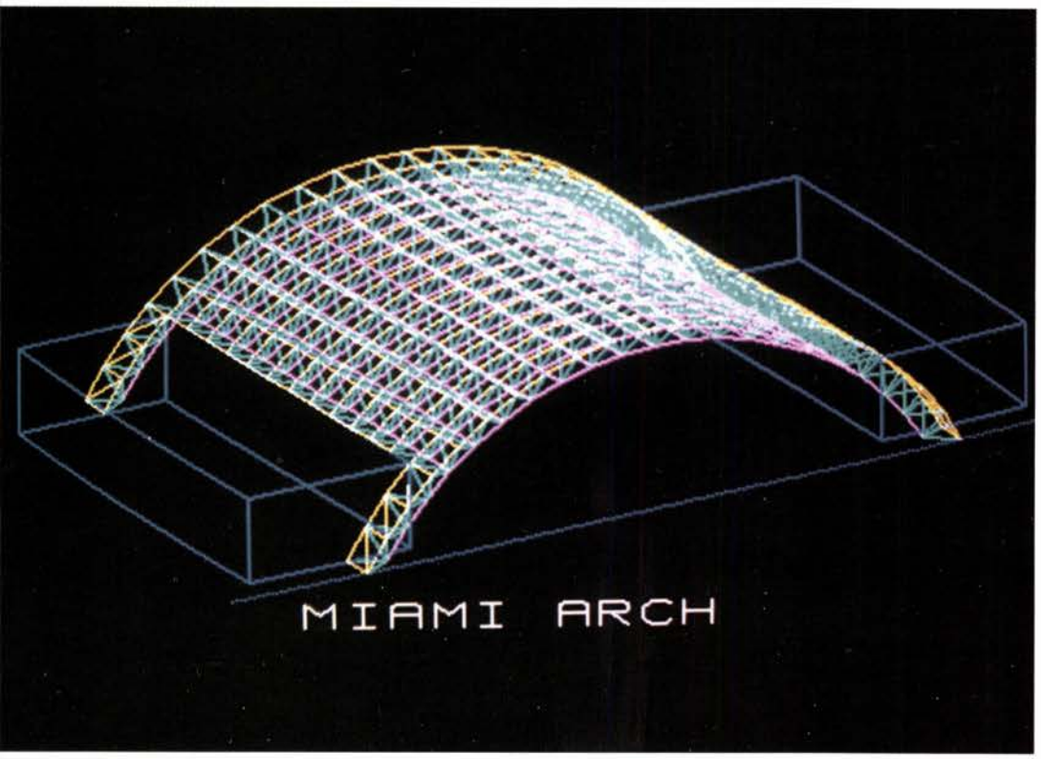
A major advance in spaceframe development was made with the work of Alexander Graham Bell in 1903-1907. As well as being the inventor of the telephone, Bell became involved, as an engineer, in using assemblies of tetrahedra in spaceframes. In his investigation, Bell wrote in the June 1903 copy of National Geographic:

"Of course the use of a tetrahedral cell is not limited to the construction of a framework for kites and flying-machines. It is applicable to any kind of structure whatever in which it is desirable to combine the qualities of strength and lightness. Just as we can build houses of all kinds out of bricks, so we can build structures of all sorts out of tetrahedral frames, and the structures can be so formed as to possess the same qualities of strength and lightness which are characteristic of the individual cells."

"It [the tetrahedral cell] is not simply braced in two directions in space like a triangle, but in three directions like a solid. If I may coin a word, it possesses 'three-dimensional' strength; not 'two-dimensional' strength like a triangle, or 'one-dimensional' strength like a rod. It is the skeleton of a solid, not of a surface or a line."

Bell designed and built a tower 23 metres (75 feet) high, with three tetrahedral legs, as an observation platform. The spaceframe was assembled using iron piping and a hub system designed by Bell. It weighed only five tons and its light weight, combined with its rigidity, enabled it to be jacked up into place without the use of a crane. The success of one of the first true spaceframe buildings led to the formation of a

A computer generated drawing of an aircraft hangar produced using STARCAD design software.



"Tetrahedral Association" to develop a business for spaceframe construction – the first spaceframe company. Bell should thus be remembered as one of the fathers of spaceframe architecture.

In the years after Bell's research a number of engineers developed spaceframe systems either on a project basis or as the development of actual business. All emphasized the possibility of lightweight, easy, low skill assembly and the capability of large spans. Some of the key leaders in this field include Max Mengeringhausen, who invented the mero system in the 1940s, Konrad Wachsmann who developed the mass production of spaceframe components, Buckminster Fuller who invented the geodesic dome and the OCTET-TRUSS, and Charles A. Attwood developer of the Unistrut system.

Spaceframe development in the 1940s-1970s included the concept of *Nude spaceframe* – a spaceframe as a structural system alternative to standard structural systems. In the 1980s the *Dressed spaceframe* was developed which is a climatic envelope system. This change from nude to dressed spaceframes represents the development of more sophisticated systems that include all the services (communications, heating, air-conditioning etc) with interchangeable cladding.

The make up of the design teams involved has changed in the last few years as a result of the move towards dressed spaceframe systems. The industry has generated two types of company: those that make components and those that are system specialists and have design and build teams. In situations where a spaceframe system is used as the building construction (as opposed to being used simply as a part of the building), the system specialist has to be part of an architectural team.

New materials mean new freedoms. Computer controlled manufacturing, the use of aluminium, and the development of advanced composites (courtesy of the aerospace industry) have created a new generation of low weight/high strength materials.

During the period from around 1940 to 1970 the guiding principle for spaceframe systems was "standardization and mass production of components". In the 1980s a dramatic change of attitude occurred. This involved the standardization of the design and fabrication process, *not* the components. State of the art spaceframe companies use computers for the design process – and for manufacturing. A turret lathe can be producing a 5 cm diameter hub and then, within a minute, be switched to producing 11 cm diameter hubs. The computer liberates the system.

The aesthetic qualities of spaceframe architecture are frequently rooted in the marriage between spaceframe design and light. Spaceframes are often selected to support glass, acrylic, polycarbonate and membrane cladding. The beauty and efficiency of the spaceframe form, which is an exposed structural element and an aesthetically beautiful network, is that it also provides protection from the weather.

Appropriately, the new opportunity for spaceframes is *space*. Spaceframes have the advantages – lightness, compactness, ease of assembly of spaceframes on earth – that make them the natural choice for space. There are low earth orbit applications such as space stations and other applications including fuel terminals, reflection arrays and telescopes. One of the most exciting concepts in space technology is that of the "moon star" in which arrays of reflectors, tens of kilometres across, will supply night lighting to urban areas. When used for lunar constructions, the spaceframe will support a membrane which will then be covered with lunar rock. Other possibilities further afield in the solar system include greenhouse environments on Mars.

Additional spaceframe plans in space include the development of deployable spaceframes that fold up to allow for fast, and possibly automatic, assembly without human or robotic interference. These deployable spaceframe systems may be used initially on the first lunar bases or as solar collectors in orbit. A second growth area of spaceframes is the area of robotic assembly – presently the STARNET/ Shimizu Construction/Carnegie-Mellon University team is running experiments on robotic assembly on the easy to assemble STARBAY 1 spaceframe system developed for NASA. This experiment raises basic questions, such as how do you move the

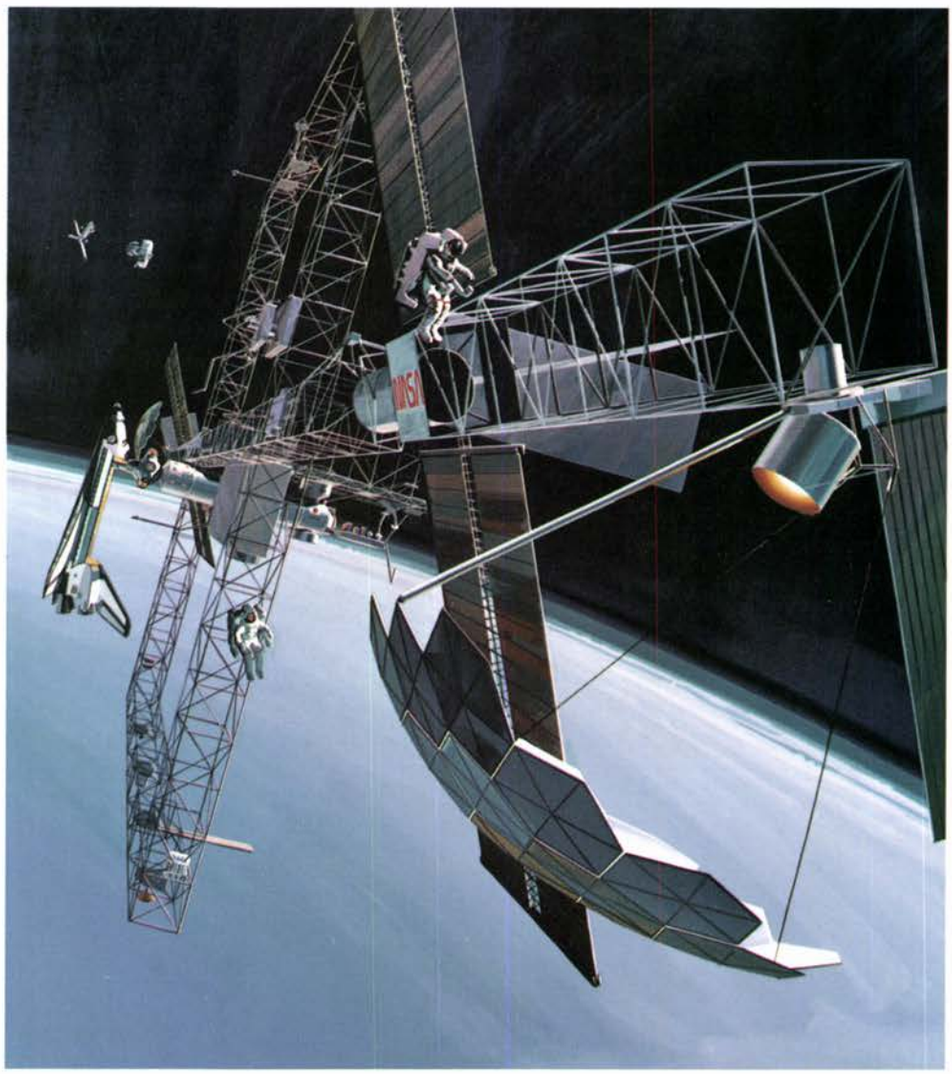
robot along a spaceframe as it is assembled, how to confirm that the strut is attached properly and how to package the spaceframe components for easy assembly.

As research in Astrotectonics grows, the study of spaceframes and their uses in space, on other planets and on asteroids provides areas for exciting new developments, including the development of new technology which may create new opportunities on earth. One area that the Space Division of STARNET Structures has been working on is assembly of spaceframes in a zero gravity environment. This is the next step after the spaceframe assembly experiments underwater and the first privately funded zero gravity flight in a Lear Jet which is scheduled for the spring of 1990. This test flight will provide a 22 second time frame for a zero gravity experiment in assembly and the testing of many new assembly tools.

There are many design factors needed to plan the use and growth of space networks in space. The design factors in Astrotectonics are an outline of the spaceframe development considerations that are actually part of the selection and decision making process for terrestrial projects. The only difference (often of great magnitude) is cost. In space the site labour cost of an astronaut is $60,000 per hour versus, say, $20 per hour on a job site on earth. Another comparison is the transportation cost; about four thousand dollars per pound in space versus about ten cents per pound on earth. A third comparison is structural requirements: with a zero gravity site condition on the Space Station *Freedom,* the spaceframe struts are designed for about a one thousand pound design load, whereas on earth the requirements are maybe 70,000 pounds.

Once the exploration of space becomes the exploitation of space on a truly commercial basis (as is happening) then the cost factors should become less severe. But clearly spaceframe technology is "bridging" our steps into space just as in the past it has helped us bridge our steps into new lands.

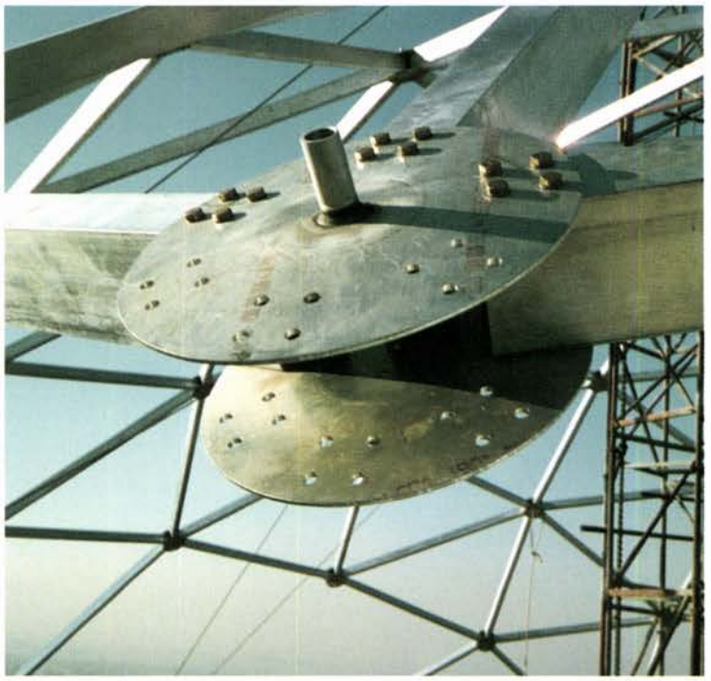
Wendel R Wendel
is the President of
Starnet Structures Inc.



A vision of the not too distant future? One possible application of spaceframes in space.

The "STARBAY 3" system, developed by Starnet Structures and Shimizu Construction for possible use in space.

The "STARDOME" system hub illustrates one method used in the construction of spaceframe based domes.



Spaceframe forms

Some of the basic forms created with Spaceframes are:

- Horizontal
- Vertical
- Sloped
- Tower
- Trussed
- Barrel Arch
- Multi-layer
- Pyramid
- Multi-plate
- Stepped
- Conical
- Dome
- Cylindrical
- Cantilever
- Folded
- Ridge
- Multi-level

Spaceframes today – the new 3R's

When spaceframes are used as building systems, rather than just building components, there are the 3R's that many architects and engineers are just learning. The 3R's are:

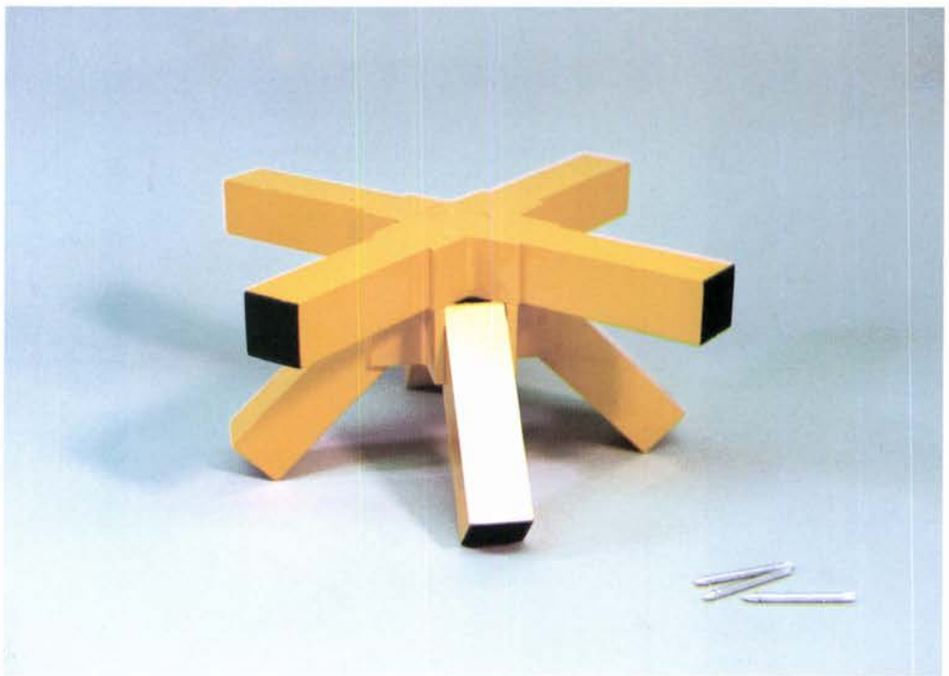
- Reconfigurable – Spaceframes can be easily expanded, reduced or reassembled in new geometric forms.
- Relocatable – The light weight and ease of assembly provide the opportunity to create relocatable, fast erectable, transportable systems.
- Resaleable – The market is starting to grow for used spaceframe systems that can be recycled – especially with the development of durable and lightweight aluminium spaceframe systems.

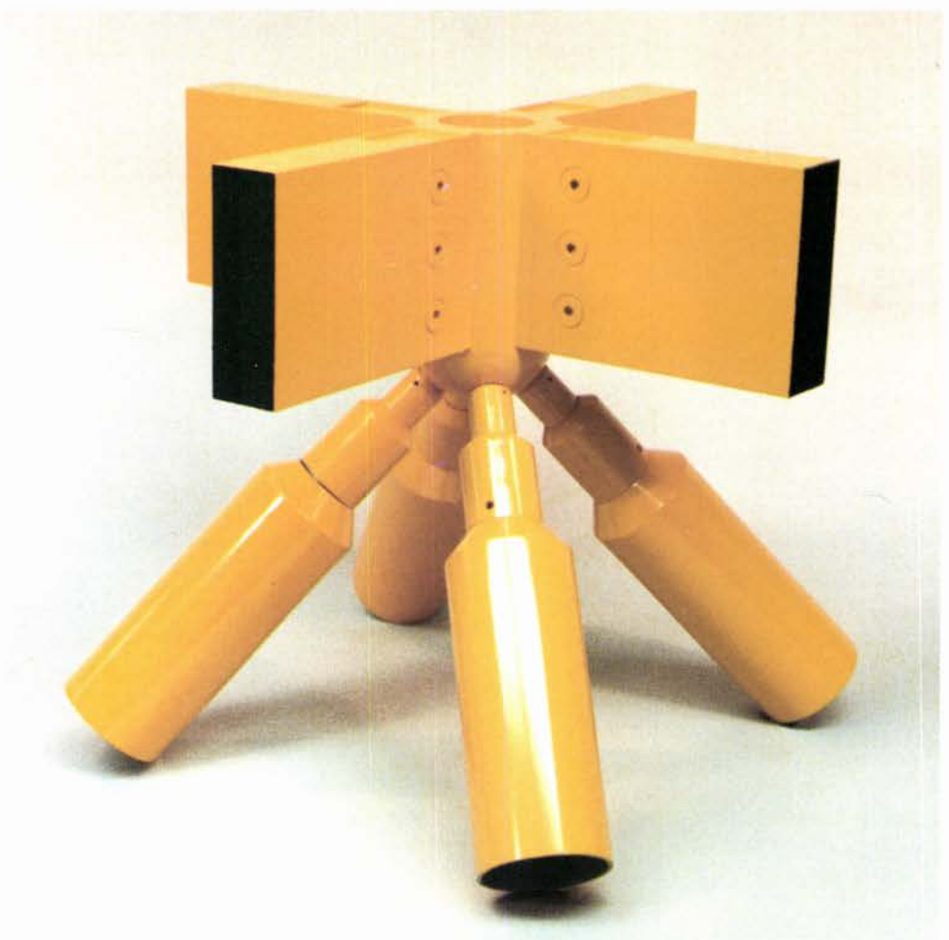
Spaceframes in space – design factors

- Design flexibility
- Geometrically viable systems
- Scaleability of all elements
- Use of triangular and circular forms as reputable elements because of their structural efficiency unless other design constraints supersede
- Hubs dominated systems – the hubs should be the strongest element in any space system
- Multi-material use – with option for cost/strength/weight trade off
- Interfaceability with other systems such as cladding, payload, utilities, and supports
- Adaptability to varying gravitational environments
- Easy and efficient assembly/disassembly, utilizing 3 methods – manual, telerobotic, fully autonomous robotic
- Aesthetically designed spacefaring materials cultivate the "form follows function" concept for space
- Structural preload

Spaceframe design factors – a checklist

- Is the system to be used as a part of a building or is it to provide the structure of the whole building?
- What kind of visual and aesthetic impact is desired? This affects the choice of material and cladding.
- What size of module? Larger modules are usually more efficient.
- What type of geometry? This is selected on the basis of cladding, space and dominant load directions.
- What kind of support conditions? The most efficient is a continuous perimeter with a partial cantilever.
- What kind of finish? There is a new technology in painting and anodizing which also offers durable polished metal finishes.
- Interface: some of the new dressed spaceframe systems allow an easy interface with cladding systems in a wide variety of materials.
- Design loads: to take into account dead, live, snow, seismic activity and thermal conditions.
- The site: how accessible is the site?
- Form: spaceframes are efficient structural networks by themselves. Their efficiency can be increased by their being shaped in to forms such as arches, domes, pyramids, cones, etc.





Two examples of spaceframe jointing systems produced by Starnet Structures.
Top right: Geo-hub
Right: Omni-hub

THE FLICKERING LIGHT

Will the new town of Spitak be a disappointment, has yet another opportunity to plan and build a virgin modern city been passed over for the sake of administrative expediency?

The article about the plans for the new town of Spitak, which appeared in WA 3, ended with a question mark. "After such a good start, after the enthusiasm with which ended this first phase of a unique experiment, will we fall back into routine? Will we be able to create the structures and the methods which will allow us to continue what has been so well begun?"

Regrettably, disappointment was to come. While an Armenian team laboured ceaselessly on the detailed working out of the plans adopted at Santo Kyriko in the context of the Workshop specially convened at Erevan, the technical bureaucrats continued to pretend to know nothing of what was going on. They plagued the landscape, constructing small groups of buildings on widely dispersed parts of the vast and still virgin site, in positions one could believe were specially chosen to compromise the execution of the overall plan. Nothing existed on the site of the future town when the planning concepts were being developed at the beginning of June. But as these plans were then worked out in detail, so were the architects forced to "integrate" more and more of these "schemes" – a group of dwelling-houses here, a school there, even groups of buildings which existed only on paper or were still at the research stage, by whose inclusion the overall plan was seriously distorted. This sabotage was actually being carried out when George Stoilov and Pierre Vago visited the site at the beginning of September, accompanied by the architect Kalbova, Secretary of the International Academy of Architecture. What they saw was truly alarming. In the middle of the vast expanse of the site, where there were still no services or infrastructure, there was a spread-out group of about a dozen two-storey houses, more or less finished (some already inhabited!); at another spot was the shuttering for the ground floors of another set of houses just beginning to be built; further along again, the foundations of a school . . . Advance forces clearly intended to "hold the ground". It was impossible to understand what criteria had been used for the location of these widely scattered embryonic building sites. Who had decided on them? Who had approved the plans? We saw the few almost completed houses; constructed by an Uzbek enterprise, their architectural level (if we can call it that!) and quality of execution were unbelievably low. The plans for the two-storey dwellings now being built by another enterprise, Estonian in this case, organised on a repetitive 3.60 m grid, with two floors on a "base" 3 m high, were hardly any more acceptable. Plans were seen for another project for housing blocks of a well known type. These used the detestable system of prefabricated panels, which have been responsible for so many victims in so many disasters, (with the difference that the 4th and 5th floors were to be omitted).

It seems that in one of the most beautiful sectors, the southern slopes of the hills looking down on the centre of the future town, authorisation has just been given to all those who have the means of doing so to start on the construction of their own individual houses. Everything is beyond any possibility of intervention or control by the International Academy, though this was provided for in the agreements signed. One can understand the bitterness and discouragement of the Armenian architects who have worked with so much enthusiasm and devotion on making real a dream which every day becomes more insubstantial. Beyond the symbolic city, the model town, there appears already the hideous reality of a now almost unavoidably bungled opportunity.

All those around the world who had devoted their time, their imagination and their knowledge to a stirring project of international collaboration and solidarity, and who were ready to carry it through devotedly and disinterestedly, must now recognize, with sadness, the second destruction of Spitak.

Let no-one raise the argument of urgency against us. It would be easy to demonstrate its inconsistency. The excellent hospital which was planned, built, equipped and given by the Norwegians proves the point. □

INTERNATIONAL FORUM OF YOUNG ARCHITECTS PUBLICATION

The International Forum of Young Architects is a world-wide organization of young architects for joint professional activities aiming at the stimulation and promotion of avant-garde trends, concepts and projects in the field of architecture.

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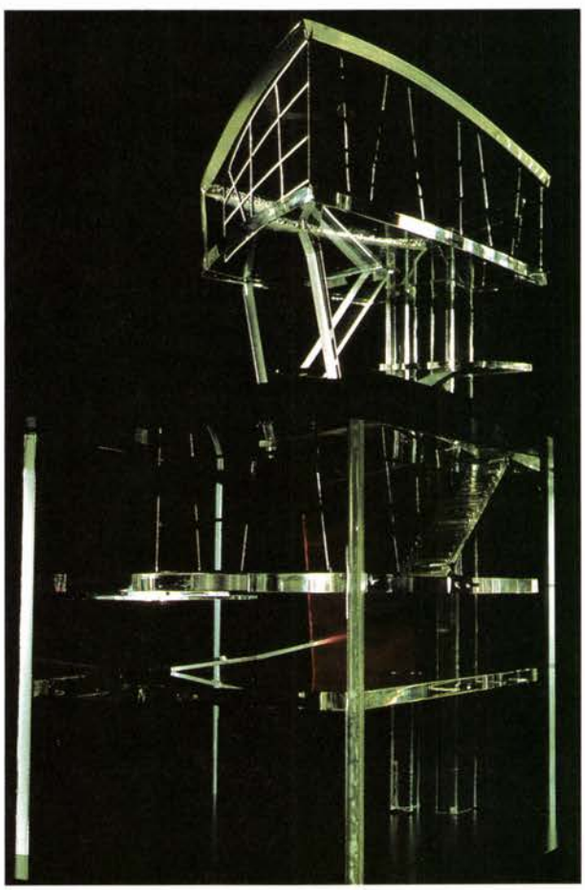


Tomigaya Building, Tokyo, Japan, 1987-89. Background: Preliminary sketches. Centre: Model of the final project.

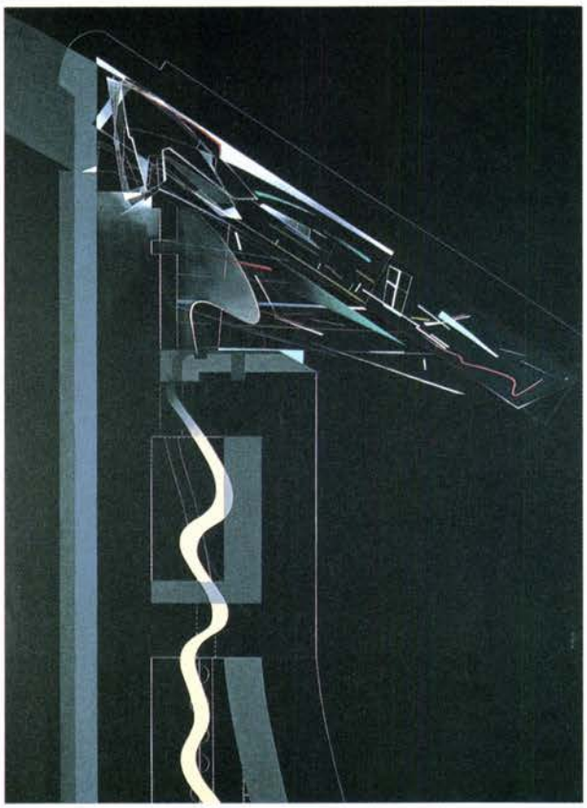
ZAHA HADID'S LABORATORY

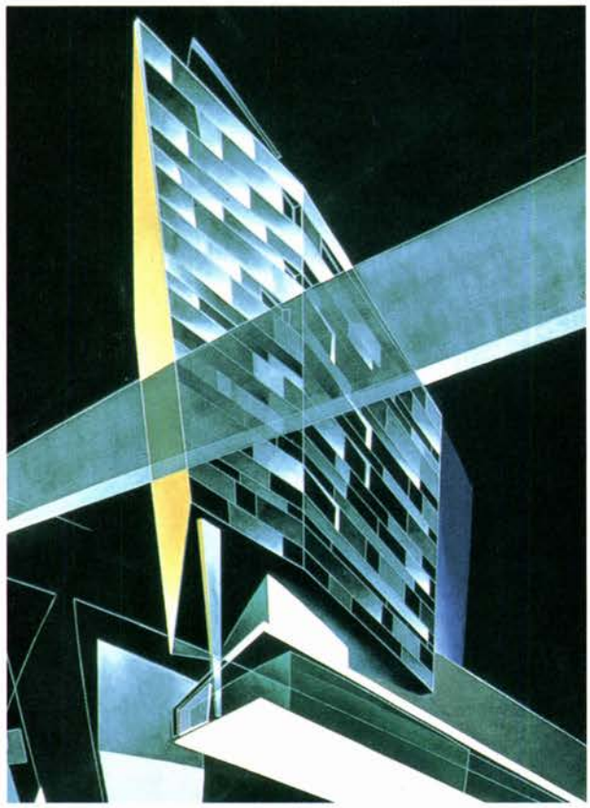
INTERVIEW WITH ZAHA HADID by Georgi Stanishev and Andrej Chernikhov.

Any architectural creation – even the most original, the most unusual – inevitably corresponds with some tradition within architectural culture. I would like you to start with stating the sources of your architecture: what was there in the beginning?

In the beginning was Malevich, then the works of El Lissitzky and Leonidov, and after that there was Melnikhov, and Chernikhov, although these were not from the same school of thought. The whole period of the 1920s in the USSR was seen as a laboratory for novel architectural ideas; in that age, there was no precedent, the Russian avant- garde stood alone.

That period was for us, as students, a kind of mystery. It presented a break with history that was not at all popular in the 1970s, but my work did in fact begin with reflections on Malevich. Our intention was to examine the ideas that were





IBA, Housing Block 2, West Berlin, 1986; Left: Landscape study of Roof terrace, courtyard and Rotation of the Tower. Right: View to the East of the building.

not embodied in architecture. It was not to do with an individual book or an individual person. Everything began with Malevich and all that which was embodied in his work.

Is it not true that the experimentation of the Russian and the Soviet avant-garde at the beginning of the century was never finished? Its leading proponents succeeded only in laying a kind of conceptual foundation for different architectural lines of development, all of them oriented towards the transcendence of the bounds of architecture as such.

It is exactly this foundation that became the starting point for my own line of development, and this particularly concerns suprematism. What struck me about the suprematists was the fact that they would paint things while thinking of them as architecture. And, at the same time, their achievement was never translated into architecture, with the possible exception of Leonidov. I was attracted above all by the fact that the ideas, the projects of this period, had never been realised in practice. In part, some of the ideas had been realised in Manhattan by Rem Koolhaas, but never in Europe. For me, the heritage of the 1920s was a means of self-education.

Why did you turn to the constructivists, to the architectonics of Malevich, to the Lissitzky designs – and turn to them in the closing decades of the twentieth century?

This had to do with the incredible architectural optimism of that period; and that optimism is something which today simply does not exist. I believe that the existence of this spiritual upsurge was very important for Russia. I saw it as important for us to understand the reasons for this spirit. I appreciate the enormous importance of the political situation, but I believe that behind it stood the aspiration to change the world through architecture. And this is extremely important. During the 1970s and the 1980s this kind of aspiration to change the world disappeared – it is not an attribute of architects working in the office of today. After a while, working along such lines, we came to the conclusion that it was not simply a question of colour schemes and form elaboration, but that it was a programme, a kind of creation and a new kind of space and the way this kind of space would change a city if one were to introduce it into its fabric. Furthermore, the plans which could be generated from this kind of architecture have to have a new kind of script. What is also important is the way that plans can change architecture itself.

Speaking of the artistic ideology of Malevich, how did you achieve the translation of his artistic language into that of your architecture?

As a student at the Architectural Association (in London) I worked in the group of Rem Koolhaas and Elia Zenghelis. We then looked at Malevich, and none of us understood what we could get out of all that. The answer to that came out of one of his collages. This, we saw, could be made into architecture, and then we started a kind of research. First, we analysed his objectless tectonics and thought about how to make this into architecture. Then we started thinking about how to evolve the spatial organism, and on how we would work out the plans as if they were a building. I worked a long time on this, and after a while I came to the conclusion that there are various ways of translating it into the language of architecture. In this way, in 1976, there came into being a project-interpretation of one of Malevich's "Architectons"; it was something like a bridge over the Thames with a strong public function – a club, a parking space etc.

This notion of liberation in Russia is very clear, very adamant. It could be grasped as liberation from gravity, and this immediately implies the breaking of certain norms, or, one can get this out of Malevich, "standing on the verge of time". I think that he was trying to tell us that we are very dependent on the Earth's pull, being Earth creatures.

The Revolution then seemed to embody and to realise this idea of liberation. There is no revolution now, and that's the basic difference. But the architecture then does show a different way of touching the ground, it is lighter. Today, the idea of inserting a new attitude to space in architecture has many different sources.

How does your internal, "ancestral" world-view express

itself in the space and in the forms of your projects?

I have lived abroad other than in Iraq where I was born. Of course, there are inherited things. But they are to do not so much with the East as such, but with the conditions of my upbringing, my origins, my family, my school in Iraq.

What of your present day consciousness? To what extent do you feel it connected with the East?

It is defined by all of these things, it is hard for me to specify the leading one. Culture is interaction, history is interaction, our own build-up is the result of interaction, and it is difficult to point to one specific thing. There are, of course, degrees of morality, rules of ethics that are not to be bypassed. But there is also my education. My background is among the best – I have always been encouraged to think progressively. All of these things are interconnected, and that's typical of the Middle East. My father was from the generation that fought the British Mandate and was against imperialism, and he is a socialist. He went to school here, as did my brothers, so my background is not typically Middle East. And we travelled a lot when I was young. Some people see a connection between my layouts and Arabic calligraphy – you know, fluidity and all that. But it's all these things, really.

Turning back to the field of architecture, what transformations does the original conception undergo, before getting to the stage of this "calligraphy of the plan"?

On the whole, it begins as a notion of abstraction and fragmentation. The plan, whether it is an urban plan or a smaller one, is dissected and conclusions are arrived at. Some of its areas become quite energetic, and others are very fluent. This plan then becomes functional by way of a series of metamorphoses. This is the way it starts, this was the boom of my student years. You can't start a new thing in the old way. The projections, the drawings, the studies could not be done in conventional terms. This was the breakthrough. Stuck together, these things make the new work. Plus, there is the constant desire to do something new, to make a new programme, a new architecture.

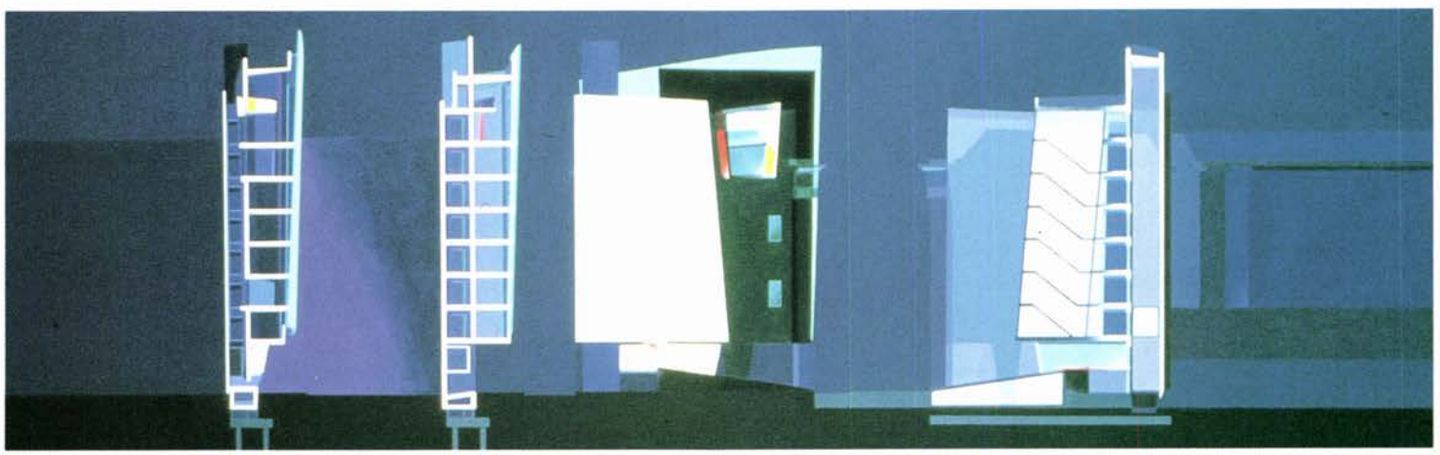
If, as you say, this is an attempt to reject conventional things, is this not an ordeal for the language of architecture, which rests on the system of norms?

I cannot really present such a work in conventional terms. It is important for me to see it in a different light. The stage of drawing is always the testing ground for these ideas.

Do you use drawing solely as an instrument, or do you aim to arrive at an independent expression of the architectural idea, and one which would tend to stay, in its purity, divorced from the final product?

I draw not to illustrate, but to check out ideas. I draw things which present the idea in its most naked form. Via a series of drawings one can arrive at the nature of the object in a profound way, by changing the viewpoint several times. At the end, the object willy-nilly unfolds, showing aspects that you'd never believe were there. The drawing is as much a means for presenting the object as a way for its designing, and an instrument for analysing the architectural result arrived at. For me, the drawing is not the final product, but rather a procedure for revealing the nature of the object. Although, yes, in some cases the drawing does take a life of its own as in the case of Peak Hong Kong – and it can tell whole stories too!

Office Building on Kurfürstendamm, West Berlin, 1986. View from Kurfürstendamm.



Office Building on Kurfürstendamm, West Berlin, 1986. Study of the Sections and Elevations.

Did you insert the idea into your Trafalgar Square project, that someone should be seeing the city from above? Is not that composition aimed at the Gods? I get the feeling that in this case you use the texture of the city as a canvas, in order to paint on it a giant suprematist composition.

It is a way of making conversation. We draw a project, we draw the city, but at the same time the drawing implies that this project is not there by itself, and that the city is changing. In the process of drawing the abstraction we change it. These days we see the world from different points of view. Even 200 years ago nobody could have seen a city from a bird's-eye view. We can experience things from so many different angles these days – from a train, a car, an airplane – we have such a novel feeling of speed; does this not mean that we have to see the world from all these different viewpoints? We must use the situation that we are in, take advantage of all the achievements.

Did your contacts with the heritage of the Soviet

West Hollywood Civic Centre, Los Angeles, 1987. Aerial view.

West Hollywood Civic Centre, Los Angeles, 1987. Detail of the plan.

avant-garde boil down to leafing through albums and going to museums?

Of course not. I have visited the USSR four times over the last six years. Nobody had heard of me six years ago, but it is at that time that I decided that if a woman wants to continue her education in the field of modern architecture, then she had better study the main cultural currents of the twentieth century. And this is how it all started. It was important to see the Russian achievements – on paper, and on the spot.

In what ways did you feel the differences between the image of Moscow in the projects and conceptions of the 1920s and the real city of the 1980s?

For me, Moscow was fantastic. I think that the idea of liberating space continues to exist. The fantastic thing about Moscow was that, as you stand on the Lenin mausoleum, you feel as if the whole city is bending. And you feel tangential in relation to the surface of the ground. I think that the spirit of Moscow is the spirit of space. That spirit of the city, and its fusion with the obsession with the Cosmos, makes the works of the Russians more comprehensible. It's quite overwhelming. You see the Sputniks everywhere, on toothpaste, on souvenirs, on toys. This is the incredible spirit you start to feel as you walk about Moscow. I really felt, for the first time ever, as if I was free from the ground. To make this kind of architecture, embodying the notion of liberation from gravity and from Earth, is another obsession of the Russians. They feel the Cosmos, and this gives birth to a new kind of spatial organisation.

In a number of your projects one can feel, so it seems, the absence of gravity pull, or rather, its transcendence. This kind of feeling is especially strong in your Peak Hong Kong. Has this to do with the influence of Moscow?

I had the idea, even before I went to Moscow, that the way modern buildings touch the ground is different from the old ones: the materials are different, they have a certain lightness, the building feels as if it is made of glass. It is lighter than stone. It touches the ground like a Russian dancer who touches the ground only to fly up again, whereas the English dancer is firmly rooted, like a plant.

Would you say that there is a common denominator between architectural – indeed, spatial – culture in Russia and America?

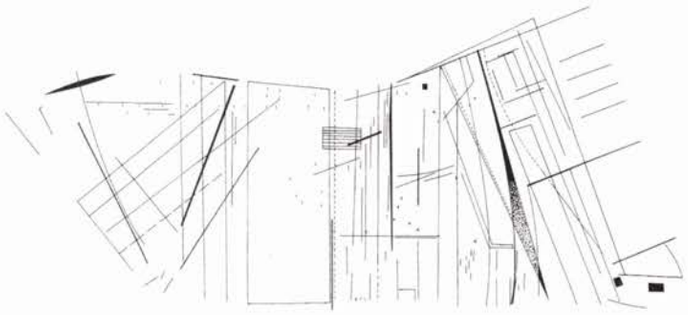
I think that a lot of ideas happening in Russia were later translated to America, but not fully. Europeans tend to reach for the clouds and beyond them, whereas Americans go for the sky – hence their skyscrapers. As for the Russians, they reach for the stars. Their ceiling is higher, they are less inhibited, more adventurous. I still think that people in America and Russia are very alike, not just because their mentality is similar. Americans tend to be guided by a kind of Anglo-Saxon, or Germanic thinking, whereas the Russians think in a much more Eastern way. They are occupied by the same things, but their limitations are different.

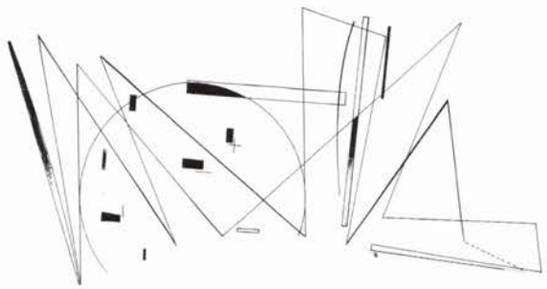
In the architectural history of the twentieth century there is, in Western Europe, an avant-garde developing in parallel with the Russian one, starting with people like Marinetti, and culminating in Le Corbusier, Mies van der Rohe, Gropius. What would you see as the basic difference between these two avant-garde cultures?

There are, I think, fundamental differences here on the level of thinking. Europeans are more inhibited – they have a lower ceiling, they come to a stop somewhere, at a point beyond which they feel it is irrational to go. There are two kinds of minds in Western Europe: one is the emotional, the intuitive, and the other is the rational, supposedly logical. And they have never been able to understand that they exist in a kind of unity.

Intuitiveness is not simply based on the wish to do something in a certain way, it is grounded in a certain experience and understanding of the situation. Whereas in Russia, things are rather different. The emotional colour there is much more intense, and over there they tend to overstep rules and regulations. On the one hand this transgression produces an uncomfortable feeling, and on the other it has to do with liberation.

There are two things now, at the end of the twentieth century, that are of prime importance: one is to use the latest technology and make our lives easier without interfering with





West Hollywood Civic Centre, Los Angeles, 1987. Sketches in different stages of the project development.

the environment; the other is to keep the notion of simplicity. At the end of the century it is harder to design a simple building than a complicated one. One reason that people are abandoning Modernism is because it is not decorative, and it's so difficult to hide one's mistakes. It is easy to spot the mistakes in a Modern building, and it is easy these days to camouflage mistakes in decorations – like decorating a cake.

Do you include Post Modernism in this?

Yes, I think that Post Modernism is all about doing things the easy way – you take bits of this and bits of that, and there's your formula. I begin with thought and image: this should look thus. This is what most architects do, they have an image in their head, and then they need a couple of hours for the design. In my case, I make experiment after experiment, trying to get at the target. At the same time, one must think about the rules, the requirements – if you're doing a house you must not forget that people are going to live in it. So then you integrate the image and the process in space, after which you check out the completed idea in the context of the environment. All of this should be happening simultaneously. The basic idea develops into a concept, the concept is developed into a project and then becomes architecture.

Is this ideal image subject to evolution in the process of the designing itself, or is it presented to your mind in a final form, which should then be filled out by the programme, and turned into an architectural project, a construction etc?

Sometimes, it comes to me very clearly at the beginning, and then it is a matter of simplifying it. Sometimes, a curious thing happens: I have a kind of preliminary sketch of what I think will happen, and then the project changes as I work on it, and in the end it comes back to the original sketch. Because it has to be tested and simplified and worked out until there is nothing unnecessary in it. When an idea is born, I sketch it, and then I do the diagrams and send them to my people, then the idea starts going back and forth, then I check it and it begins to settle. All factors must work together, and not simply combine. When I was young I used to draw the same thing thousands of times on the board, but it did not happen. Now my head is clear like a screen, and I draw on that. When my mind is clear, then I draw.

What's your latest project? Tell us something about it.

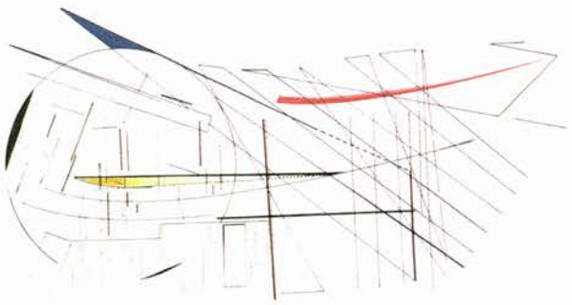
We are doing a number of projects at the moment. About three years ago we took two projects in Berlin. Then there are the Japanese, in the same mode. Although it's a very tight site, even in these very, very restricted conditions you can do something to release space. The same with the Turkey project: we felt so very over-congested, but we still went for releasing the space within the buildings. And the space itself was very peculiar – three metres by ten by twelve metres. The ideal was to make this series of voids in the city no matter how tight the situation, and also, to release the volume of the existing building as a void. And so we sank the building below the ground, and we lifted it up so that the centre is not a part of the building, but a part of the city. So when people visit the building, they actually use that space. The same with the Tokyo project: in spite of the tightness of the site, the building itself releases space.

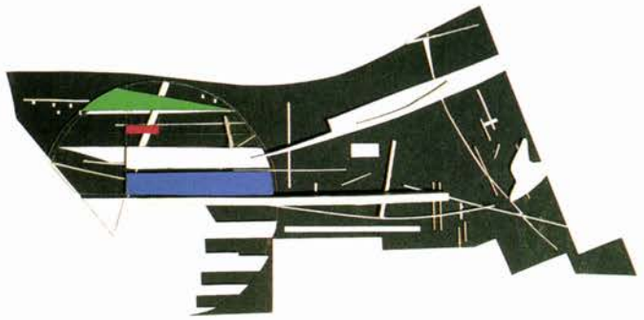
Left to right: Tomigaya Building, Tokyo, 1987-89. Preliminary Drawing. Tomigaya Building, Early Studies. Azabu – Jyuban Building, Tokyo, 1987-89, Entrance view. Azabu – Jyuban Building – fragmented perspective.

What's your attitude to the fact that some critics like to include your work, under the label of Deconstructivism, together with a lot of the participants in the 1988 MOMA exhibition?

The MOMA show . . . It's a pity they gave it that name, actually. If the show had no name, it would have been more successful. There are links between the people in that show, in that they all share, in different ways, a fundamental belief in Modernism. I believe that this is the tie, and not the "sacrificial" things that they talk about. All seven participants believe in the development of Modern architecture. They believe that, to go on, it means working in the modern way. But Eisenman and the others came in with their theories much later. I began with the notion of abstraction – it is not for nothing that I have a degree in maths. As for Derrida, I've never read him.

During the 1980s, the young entering into architecture seem to have divided it into two layers: conceptual architecture, architecture of ideas on the one hand, and practical architecture on the other. It seems to me that you have never belonged to one or the other exclusively, that in





West Hollywood Civic Centre, Los Angeles, 1987. Sketches in different stages of the project development.

the different periods of your work you have covered both. What do you see as the connections between them today?

I think that what we try to do, really, is to maintain a laboratory for developing ideas. It's very important to do this, since without it you cannot develop an architecture. When you are actually building, there are so many limitations – not intellectual ones, but to do with regulations and that sort of thing.

Would you say that an architecture which combines conceptualism and realism is somewhat different from purely practical architecture?

I think so, absolutely. Things become difficult when there's any degree of inventiveness. People in the world these days, they just shop. They buy what they can see. And if this building has not happened before, they cannot understand it, cannot see it. There is a loss of faith in architecture. People became worried about building something that was not immediately obvious, and they abandoned their ideas – people who could have done wonderful work. And the building industry is also at fault. It is so conventional that, when they have to do something a little bit out of the ordinary, they price it so high that it becomes impossible to build. They want to sell you everything that they've got, and they try to unload on you their whole system: curtain walls are like this and not otherwise, metal walls are like that, and the wall should be at an angle of 90 degrees and that sort of thing. The minute you try to break these conventions, they double their prices. And in this situation it becomes very difficult for someone young to do really new projects. The most conventional of all is the fact that they spend an hour on the design, and then a year planning the building.

What changes do you expect to come after the period of nostalgic historicism?

I think that the change will come when the people in charge come to understand that it does not all boil down to a nice elevation. That a building has to have an impact on the city. That's why the French are so fantastic with their far gone projects. They have an area-consciousness, they realise that they should do more than just another building. I see changes beginning to happen in Europe and America, because they are going to do very large projects, and they realise that for this they require some very strong ideas. This will inevitably change things.

What changes do you expect in your own work?

For us, the most important thing at the moment is to prove that what we do is real, that it is possible, and that a new architecture is possble, no weaker than the so-called theoretical architecture, and is going to have an impact on the city. My main interest, possibly as yet subconscious, is how to make really major urban projects. We are going beyond the single building, looking at whole areas, and at how they can be changed. □

ZAHA M. HADID: PROJECTS

1976-77 Malevich's Tektonik, London.
1979 Dutch Houses of Parliament Extension, the Hague. (Competition, OMA team: Z. Hadid, R. Koolhaas, E. Zenghelis)
1979 Irish Prime Ministers' House and the State Guest House. (Competition)
1982 Apartment conversion at 59 Eaton Place, London. (Gold Medal A.D., British Architecture Awards)
1982 La Villette Park for the 21st Century. (Competition)
1983 The Peak Competition, Hong Kong. (First Prize)
1985 Grand Buildings, Trafalgar Square, London. (Competition)
1985 HTV Studios, London; Melbury Court, London; Halkin Place, London.
1986 Furniture for 24 Cathcart Road, London.
1986 IBA Housing Project, Berlin.
1986 Kurfürstendamm Office Building Competition, Berlin. (First Prize)
1987 Tomigaya, Tokyo.
1987 Azabu-Jyuban, Tokyo.
1987 West Hollywood Civic Centre, Los Angeles. (Competition)
1988 Al Wahda Sports Stadium, Abu Dhabi.
1988 Victoria Areal, Berlin. (Competition)

Projects for 1989:
Docklands Housing Project, Hamburg.
Fire Station Vitra, Basle.
Tomigaya, Tokyo.
Azabu-Jyuban, Tokyo.

TOMIGAYA BUILDING

Tokyo, Japan, Project 1987-89

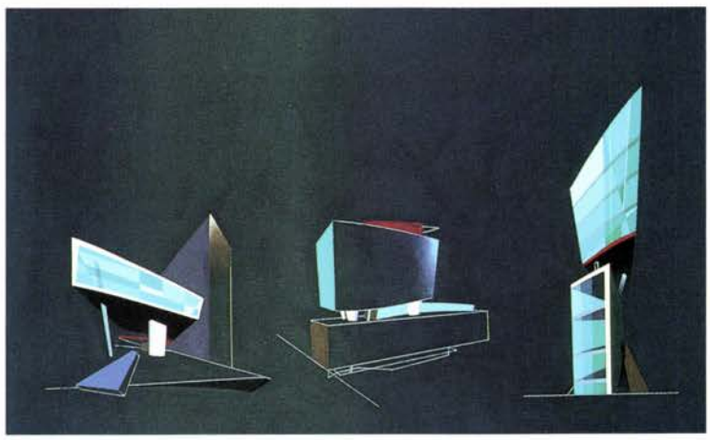
The relationship of this building to the site and the street is an unusual one in a crowded city. A light glass pavilion is elevated to create a small urban void, providing relief from the clutter of the surrounding neighbourhood. This void is a compressed space suspended between two horizontal planes.

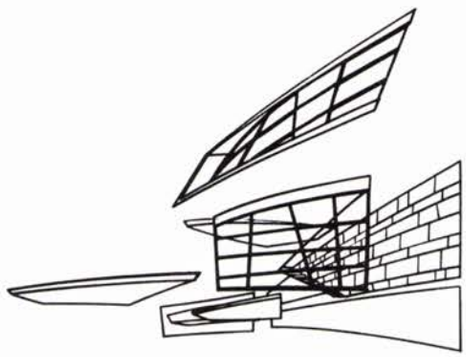
A major part of the building is sunk below the curving ground floor, which is pulled back from the edges on two sides and holds a tall glass wall in a channel which allows light to filter into the lower space. The entrance stairway steps down to a mid-level platform and an external court within the lower space. This provides views up past the ground level to another platform and the belly of the pavilion above. The generous proportions of the lower space enable complete flexibility, either as one continuous floor or a series of platforms, allowing this space to be used for retail and office activities.

The raised pavilion, although completely independent, is an integral part of the whole building concept. It is a light, one-storey structure which hovers above the open ground, with a curving roof line and full height windows on three sides. The design offers flexibility for office, studio or retail use.

Areas of the ground will be of translucent glass paving, lighting a path in the evening, filtering daylight, and creating a soft diffused light for the space below.

The unique and dramatic qualities of each individual space allows superb opportunities for organizing an enterprise within this building in many ways.





Above centre: Preliminary studies. Below centre: Model. Above right: Graphic study. Below right: Study of the plan.

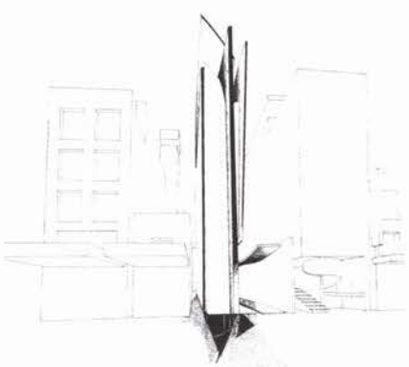
AZABU JYUBAN BUILDING

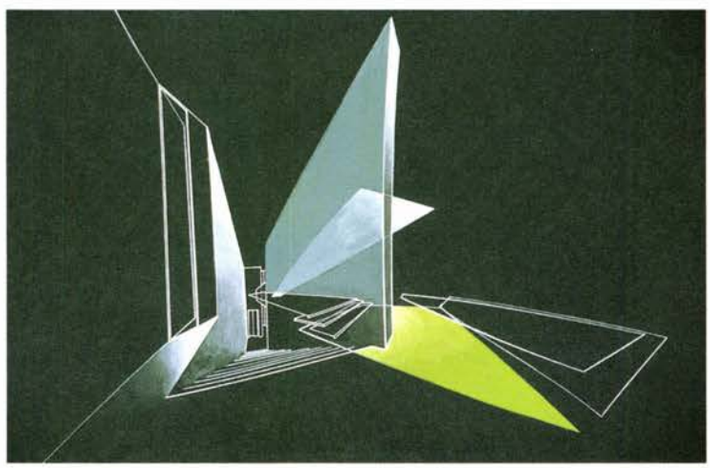
Tokyo, Japan, Project 1987-89

This pristine glass building cuts a clean, sharp edge through the randomly built environment of the surrounding area. The building is formed by compressing various functions into independent spaces, and using the character of their related spaces to define each use. The curving entrance ramp offers views below and above into the depths of the building. This new pavement, open to the air, leads into the heart of the building, which slowly reveals itself during the passage from the street. Once in the heart of the building a vertical stairway runs up the entire height of the building which breaks out, forming generous balconies and mid-floor landings. This stairway gives glimpses through to spaces on many different levels, with the delicate glass wall bringing light into each space.

The glass box can be used for retail space in various ways. The lower levels form a landscape of ramping floors and platforms starting at the base and moving up past the ground to the upper floors. From the street this open landscape gives views throughout the three-storey space. The upper levels are a series of balconies allowing light and views to move freely down through the space from the glass of the roof. Each balcony can be independent while still contributing to the main space, offering many opportunities for displaying goods.

Centre: Birds view perspective. Below left: Perspective study. Above right: Model. Below right: Interior view.





L'ETAT C'EST MOI!

Pierre Vago believes that those with royal privileges should respect the workings of democracy and do more than pay mere lip service to those people who really know what they are talking about – and what they are doing.

Most historical quotations tend to belong to the domain of legend. There is nothing to prove that these famous words were ever pronounced by the young Louis XIV on April 13th, 1655, and yet the phrase has become the motto of absolutism.

Today, we are far from the seventeenth century, far even from the enlightened despotism of Joseph II. Yet we have witnessed, as if bewitched, the terrible revivals of absolutism in this our twentieth century Europe.

When Adolf Hitler gained supreme power in one of the most civilised of countries, it was his rather primitive idea of Art that pilloried and condemned without appeal a so-called "Degenerate Art", and killed off the nascent architectural movement represented by such masters as Mies van der Rohe, Gropius, Mendelsohn and Scharoun. When Joseph Stalin rose through politics to become the all-powerful head of a vast empire, it was his bad taste rather than theoretical convictions or expertise that strangled at birth the researches of Russian avant-garde artists and imposed a backward conformism on all forms of artistic expression. The holder of absolute political power, he immoderately extended this omnipotence to all fields of science, literature, culture and art. The words written by Lenin in 1905 could well be used to describe this said period: "Cursed time of literary degradation, of servile expression and enslavement of thought!" I remember how shocked I was on learning that an opera, prepared at length and at great cost, had been taken off after only one performance at the Bolshoi, because Joseph Vissarionovich Stalin didn't like it.

It is not at all my intention to draw parallels which would be only too obviously inappropriate! But I have never understood why a politician, elected by the majority of his fellow citizens on the basis of a political programme, should take upon himself the right to be judge in the last instance in matters of town planning or architecture. I remember a dispute (which was kept fairly quiet) between the UIA and the French government about a competition where the final decision was not in the hands of the international jury (chosen by the government anyway!), but lay with the President of the Republic. It was a matter of principle, concerning an international competition, and it was the UIA, whose duty it is to see that the international rules are applied, which was right. It merely expressed its "non-approval" of the competition. But the exception seems to have become the rule. Quite recently, at the end of an important consultation, to which 20 participants were invited (chosen from 244 applicants), the jury of 17 presented four projects to the President of the Republic, who himself chose the winner. It was a bit of good luck that François Mitterand once again made the right decision. But the principle is wrong.

And what are we to think of what is happening just next door in the United Kingdom, a model of democracy for us all! At its head a Sovereign who "reigns but does not govern", the respected guarantor of a long democratic tradition, a symbol of the unity and continuity of the nation, standing above conflicts, divisions and internal struggles. So much so that at the opening of Parliament the monarch *reads* the speech prepared by the Prime Minister. George I, who didn't speak English, was a great piece of luck for England.

But now we see the heir to the throne involve himself most vehemently in the quarrels of Architecture. You may say that the Prince is not the King. Not yet. But he exherts the whole weight of his royal prestige. This was recognised by the new RIBA President in his striking speech on July 11th when he said: "The common planning committee criterion is now 'Would the Prince of Wales like it?'"

I don't want to discuss Charles' preferences, or his arguments – just this way of going about things. Is he doing right or wrong? Does Citizen Charles Windsor have the moral right to alter events by his interventions? To use his position to attack architects whose ideas he does not share; to make, with regard to a whole class of his future subjects, accusations which are as insulting as they are unjust, such as that of having caused more destruction than Hitler's Luftwaffe? In his public declarations and in the book which he has just published (a printing of 500,000 apparently), one finds facile arguments and commonplaces with which all may agree. Who does not want beauty, harmony, respect for the environment etc? But the answer is not to be found in the superficial and purely formal lucubrations of the lately deceased post-modernism, so contrary to the English tradition: think of Christopher Wren, John Wood, of the two Adams; think of the calm and admirable squares, places, courts and crescents, with their long repetitive facades . . . Not every family in Greater London can have a house set in a beautiful Sussex landscape. The population of the capital, which was around 100,000 in the time of Henry VIII, 500,000 in the middle of the seventeenth century, huddled together in the City for the most part, reached one million around 1800, and then 4.5 million (6.6 including the suburbs) around 1900, and must today exceed 8 million. As in all great cities, social change and technological innovation (the arrival of the motor car, to mention only one) create situations and present problems to which no constructive response can be found in the nostalgic evocation of a particular past or the demagogical pillorying of certain well-chosen examples.

I repeat: I do not wish to argue about the substance of the Prince of Wales' propositions. As often is the case, one finds here excellent things alongside others more difficult to accept. All open and fair-minded discussion is fruitful. What worries me is the direct intervention of Power, whether political of dynastic, in a debate where position and title are replacing fundamental competence. We have had a Fuhrer-architect drawing up plans for the Greater Berlin of tomorrow. We have seen a Conductor-planner in the person of Nicolae Ceausescu ordering the destruction of thousands of villages and of his own capital. Pliny once cried out: *Ne sutor supra crepidam.* Today, I would want to say: *Ne princeps sub corona* – hoping not to have my cheek branded, like Prynne's, with the letters SL.

In ending, however, I should confess my perplexity. When it is a matter of carrying out a project of great scale and significance, how should one choose an architect or plan? It's not self-evident that the competition is the best solution, for if the decision is then in the hands of the jury, one still has the question: who chooses the members of the jury and according to what criteria? The question mark remains. □

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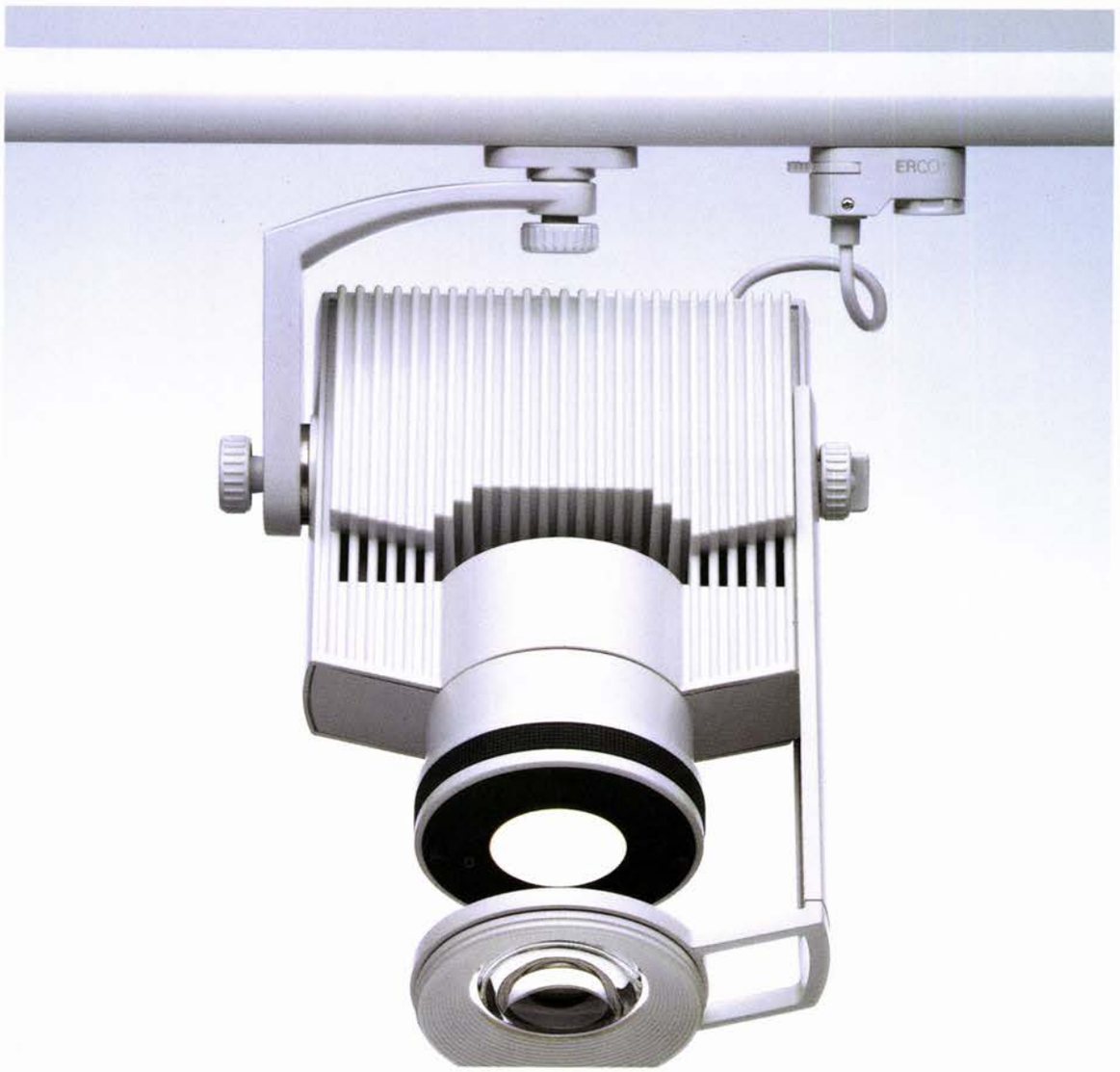

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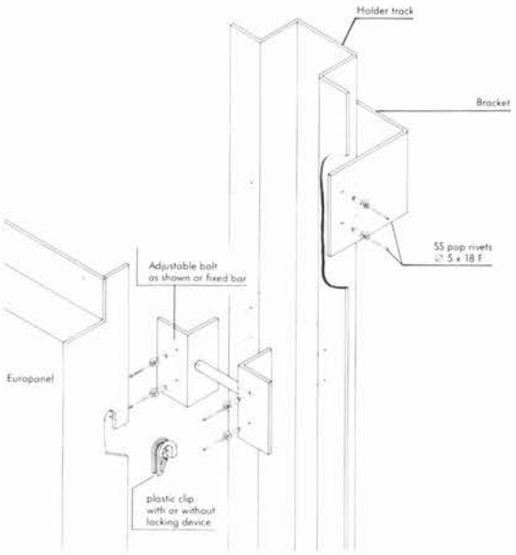

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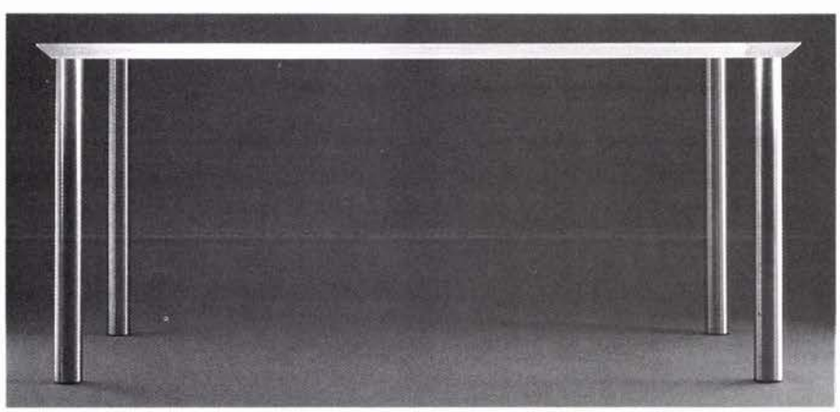

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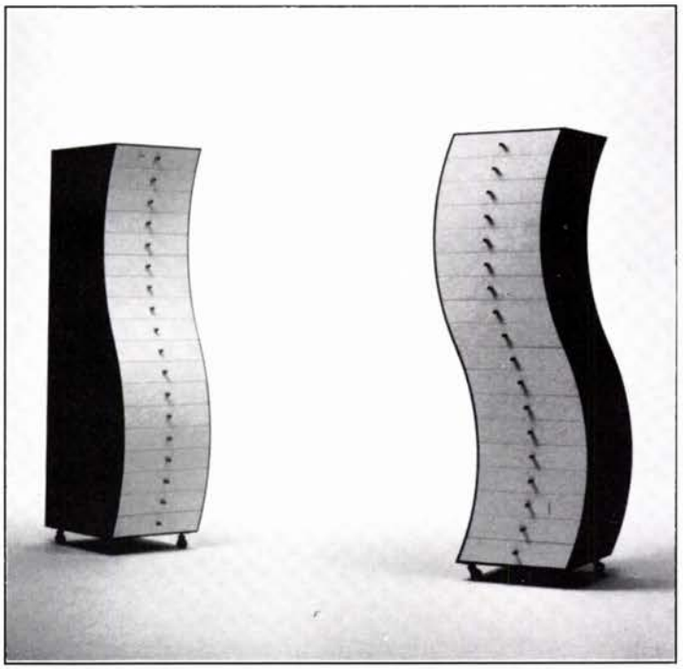

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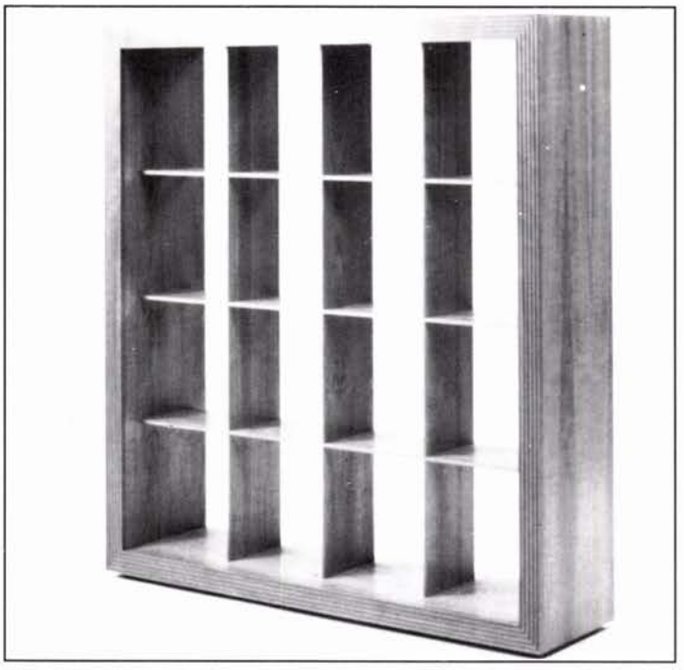

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