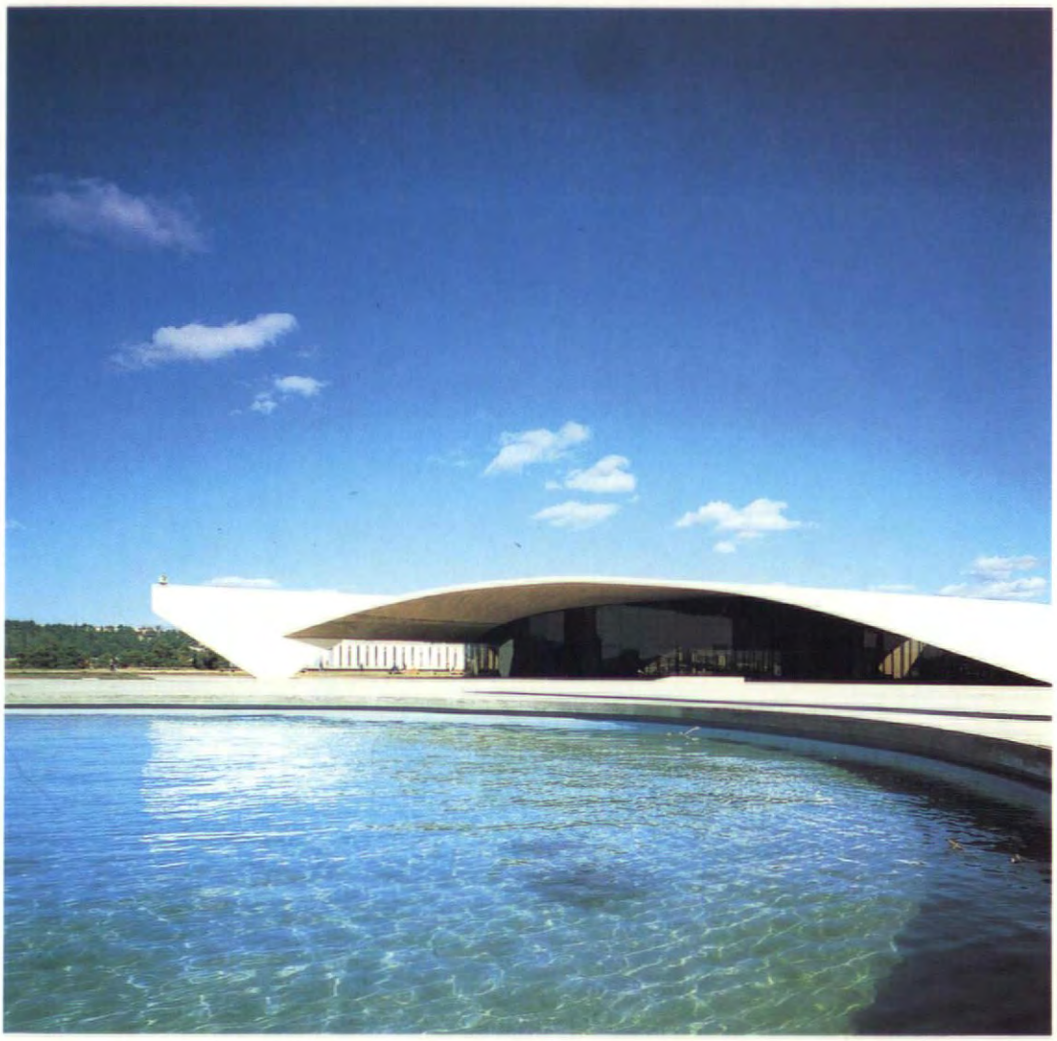
WORLD ARCHITECTURE

ISSUE NO. 26 US$10 UK£10



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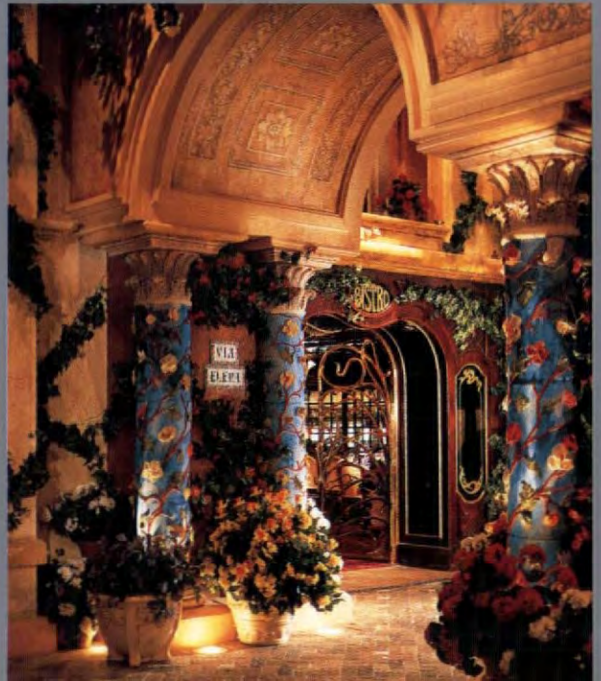

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THE INDEPENDENT MAGAZINE OF THE INTERNATIONAL ACADEMY OF ARCHITECTURE (IAA) NUMBER 26

Iakov Chernikhov

New work from Poland

Ben Johnson

Cover: Part of the Constantine University campus, Algiers, by Oscar Niemeyer. Photograph by Michel Moch

27 Foreword: A terrace not fit for a bank

28 Profile: Oscar Niemeyer
Italo Campofiorito interviews Oscar Niemeyer for *World Architecture* and finds him to be a determined advocate of functionalism after all these years.

30 Oscar Niemeyer and the Bird of Paradise
The career of Oscar Niemeyer spans nearly 60 years. *World Architecture* celebrates his extraordinary achievements by chronicling his early years, the advent of Brasilia, and his later work in Europe and South America.

34 Sixteen Projects
Drawn from the archives of Oscar Niemeyer, this remarkable collection of buildings covers the period 1950-1993, with special emphasis on the architect's later work.

52 Global Review
World Architecture's business section presents a selection of thought-provoking items. Not least from Europe - where British architects are migrating in numbers - and from Singapore, where artificial snow will soon make skiing possible for the first time.

58 Gallery: Ben Johnson
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Andrei Chernikhov presents an exclusive memoir of his famous grandfather, illustrated with images supplied by the Iakov Chernikhov Foundation.

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Poland has undergone an architectural revolution since 1990. A revolution led by church building.

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Nigel Gilbert charts the fate of architecture in the coming world of real time simulation.

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What are the chances of the Shell Group's ultra modern £500 million global petrol station redesign programme beating the opposition?

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92 Interiors: Sparse but comfortable
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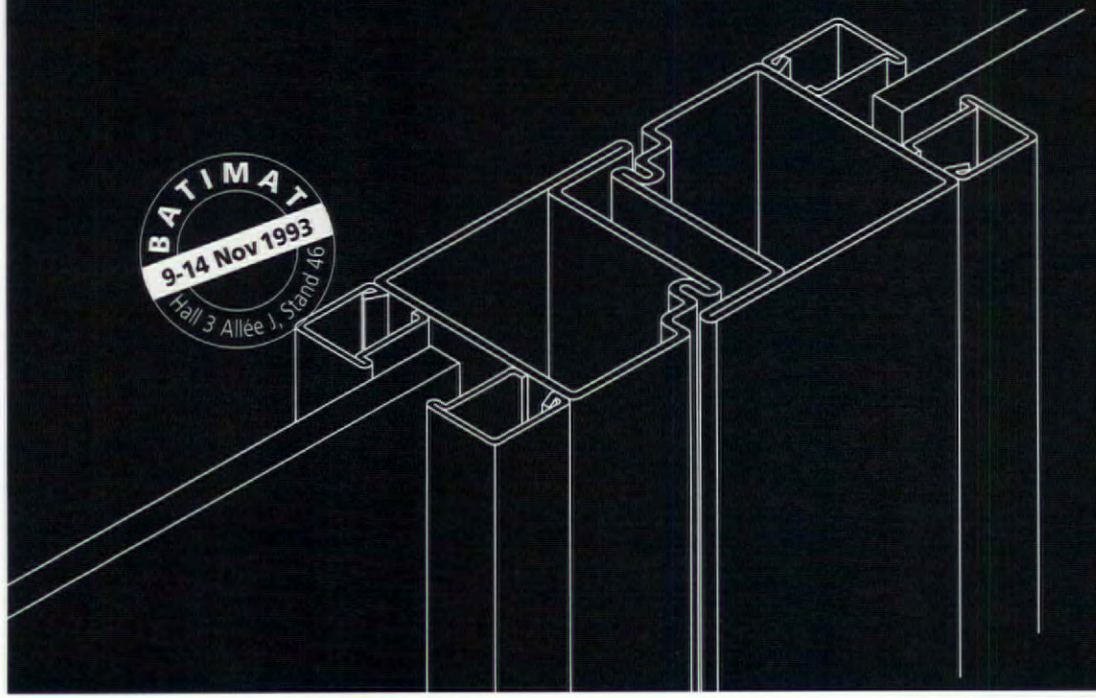

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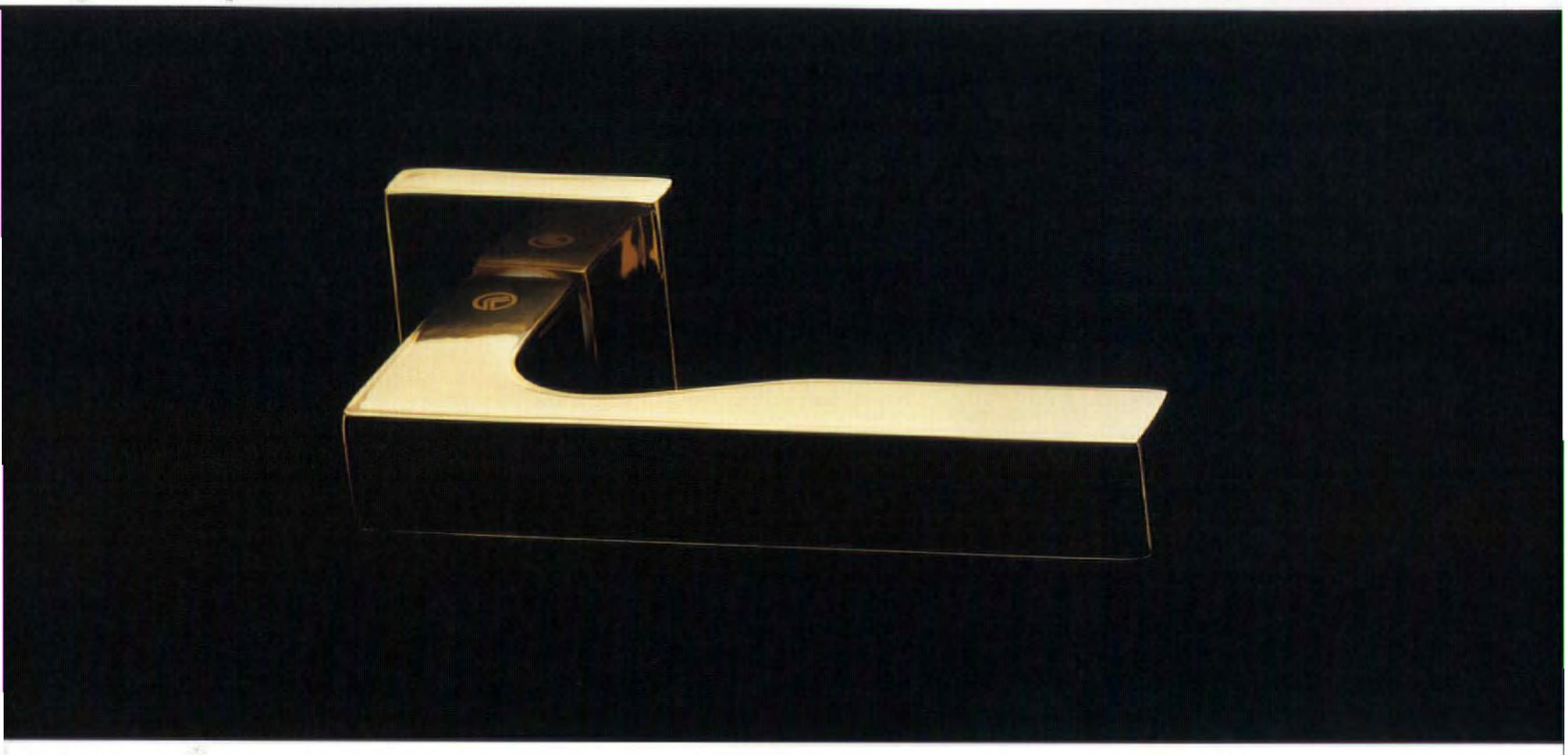
Lighted profile.

Mario Bellini



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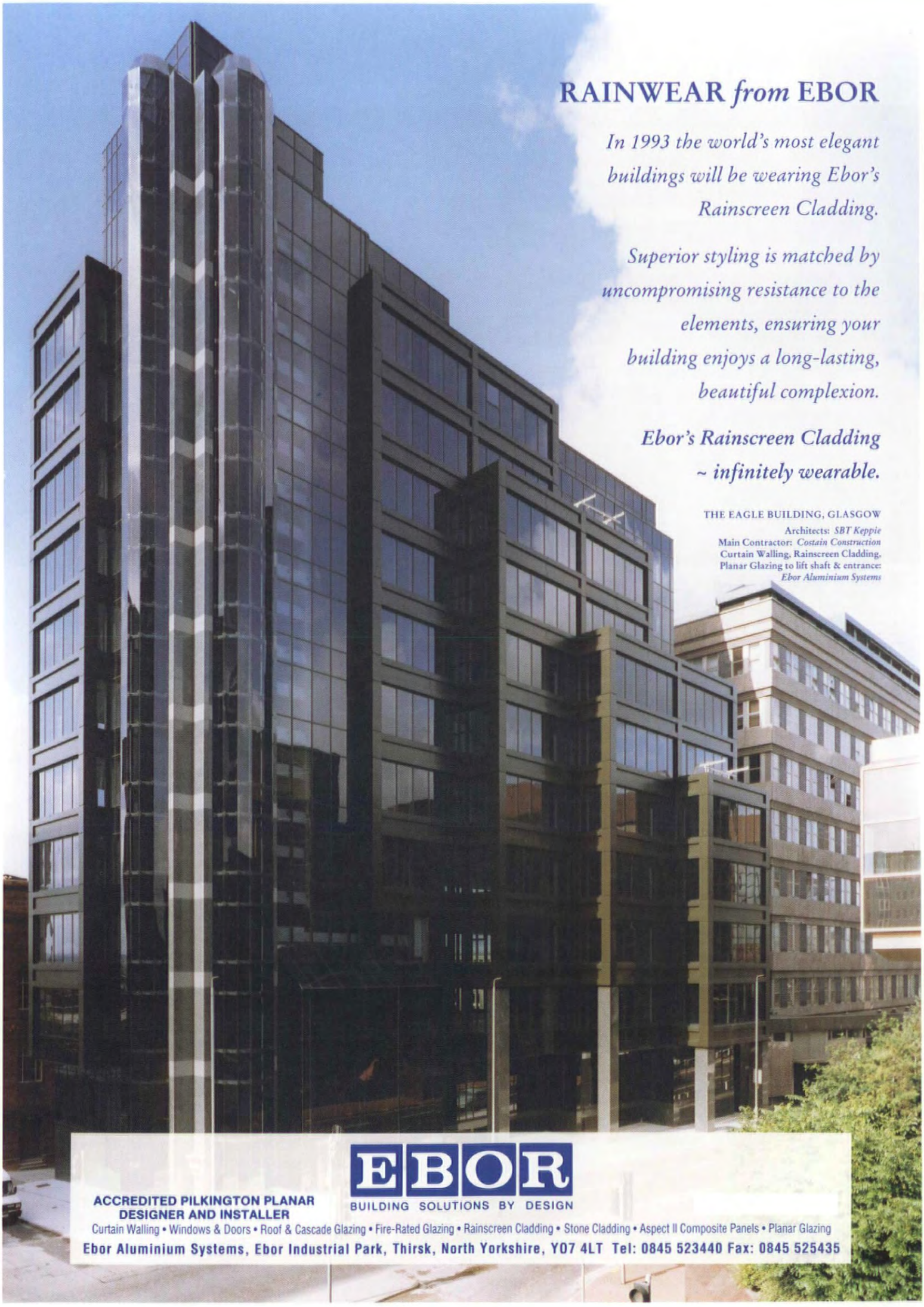

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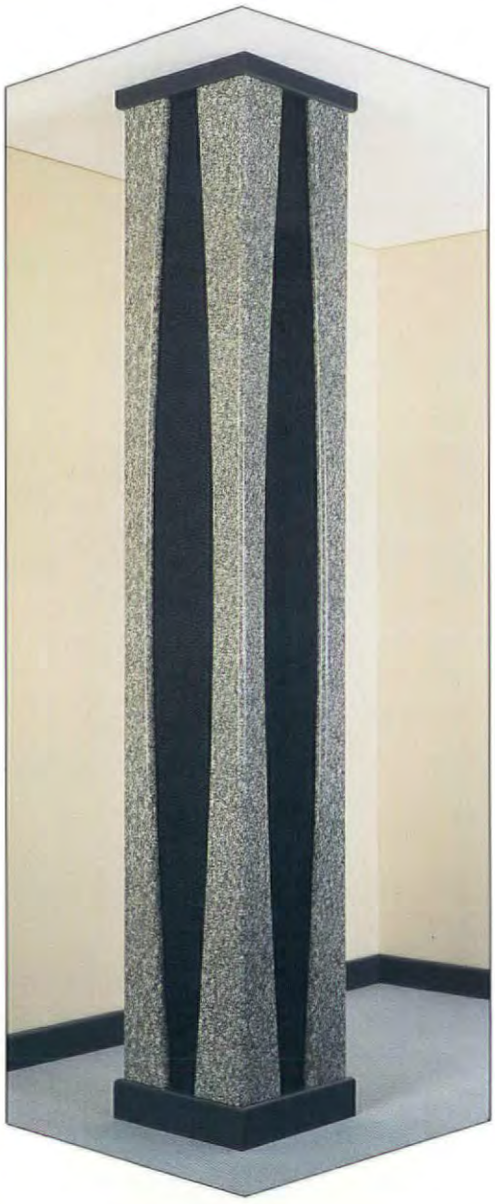

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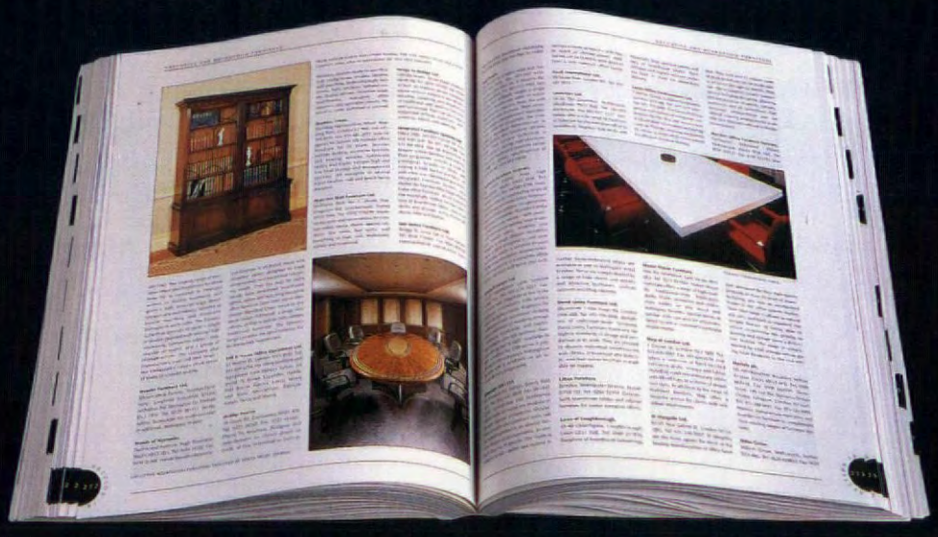

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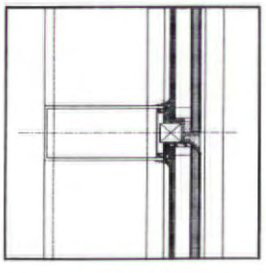

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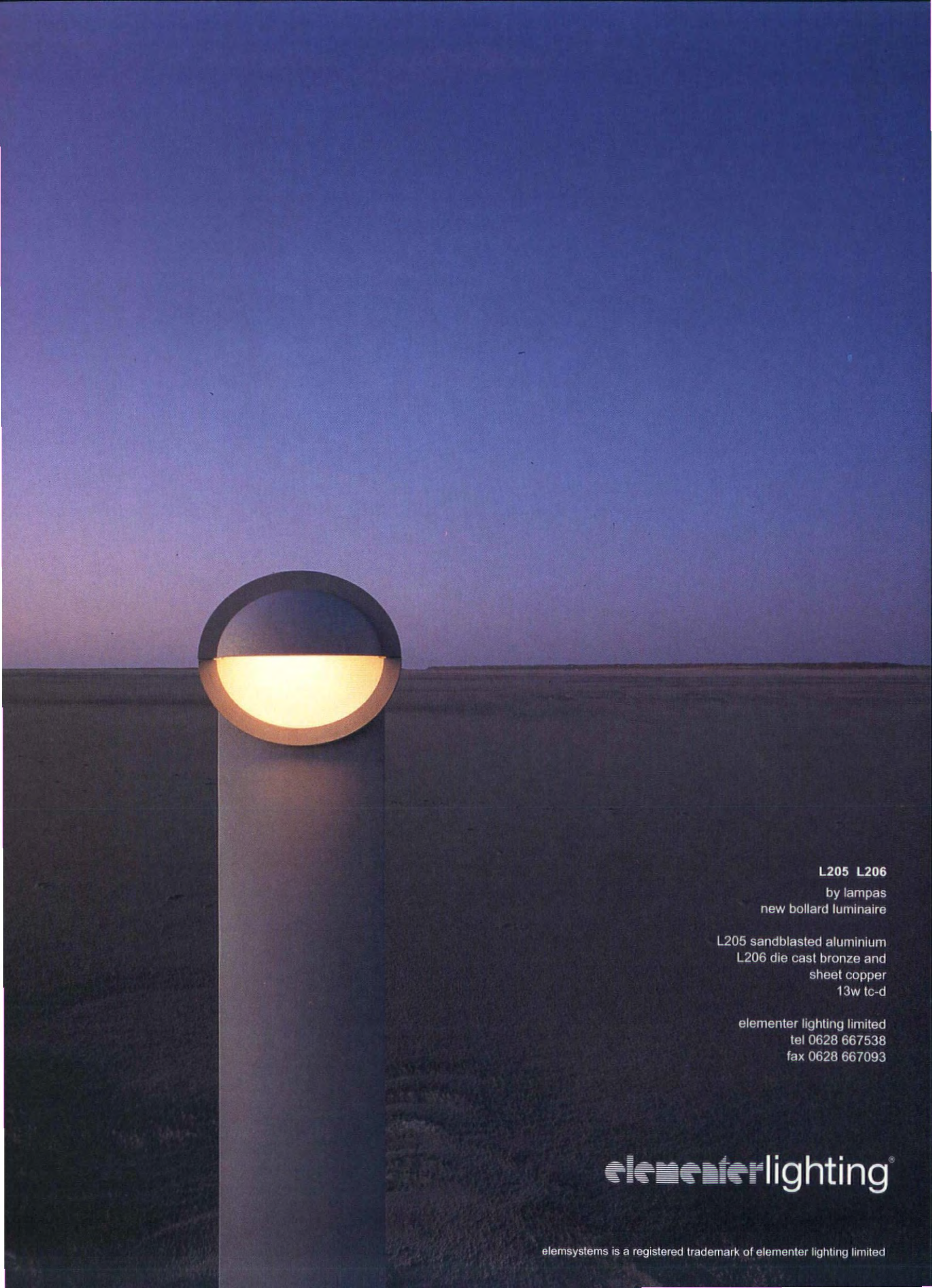

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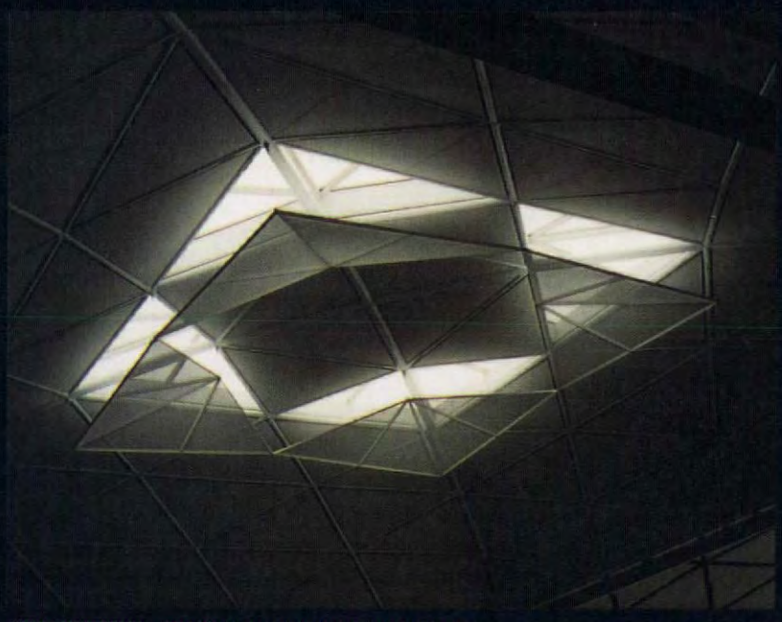

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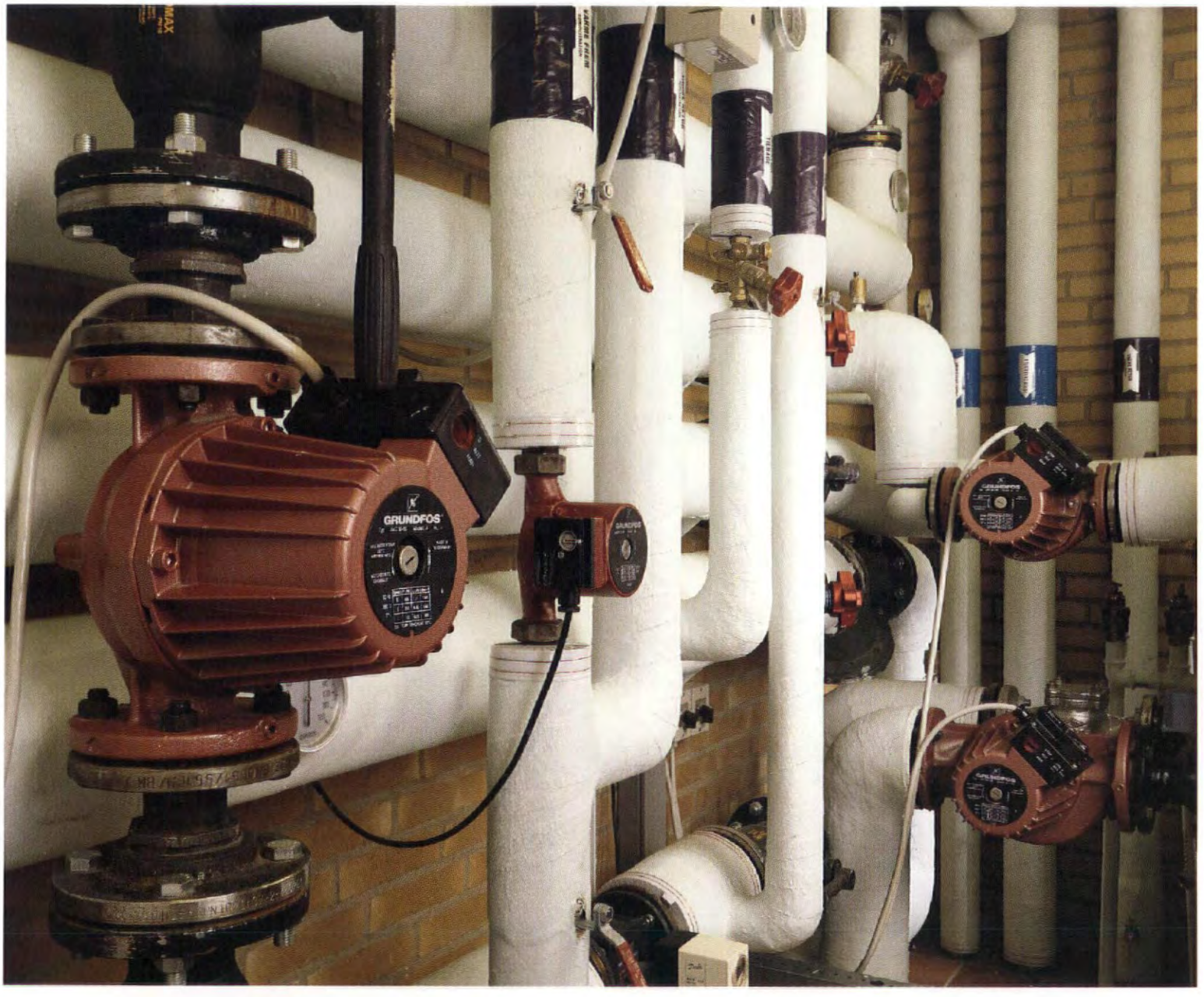

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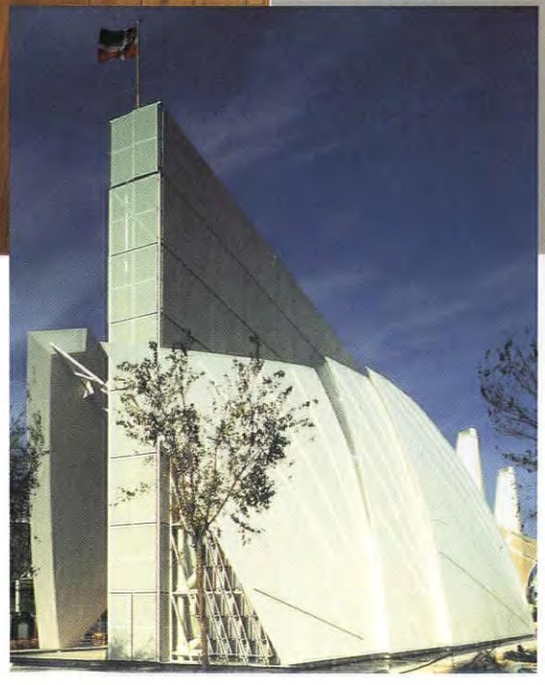

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WORLD ARCHITECTURE

A terrace not fit for a bank

The Bishopsgate "terrace", London

Europe is plagued by ignorance. According to a recent survey, not only do a third of English school children think an Ecu is a French taxi, but a quarter believe the title of the German chancellor is "Bundespost". It would not be surprising if none at all had heard of the European Bank of Reconstruction and Development, the 54-nation finance house founded to invest in the former socialist economies of Eastern Europe so as to integrate them into the European Community. This gap in their knowledge would be the saddest of all, for the tale of the EBRD is a parable of post-Modern times.

Last July, the EBRD's auditors castigated its first president and his senior management for wallowing in architectural and artistic extravagance. They were accused of allowing the architects Berthet & Pochy to lavish more than £53 million on fitting out Number 175 Bishopsgate, a simple 35,000 square metre office shell. But while awestruck visitors dutifully gasped at the bank's perfectly aligned mirror ceilings, clever reflected department signs, and hewn marble lift lobbies, the real story remained untold.

In fact the fitting out of the EBRD had not exceeded cost limits, and had certainly cost no more than other shell and core fitouts of similar size. What caused the trouble was the bank's reluctance to accept its "terraced housing" headquarters at Broadgate in the first place. The EBRD, ordered by Brussels to locate in London instead of Frankfurt or Berlin, had carried out feasibility studies on no less than 35 London buildings before taking on Broadgate at the end of 1991. It had considered Canary Wharf, Grand Buildings in Trafalgar Square, the Lutyens Midland Bank in Poultry, and - its first president's own emphatic choice - Embankment Place at Charing Cross by Terry Farrell. But for one reason or another none of these buildings was right. In the end the building on the uninviting Bishopsgate side of Broadgate was accepted as a cheap option that could be made palatable by means of a grand interior. Berthet & Pochy did wonders in transforming rafts of 1980s would-be dealing rooms into the headquarters of a twenty-first century European institution, but it was not enough. Neither they nor their clients really knew what to expect in London. Certainly they did not anticipate two nearby IRA bombs in a year; widespread misapprehension about the cost of shell and core fit out; the British press in full witch-hunting mode driving their client from office or, finally the City of London erecting a plastic Berlin Wall around itself. By last July, taking the initial property search into account as well, it must have looked to them as though London was the last place in the world that anyone in their right mind would want to locate an important bank. And sure enough, alongside the auditors' report last summer, in much smaller print, came the news that the EBRD's big brother, the European Central Bank, would not be located there after all.

What are the lessons of this unfortunate business? Most importantly that politics and architecture are so entwined that neither can prosper where there is chaos in the other. More particularly, we can now see what the toxic planning cocktail of conservation and "groundscrapers" that constricted the redevelopment of Central London in the 1980s really meant for the future of the capital. It meant quite simply that there is still not a single building in the city that is big enough or modern enough to become a major EC institution.

Martin Pawley

ALL I EVER SAW AND LOVED IN MY LIFE

After having been appointed to interview Oscar Niemeyer for World Architecture, *the magazine reminded me that "this is a task that requires some awareness of current thinking in Europe to provide an appropriate currency of ideas".*

Taking certain precautions, World Architecture *suggested an outline for the questions. Although I noticed they were relevant, they essentially referred to subjects that are also important among us and therefore would have been implicitly included in the interview, the main objective of which is to transmit the architect's thoughts. In general terms, at the end of this twentieth century architectural and artistic concerns are approximately the same in Europe and in the Americas. Nevertheless, our point of view was branded by the socio-economic and technological context of the world we live in - divided between North and South, the rich and the poor, the economic expansion interests and those who struggle to free themselves from contemporary neo-colonialism. So begins Italo Campofiorito's interview with the great Oscar Niemeyer.*

Oscar, it seems incredible that more than 30 years have gone by since I first started working in the field of architecture, from your office in Brasilia. I started in the company that was building the new capital of Brazil, following Lucio Costa's Urbanistic Pilot Plan and your architecture. We have spoken to each other whenever possible over the years, covering an unbelievable range of matters pertaining to life and art. Let me then start with that which always concerns the architectural milieu: specialised criticism - or the one arising from the community in general. Flaubert used to say that "A man is a critic when he cannot be an artist in the same way that a man becomes a spy (*un mouchard* in French) when he cannot be a soldier". What is your opinion about that?

For an architecturally gifted young man, to be an architect represents the pursuit of a path his talent obliges him to follow. On the other hand, when he only likes architecture, lacking the other qualities this field demands, he should only write about architecture.

Obviously, I respect architectural criticism but I do not obey it. Architecture is such a complex, such a personal problem, so full of minutiae that I choose to follow my own convictions.

Criticism sometimes perverts the very young. As regards older people, Fernando Pessoa stated something more radical in his book of Memoirs: "I do not read literary works for I have nothing new to learn". As time goes by, ideas mature and are established forever.

On the other hand nothing stops the intelligent critic from changing his opinion. This is what happened when a well known Italian critic who, for a long period of time had contested the plastic freedom of our architecture, enthusiastically proclaimed that he considered my project for the port of Le Havre in France one of the 10 best works of contemporary architecture. Often, the critic touches upon subjects he barely knows about on the basis of opinions he accepts as unshakeable. This is what must have happened with Argan, Gropius's friend, when he spoke with such self assurance about contemporary architecture. Gropius was an eminent professor with little artistic talent.

In the realm of architectural ideas, the key words have remained the same for a long time: form and function, rationalism and imagination, technology (old, new or "high-tech"...) and creativity.

In all good architecture the starting point will always be function. It is its first objective, to grant man indispensable support in his anguish and hopes. I believe form and function are two things that go together, entwined with constructive technique. Function, which is the respect owed to a preordained schedule, seems to me to be essential and indispensable.

I will give you two examples. Once the Mondadori headquarters building was ready Jorge Mondadori decided to build another one in downtown Milan. He decided to look for me in Brasilia to ask me for a new project. This was proof that the original building was functional and pleased him so much that he contacted me once more. The same thing happened with the French Communist Party. After their headquarters was built, they asked me to prepare a study for offices for *L'Humanité* newspaper.

It is usually said that "the project is correct". Yet this is not enough to define good architecture, which apart from being correct must also be functional, beautiful, and shocking. This is how Baudelaire defines beauty.

Many comments have already been published on the existence of traditional Brazilian characteristics even in your more innovative creations; for example: in the Alvorada Palace, with its porches in front and the chapel at the side. There are several historical buildings, such as the Doges' Palace in Venice, that you have frequently praised. Can your identification with the past have any relevance to your work?

André Malraux told me once: "I keep in my private museum all I ever saw and loved in my life". That applies to all of us. As an outgoing person who appreciates a large variety of things, I am touched by Le Corbusier's work and by Mies Van de Rohe's work; by a novel written by Camus or Sartre; a painting by Picasso or Matisse. And yet when referring to a piece of architecture we have known since childhood, apart from its beauty,

habit makes us see it with more empathy. Without even trying to, we remember it. Not surprising , as you say. When we design a simple veranda we make it large enough to lengthen the living room as was customary in olden days. Or, when we design a curve insinuated by reinforced concrete, we feel like going back into the past, like returning to the baroque architecture depicted in the old churches of Minas Gerais. Undoubtedly, this represents a desired link with old architecture. Nevertheless, it is upon nature itself that our imagination really focuses. Perplexed as we are by the speed with which it creates and invents a world of unrivalled shapes and colours, an example that, if we respect principles and coherence, we can always change.

Do you believe that a completely new city, "such as Brasilia" without historic associations, can create an adequate environment for our daily life?

The present will always be tomorrow's past. Our South American cities are devoid of the monumental memory that characterises the countries of the old world. Here, men don't walk around monuments, nor does the contrast between the different ages move us so deeply.

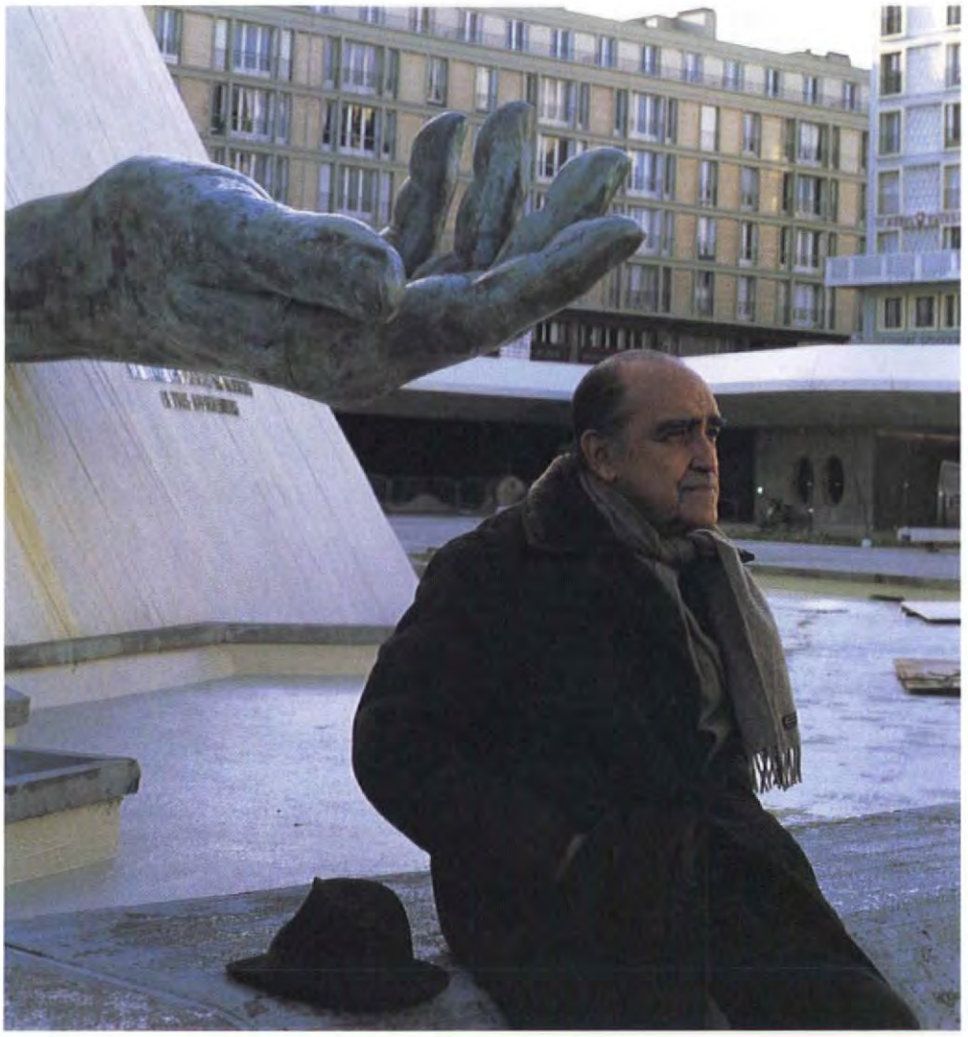
That is why we are always ready for anything new. Devoted to inventing new things, creating today, as I mentioned before, tomorrow's past.

For me, the distinguishing factor of a city is the life of men. The horizontal society that draws them closer, allowing them to maintain in a brotherly fashion that solidarity that the lacerated world we live in seems to have lost forever.

I remember Le Corbusier once telling me in New York: "The ideal thing is a shack with a pool beside it". Everything has changed. Cities are full of cars and people are dominated by the rule "do not get involved". Today's man has forgotten his own destiny "to be born, to live, love and multiply". Now, he is completely governed by competitiveness and the consumer society he himself created.

Although building technology and interior equipment have developed quickly, do you see any contradiction between these advances and reinforced concrete?

A normal building is easily transformed into an intelligent one as consumerism demands. Or you can add from one day to another on a post-Modern building superfluous things, old architectural details, novelties that please minorities, the industry and the business world. And yet, in spite of this , they have one strong quality. They eliminate rationalism. Nobody can be against the acceleration of technological development. And yet those who defend a more simple way of life also have arguments that are difficult to dispute.



How much better our old Rio de Janeiro was in the old days! With its gardens, parks, tree-lined streets and that feeling of peace and solidarity. Today's Rio ... it is obvious that it is still pretty, in spite of the traffic, growing pollution problems, street crime and poverty. It is still our city. And we get used to it all.

Are there any colleagues of yours, technicians or creative people in general that you believe should be mentioned as important people in the architecture of our times?

There are many competent and talented architects among us. Most important of all, they are good friends. I should not judge them for I might make a mistake.

What is your personal experience of living in a world so incongruent and distant from your political ideals?

I always say one shouldn't give too much importance to architecture, although I have spent most of my life in front of a drawing board. Life, family , friends and hope are the most important things in life for me. Hope as an ingrained desire to see the world improve and men get closer to each other, aware of their own insignificance and of life, flowing at the pace that nature and destiny have stamped upon it.

One of the works I designed that pleases me the most is the Latin American Memorial. Although, if you ask me what pleased me the most about it while I was designing it, I would have to reply it was the open hand with the blood flowing to the wrist. It represents Latin America. Its past or struggle and the yearning to make it more united, ready to defend itself from those who have been interfering with its culture and sovereignty for years. My architecture , the architecture I create today, has the purpose of using technique to the full, while leaving space for wings and imagination. □

OSCAR NIEMEYER
AND THE BIRD OF PARADISE

Before the Great War of 1914-18, political factors were of small importance in the dissemination of Modern Architecture. Isolated centres of influence had sprung up in the booming Chicago of the 1880s, in Republican Paris and Imperial Vienna, and later in Hohenzollern Germany. But only after the conclusion of the Great European upheaval did the ideological connection between these centres become overt. By 1939, the eve of the next European war, a veritable flood of migrant modernists had penetrated to the farthest corners of the earth. Everywhere, that is, except to South America. There the seeds of Modern architecture were planted by one man - Le Corbusier - and brought to fruit with a speed and certainty unequalled anywhere else in the world by one architect - Oscar Niemeyer.

Oscar Niemeyer was born on 15th December 1907 in Rio de Janiero and he was in his thirtieth year at the time of Le Corbusier's second visit to Brazil, a country equal in size to the United States of America...

Six years earlier, and already married, he had begun the study of architecture (which in Brazil involved a mastery of civil engineering) when he entered the School of Fine Arts in Rio de Janeiro. During and after his studies he worked for the architect and town planner Lucio Costa. Costa himself has recorded that the young student (whose great gifts were not at that time readily apparent) had in fact offered to pay him in order to work for him, so great was his determination to succeed. That same determination enabled Niemeyer to persuade Costa to put him on the Ministry of Education design team in 1936 - just in time to spend a month working on the project with the visiting Le Corbusier. That encounter changed the whole course of Niemeyer's career as an architect: in the words of Stamo Papadaki, "This impact was not so much of artistic mastery but, rather, of intellectual integrity, of an ethical awareness which gives someone the strength and ability to say 'no'. Le Corbusier often used to say that talent was not enough if it could not be backed by a strong character; and many young men departed from his studio with only a set of 'stilts' and 'roof gardens'."

Niemeyer absorbed the lessons of Le Corbusier completely. Familiar with the master's work through publications and via his earlier visit, he quickly developed a drawing style strongly reminiscent of Le Corbusier. His sketches for the (unbuilt) Henrique Xavier house, executed in 1936, possess the same economy of line as those of his mentor; the famous "five points of modern architecture" were scrupulously observed. Though Le Corbusier's own comment on Niemeyer's work, "You know how to give full freedom to the discoveries of modern architecture", was of course of later date, and corresponded to the Brazilian's achievements rather than to his promise, the implied paternalism was nonetheless justified. Le Corbusier, the tireless polemicist and pamphleteer, was the driving force behind modern architecture in Brazil, and indeed throughout Latin America. His political and social theorizing, largely ignored in Europe, found an audience in the former Portuguese and Spanish colonies; his rhetoric was addressed to those nations "about to cross the threshold of industrialization" and the extent of his influence in Brazil (as in India and Pakistan) derived as much from the close connection which he saw between his architecture and an emergent, but still labour-intensive, technology, as from its value as an image of a more developed Western world. Le Corbusier's geometry, which he called the "thumb print of technology" proved in the event to be the talisman of emergent industrial power, emergent political independence, and emergent wealth. Just as Marx's communist revolution was obliged to take place in backward, agricultural, war-exhausted Russia instead of any of the fully industrialized mercantile capitalist states of Western Europe, so Le Corbusier's "Ville Radieuse" was in a curiously ironic sense born on the plains of India and the plateau of central Brazil.

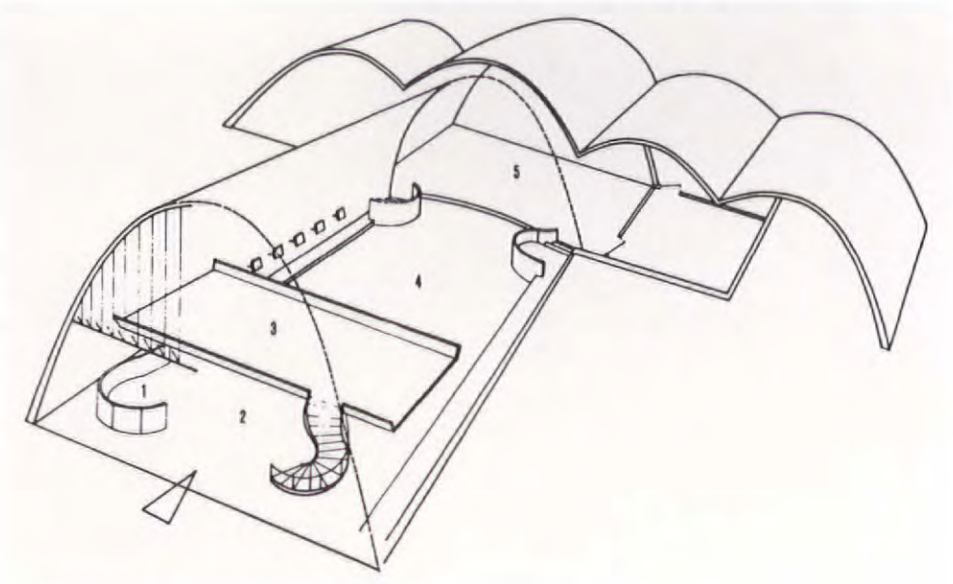
This connection at the level of political and industrial evolution was by no means irrelevant to the career of Oscar Niemeyer. Lucio Costa himself owed his rapid rise to success to a favourable relationship with the Presidency of Getulio Vargas, which lasted from 1930 to 1945. Niemeyer achieved a similar relationship with Juscelino Kubitschek who became successively Mayor of Belo Horizonte, capital of the state of Minas Gerais, in 1940, Governor of the state in 1950, and President of Brazil between 1956 and 1960. The political link was matched by parallels in the fields of finance and technology. In terms of building technology, in-situ concrete construction proved to be an ideal medium for the labour-intensive Brazilian building industry, the country's climate, and the skills of its highly trained engineer-architects. With a population of about 85 million at the outset of Niemeyer's career, Brazil had a

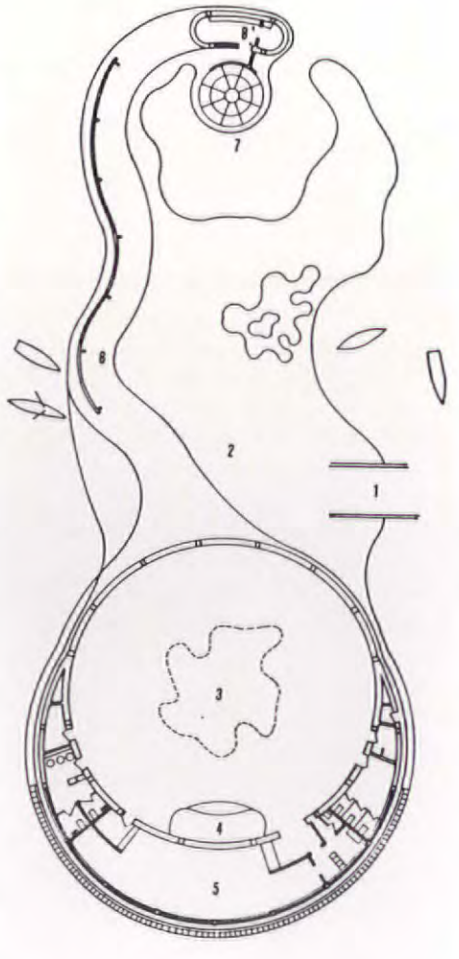
rate of illiteracy of nearly 50 per cent and a large itinerant labouring population driven from the cultivation of coffee, cocoa and cotton by disastrous fluctuations in international prices for these commodities during the 1930s to seek work in the coastal cities. Mixing and pouring concrete was an unskilled occupation, and the concrete structures themselves, thanks to the equable Brazilian climate, required no expansion joints, no curtailment of building in winter, and no serious problems of heat or damp insulation.

Oscar Niemeyer's first completed building was a day nursery and milk dispensary in the Gavea district of Rio de Janeiro. The three upper floors of the building, facing north, were given adjustable sun louvres, or *brise soleil*, after the pattern of Le Corbusier who had first proposed them for a Barcelona project in 1933. Here, four years later, after the original fixed concrete louvres had proved ineffective, Niemeyer installed vertical asbestos louvres at his own expense, evidence already of the strength of character to which Papadaki referred. One further significant building interrupted work on the Ministry of Education commission. Costa turned over to Niemeyer his competition-winning design for the Brazilian Pavilion at the New York World's Fair of 1939 and the result, executed in collaboration with Paul Lester Wiener, revealed the extent of the architect's grasp of the technology of plastic concrete form. Built on two storeys, the pavilion featured free planning around a grid of free-standing concrete columns; a sinuously curved western block was echoed by a ramp to the south, and a first-floor terrace was roofed with a concrete slab perforated by a large, irregularly curved opening. The building signalled the official arrival of the Modern Movement in Brazil.

On his return from New York Niemeyer was elected head of the Ministry of Education design team. The building as completed represented a triumph of Le Corbusier's thinking in almost every sense, though certain improvements had been made over the original design of 1936: the height of the pilotis had been more than doubled so as to emphasize the openness and transparency of what would under older architectural theories have been the most impenetrably substantial level of the building; the position of the slab block itself was centralised on the site; and the elevator towers were incorporated into it. The integration of art with architecture, on which subject innumerable conferences were held, failed to improve in a like fashion. Far more than the design of the structure itself, with its clean lines and distinctive *brise soleil*, the appended sculptures seemed doomed to incongruity or insignificance. Bruno Giorgi's Youth, which stands at the foot of the south elevation, is strongly reminiscent of the heroic sculpture of the Stalin period in Russia, while Jacques Lipchitz's *Prometheus*, for some time mounted on the curved wall of the ground-floor auditorium, was cast in error to one third the size the sculptor intended, not surprisingly with unfortunate results. Of the peripheral features only one - the landscaping of the site by Roberto Burle Marx - can be said to be comparable in its conception to that of the building itself.

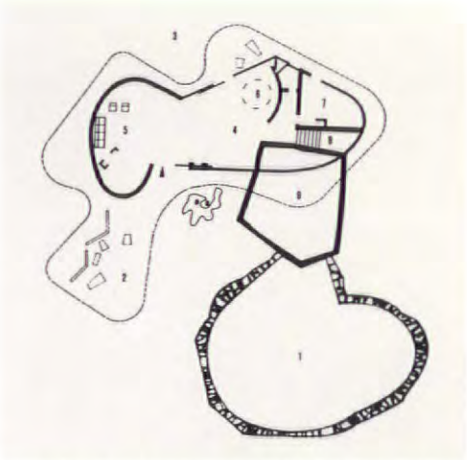
Church of St. Francis of Assisi, Pampulha 1942 (below). Plan of the restaurant at Pampulha (bottom) built at the same time

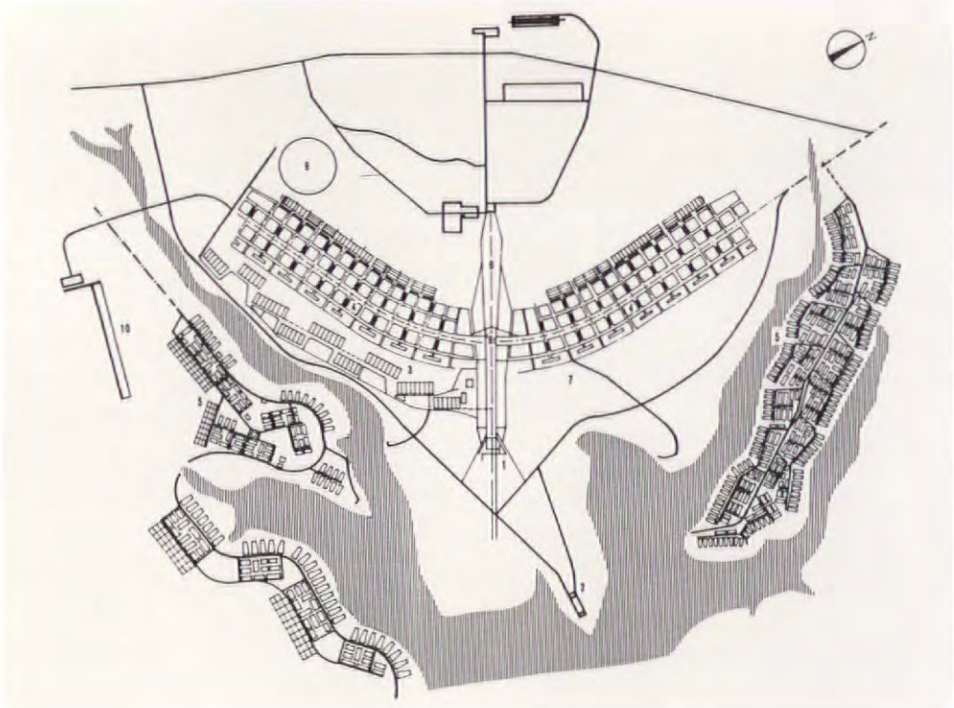




By the time the Ministry of Education building was completed in 1943, Niemeyer was already deeply immersed in the design and construction of a series of buildings around the artificial Lake Pampulha in the suburbs of the city of Belo Horizonte. Here, as has already been noted, Juscelino Kubitschek, five years Niemeyer's senior but already a close friend and patron, had been elected mayor in 1940. Almost immediately the young administrator embarked on ambitious plans to reform the structure of the city. He planned new roads and public buildings, established public transport on a new and more efficient footing, and began the construction of a new garden suburb at Pampulha. Niemeyer was commissioned to design successively a casino (destined under a more austere administration to become an art gallery), a yacht club, a restaurant, a dance hall, a church, and - although it was never build - a 100-room hotel.

In architectural terms the most original and controversial building in the group was the small church of St Francis of Assisi (1942). Very few





Plan of architect's own house 1943 (above). Plan of Brasilia by Lucio Costa (right)

uncompromisingly modern churches then existed and Niemeyer's essay in this genre far outstripped in formal unorthadoxy both Perret's church at Raincy of 1924 and Moser's Church of St Anthony, Basle, of 1926. He used a curved, folded slab form which allowed a single structural element to act as roof as well as walls.

Surrounded by plants and shrubs arranged by Roberto Burle Marx, who also landscaped the site area of the Ministry of Education building in Rio de Janeiro, the concrete church prefigures Le Corbusier's own plastic concrete forms first employed at Ronchamp in 1953. Niemeyer was already in a fair way to exploring the absolute limits of free-forming concrete construction. Only the wall of *azulejo* tiles, an old Portuguese finish used during Brazil's colonial period and one which was enthusiastically endorsed by Le Corbusier, remained of the once pervasive influence of the European master.

Niemeyer's commissions increased in the period immediately folowing the end of the Second World War. His Boavista Bank building in Rio de Janeiro marked a return to the capital city and the Corbusier-influenced rationalism of rectangular urban structures. "Discovery" by the New York Museum of Modern Art during the war led to considerable publicity in books and magazines and eventually to involvement in the design of the United Nations complex in New York and election as an honorary member of the American Academy of Arts and Sciences in 1949. In the following year Kubitschek was elected Governor of Minas Gerais, a state with a population of over ten million. He began immediately to develop electric power and transportation systems on a scale appropriate to the size of his new domain; major infusions of European and United States capital were arranged by means of loans and investments; once again he created conditions where massive architectural, industrial and engineering commissions blossomed. In Belo Horizonte Niemeyer's "Julia Kubitschek Elementary School" appeared in 1951, to be followed later by a secondary school boasting a long classroom block and aerofoil section auditorium, all executed in concrete. A curvilinear public library was projected for the city, as well as two massive apartment towers of Corbusian dimensions called "Governor Kubitschek Buildings", which were eventually built in 1958.

In 1943 the publication by the New York Museum of Modern Art of the book *Brazil Builds* had launched Niemeyer's world reputation; by the mid-1950s his fame was established and his office bursting with commissions - more than sixty were on the drawing board at one time. In 1955 he was invited, together with Le Corbusier, Gropius, and other world-famous architects, to design an apartment block for the International Reconstruction Fair ("Interbau") held in Berlin in 1957. However, an even greater honour was about to be bestowed on him; hard at work in his house overlooking Rio de Janeiro, a vegetation-enshrouded hilltop structure which he had built for himself in 1953, he received a visit from an old friend.

Kubitschek was at that time in the midst of plans for the massive expansion of the Brazilian economy during his five year term of office as President. With his Vice-President João Goulart he had won the elections of October 1955 with the aid of a massive trade union and Communist vote. He was committed to increasing electric power by two-thirds, installing an atomic reactor, and raising the yield of Brazil's dominant export - agricultural produce - by more than 30 per cent. In addition he had promised to establish heavy industry securely and inaugurate a home motor industry to replace the increasing number of vehicles at that time imported - chiefly from Germany and the USA.

By the autumn of 1956 the great leap forward had begun, and to crown it Kubitschek determined to realize a dream already enshrined in the Republican Constitution of 1891: to transfer the capital from Rio de Janeiro on the coast to an empty plateau 600 miles to the north-west and 3,000 feet above sea-level. The new capital would be called Brasilia; it would have a population of 500,000 and it would be built within four years! This was the incredible ambition that Kubitschek explained to Niemeyer that September morning.

Without further delay a Brasilia Pilot Plan Competition was held with an international panel of judges. Early in 1957 the proposal of Lucio Costa was selected out of 26 entries, a master

plan was developed, and a development corporation (NOVACAP) created under the control of Dr Israel Pinheiro. Niemeyer himself was given the task of designing all public buildings in the centre of the city which was itself an axis, for the heart of the new capital was to be the intersection of two immense motorways. No sooner had the master plan been finalized than a massive construction force of 40,000 men was drafted to the area to begin shift-work round the clock. The completion date was boldly announced a full four years ahead: 21 April 1960. On that day the government of Brazil would move to the centre of the country; six months later Kubitschek would be obliged to seek re-election.

The pressure of work was immense, and with it came a test of the force of character Le Corbusier had always so much admired. Niemeyer wrote: "We had to draw up in a fortnight plans that would normally have required two or three months of study, simplifying and altering specifications, avoiding imported materials that - however suitable - would have entailed economic and customs difficulties, besides competing with Brazilian industry, which it was up to us to protect . . . The contractors, far from all resources, managed to hold to the schedule that was imposed upon them, constructing for instance, the Alvorada Palace in 12 months - the time that it generally takes to build an ordinary private house . . . Suggestions (for design alternations) were put forward without malice, simply through misunderstanding. But, however valid, they would have perverted the architecture and this is why we refused them, lest they be transformed into a dangerous precedent, liable in the long run irreparably to injure our work."

The ominous sound of the last sentence was echoed during an exchange reported by British town planner Max Locke in 1959: "I had the privilege of meeting Niemeyer, and I asked him how much his Alvorada Palace cost. He shrugged his shoulders, as I would like to be able to do, and said, 'I do not know. How should I know?'"

Israel Pinheiro, Director of NOVACAP, gave a somewhat similar reply to an enquiry about interference by capital accounts committees and things of that kind. "I have said to parliament, 'If you criticize me, you do not get your town'" In this buccaneering spirit construction continued into the late 1950s.

The plan of the city itself - described by André Malraux as the "first capital of twentieth-century civilization" - included two immense autoroutes: the first to run from Brasilia to Belém - a distance of 1,400 miles - and the second intended eventually to reach from Brasilia to Lima, the capital of Peru (initially it was to terminate at the Peruvian frontier, 2,300 miles away through the uncharted jungle of the Mato Grosso). The first of these routes, inaugurated in February 1960, was intended to be completed in six months, the second in nine.

Study of these grandiloquent plans, together with photographs of Kubitschek, the planner Costa, Niemeyer himself, and Pinheiro, the head of the Development Corporation, bring back something of the insane excitement of the gigantic project itself. Exhausted, sweating, unshaven, but possessed by an overwhelming devotion to their task, these men gesticulate at conference tables and around drawing boards. They smoke incessantly. The work they are engaged in is indeed an epoch-making stride in the evolution of modern architecture. Here on the red-earthed plateau of central Brazil the vast dream of CIAM, of the Athens Charter, of *Vers une Architecture*, of the Russian Constructivists, the Viennese moderns, the Weimar pioneers, the German diaspora, the English Garden City enthusiasts, the American skyscraper builders, is taking physical, palpable shape. Architecture in the service of society, rational, "Cartesian" architecture to meet the needs of the modern mercantile, social-democratic state.

In the spacious Square of the Three Powers at Brasilia, the twin towers of the Secretariat, the dome of the Senate and the bowl of the Lower House, the Palace of the President and the High Court, the skeletal cathedral and the endless rectangle of the Brasilia Palace Hotel - in these buildings the *meaning* of the dream of the twentieth-century architecture is to be revealed.

Miraculously the exhausting timetable is maintained and, on 21 April 1960 amid scenes of sacred and secular splendour, the city becomes capital of Brazil - a country three million square miles in area with a population of ninety million. The achievement is on a scale reminiscent of but calculated to dwarf even Adolf Hitler's plans for the rebuilding of Berlin; the fertile buildings mock the arid neoclassicism of Albert Speer's vision. The one motorway connecting the capital with Peru will make the German *autobahnen* look like the work of children. The 400-yard wide avenues will resist the congestion of the motor car. For the four principal actors in this drama the day must have been one of almost unbearable emotion and triumph. Not even the economic catastrophe that followed can rob them of its splendour.

The euphoria attending the inauguration lasted only weeks. Soon ominous murmurings were heard from those opponents of the Kubitschek administration who had all along opposed the desperate inflationary measures with which the President had financed the immense project. In that autumn's presidential elections Kubitschek's chief opponent Quadros campaigned with a broom as his symbol. In the event Kubitschek decided not to seek re-election and in the contest of 3 October 1960 Quadros was returned with the biggest majority every accorded a Brazilian President. In the saddest obituary on Brasilia yet recorded, he broadcast to the nation as follows: "We must pay back nearly two billion dollars in foreign loans during my five-year term alone. All this money, spent with so much publicity, we must now raise - bitterly, patiently, dollar by dollar, *cruzeiro* by *cruzeiro* ..."

Niemeyer himself, exhausted by overwork, was seriously injured in a road accident soon after the election. When a military junta took over the government of Brazil in 1965 he fled to Europe to escape possible retribution. From 1965-1974 he lived in Paris, carrying out large commissions in Israel, Algeria, France and Portugal. From time to time he returned to Brazil and completed some small works there, while continuing to supervise the now painfully slow development of his buildings in Brasilia itself.

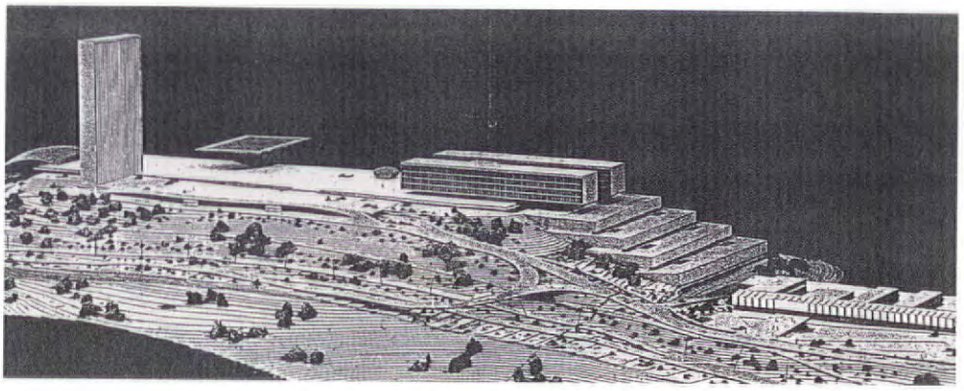
In the 1980s he completed his famous Pantheon of Liberty in Brasilia; his monument to the Latin American People, and a dramatic Sambadrome in Rio de Janeiro. He has never worked in Britain although he has come close. As long ago as 1970 the architect Dominic Michaelis worked on his behalf to promote the construction of a Niemeyer-designed hall of residence for Saint Anthony's College, Oxford, but the energy crisis of 1974 led to the project being shelved. Seven years later there were rumours of a Centre for Brazilian Arts to be built in London's Docklands, but again economic recession put an end to the project - as indeed it did to a large exhibition of the architect's work scheduled to appear at the RIBA in April 1990. Since 1990 the great man has continued to reside in his native Brazil, working on various projects of which the most recent is the new Niteroi Museum of Contemporary Art. At present the prospect of further buildings in Europe remains problematical. Niemeyer is a genius at odds with the restrained conservationist tide of the Northern hemisphere. Nor has he any sympathy with the mechanistic realm of High-tech. Niemeyer is an original. As Walter Gropius said of him many years ago, he is a bird of paradise among architects. □

Photo by Michel Moch

Chapel of our Lady of Fatima, Brasilia 1959

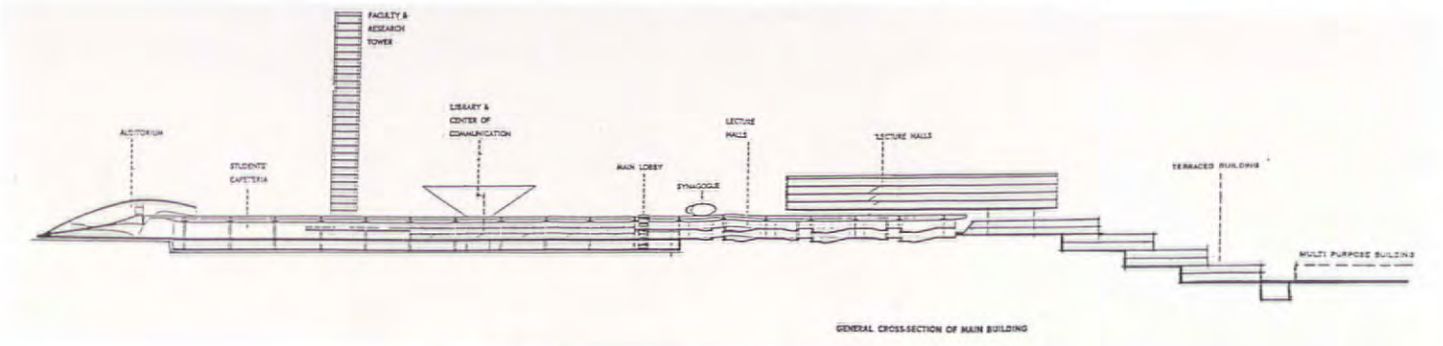
Completed some ten years before the cathedral that stands near it, this small triangular ecclesiastical structure consists of a tapered catenary curved roof supported on elegantly tapered concrete columns at each corner, with the chapel itself screened in the centre by twin concrete side walls faced in bright azulejo tiles. Its design, though radical, is now overshadowed by later Brazilian structures but, at the time of its completion, it was credited with influencing the Catholic Church in its decision to wholeheartedly accept the tenets of Modern architecture for church building in Latin America.

Model and section (below) show projected campus complete. Niemeyer sketches (bottom left) show massing, while cutaway (bottom right) shows back to back lecture rooms and vast scale of structure

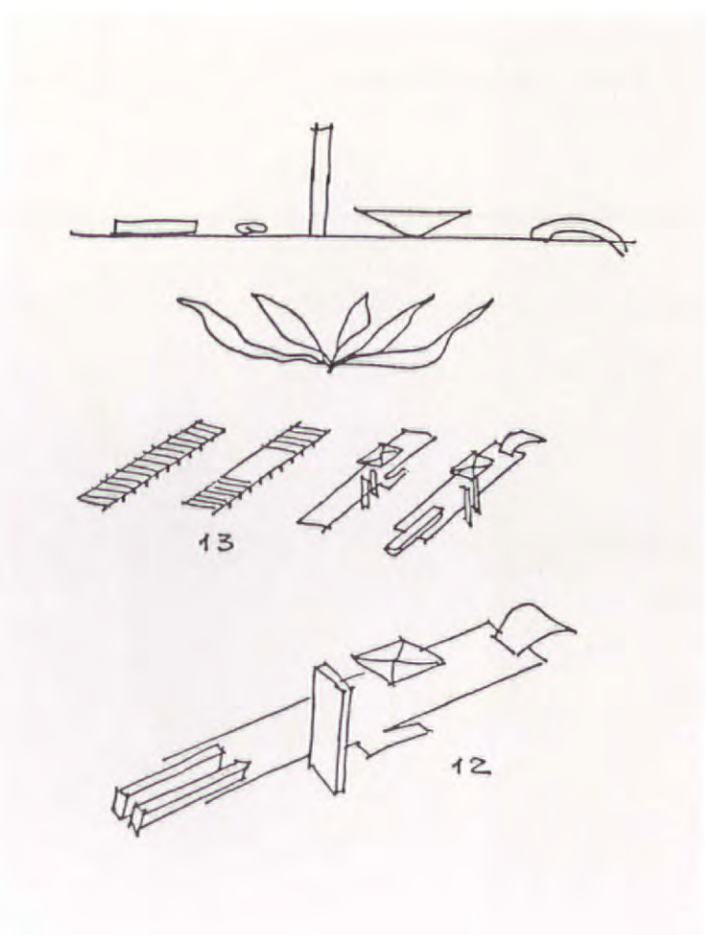


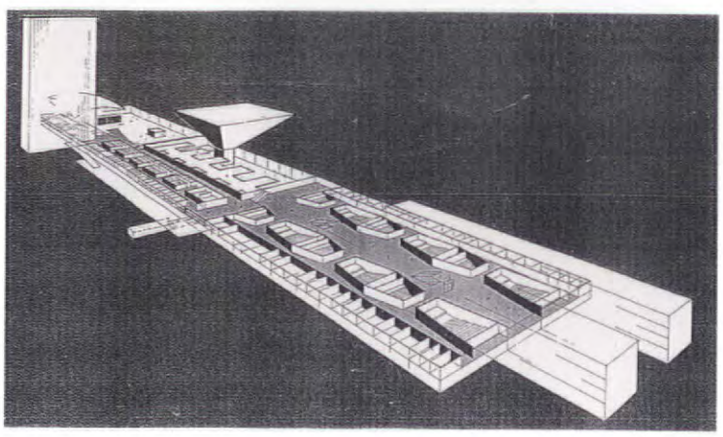
University of Haifa, Israel 1964

This immense structure, which is intended eventually to house more than 10,000 students, was begun in 1964 and remains unfinished to this day. Situated on the crest of Mount Carmel, surrounded by a National Park, the highest building on the 200- acre Haifa University campus can be seen from the Lebanese border in the North to Hadera in the South. Because of its elevation the 28-storey Eshkol faculty and research tower is also a communications centre, bristling with satellite dishes and antennae. The multidisciplinary



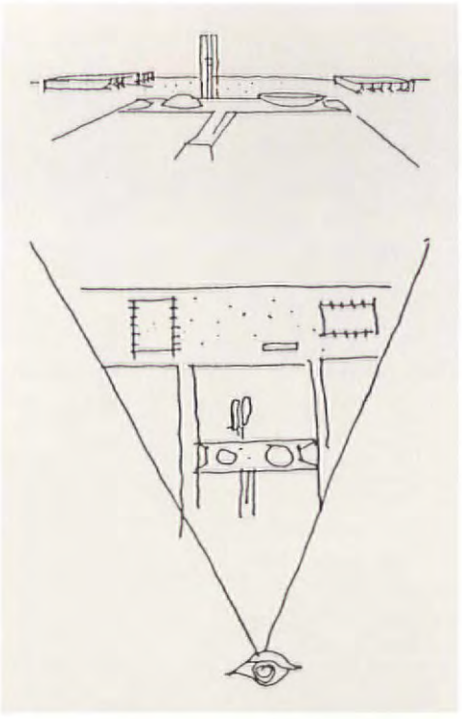
campus is centred on a 500 metre long four-storey main building incorporating eight large auditoriums. This structure serves as a sheltered communications corridor linking all parts of the campus beneath a massive concrete roof. When completed, the main building will terminate at one end in a concrete shell auditorium and, at the other, step down the mountain side in a series of terraces of classrooms, dormitories and car parking. Soaring above the highest level of the main building is the Eshkol Tower administration centre, eventually to be joined by an inverted pyramidal library and communications centre, an egg-shaped synagogue and two lone four storey complexes of further lecture halls. The growth of the university of Haifa is indicated by the number of students, which increased from 500 in 1964, the year of opening, to 6,500 in 1988.





National Congress complex, Brasilia 1960

The outline of the congress buildings at Brasilia is known to every Brazilian as it appears on banknotes, stamps and bumper stickers. Located at the centre of the Square of the Three Powers, it comprises the chamber of the upper house, the chamber of the lower house, and the twin towers of the secretariat. The upper house, or senate building, is cast in the form of a dome whose reverse, a saucer-shape, houses the lower chamber. The promenade linking these two chambers provides administrative, press and social facilities for the Brazilian government. A ramp from this promenade leads directly to the towers of the secretariat where the offices of individual political representatives are also located. Both chambers of the parliament can be reached from below, within the promenade building. In architectural terms the twin towers of the secretariat are the most powerful elements in the administrative quarter, which is otherwise a virtually two dimensional composition set between two broad access highways.



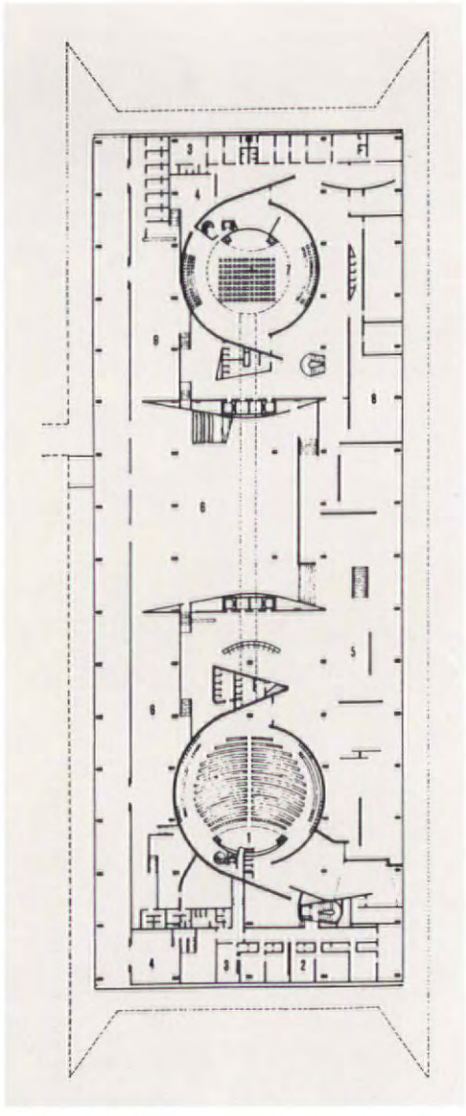


Photo by Michel Moch

Early sketch of Congress buildings and finished plan (above). External view across lake (left) and section (below) showing upper and lower chambers with linking bridge
Opposite page: Congress buildings with lower chamber in foreground (top). Early Niemeyer sketches (below)

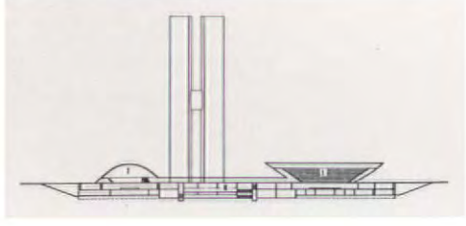
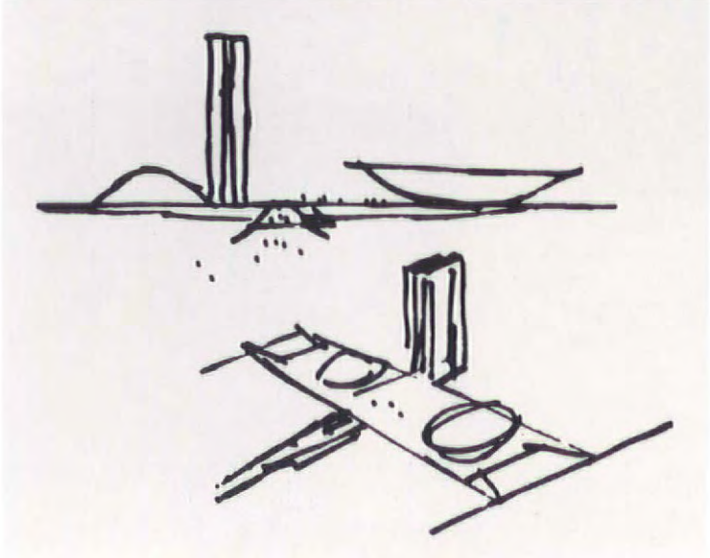
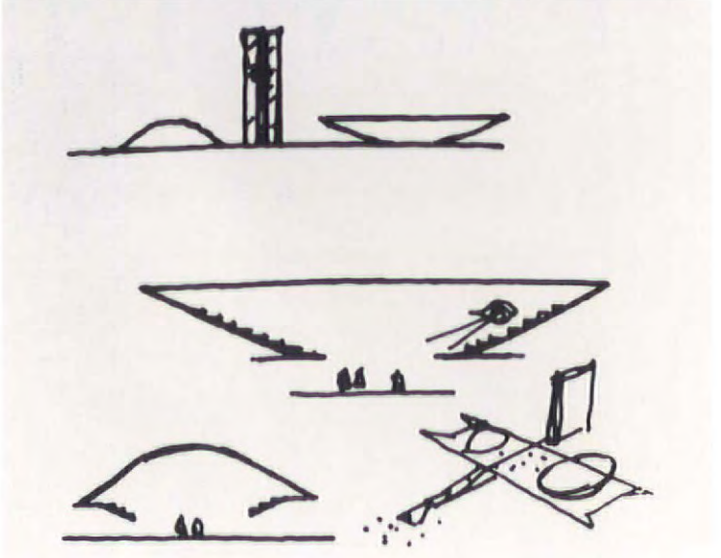


Photo by Michel Moch

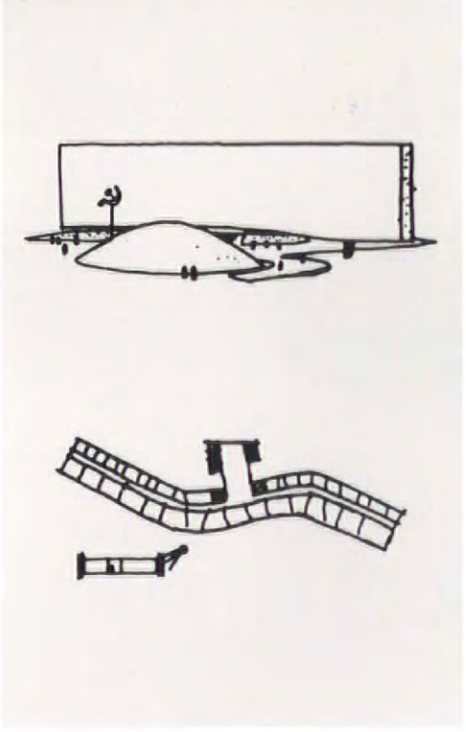




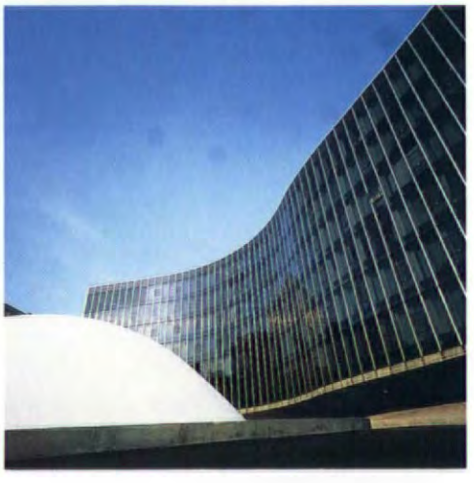
Offices of the French Communist Party, Paris 1965

Oscar Niemeyer became a convinced communist in 1945 following the end of the Second World War, and has remained committed to popular forces ever since, notwithstanding the collapse of the Soviet Union and the end of the Cold War. During his ten-year exile in Paris, he formed associations that led to his being appointed to design, not only the present headquarters of the French Communist Party, but new newspaper offices for its leading newspaper l'Humanité. *The Party Headquarters, with its seductive double curvature facade and floating administrative office block, resembles earlier work in Rio de Janeiro except in the manner in which it curves itself around the mound formed by the dome of the Party Congress, a white concrete structure reminiscent of the Palace of Arts at Sao Paulo that rises from a paved and grassed area of landscaping dotted with sculptures and inscriptions commemorating the struggle of the French working class since the time of the Paris Commune. The actual connection between the congress and the secretariat is effected below ground level by means of a broad ramped tunnel. Unlike the architect's Sao Paulo buildings of the early 1950s, with the strong horizontal emphasis provided by their continuous* brises soleils, *the Paris party Headquarters confines itself to a smaller triangular site in the city centre, emphasising its verticality with strongly expressed stainless steel mullions running the full height of the six-storey concrete-framed secretariat which is only partially raised above the ground on pilotis. The integration of this large floating box into its carefully profiled and surfaced ground level receptor is one of the most subtle and successful ever achieved by Niemeyer.*

Photo by Michel Moch



Spectacular double curvature of secretariat (above and below) with Niemeyer sketch and plan (left)

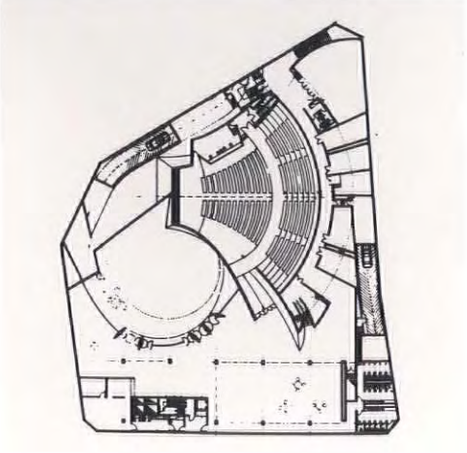


"For the auditorium we chose a solution that produced a beautiful contrast" (top). Plan (below) shows only pilotis of main block

Photo by Michel Moch

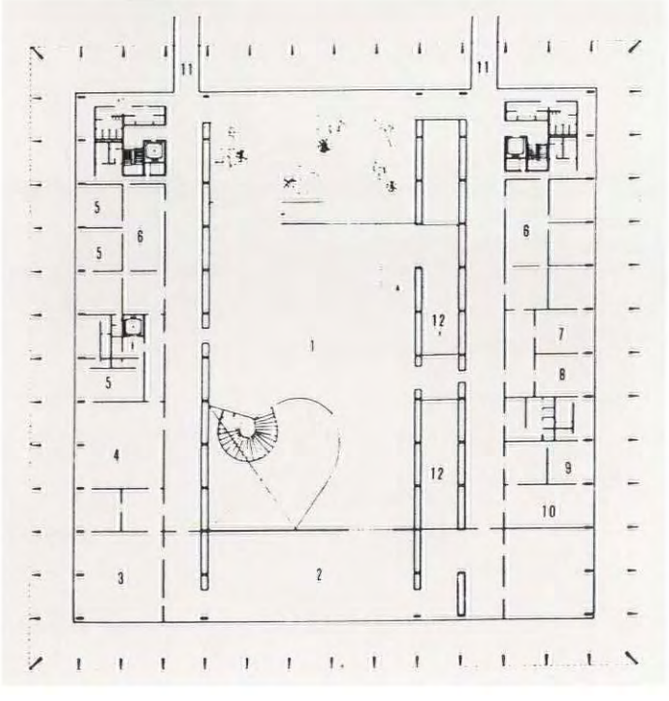
Labour Exchange, Bobigny, Paris 1972

An example of the architect's dedication to social architecture and the amelioration of the plight of the masses, this structure combines typical Niemeyer compositional elements in an unusual way. As it was important to be economical in construction, the spans and finishes in the main block were dealt with extremely simply. Nevertheless the auditorium stands in abrupt contrast. The long horizontal main block, raised up on pilotis, is not curved as in previous and later buildings, but rectangular, with pronounced vertical mullions in bright metal set against dark reflective glazing. In front of this four-storey administrative box is the Labour Exchange itself, a strange whale-shaped structure in white concrete, its prominent entrance angling towards one corner of the main structure. Set at the edge of a small square in the Paris district of Bobigny, this building is best approached over a carefully designed system of ramps and inclined planes designed by the architect, which are floodlit at night. The first of Oscar Niemeyer's French buildings, this structure is perhaps the least dramatic, because of its small size and limited site area it achieves few of the powerful sculptural effects exploited so eloquently at Brasilia and elsewhere.



Department of Foreign Affairs, Brasilia 1970

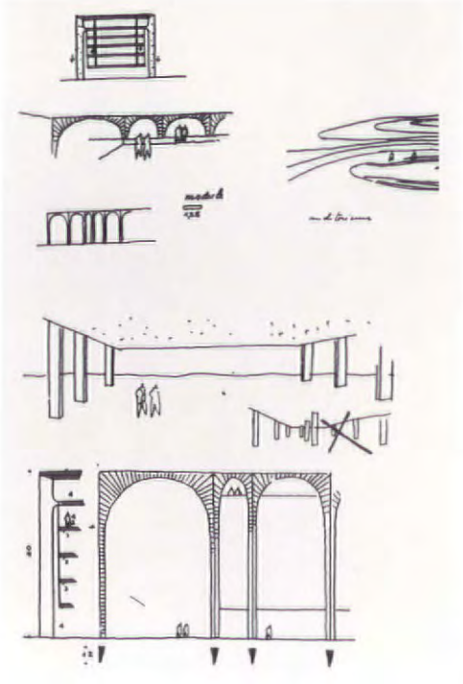
Unlike the marble facings used on earlier government buildings at Brasilia, the Department of Foreign Affairs exploits the Corbusian technique of board-marked concrete for the spandrels of its great supporting arches. These arches, unique in Brasilia, though later employed in a visually similar form by the architect in Italy, spring from a moat-like pool with a powerfully romantic effect. The interior cladding glimpsed within these arches is independent of this main structure and is defined by light screen walls, and tinted glass cladding. This actual envelope is recessed within the depth of the arches for maximum sun shading.



First floor plan

1 Central hall
2 Reception room
3 Diplomats' offices
4 Foreign Minister's office
5 Administrative offices
6 Offices
7 Security office
8 Interview rooms
9 Small conference room
10 Assembly room
11 Walkways to Congress buildings
12 Ramp to upper floors

Photo by Michel Moch



Palazzo Mondadori, Milan 1968

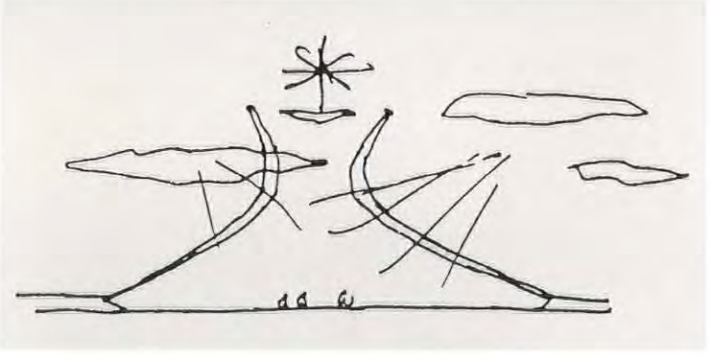
As Oscar Niemeyer's Italian biographer, the Venetian historian Lionello Puppi, once wrote: "The great Brazilian architect's flight from his native country to the Old World after the military coup of 1965 created for him new opportunities to create new masterpieces: opportunities that he realised without ever yielding to fashion or compromise." In the building he conceived for the Mondadori publishing house he remained faithful to the epic scale of Brasilia, but in a minor key. Although he created a new headquarters office building in Italy that was strongly in the mould of the Brazilian Ministry of Justice – with the same tall board-marked concrete arches, the same recessed glass cladding, and the same use of water as a cooling and reflecting plinth upon which the building could stand – the difference between the two buildings is absolute. The five stories are suspended from the roof beams and spans of the arches vary in what Niemeyer has described as a musical sequence. At Brasilia the great concrete arches form the sides of a deep-planned square: at Mondadori the entire structure is arched. It is a long rectangle only a single bay deep, with the glass box of the offices floating above the shallow lake instead of rising from its surface, a subtle modification that gives the whole composition an entirely new appearance.

Superficially resembling the Brasilian Department of Foreign Affairs, the Mondadori building (top) supports its office floors from arches of varying spans, as Niemeyer's sketches show

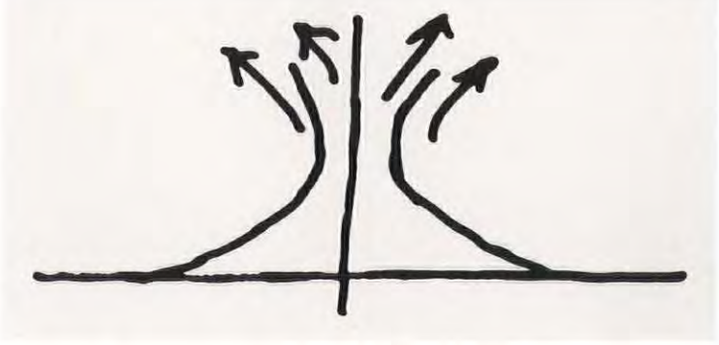
Cathedral of Brasilia 1971

The circular planform of the Cathedral at Brasilia derives from the city planner Lucio Costa's conviction that it should be approachable from all directions. in the course of the design of this structure, Niemeyer concluded that it could only be approached from below in order to preserve the purity of the contact between its 16 elegantly tapered reinforced concrete legs and the surrounding open space at ground level, which is dotted with vast statues. The main entrance therefore is by means of an underground passage which is reached through a vomitory without protective balustrading. The interior of the cathedral, with its 200 foot diameter sunken floor and overall height of 120 feet, will accommodate a congregation of over 4,000 citizens. The sloping hexagonal stained glass windows, with their swirling blue and purple abstract patterns, were originally designed to fit between the spiders' leg supports. At one time it was feared that they would be removed in favour of bronze-coated substitutes in order to reduce solar gain, but this destruction of the original concept has now been halted as a result of popular protest. A slightly domed glass roof, with very light steel framing, was originally located within the compression ring beam that linked the supporting legs at their point of junction. Its design was extremely refined for the glazing technology of the 1960s but early experience showed that it could not withstand heavy downpours of rain. It has since been replaced with an opaque membrane and the leaks have been cured. Not far from the cathedral itself is an immense cantilevered concrete belfry of unusual appearance.

Photo by Michel Moch



Tapered reinforced concrete ribs (top) with abstract stained glass realise Niemeyer's first sketches (right and below)



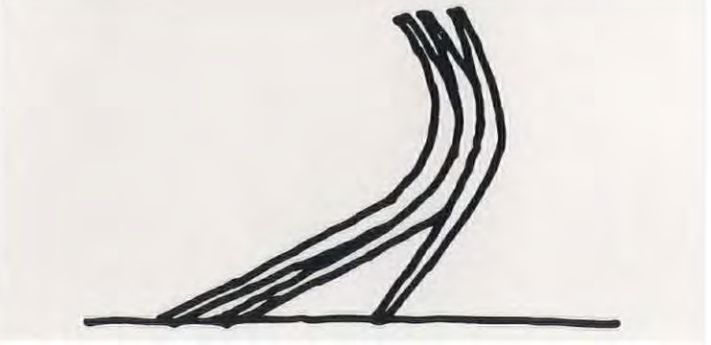


Photo by Michel Moch

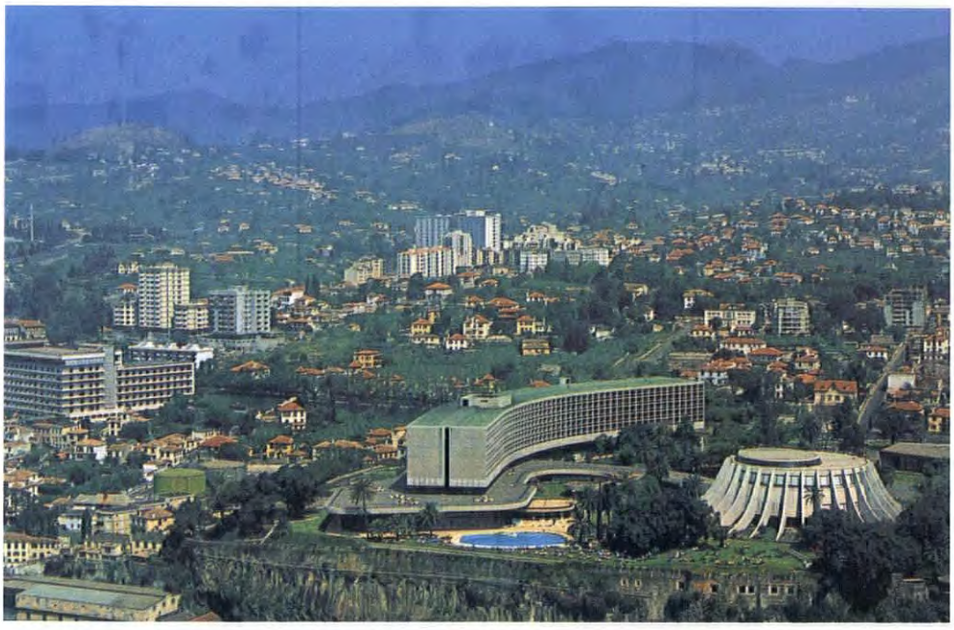
Remote sculptural belfry survives from earliest sketch (left) to completed building (top)

Cultural Centre and Plaza at Le Havre 1972

The largest and most challenging of Oscar Niemeyer's French commissions is the public square and municipal cultural centre at Le Havre. The city of Le Havre, virtually destroyed during the Second World War, was replanned afterwards according to the designs of Auguste Perret and Niemeyer respected the Perret plan and its buildings when he caused his public square to be lowered four metres below ground level, using only the most abstract shapes for his buildings. Because of its varied architecture the Channel port is now a place of pilgrimage for students of Modern and High-tech architecture in France. Oscar Niemeyer's contribution is quite unlike any other. His huge funnel-shaped auditorium and art gallery may make some belated reference to long since vanished ocean liners, but their chief effect, with their spiral concrete ramps, pedestrian walkways and deep, sheltering recesses beneath wide cantilevers, at the very edge of the port itself, is to create an unique sculptural environment. There is an unusual quality to this space that is summed up by the projecting memorial hand above the ceremonial pool, a giant representational human member that beseeches the aid of the passer-by with a directness that is reminiscent of the expressionist sculptures of Brasilia.

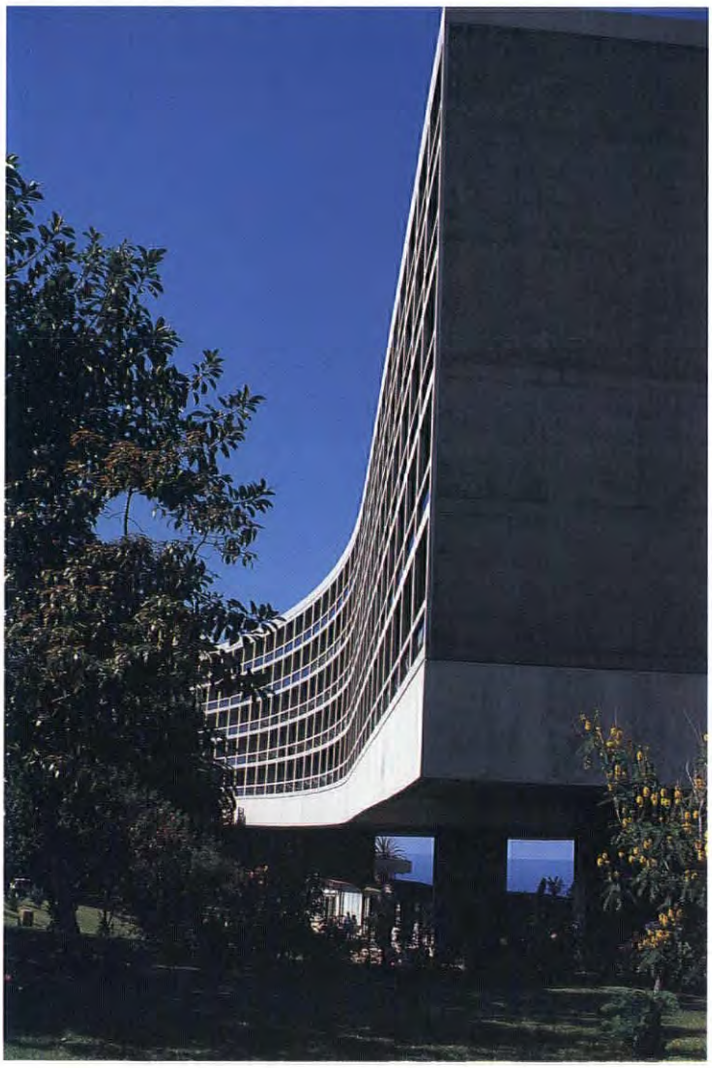
Photos by Michel Moch

Characteristic ramps and truncated cones in sketch and full-size form. View from water shows obeisance to Perret



Casino Park Hotel, Funchal 1976

The island of Madeira is a curiously remote place to find an important building. It is the tip of a range of mountains 350 miles off the coast of Morocco, and if the Atlantic were to dry up, it would emerge some 15,000 feet above the ocean floor. Even now its cliffs at Cabo Girao are the second tallest in the world. Oscar Niemeyer's response to this grand landscape was to design a quarter-mile long hotel on pilotis, curving around a circular casino to which it is linked by ramps, gardens and covered walkways. Like all Niemeyer buildings the Casino Park embodies traces of many of its predecessors. The circular casino itself resembles the cathedral of Brasilia; the link with the hotel is from the Sao Paulo Palace of the States; the curved main block is a combination of the 1961 Copan apartment buildings in Sao Paulo and the 1958 Brasilia Palace hotel. Like Brasilia itself, the complex effortlessly demonstrates what an appropriate scale of intervention in the landscape can do, its floating white concrete sweeping over Funchal's dismal touristical red-roofed bungalow blitz to create the first architectural event on the island since the construction of the Pico Fort in the sixteenth century.



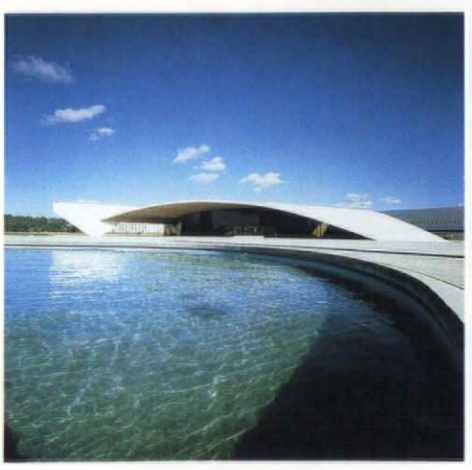
Scale of hotel and casino in landscape are clear (top). Scale of hotel building itself can be seen in close up

Photos Moch

Constantine University, Algiers 1974

Vast campus (top) is dominated by administration tower. Auditorium (below) shows ultra-flat concrete arches

Reminiscent of the Israeli university of Haifa in its spectacular contrast of horizontal and vertical elements, the University of Constantine deploys many of Niemeyer's largest sculptural concepts, including directed vistas, mounds, elegantly shaped shallow artificial lakes, an immense horizontal block suspended on pilotis, huge, low sweeping curved reinforced concrete vaults with deeply recessed glazing, and a powerful vertical element, in this case too an administration tower. The student accommodation is concentrated in a long rectangular building behind an abstract curved lower block housing laboratories, lecture rooms and academic offices. The whole campus is composed around a central 50 metre by 25 metre circular auditorium of daring structural design.



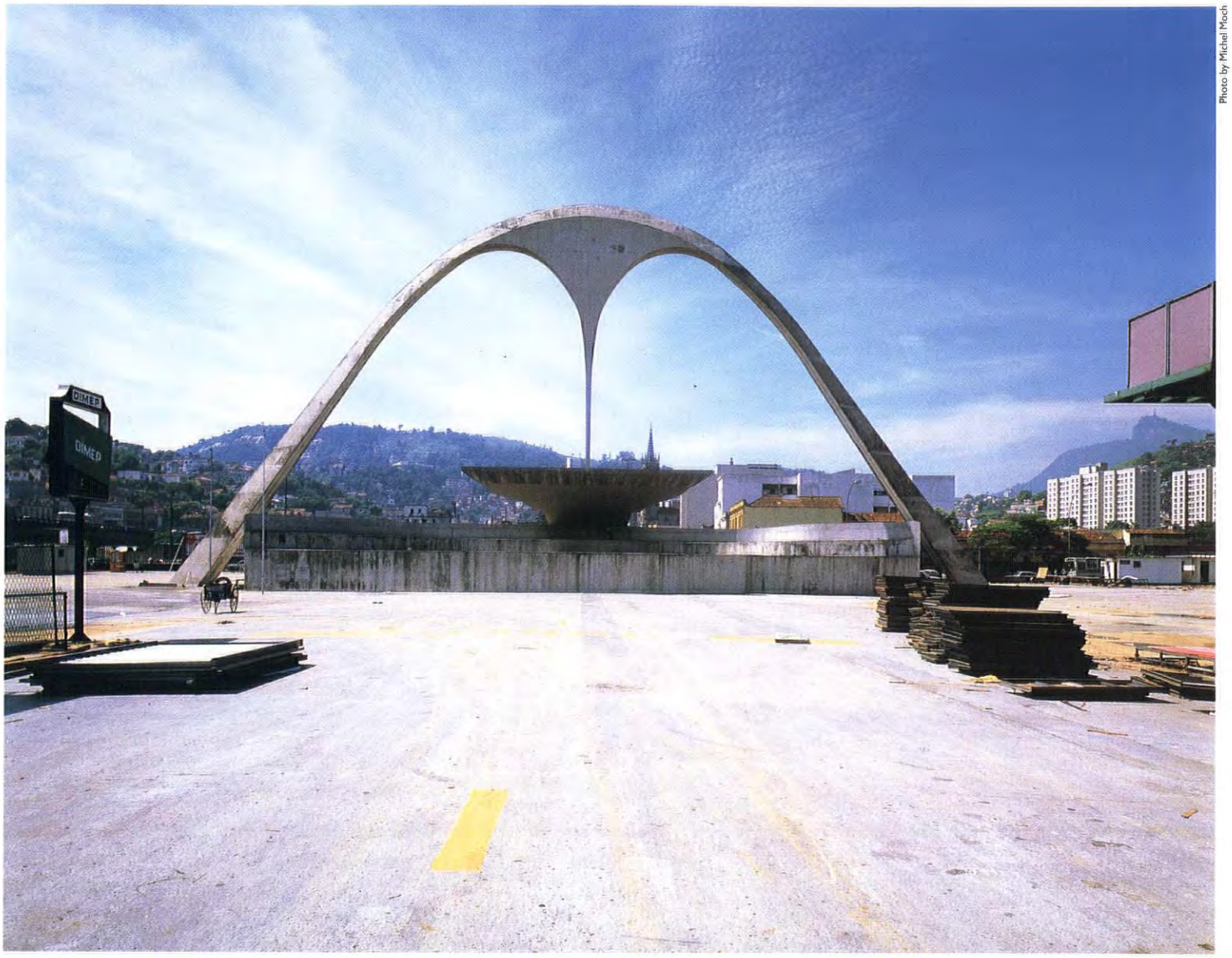


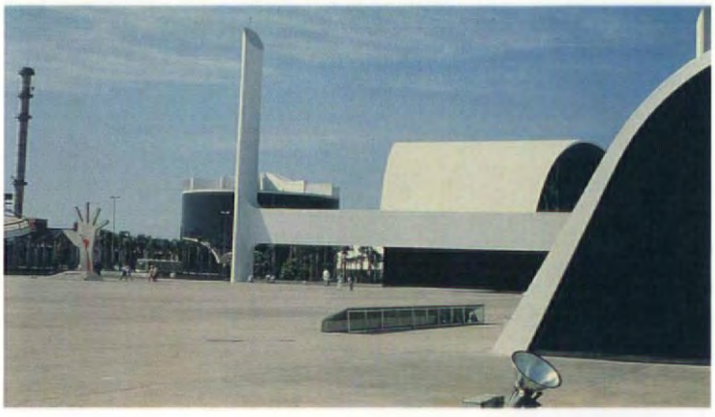
Photo by Michel Moch

Sambodrome, Rio de Janeiro 1984

The Sambadrome is a tremendous outdoor dance arena conceived by the octogenarian Niemeyer on his return to Brazil after the expulsion of the military junta that seized power in 1965. A new departure for the architect after his years of semi-official work in Brasilia, Europe and the near East, this huge public entertainment space, with its ramped concrete seating, is symbolically enclosed by an attenuated, soaring concrete arch, whose prominence establishes the location of the Sambadrome from vast distances. A powerful evocation of the ebullience of the Brazilian people in the face of oppression, poverty, injustice and generations of misrule, the Sambadrome was an immediate commercial success. it served to re-establish the architect as a national hero after his long absence. The characteristically bold cutaway ribs and cantilevers of the seating areas are approached by way of an aircraft-carrier-sized dance floor and an array of public fountains, using hydraulically boosted water pressure to achieve gigantic torrents of water, illuminated as in freeze-frame by powerful strobe lights, while the whole ambience drowns in the pulsating and endless rhythm, night and day, of the omnipresent Brazilian lambada.

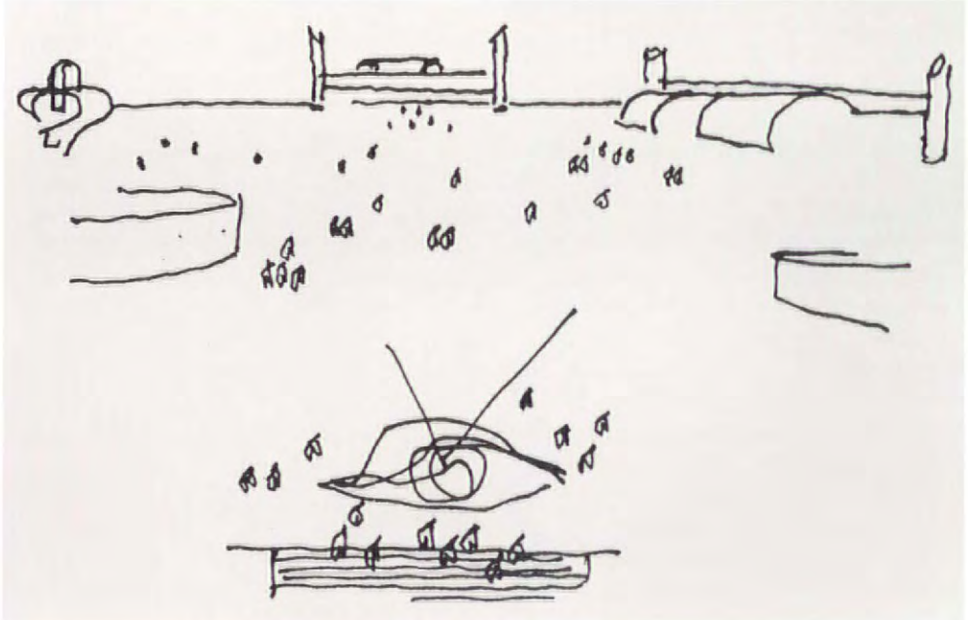
Monument to the Latin American People, Sao Paulo 1988

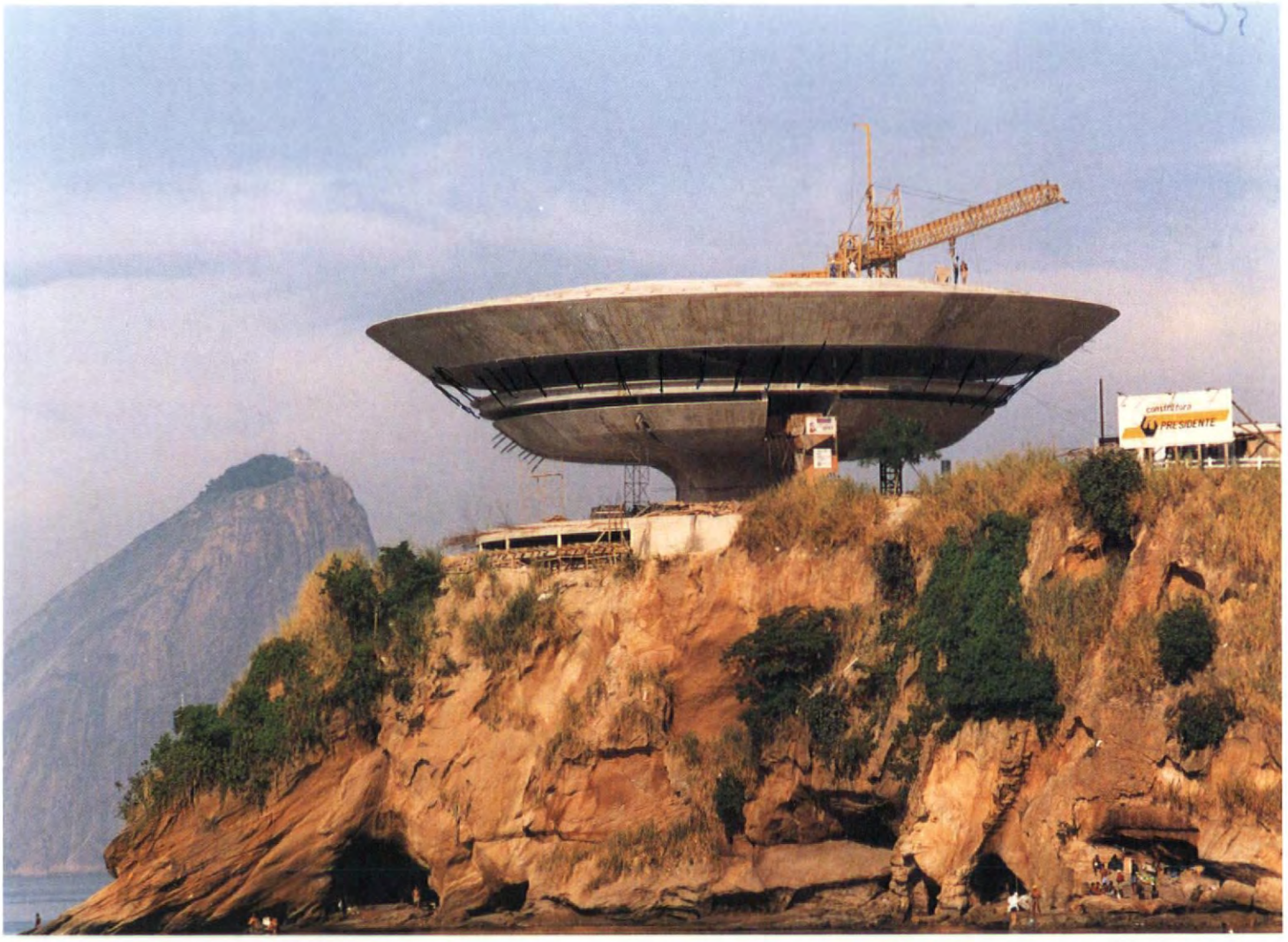
This remarkable project was designed and built in one year on a wasteland site between an underground railway station and an industrial area. It is bisected by a motorway that is crossed by a curving pedestrian bridge that is part of the scheme itself. The complex of white-painted concrete buildings with dark-tinted windows is planned asymmetrically over 78,000 square metres of level ground. It includes a centre for documentation, films and recordings dealing with oppression; special areas for dancing; theatre workshops; auditoriums for meetings and the celebrated bleeding hand monument commemorating the sufferings of the Latin American people. The project cost $48 million - a figure calculated to be equal to the daily debt repayment made by Brazil to Western banks.

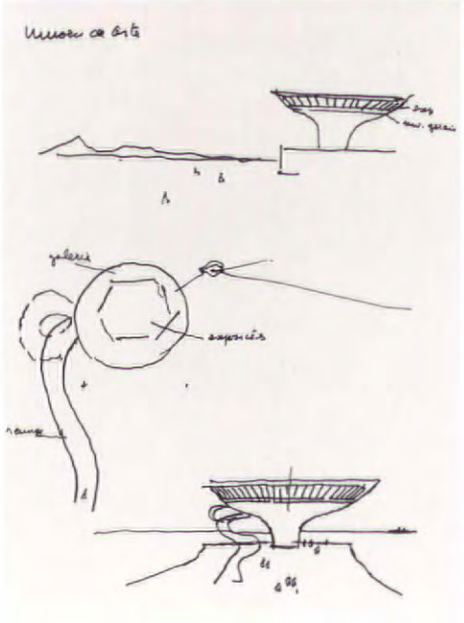


The concrete pedestrian bridge (above) crossing the motorway with its expressive curving support

The central plaza (right) with the monolith, documentation centre and bleeding hand monument to the left







The stupendous site of the Niteroi gallery (above), with Sugar Loaf Mountain in the distance. The mullions in the photograph were drawn onto the print by the architect

The sketch by Oscar Niemeyer illustrates the principle of the gallery, which is to confine exhibitions to the centre and provide views around the perimeter

Niteroi Museum of Contemporary Art, Rio de Janiero 1993

"My architecture follows the most radical construction techniques," wrote Oscar Niemeyer in 1992. "No details, only beams of 70-90 metres and prefabricated cover plates." He was speaking of the design of his memorial to the people of Latin America, but the point can be just as clearly recognised in the in-situ construction of Niteroi. Here, on a site adjacent to the famous Sugar Loaf Mountain, he has erected a massive saucer defying nature and gravity and yet standing upon the landscape like a perfectly chosen piece of sculpture. The museum is suspended over the sea in a state of balance, its outward inclined glazing presenting a 360 degree perspective for visitors who do not reach it by the central core, but by a winding ramp from below. This, the most recent building designed by the architect, is only now nearing completion.

Photo by Michel Moch

Pantheon of Liberty, Brasilia 1985

One of Niemeyer's latest additions to the new Brazilian capital city, the Pantheon of Liberty commemorates the Brazilian struggle for freedom and independence by means of large internal sphere decorated with representational paintings. Because of the long vistas permitted by the Brasilia city plan, externally this complex appears from two directions to consist of rectangular concrete elements. From elsewhere it can be clearly seen that its right-angled orientation embodies shapes that do not project upwards in the shape of the plan, but incline so as to present an unnervingly unbalanced image to the eye, one that suggests instability and a kind dynamism uniquely related to the purpose of this almost completely sculptural edifice. The alternative name of the Pantheon – "Dovecote monument" – provides the anthropomorphically inclined with an explanation of its non-geometrical shape in the image of a dove taking flight.

Photo by Michel Moch

Offices of the newspaper *l'Humanité*, Paris 1989

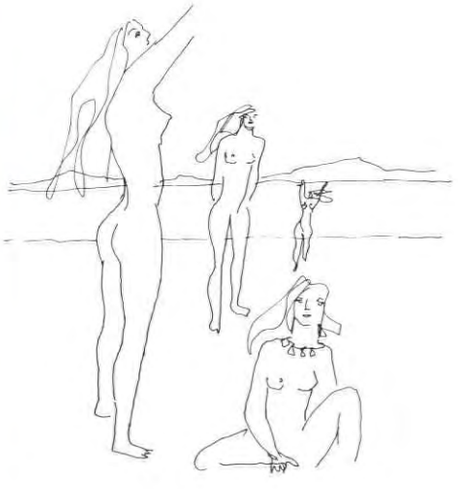
The office building, the second fruit of Niemeyer's association with the French Communist Party, and his most recent European structure, shows the enormous strength of his creative vision in a number of ways. Most obviously, in relation to his earlier Brazilian work, it shows how he and his collaborators were able to encompass the enhanced capabilities of the modern curtain walling industry within an established canon of broad, curvilinear concrete structures dating from a much earlier time. The result of this fusion of technologies at l'Humanité *is a level of precision and perfection of performance that would have been impossible in the conditions of Brasilia in the late 1950s. Niemeyer's curving, mullionless glass cladding at* l'Humanité, *capped with a broad, perforated, board-marked concrete parapet that peels away from the glazing to form a kind of flying frame at one end of the structure, demonstrates in the heart of an ancient city how the sweeping self-referential lines of his architecture, wherever they emerge, require no contextual justification. Here a long, low newspaper building formed in no more than two basic materials, takes its place among the older churches and houses of the quarter with all the confidence of authentic and original genius.*

Oscar Niemeyer: A Biography

The architect declined to provide a conventional biography. Instead he supplied World Architecture *with the following short biographical statement.*

"Oscar Ribiero de Almeida de Niemeyer Soares, or Oscar Niemeyer as he is known, was born in Rio de Janiero, in the district of Laranjeiras, on December 15th 1907, where he lived with his grandparents from his mother's side of the family until he was 23. He was very fond of that house, the steep street where they used to play football, the large dining table around which his grandparents, his uncles, his five brothers and his cousin Milota used to get together. And he remembers with nostalgia his young days. The Clube de Regatas Guanabara, the Lamas coffee shop, and the old Lapa district with its rebellious women.

"Graduated: Escola Nacional de Belas Artes (National School of Fine Arts), Rio de Janiero 1934."



GLOBAL REVIEW

EXCLUSIVE ON THE NEW BRITISH DIASPORA

FUN IN JAPAN

RECESSION YES OR NO?

GOOD NEWS COMES FROM THE EAST

STROOM STROOM

COSTS IN ALL LANGUAGES

WELSH SNOW JOB

BRITONS EXIT TO EUROPE IN A VERY BIG WAY

It is one of the most significant professional business shifts for decades. Despite reports that Britain was less prepared than other nations for the onset of the Single European Market, its architects and engineers are now forming what could be described as a design diaspora, setting up offices and joint ventures across the rest of Europe.

Even more unexpectedly, not all of this dispersal of design activities has come about as a direct result of the British recession, although that has been a considerable spur. Although in the past British architects have always travelled to where the work was - Lutyens, Baker and others to the furthest reaches of Empire in the 1920s and 1930s, and a myriad of commercial practices to the honeypots of the Middle East in the 1970s - the current move away from the homeland appears to have rather more behind it than mere short-term expediency. This is despite the fact that architects have been harder hit in the recession of the early 1990s than by any previous trade slowdown, with 40 per cent or more of the entire UK profession having lost their jobs in the space of just three years.

There is a sharp distinction to be drawn between those practices with an existing international reputation - such as Rogers, Foster, Stirling Wilford and Will Alsop, with their engineers Ove Arup - and the great mass of more conventional UK-based practices, which are now moving overseas in deadly earnest.

This phenomenon is almost entirely one-way. Only a few American practices penetrated the UK architectural market to any extent during the boom of the 1980s, and other European countries got virtually no look-in, apart from a few signature buildings, usually in university cities. You do not find French or German or Spanish practices setting up bases in the United Kingdom, although the Australians Denton Corker Marshall maintain a presence. A small bridge by Santiago Calatrava in Manchester, recently announced, scarcely serves to reduce this particular British invisible trade surplus.

There are a number of causes for this wholesale architectural exodus. Not only has there been a major recession, not only did British architects find themselves public enemies during the five years or so when Prince Charles' reactionary views on architecture were influential, but the current climate of massive cost-cutting, by Government and businesses alike, has made architects seem almost superfluous to many building projects, reduced to the status of design-and-build consultants in many cases. Although the lack of leading consultancy status, and the absence of a supervisory role over the construction phase of a building, is paradoxically common elsewhere in Europe - particularly in France - the British are not used to it and are looking overseas to find outlets for their accustomed labour-intensive way of working.

LAW & DUNBAR IN WIESBADEN

The Edinburgh practice of Law & Dunbar-Nasmith, a typical example of the traditional kind of British architectural purveyor, has taken over the German practice Architektböro Hilger in Wiesbaden precisely because of the declining regard for architecture back home. Partner Colin Ross explains: "The motivation behind this was to do with the preservation of our intentions as architects. We want to offer a total service in architecture, and that is what is being undermined in the

UK. We said to ourselves that we didn't want to change what we do, so we'd have to change the places where we did it. To go down the design-build path was not a serious option for us."

The practice has now moved one of its young partners, Tom Duff, to Hilger's Wiesbaden office. After examining Spain, France, and Denmark, the practice settled on Germany because its attitude to architecture was sympathetic, and because of the public-sector opportunities in conservation and theatre building in which Law and Dunbar-Nasmith have experience. Also they had previously collaborated with Wilfried Hilger on a competition entry for the new Vogel Verlag publishing house in Würzburg. "In a funny way," reflects Ross, "I think Germany is a bit like we were 30 years ago - very conservative architecture, generally very competent but a little mundane. If we're wise we'll hang onto that competence and try to introduce some different ideas."

ALSOP IN MOSCOW

Things have always been different for the practice of Alsop and Störmer. Will Alsop was deemed too extreme to build much in Britain during the boom 1980s, and perforce struck up liaisons across the Channel. Competitions in Hamburg introduced him to Jan Störmer, then with the practice Medium, and Störmer eventually took over from John Lyall as Alsop's partner, staying Alsop's way, and the ration of "home" to "overseas" work is now roughly 50:50 as the celebrated Hotel du Departement in Marseilles is completed.

Work prospects are at present cropping up as much around the Pacific rim as in Europe, but Alsop & Störmer are now taking a calculated risk: earlier this year they opened an office in Moscow with no local link-up and no immediate commission in prospect. It's being done in anticipation of what might be, with a staff of just three people. There is more immediate work in hand outside Warsaw, but that too is being taken as it comes. The practice's spokesman James Allen said: "If you want to make quick profits and get out, then neither Russia nor Poland is the place. But in the long term, there's future in both."

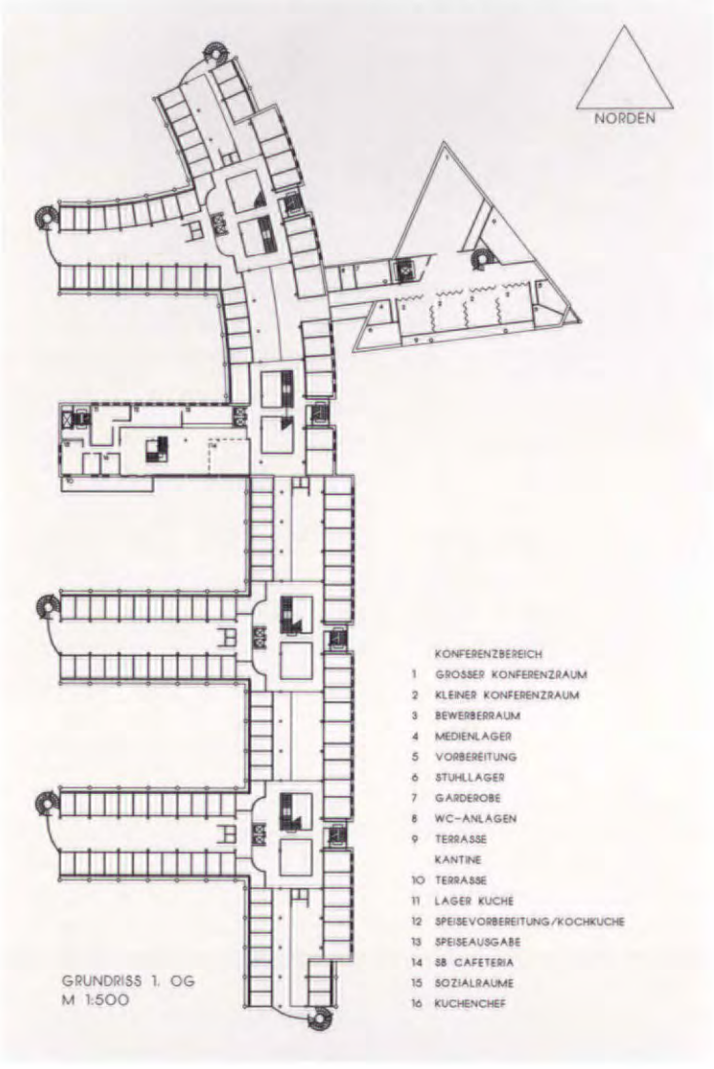
CDH IN WARSAW

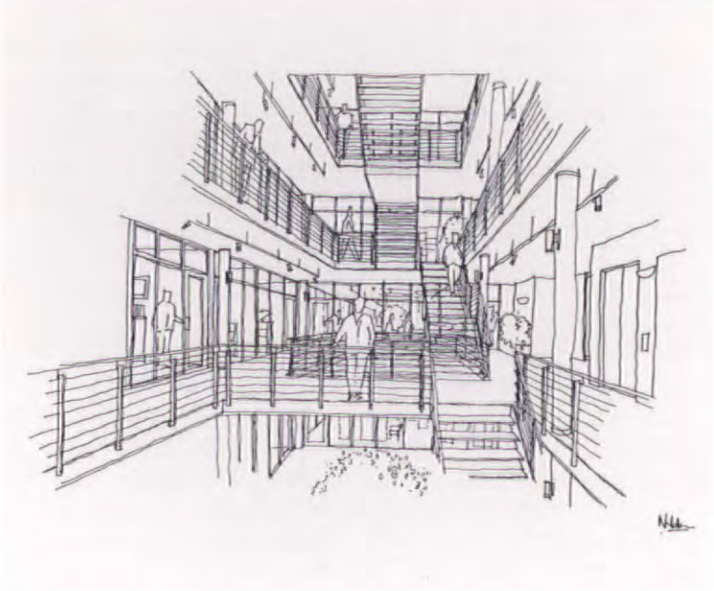
A similar commercial, if not aesthetic, view, is being taken by the London commercial practice Cecil Denny Highton, which has opened a Warsaw office "cold" - with no local link. After a year, partner Michael Highton admits: "It's been difficult. It's been easier than I imagined to make contacts, but harder than I imagined to get jobs to fruition. The most frustrating thing is that nobody wants to make a decision." Basic buildings - a motel, a DIY store, some warehouses - have been the staple fare so far, but more glamorous work is in prospect. Highton wants the currently 6-man office to make its own way - necessary in view of the fact that he is competing with low-overhead local practices. "We're not out there to bring Polish work back home to London" he says.

BDP IN PARIS / BERLIN

Perhaps the most considered view of the whole process comes from Britain's largest firm of architects, BDP (for Building Design Partnership). BDP had burned its fingers in sporadic overseas venture up to the 1980s, including attempts in the United States, Portugal, Saudi Arabia and elsewhere. Its size was derived virtually entirely from multi-discipline work in the UK. But when the deadline for the Single European Market was announced, this

Diaspora architecture. Hilger, Law & Dunbar-Nasmith's Euro-competition bid in Würzburg





The new Cultural Centre for the Istanbul Foundation for Culture and Art at Ayazaga Kasri in Turkey by Arup Associates

behemoth of British architecture and engineering, commanding around two per cent of all UK construction work, sat down to construct a European policy. The result is joint ventures in Berlin and Paris with practices who are themselves new to those cities. BDP Group 6 in Paris draws on a 60-strong Grenoble-based practice: BDP Rohling in Berlin makes use of the services of a 100-strong design group based in Osnabrück and Magdeburg. In both cases, therefore, the joint venture is on neutral ground, but in a key location. Another joint venture in Madrid with the practice of architect Carlos Langdon has been delayed due to Spain's post-Olympic hangover but will be invoked the moment the Spanish economy picks up.

BDP's chairman Kenneth Draper, whose formative experience in overseas work was helping Adrien Fainsilber build the titanic La Villette museum in Paris, remarks: "It's a bit presumptuous to think you can move into a country and absorb the culture immediately. We felt that this should be something rather deeper than a holiday affair." So far the Paris office is doing best, winning competitions such as the new shopping centre for Ivry, just started on site, and justifying a staff of 18. Berlin as a city, however "is still more talk than action", Draper complains. There have been surprises: having identified Berlin, Paris and Madrid as the three mature markets they could do business with, BDP has found an unexpected amount of urban design work coming from out-on-a-limb Portugal. This is dealt with in London. And hitching your wagon to a development consultant has proved good for business: with Bovis, BDP won the masterplanning commission for the Brno technology park , the architecture of which was subsequently won by the late Peter Foggo.

"In the end," says Draper, "in most of these places when you are talking to clients, they want your design skills but they also want to know your developer contacts. It's money that's important."

STROOM STROOM

There are beginning to be indications that Antwerp's ambitious docklands project, logically if somehow irritatingly named City and the River (Stadt aan de Stroom) might soon – early in 1994 – lead to some real, if small, building schemes.

The Stroom project, as we shall call it, has not rushed into building the way that other of the world's superfluous docklands areas have. Indeed, the leisurely programme of international planning competitions and navel-gazing linked to Antwerp's designation as Year of Culture 1993 – plus the inevitable delays caused by recession – made it seem at one point that Stroom was merely a paper exercise. Certainly the amount of paper issuing from the city since 1990 regarding Stroom has been prodigious.

Noises emanating from the Flemish stronghold are both optimistic and cautious. The Stroom regeneration on the River Scheldt is universally seen as necessary to reverse the relentless decline of the city centre in favour of the suburbs. But at the same time as applauding Toyo Ito's plans for the area known as the "New South", and Manuel de Solà-Morales's scheme for the south side of the waterbound district known as the Islet, the city fathers are sounding rather reserved about getting going. Ito's residential masterplan, with its marching megastructures rising from parks created on the floor of re-excavated docks, is clearly causing some concern despite the politeness of city officials. "Perhaps one of Ito's countrymen might be interested in realizing his plan?" artlessly suggested Burgomaster H.B. Cools recently, pointing out the inherent expense of his plan.

Morales is perhaps seen as safer, to the extent that he has now been seconded to the city's planning team. Morales makes reassuring comments such as: "Urban regeneration does not always mean demolition and new buildings...safeguarding the things that are special and local makes the place more attractive to outsiders."

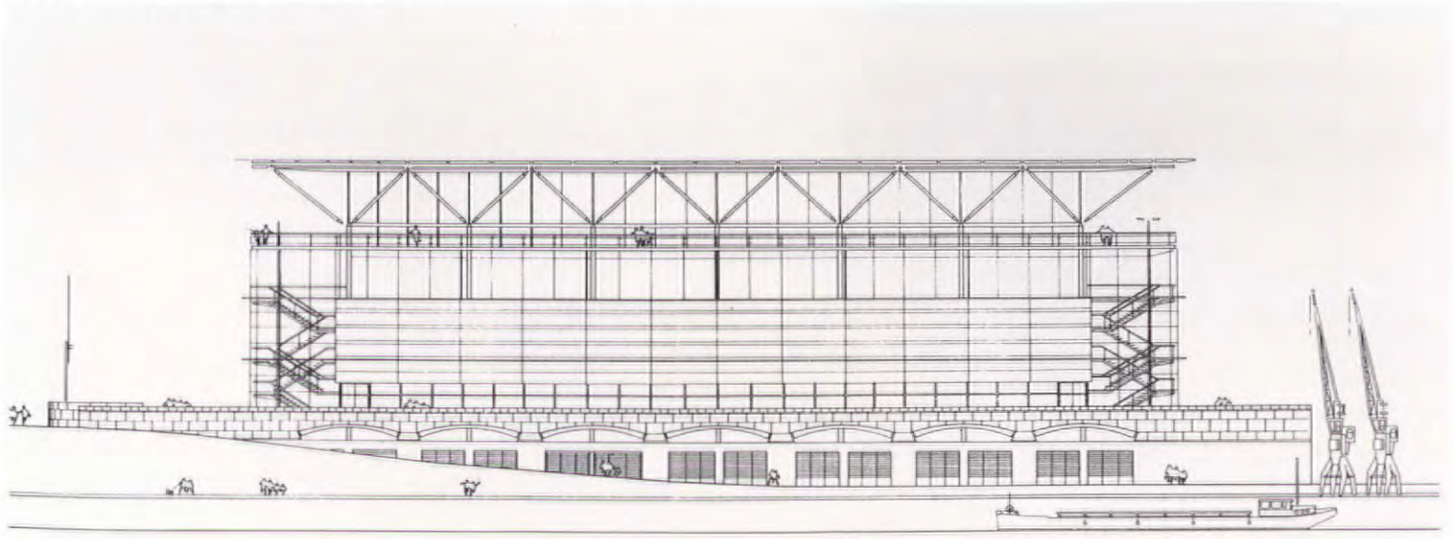
Expect a pilot part of one of Morales's schemes to start in 1994. Do not be surprised by further delays to Ito's grand scheme for the New South. Steady as she goes, that's the Belgian way.

ISTANBUL

Arup Associates, working from its Istanbul office, is to design a new Cultural Centre in the Turkish capital, the Istanbul Kültür Merkezi.

This comprises a 2,500 seat symphony hall, a rehearsal hall and two conference halls, plus a cinema. The 6.5 hectare wooded sloping site was formerly the Sultan's retreat on the outskirts of the city. The practice's other work in Turkey includes a factory for Toyota.

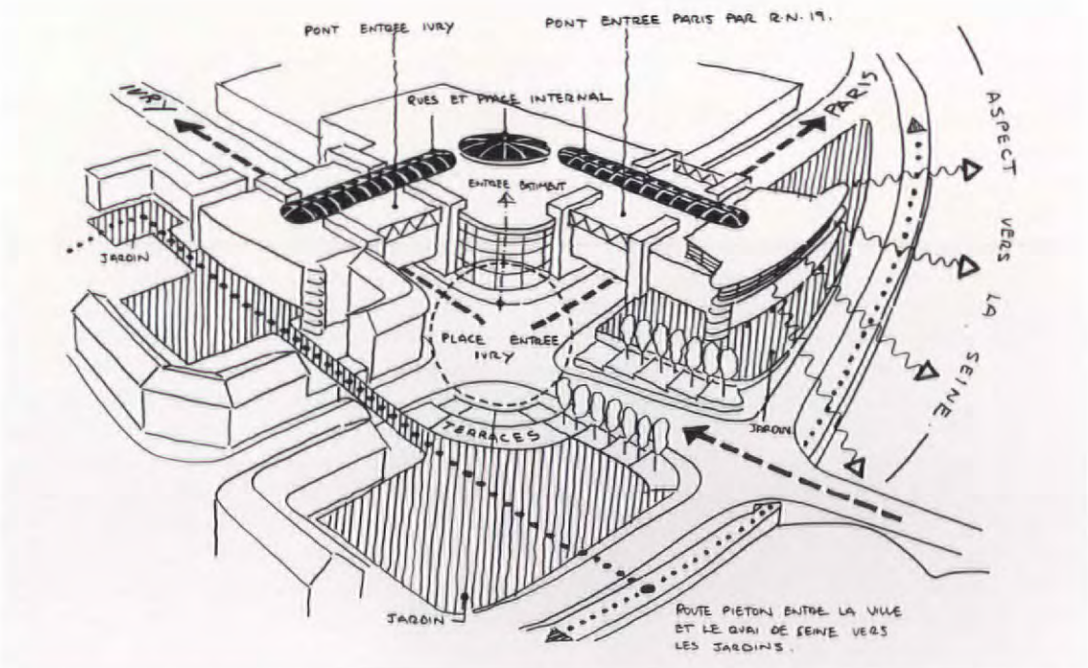
BDP's Paris office "doing best" in Europe. A shopping centre project in Ivry



EVERYWHERE ELSE

Ove Arup, the engineering consultancy, makes all its British architectural colleagues look like very small fry. Ove Arup has 60 offices in 28 countries (including three recently opened in Dusseldorf, Leipzig and Berlin), but is worried it should be doing better. Particularly in the explosive area of South-East Asia. Tim Haig, of the practice's business development section, states: "We are consciously saying that we've got to get more work outside the UK, and do more industrial and infrastructure work rather than building structures. There's a lot of infrastructure work in South-East Asia but we find that the margins are very difficult. It's cut-throat stuff. There's no shortage of work so long as you can get paid for it."

Other engineering firms with a global reach design, construct and manage as a package, and use the cheapest possible drafting labour, whichever country it happens to be in. In the past such an approach has been beneath the rather patrician Ove Arup but, as Haig says, "We have got to rethink how we do things."



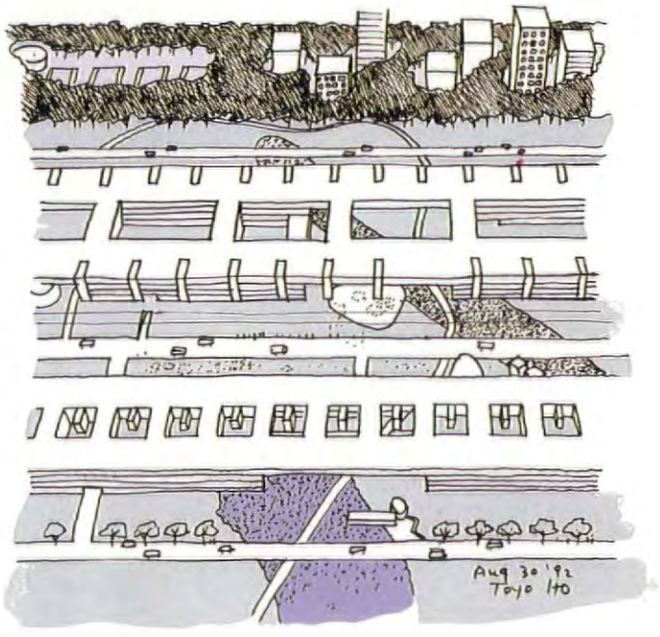
So why is there virtually no return traffic from other European practices wishing to set up shop in the UK? Draper offers: "In most of these countries, the tradition is not to become a big organisation. I'm not sure that there *is* such a quasi-corporate view of architectural practice there."

FUN IN JAPAN

In one of those straw-in-the-wind signs of economic activity that often tell you more than official analysts can, it is significant that architect Pierre d'Avoine is finding projects coming his way from Japan.

The Japanese department store group Parco had previously commissioned D'Avoine to come up with urban ideas to improve the environs of their store in Tsudanuma. The proposed interven-

Toyo Ito fooling around in Antwerp



tion – for a "living wall" of vegetation to provide a barrier between people and traffic – was on ice for quite some time. Now the idea has been revived and changed – Parco wants the streets round about to be included into the scheme by means of "monuments" to enliven the town's shopping area (their word, not d'Avoine's who has nonetheless proposed what he calls, "300 little objects studded all over the place, plus a large monument, as the setting for an annual festival").

Just as significantly, Parco has also commissioned d'Avoine to prepare conceptual ideas for an entirely new store at Otsu, near Kyoto, which boasts Japan's largest lake. The plan is for the Otsu store to include social functions such as a theatre and restaurants. Such apparently non-commercial elements are not uncommon in Japan, where the private sector frequently compensates for the lack of direct public sector investment.

The commissions are an indication that commercial interests in Japan are once again turning to the West for original thinking, even if construction activity is a whisper of what it was a few years ago. D'Avoine himself remarks: "We view the Tsudanuma scheme as quite a fun project. Otsu in comparison is very large."

RECESSION

As any merchant banker will tell you, it is the people who handle money who control global economies, not the politicians – unless a war breaks out, in which case all bets are off. It is thus always a pleasure to read the sometimes lyrical, sometimes nonsensical reports emanating from the real economic power bases in the world's financial centres. And few speak with more confidence than the aptly-named Midland Global Markets organisation in London and New York. Here is their global outlook, published in August:

United States: "Despite positive economic growth, consumer confidence shows little sign of improvement. Faced by falling real wages, job insecurity and the threat of further tax increases, consumers are holding back any sharper recovery."

Britain: "Britain is out of the recessionary woods, but the climb to the sunlit uplands is a long, tough one...indebted economies like Britain's do not recover like rolling stones, continually gathering pace and quickly making up the ground lost during the recession."

Germany: "The economy continues sluggish...a DM appreciation poses a threat to recovery hopes...no significant recovery before mid-1994."

Rest of Europe: "The ERM's demise opens up potential for monetary easing and improved growth prospects throughout Europe, though governments are proving slightly reluctant to grasp the opportunities offered."

Japan: "Slump in domestic demand...surging yen...easier interest rates and fiscal stimulus will take time to lift consumer confidence and the domestic economy from its present low point."

Eastern Europe: "A mixed picture, with Poland, the Czech Republic and Hungary showing signs of stabilisation and being best placed to benefit from West European recovery, while the former Soviet Union continues to contract amid rising inflation and continuing political tensions."

These summaries may seem condensed enough, but Midland Global Markets extrapolates still further into a column headed "Encouraging for Recovery?" In this column you find "Yes", "Neutral" or "No" against the country or region in question. Germany and Japan get "No". The US, Rest of Europe, and Eastern Europe get "neutral". Britain, which is analysed in greatest detail according to the various entrails being studied, gets 16 "Noes", 27 "Yeses" and 2 "Neutrals". On balance, the "Yeses" have it for Britain, but apparently nowhere else at present.

THE EBRD CHOICE

After all the scandal earlier this year surrounding the alleged excesses of the European Bank for Reconstruction and Development, it comes as something of a shock to find a sober and well-balanced report on the economies of Eastern Europe emanating from the marble-clad halls of the EBRD. Some work must be going on there after all, between lunches.

The bad news is that Eastern Europe is still in serious economic decline. The good news is that the rate of decline is slowing, says the bank in its last report on the region under the controversial leadership of Jacques Attali.

Translated into percentage terms, the gross domestic product (GDP) of Eastern Europe as a whole fell by four per cent in 1992, which looks serious until you consider that in 1991 the fall was a precipitate 11 per cent. Similarly inflation in the region was 60 per cent, a distinct improvement on the 90 per cent of the previous year.

The bank's analysts suggest that the move towards eventual economic equilibrium in Eastern Europe has been delayed by some unfortunate events: continuing political instability in Russia, and a prolonged drought which affected agriculture in central and eastern districts, for instance.

The economies of eastern and western Europe are becoming more interlinked. One of the reasons that Hungary, the most westernised of the former Eastern bloc states, has not yet returned to growth is cited as the fact that it is now exporting less to recession-hit Germany.

Full-scale development in what are described by the EBRD as "the reforming countries" is

How to ski in Singapore. See "Snow Jobs"

unlikely to occur until competitive banking systems are set up, it says: thus far, the old state banks have merely been broken up into smaller, regional or sector-based monopolies.

COST TRANSLATOR

Exactly what is a building worth? The answer may not have a great deal to do with its market price, as anyone insuring a house will know. A glance at the advertisements in the European property press reveals wide discrepancies in asking prices for office buildings of similar size in similar locations.

Technology has now come to the aid of the puzzled property developer. Replacement values for buildings can be calculated with the aid of a multi-language software program developed by the American-owned building cost data company Marshall and Swift.

In effect, the tool allows data to be entered in one language, using a given currency, will convert data from imperial to metric, and print out a final building cost report in another language and currency, if needed.

Called "The Building Estimator", the program is currently available pre-loaded with cost information for Britain, France and Germany. A version for Spain is expected in 1994.

Further information: Pascal L Lorthioir, Marshall and Swift, in the United Kingdom (011 44) 0425 655652.

ART NOUVEL

Those wishing to re-assess the talent of Jean Nouvel following the hostile public reaction to the opening of his Lyons Opera House have a chance to do so at the Arc en Rêve Centre d'Architecture in Bordeaux until January 23rd, 1994.

Nouvel's exhibition will display many of the concerns he outlined in his British show at the Institute of Contemporary Arts a year previously. However, the intervening year has proved a significant one for French architecture's *enfant terrible*. As well as Lyons, he has completed the Cartier factory in St. Imier, the Hôtel des Thermes in Dax, the CLM/BBDO advertising agency in Issy les Moulineaux, and the Tours congress centre. With building projects in France now reducing greatly in number as the recession takes hold, this exhibition effectively marks the end of a highly significant and fruitful period in Nouvel's career.

Jean Nouvel at the Arc en Rêve Centre d'Architecture, Entrepôt, 7 Rue Ferrère, Bordeaux. Phone (33) 5652 78 36.

MIGRATION

There is allegedly freedom of working and living within the European Community. This, however, has not yet led to a great deal of movement between populations, according to the EC's statistical office.

Over the past five years, the number of EC citizens living in EC countries other than their own has risen by half a million to 5.5 million. That figure encompasses only 0.4 per cent of Germans, 0.8 per cent of Britons, 3.8 per cent of Greeks but 8.1 per cent of Portuguese.

You will have spotted the trend: populations of poorer southern European countries are necessarily more mobile than those of the traditionally wealthier nations. Infrastructure links such as the Channel Tunnel are paradoxically likely to encourage the stay-at-home tendency by making business trips easier.

SNOW JOBS

There's always something faintly unsettling about artificial snow. When you find that a subsidiary of a Welsh water company has perfected a snow-making technique, tested in Shropshire, that allows ski-ing in the tropical conditions of south-East Asia, the thing starts to become surreal.

This, though, is the case, The engineering group Acer, these days owned by Welsh Water, has set up a company, Acer Snowmec Ltd, that not only makes perfect snow (that is, proper dendritic snowflakes) but has patented a thermal storage system that, it is claimed, brings the running costs of a snow centre down to half that of similar projects being developed in Japan.

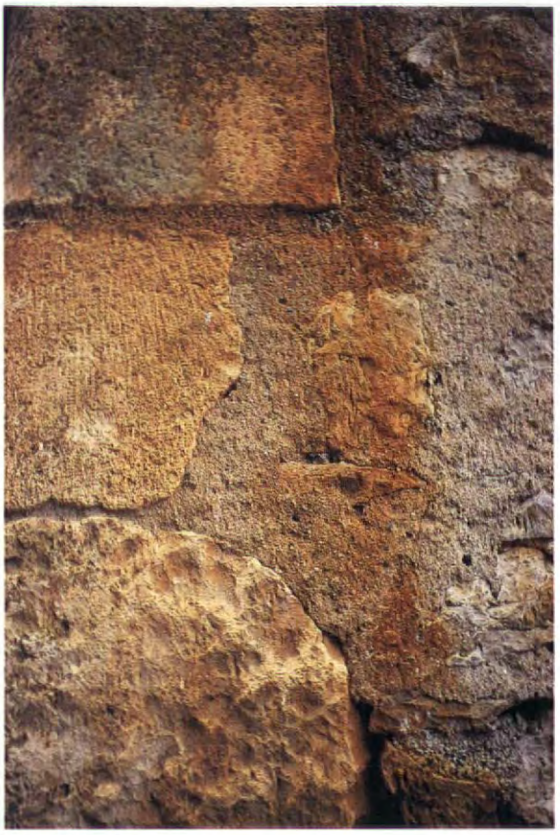
The first Acer Snowmec indoor ski centre will be built on the Island of Batam off Singapore, part of a £1bn leisure complex there. A chain of further centres is planned throughout the region. It just doesn't seem natural.

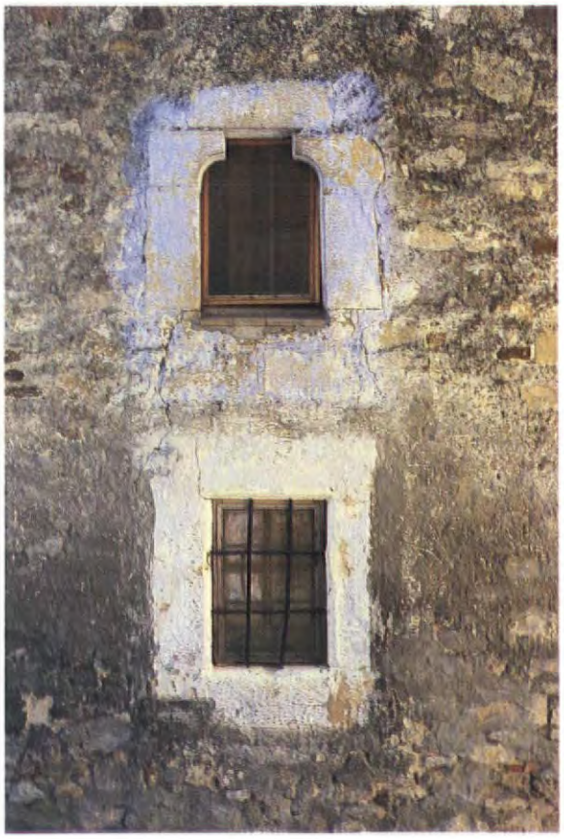
PS. How to make snow with Welsh water: use guns which fire a mixture of water and compressed air into an atmosphere with a temperature of between -3 Celsius and -10 Celsius. An indoor snow centre, therefore, is basically a very large freezer cabinet.

The Acer Group: contact Amanda Powell-Smith in the UK, (0) 483 35000. □

BEN JOHNSON

Ben Johnson is a painter who is also a photographer. A photographer who is an artist who is obsessed with buildings. Obsessed? Yes, he insists on the word. "I am a guy who goes around taking photographs the way a writer might make notes." But this description, though true, is not the whole truth. Ben Johnson came to photography after years of painting, and this has made him an architectural photographer of a unique kind. For him the medium is omnivorous - textured walls, old timber, rust and darkness, as well as form, light and advanced technology - and it is more than a stopping place on the way to art. It is a special art in which, in measured doses, he includes the people who make buildings, and ennobles the work they do.



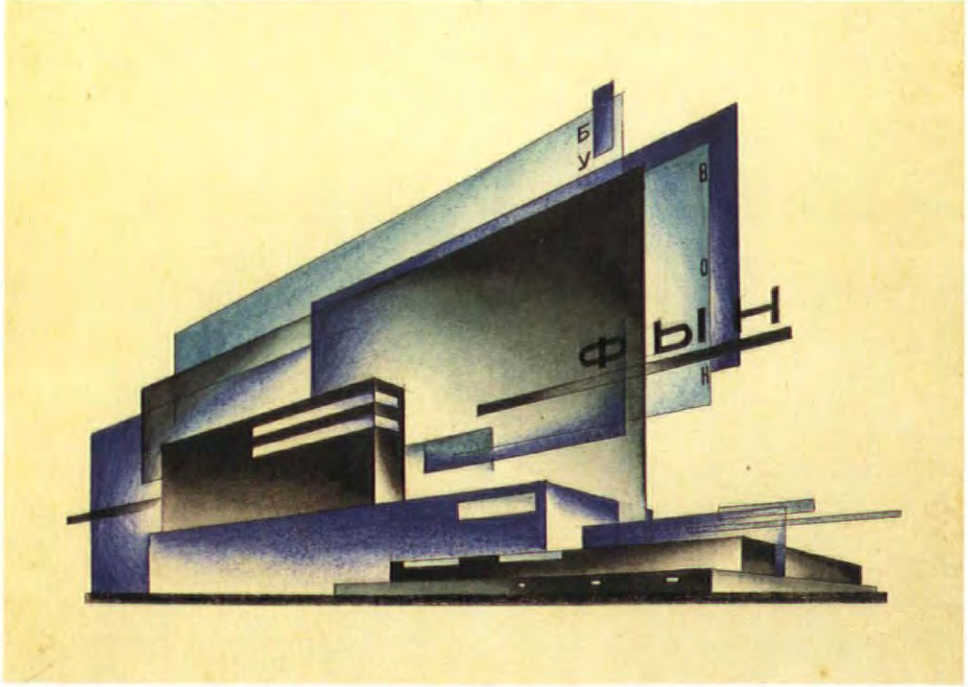


THE RHYTHM PRECEDES THE IMAGE

The "Iakov Chernikhov Architectural Fantasies" exhibition has just concluded a three year tour of Europe and America. Organised by the Iakov Chernikhov International Foundation the exhibition represents the most comprehensive treatment of Iakov Chernikhov's oeuvre to date. It consists of some 788 items, including over 650 original works from the Central State Archives for Literature and Art in Moscow and the private archives of Andrei Chernikhov, Moscow architect and grandson of the master.

It was Friedrich Nietzsche who said;"Rhythm is an enticement. It gives rise to an irresistible urge to imitate, to follow it; not just the footsteps but the very soul follows the beat.That is why people tried to entice the deities and gain power over them with the help of rhythm." These words form the introduction toAndrei Chernikhov's own account of his grandfather's life, which is published here for the first time.

A composition from "Foundations of Contemporary Architecture", 1930



Iakov Chernikhov was born in 1889 into a large and poor family in Pavlograd, a small provincial town in Czarist Russia. Here at the town's school, he picked up the rudiments of painting, but by 16 had got wind of his parents' intent to choose for him a career in "photography", where "portrait work" was being done, so he ran away to Odessa. Once there, he enrolled at the Odessa Art School, a branch of the St. Petersburg Art Academy and a focal point of Southern Russian art. Chernikhov attended school erratically, being forced to eke out a living as a stevedore in the port of Odessa, as a retoucher, cardboard-back paster, photographer, and painter of shop signs. Coaching pupils was another of the more easily found jobs at that time so he made an early start teaching graphics in elementary school.

As a result, by the time he graduated from the Art School in 1914, he had already mastered many aspects of graphic and applied art, while his early teaching practice would afterwards prompt him to create an original teaching system of his own.

Later that year Iakov Chernikhov moved to St Petersburg, where he enrolled simultaneously in the University Painting Department and the Higher Teaching Course of the Art Academy. In 1916, however, he switched over to Leontii Benois' class at the Academy's Architectural Department, from which he graduated with the title of Architect Artist in 1925, by which time Soviet rule had been established.

Several years later Chernikhov set up in Leningrad what he called "A Laboratory for Research and Experimentation in Architectonic Methods and Graphic Art Techniques", in which he completed and published the books that would bring him fame as "the Soviet Piranesi".

Chernikhov led a busy life both as a pedagogue and as a designing and building architect. Over 50 varied buildings and facilities were built from his designs across the country, including factories and railway stations. Much more impressive were the results of his teaching. Thanks to his own method of teaching graphics, which combined a course in object-free composition with drawing "from nature", Chernikhov managed to teach yesterday's peasants and workers to create by themselves complex compositions, even in colour in less than half a year. As some of his contemporaries would testify, these under-educat-

ed young people sometimes got a grasp of such sophisticated graphics much faster and better than through conventional methods. Close to 10,000 of these students' works were put on show. And in the wake of the students, Chernikhov began to "pass" through his system teachers of graphics as well.

Yet it was architectural fantasies that he considered to be at the core of his work. Even in the company of other celebrated composers of utopian architecture, Chernikhov's fantastic thinking is impressive for its enormous productivity as much as for his ability to stay in the future, the "classical" time of architectonic fantasy, as easily as he did in the distant past.

It was this capacity that allowed him to retain the ability to generate new architectonic images even after 1935, when all his books were confiscated from the public libraries and the publication of others was suspended. True, those new images were in a totally different style, much closer to Piranesi's. So, even though Chernikhov remained true to the principles he had proclaimed in the 1920s and 1930s, his career was divided into clearly delineated phases of development and stagnation.

It was in putting together the works of the Odessa school that Chernikhov first showed an independent approach to the problems of the new art. Was his obsession with geometrical ornamentation a mere coincidence or was it what used to be called manifest destiny? Whatever it might have been, that obsession would, in his own words, provide the cornerstone for his future quests in both graphics and architecture.

Having become, like many other arts at the turn of the century, a "liberated" art, ornamentation offered quite a broad field for experimentation, thanks to its formal and structural virtues.

A contemporary of ours, Jean Nouvel, the French proponent of the sophisticated hi-tech trend of the 1970s and 1980s, expressed the seemingly paradoxical yet highly intriguing thought that "ornamentation is the acid test of professional mastery, a test of an architect's maturity". If so, it would seem that many who considered themselves and were considered by others to have been the leading architects of the century have failed to pass that test. Not only for the fact that in designing the overwhelming majority of modern

buildings architects would rule out ornamentation as early as at the "conceptual" stage. It was the very repetitiveness of classical ornamentation that proved incompatible with the spirit of the new time, since the meaning of rhythm itself had changed since classical times when it had chiefly amounted to metre. The twentieth century - a century of high numbers and sets, of total processes and dynamic transformations - brought along different sets of rhythmic elements where rhythmic progressions of greater or lesser length were joined by non-metric structures. In music, as in poetry, this rhythmic explosion outlined itself as a replacement of the key principle of regularity by one of irregularity, where the strict metric measure was substituted by a syncopation and an unmeasured free beat. In previous times, ornamentation, much like dance and music, served as a graphic encoding of rhythm.

Even as early as in the Palaeolithic age, man had encoded in ornamentation practically all his knowledge and ideas of space, nature and himself, and was much engrossed in cyclical natural phenomena and their coincidence with the macro rhythms of human life.

The "impulsive" character of ornamentation as an alternation of voids and image-filled spaces, allows it to be treated as an oscillogram of ancient cultures.

In ornamentation, rhythm somehow freezes its original image; that is why orna-

Chernikhov with his family in the early 1920s (top left).Chernikhov with a life-model and fellow students in Odessa or St Petersburg schools (above centre), and two early drawings

mental art is as "eternal" as the masterpieces of realistic painting, but on a more abstract level. On that level, the ornamentation used by different ages can be viewed as the most "sensitive" area of pictorial art, while the reliable deciphering of a culture's ornamental patters yields something like a matrix of geometrical semantics.

It is worthwhile recalling at this point the attempts by Bogdan Bogdanovic and his disciples to use a piece of undeciphered ancient text as the basis on which to model the "appearance" of an unknown culture, including the "reconstruction" of its language, music, and even its architecture.

Iakov Chernikhov's graphical analyses of geometrical ornamentation prompted him to believe that the future of that kind of art, "depleted" to its limits by neo-Classicism on the one hand or transformed into the painfully sensual tortuosities of Art Nouveau decor on the other, would depend on the introduction of a more complex level of rhythm formation and composition. This, in his opinion, would amount to a "rhythm of proportion" as opposed to the dominant classical "rhythm of repetition". To "asymmetry" in lieu of the previously dominant "symmetry". "We now seek harmony, not in static forms, but in the laws of dynamics..." Herman Weil would write somewhat later.

Alongside asymmetry and the adoption of a free, dynamic structural rhythm, where repetitive rhythm would, as a rule, serve as the basic rhythmic measure, the "extraction" of the ornament from the two-dimensional plane allowed Chernikhov to obtain radically new kinds of ornamentation, capable of 3-D existence and developing in any of these three dimensions - in contrast to the classical two-dimensional ornament which evolved only on the surface of paper, fabric, or wall.

Called somewhat old-fashionedly "cellular", "interweaving" or "silhouetted", these structures, drawn with the help of compasses and an Indian ink attachment, were a precursor of Op Art's images and today's computer graphics. They were spatial sculptural ornaments which one could walk around, walk through, and even discern the melody they exuded (the way one can differentiate the "song" of Kufic script from that of a Greek meandering ornament).

Proclaiming the supremacy of the rhythm of proportions Chernikhov, like many scientists, artists, poets and musicians at the turn of the century, was convinced that the global change of rhythm had propelled the revolution that was taking place in art and architecture too. The classics, in his opinion, had by the beginning of the twentieth century become static and incapable of finding the "life sap" they needed for further creative development and variation. They had ceased to be vital. A new powerful energy was needed. It manifested itself in the dynamic "isms" of the age: Expressionism, Cubism, and Futurism.

Not for the first time in its history, humanity was crossing the border to renewal, and the transition in art was denoted by its own Suprematism, as a grapho-semantic idea of the world. Kazimir Malevich's "Black Square" was destined to serve as the writing slab on which the new art would record its discoveries.

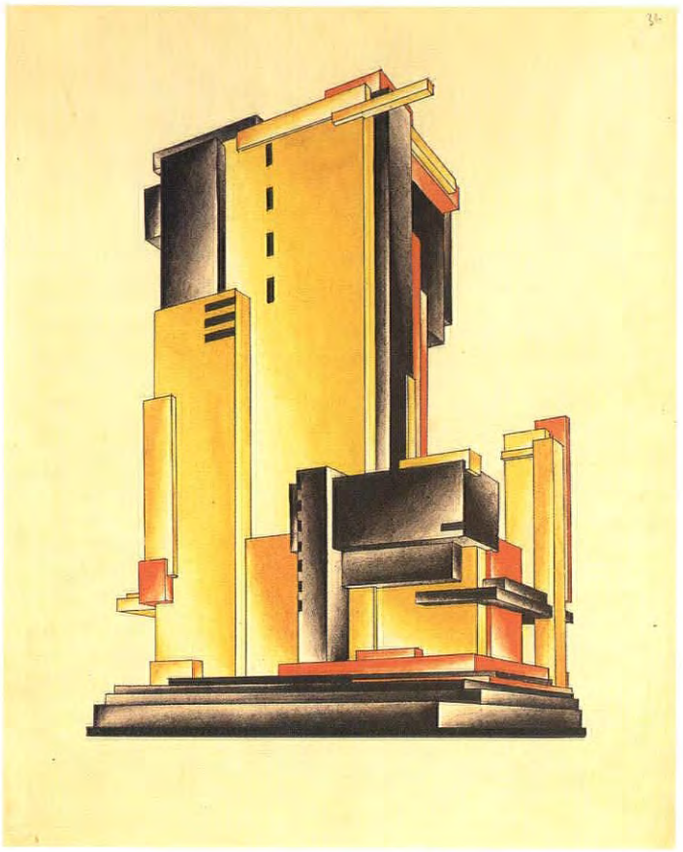
Therefore, a description of that period as the Suprematist Revolution characterises best the situation in art at a time when the old categories, ideas and values were being demolished, and new ones being just discovered and proclaimed. We can freely compare that description to the Neolithic Revolution, which modern archaeology freely accepts as the first cycle in the rise of collective human reason with the help of signs and symbols.

But while Malevich ultimately strove to make the "divine" philosophy object-free, Chernikhov displayed the lack of objects in his works merely as a possible basis of graphic and spatial modelling, conveying though his Suprematist structures that undertone of sensuality thanks to which he overcame Suprematism's "inherent anaemia". To him, Suprematism was only the womb from which the new art was emerging. A phenomenon intellectual and philosophical rather than artistic.

"Life does not want to live, but to be in a state of peace. It seeks passivity, and not activity," averred the pioneer of Russian Suprematism, Kazimir Malevich. Then, in another of his works, he added: "The world's energy tends towards economy, and each step it makes towards infinity is manifested in a new economic culture of signs...."

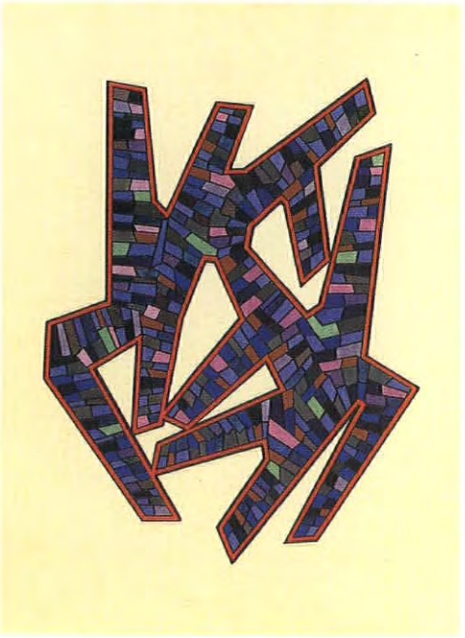
"No matter how innumerable the various combinations accessible to Suprematism, the circle, the rectangle, the square, the straight line, essentially repeat each other. Suprematism is incapable of 'melodics' and exercises instead endless monotonous roulades," wrote Iakov Chernikhov, assessing the "creative" potential of Suprematism as if in a polemic.

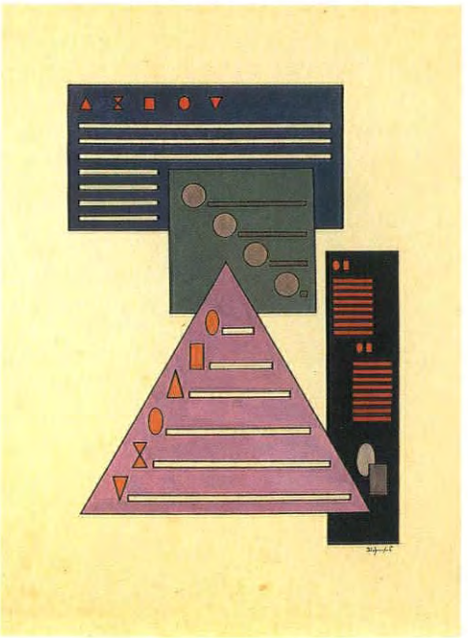
"Suprematism," wrote Iakov Chernikhov in his unpublished *Aristographia,* "is, in the sense of being object-free the ultimate form of futurism, denouncing any and all connections with the realism of things, and revolving instead around abstract compositions which combine the precision of plane geometry drawings with homogeneous colourful images". Unrestrained by any self-regulating system or order, object-free compositions based on the principle of combination amounted essentially to infinite sets of structures. (It was not accidental, therefore, that by the mid-1920s Malevich himself had been inspired to establish "a Suprematist order" as the new tectonic base of future architecture.) The ability of Suprematist structure to achieve a sort of self-transformation through the energy of rhythm formation and the construction of forms was what made Chernikhov continue these experiments within the system of purely architectural disciplines. Chernikhov's unusual graphic skills and his phenomenal productivity caused his contemporaries to view him chiefly as a master draughtsman. Today, in the age of machine-generated graphics, such an obsession for hand-drawn graphic art might seem quite old-fashioned. Yet it rested on his absolute conviction that in the twentieth century graphics would become the international language of civilization that one would not only have to be familiar with, but highly adept at, constantly evolving and improving that adeptness. It was the ability to express one's thoughts and images, to construct and combine new forms, that Chernikhov saw as the chief mission of education and of creativity itself. In fact, he even called his teaching technique "a method of compositional construction" - a redundancy insofar as "to compose" means precisely "to construct". It is in this mysterious blend of the birth of the new formation and its material display that the essence of composition probably lies. To Iakov Chernikhov at least, graphics were more than a medium of expression: they were a medium of composition as well. It is for this reason that Chernikhov's compositions wage as independent an existence as paintings, sculptures, or even buildings. They seem to embody within themselves the right to existence, because their creator was himself a proponent of the most powerful rhythm of the epoch: the rhythm of composition.

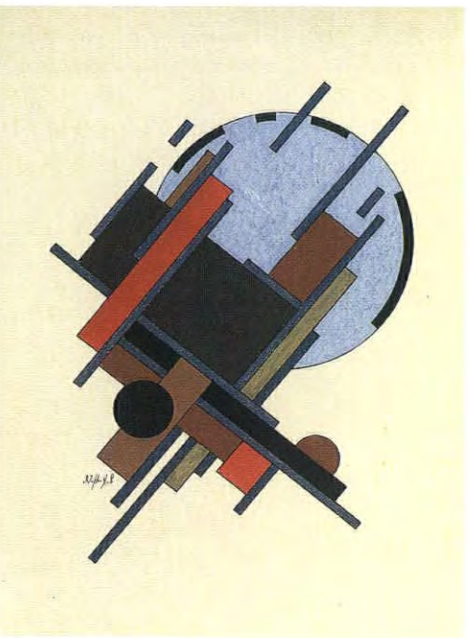


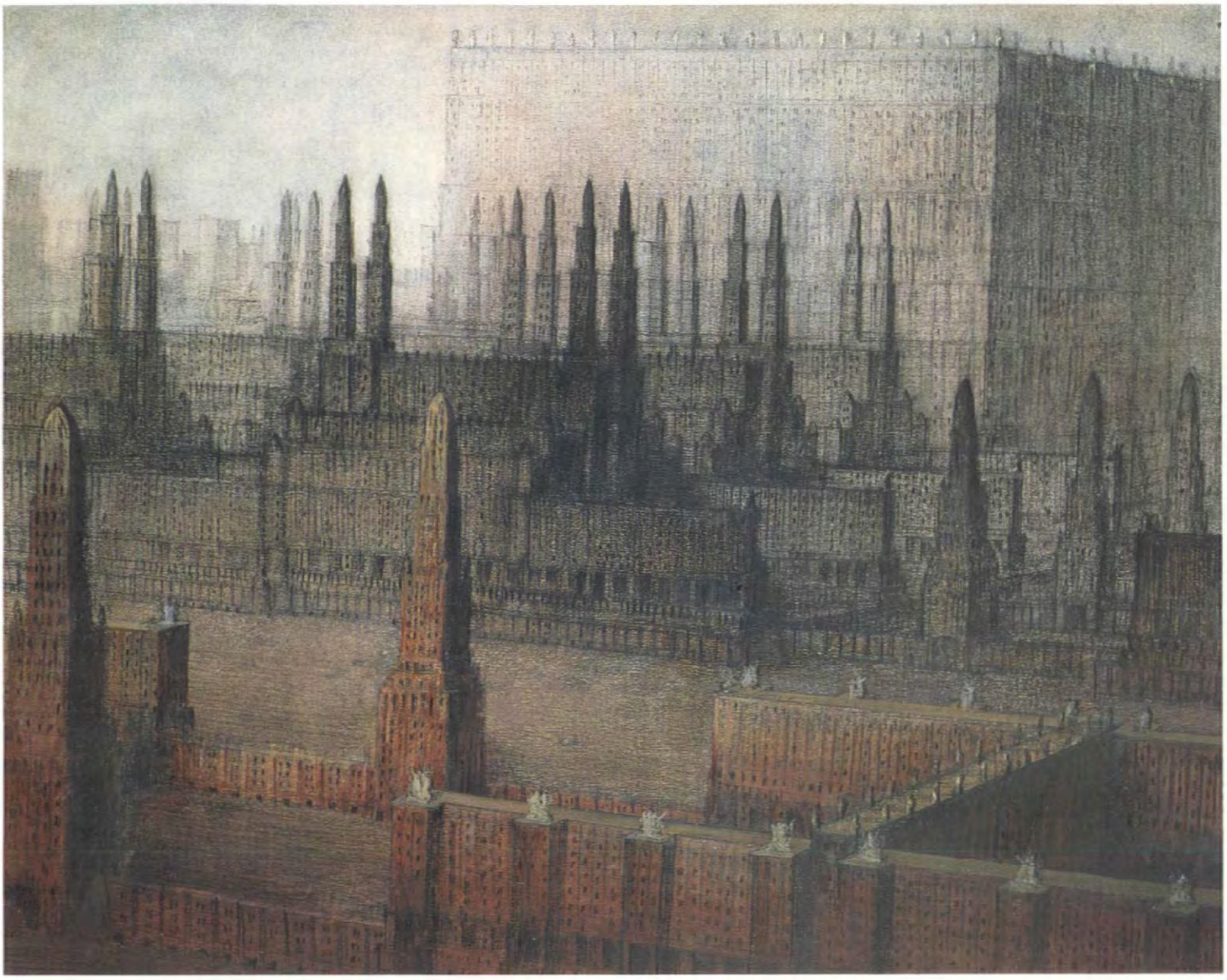
Two compositions from "Foundations of Contemporary Architecture", 1930

Three compositions from the "Aristographia" series, from "The Art of Graphic Representation", early and mid 1920s



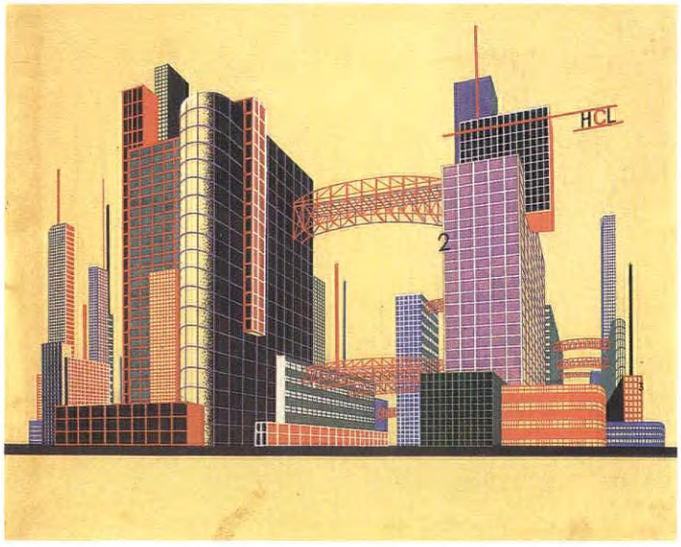


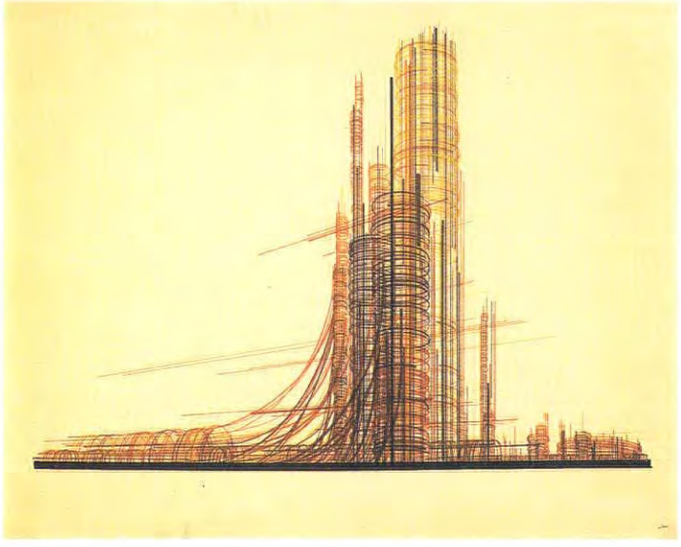


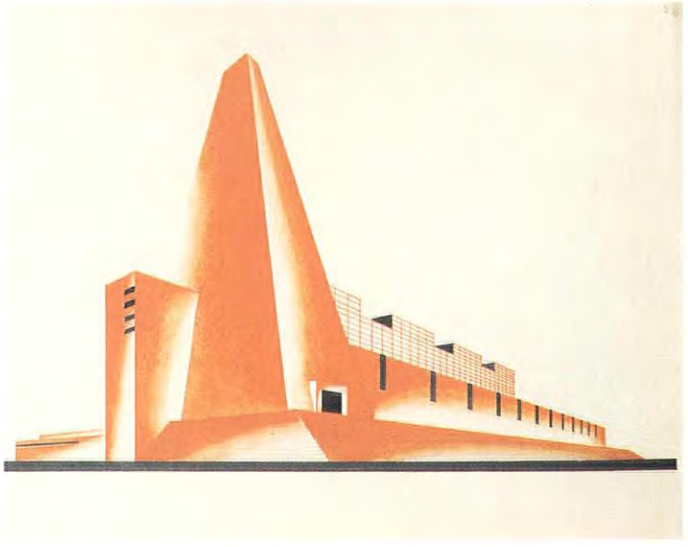


One of the series "The Palaces of Communism", 1934-41

Two compositions from the "Industrial Tales" series, 1920-1944

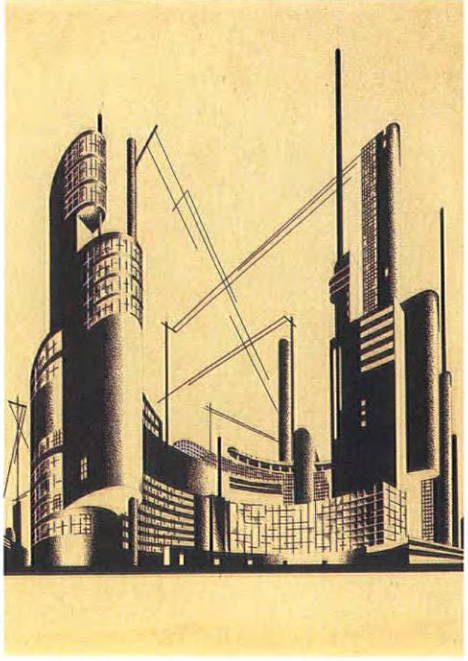


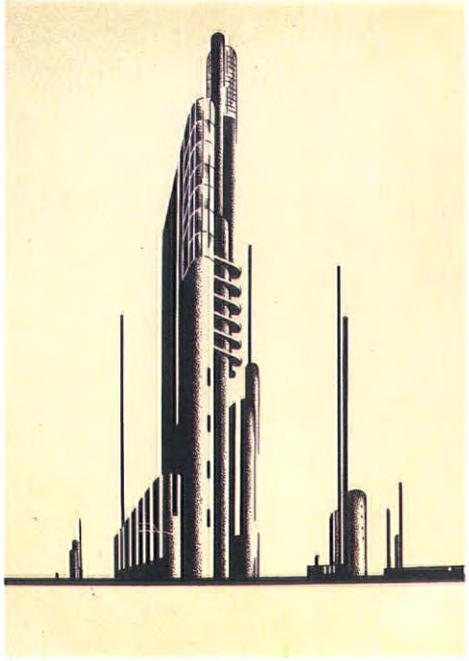


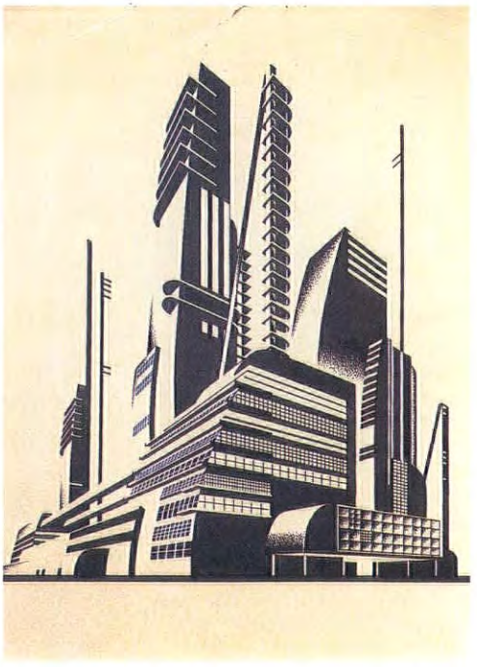


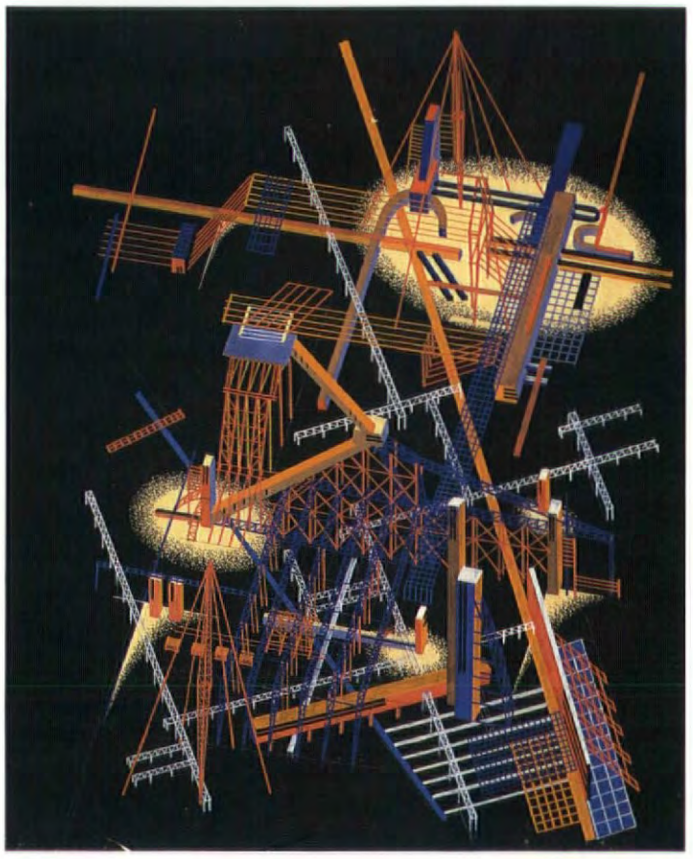
Four compositions from "Architectural Fantasies: 101 Compositions", 1933

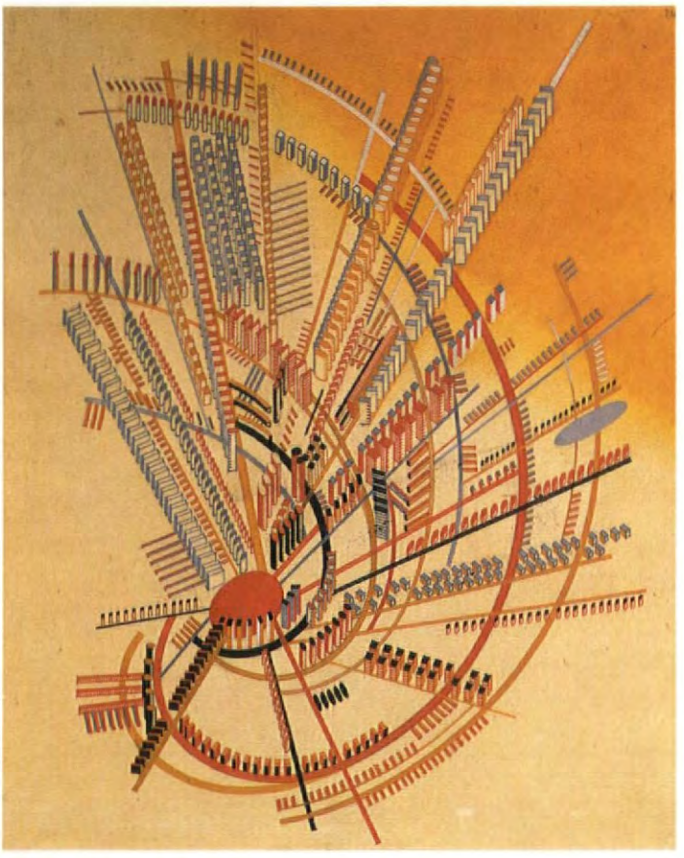
Formation of the Construction – three compositions from "Constructions of Architectural and Machine Forms", 1931





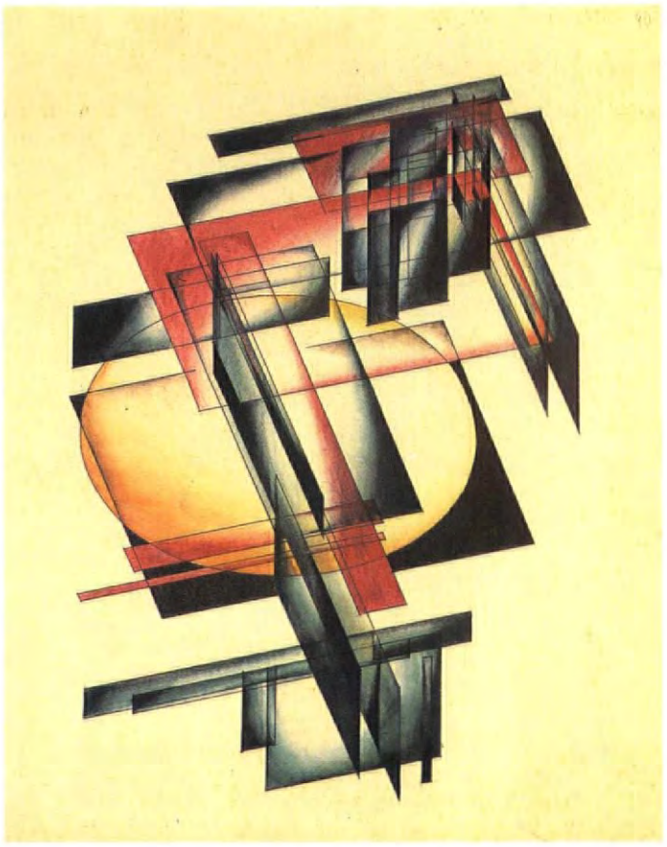




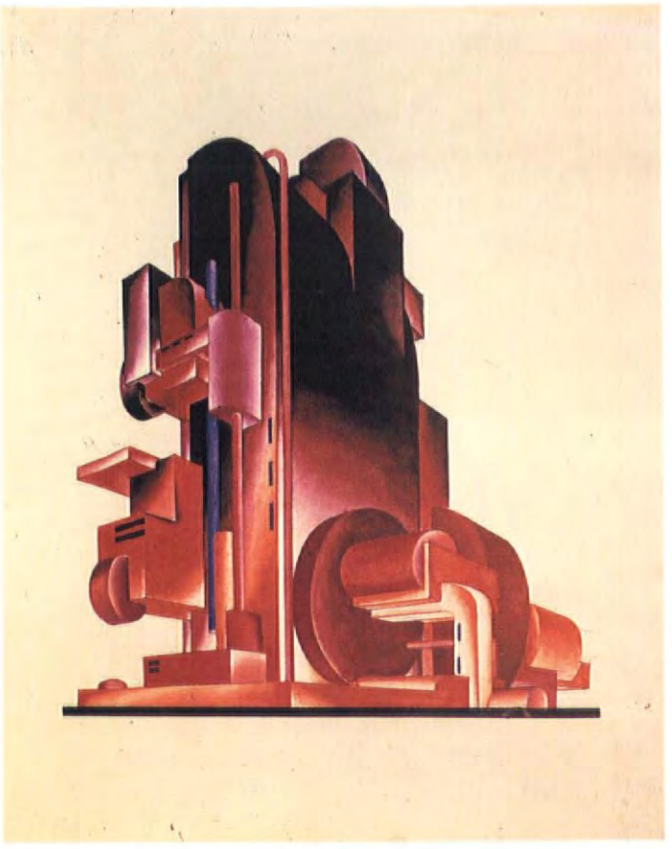


Two compositions of cities from "Architectural Fantasies: 101 Compositions", 1933

Abstract paintings, initially commissioned as camouflage pattern designs, from 1940s to 1951



Drawing from "Constructions of Architectural and Machine Forms", 1931

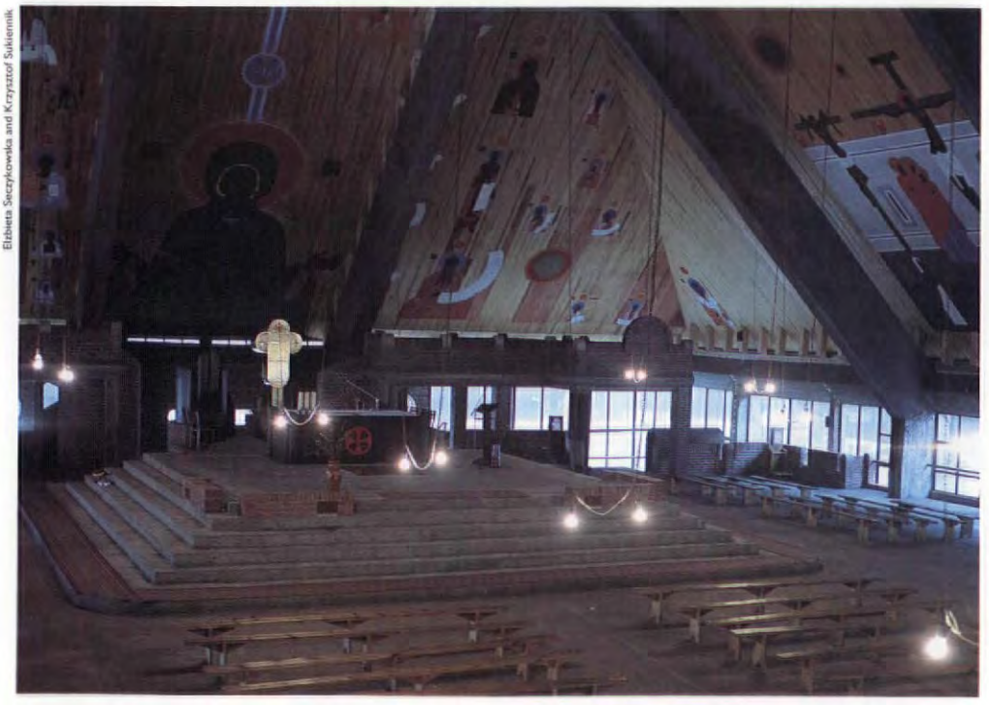


Drawing from "Machine Architecture" series

Abstract paintings, initially commissioned as camouflage pattern designs, from 1940s to 1951

A NEW PAGE IN HISTORY

The year 1990 was a historical moment for Poland. It marked the closing of a period of communist rule, which started at the end of the Second World War. For Polish architecture, this date is of great significance. For over 40 years, architects as well as members of other professions, were deprived of their independence. They were reduced to the status of employees in large bureaucratic State-run design offices. Krzysztof Chwalibog, president of the Polish Association of Architects, describes the renaissance of architecture in Poland led by church building.



Elzbieta Sieczykowska and Krzysztof Sukiennik

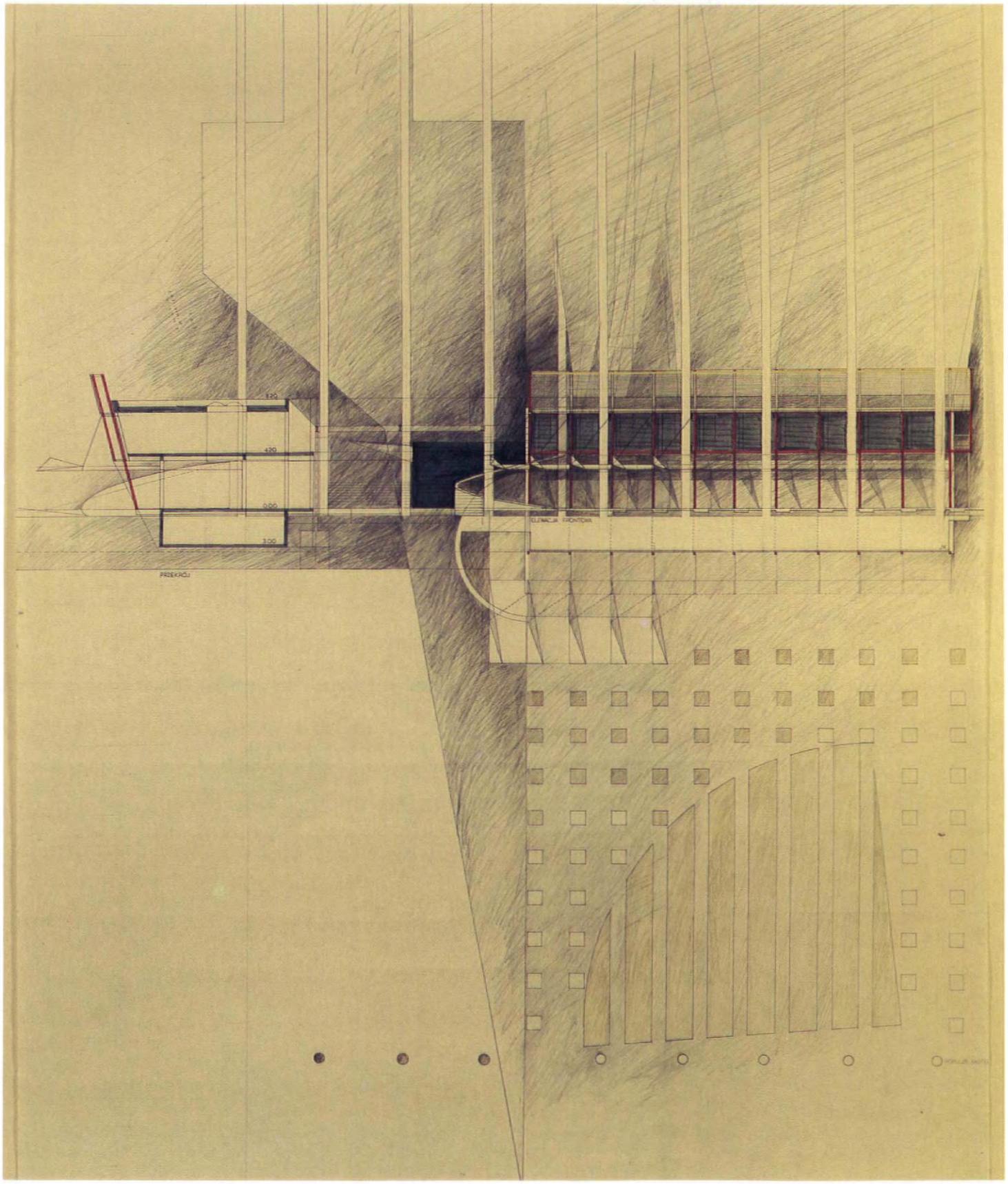
During the 1950s in Poland, what in Marxist terminology was called socialist realism was imposed upon an otherwise talented modern avant-garde. Then, in the 1960s and 1970s, the main limiting factor became the compulsory use of heavy reinforced concrete prefabricated elements, which precluded a proper shaping of the housing environment and led to an inhuman uniformity and ugliness in the whole environment.

However, even during those very difficult days, Polish architects did not miss any opportunity which on rare occasions presented itself, to be authentically creative.

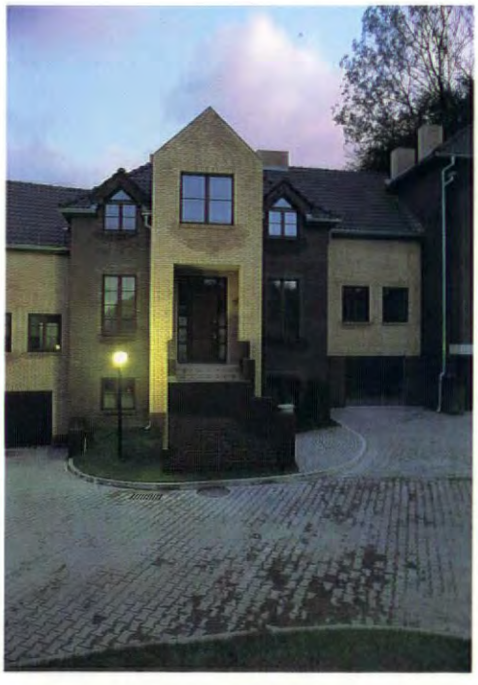
Such a chance did present itself in the reconstruction of the destroyed or badly damaged historical precincts of cities such as Warsaw, Gdansk and Krakow. Also, many architects who could not find an outlet for their talents and creativity in their own country participated in international competitions. In many instances their efforts were rewarded. Polish architects won important commissions, among them the Opera House in Madrid, the Library in Damascus, the Islamic Centre in Madrid, a project at the University of Dublin, the Espoo Centre in Finland, the Expo Grounds in Vienna and many others.

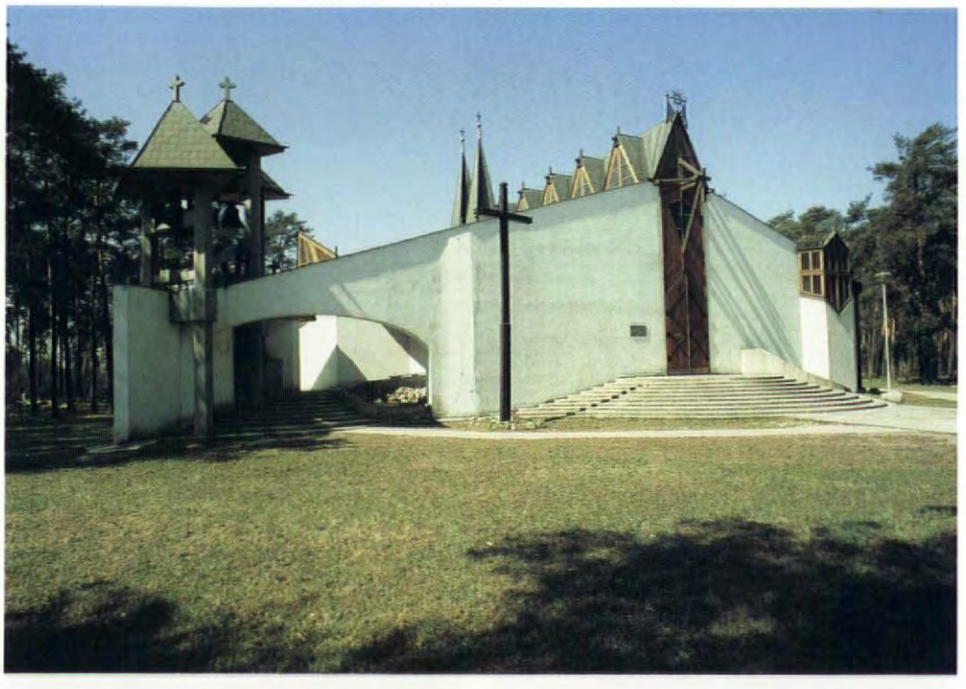
Many architects left Poland in search of more rewarding work. They found professional satisfaction in other parts of the world, such as Europe, North America, Africa, the Arab

Opposite page: Roman Catholic church, Tychy by Stanislaw Niemczyk
Design for a shopping mall in Kraków (below) by DDJM Architects, Marek Dunikowski, Artur Jasinski, Jaroslaw Kutniowski, Piotr Uherek



Roman Catholic church near Warsaw by Handzelewicz and Waclawek





(Above and near right) Condominium Gdynia Hill, Gdynia by Chwalibóg and Girtler

Roman catholic church, Warsaw - Ursynów (far right) by Marek Budzynski. (Below) Residential area, Katowice by Ryszard Jurkowski

Peninsula or Australia. Names such as Andrzej Weichert (Dublin), Stanislaw Fiszer (Paris), Zbigniew Cianciara (Chicago), Zygmunt Knyszowski (Perpignan) are well-known in architectural circles. Those who remained at home were able only to a limited extent to realise their creative potential.

The situation remained unchanged until 1980, when the peaceful explosion of "Solidarity" also became the starting point for the basic changes in the Polish economy and Polish society. Under pressure of public opinion and as a by-product of that change, the Authorities, for the first time in thirty years, consented to the building of churches. This event opened new horizons for architecture. Also through the efforts of the Polish Architects Association, the first private practices came into being and the church design commission became the basis of their existence.

One realises how important these commissions became when one considers, that for the

Secondary school, Wodzislaw by Ryszard Jurkowski

Residential building, Kraków by Wojciech Obtulowicz, Krzysztof Wojtaszek, Andrzej Pieta, Barbara Patraszewska

Roman Catholic Church alone, some 2,000 churches were built in the 1980-90 period. Some of them do not deserve any attention, but many are of high architectural merit. Among those is a church in Srodborowie, not far from Warsaw, the work of Malgorzata Handzelewicz and Zbigniew Waclawek. The design is in a vernacular idiom, fitting in well with its forest surroundings.

A contrast, both in size and character, is the church in Ursynow, which this year earned its designer, Marek Budzynski the Honour Prize of the Polish Architects Association. The monumental silhouette of the church is the dominant element in a suburb of huge, multi-storey prefabricated housing blocks. The mannerist character of the project is accentuated by a very strong profile of the roof, interestingly shaped columns and a strong stained glass window above the entrance.

The church designed in Nowe Tychy by Stanislaw Niemczyk and covered by a pyramidal roof provides an interesting internal effect, which is heightened by the use of strong icon-like murals.

In Legionowo is an example of the union of contemporary elements, such as the steel beams of the roof with traditional building materials such as brick walls and stained glass windows. The use of natural light accentuates the area around the main altar. This church was designed by the author in partnership with Ryszard Girtler.

A different approach is demonstrated in a church in Kraków by architects Romuald Loegler and Zbigniew Czekaja. Here, the interior is formed by interpenetrating masses and is dramatised by strong light originating from a number of sources.

While the sudden outburst of activity in the sphere of church architecture gave Polish designers a foretaste of professional freedom, it was still a long way away from conditions that architects enjoy in countries with a free market economy. Several basic elements were missing. There were no quality building materials; no experienced, well organised building contractors and, most important of all, besides the Church there were no investors for projects larger than one family residential houses.

It was not until 1991-1993, that due to the new democratic freedoms and the beginning of a free market economy, an architecture of a new kind started to emerge. Private investment in commercial, retail and residential buildings, however modest at first, made its first appearance. For the first time residential apartments and family homes were being built purely for sale and profit. Competition among architects for what commissions were available became keen and the best organised or those with a good name as designers got the work. Many of them started their own partnerships after leaving government positions.

At the same time the construction industry

(Below and bottom) Renewal of old town, Elblag by Szczepan Baum and Ryszard Semka

Tadeusz Barucki

Tadeusz Barucki

Residential building, Szczecin by Jacek Lenart

Barbara Sanko

changed too. In place of giant, inefficient government building enterprises, there started to appear private building contractors, as well as a number of international firms entering the local scene.

All these factors and many others permitted the designing and realisation of projects which were more akin to the standards of contemporary foreign architecture. As a consequence, 1991-93 was the period when new, more interesting buildings started to appear.

In the light of these changes, it is understandable, that residential projects formed the largest proportion of new buildings being constructed, some of them deserving special mention.

The 1993 award of the Polish Association of Architects was bestowed upon a residential project in the centre of Szczecin, designed by Jacek Lenart. Its main merit is that it fits well into the existing streetscape of the town square.

Another example of an infill in an existing streetscape is a building designed by Wojciech Obtulowicz in Kraków. Its main feature is the reinforced concrete grid which gives it a distinctive look in relation to the surroundings.

A third example in this category is a free-standing 18-apartment residential building in Warsaw, in which the corner position is accentuated by the placing of the entrance on the corner. The elevational treatment shows a certain freedom in an informal arrangement of windows, which is also reflected in the form of the roof. The architects were the author Ryszard Girtler and Dariusz Rybak.

While there is a great deal of movement in the city centres, there is also a great deal of activity in the suburbs. A large number of one- family houses as well as low and high rise is being built. Unfortunately most are burdened with some pseudo-historical details and in general are rather monotonous. However there are exceptions. Among these is a group of apartments in Katowice designed by Ryszard Jurkowski. They are well planned and have attractive elevations.

A condominium building in Gdynia deserves attention. It was designed by the author in partnership with S Dopierala and R Girtler. It received the Award of the Ministry of Construction in 1993.

Most of the new domestic architecture is characterised by more spacious interiors and a greater freedom of their external appearance. These may sound rather insignificant, but they are a luxury to people of a country, where until recently, grey concrete high rise blocks were the rule in the urban landscape.

In conditions of limited investment possibilities, which arose out of the changes in the Polish economy, not many public and commercial buildings are being built today. However major projects previously started are being completed. Among these one of the

Office building, Warsaw by Tadeusz Szumielewicz and Stanislaw Chrzanowski

Tomasz Kuczynski

Hanna Długosz and January Ilendo

Vistula residential apartment block, Warsaw by Chwalibóg and Girtler

Interior of bar, Kraków by Wojciech Obtulowicz, Barbara Patraszewska and Andrzej Pieta

most important is the work being done at the University of Poznan. Also the high school at Wodzislaw in Silesia deserves a mention. Its architect, Ryszard Jurkowski skilfully designed the building into the hilly landscape.

In Warsaw, there are several new commercial buildings under construction. The Panorama Centre is the most recently completed project. Its designers, Tadeusz Szumielewicz and Stanislaw Chrzanowski have succeeded in creating an expressive external form.

As the free market economy is getting slowly into gear, new commercial developments and large retail shopping centres are being planned. In Kraków a major design office (DDJM) is working on a commercial centre whose first stage will be 5000 m^2 in area.

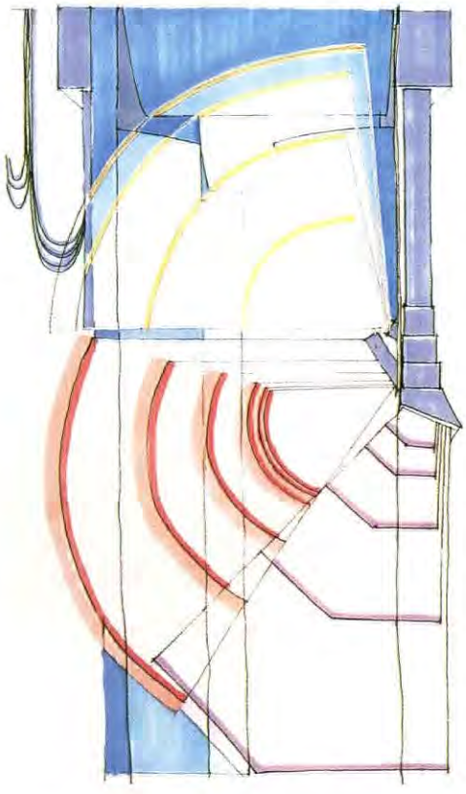
The true cultural value of Polish towns is their "Old Town" centres dating back to a Gothic, Renaissance or Baroque past. Most of them were badly damaged during the last World War, many of them were completely destroyed. In the immediate post war period they were rebuilt. As a by-product of this great reconstruction effort, a school of competent and experienced conservation experts was created. Their services have been used in conservation projects in many countries, as far away as Cambodia.

In many parts of Poland their skills are still being used in the design of traditional architecture, mainly in deference to an existing townscape.

In general what is presently being built in Poland cannot as yet be compared to what is happening in other more prosperous countries, which in the past have enjoyed a freedom not experienced in this country. However, Polish architects, despite the difficulties they are experiencing at present, have the satisfaction, of being able to organise their own work, create without the interference, and contribute to the shaping of the future architectural landscape of their country. □

CONDITION ZERO

This is the conclusion of World Architecture's *survey of computer culture. The series started with a survey of IBM's losing battle with information technology, continued with a study of the ascendancy of the Apple Macintosh, and went on to Stafford Beer and today's ultimate designing machines. Here Nigel Gilbert presents a final apocalyptic insight into a post-architecture world of full time simulation.*



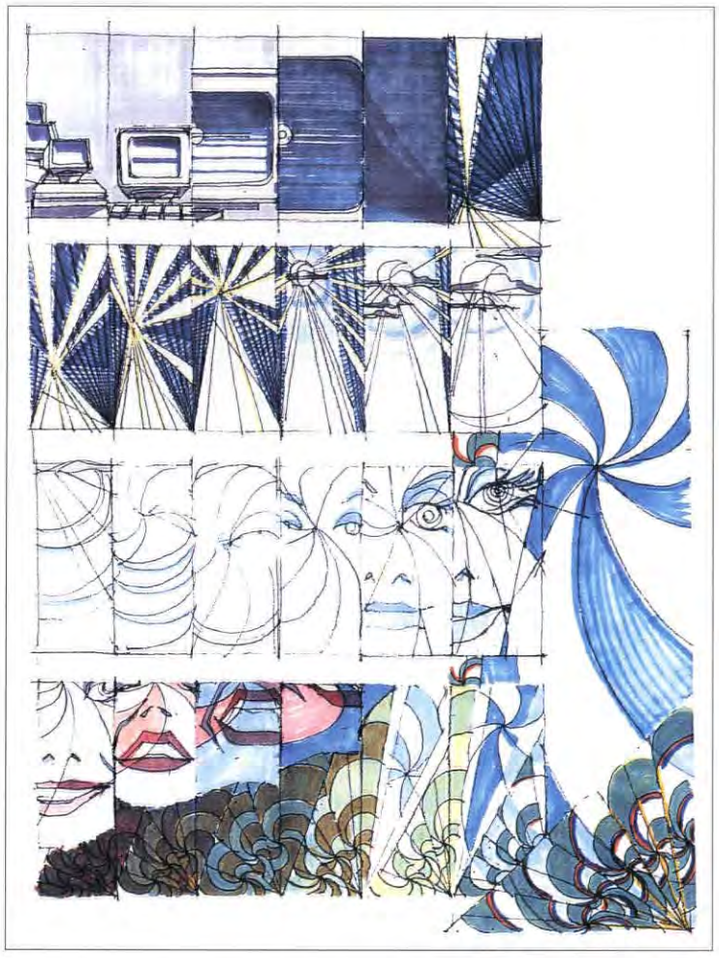
Computer Aided Design stations among the drawing stands in an architects' office are a commonplace sight. VDU and keyboard, mouse and tablet are unremarkable and unremarked upon by architects.

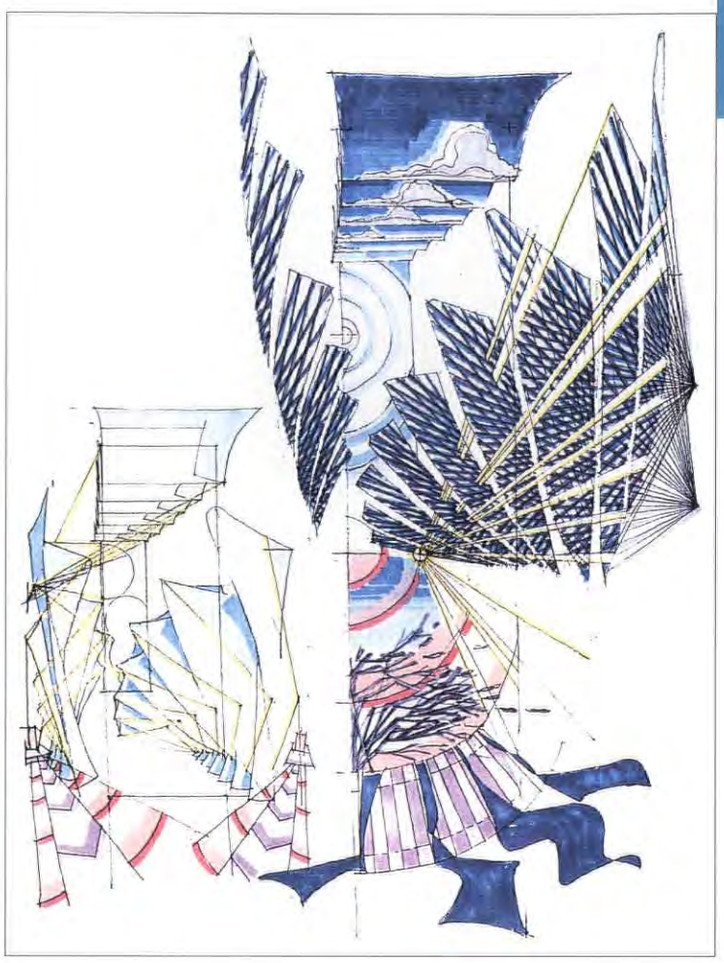
From a humble alternative to ink on tracing paper for technical drafting, CAD's capacities have accelerated from crude "wire frame" graphics through sampled rendering with variable lighting to animated colour "walk-arounds". Each new trick is eagerly adopted and "bolted on". Regular features in the professional journals predict the graceful assimilation of Virtual Reality into the drawing office as the state-of-the-art presentation technique. The ultimate design executive toy - if disturbingly accompanied by the increased likelihood of interference when the client sees what he's really getting before he gets it.

This sort of unease is one symptom of the much-discussed breach of confidence between the architectural profession and society. Such a fee-threatening estrangement from the client base has effected an astonishing tactical split in architects' output. For the majority of architects, commissions are overtly designed for broad public consumption - quasi traditional materials with a classical or vernacular gloss. For a minority, design is exaggeration of a private set of values - minimal, attenuated high technology of construction, or self expressive, self referential Art with the capital A. For a profession usually obsessed with simple morality and single "truths" in the deployment of technology, the fact that both opposed design values, public and private, appear equally at home on the office VDU or emerging from the printer seems oddly to signify very little. Certainly not that the unpopularity of the architect is only incidentally to do with a dislike of the Modern Movement and a disenchantment with the technical and managerial failures of the recent past.

In fact the "useful toy" attitude of architects to Information Technology as exemplified by CAD is really the stance of the technological idiot. It reflects a fundamental shift in attitude on the part of both their clients and society as a whole. One that has marginalised the values on which the profession depends by means of the very same technology.

The link between technical innovation and changes in human perception was first charted by Marshall McLuhan over 25 years ago, most vividly in his picture/print collaborations *The Medium is the Massage*, and *War and Peace in the Global Village*. For McLuhan, when the degree of change brought about by innovation began to exceed "the impacts of all innovations of all past cultures", then a psychic survival kit was required. He believed that "there is absolutely no inevitability so long as there is a willingness to contemplate what is happening". His





insights into processes that "elude easy perception" derived from the imaginative positioning of "seemingly disparate elements". They were first admired, then borrowed and bastardised, and now they are forgotten.

McLuhan showed how the history of Western man's inner life has shadowed the history of his unique dominion over Planet Earth through the deployment of ever more powerful levels of technology that organise and control the unreliable chaos of the natural world. The price paid for this dominion has been the shock or numbness experienced from the application of each new level of technology. But this numbness is the anaesthetic that allows the operation to proceed, for all new technologies are a destabilising extension of a human sense or bodily faculty. As the wheel is an extension of the foot, so electric Information Technology is an extension of the central nervous system. If the train and the motor car could create the suburb and the myth of rural retreat, then IT possesses unprecedented power to transform all our relationships to the complete environment and each other. In so doing, the invisibility of the electric media, light and power, together with the totality of connections they release within the global village combine to render the individual values of specific substance, content, and location suddenly archaic, relative and unimportant.

For architects and architecture, this pervasive "ephemeralisation", as Buckminster Fuller put it, has two consequences. First, with "all factors of the environment and experience in a state of active interplay", the validity of form as a fixed mass of static structure in a finite relationship to a fixed site becomes problematical to say the least. Secondly, if "as soon as information is acquired it is replaced by still newer information", and if such information overwhelms all specialised compartments, then the notion of a separate profession with a protected body of knowledge becomes redundant. It reveals itself as a rusting mechanism adrift on an electronic sea.

Doubters of this cultural and social dislocation are urged to look again at the current deregulation issue. Even in the kind of design generated by the tactical "split" in the profession, a sense of aesthetic fracture and loss is marked. Both in matchwood half-timbering shotfired over reconstructed stone, and in fitted glass, slick skin commercial buildings, design values are approaching "condition zero".

Taking McLuhan's strategy, and juxtaposing an apparently unrelated field of study with architecture, it is possible to see how architects might have given themselves advance warning of this crisis of meaning.

Long ago, in the age of the cinema and the photograph, media technologies had already advanced to the point where they could repli-

Zero-form in the City

Model: "Jellyfish"

Target Tribe: redundant secretaries from business sector displaced by third-wave technology and home-working

Configuration: topped with tarpaulins, shrouded in industrial strip-curtain, a "ghost" building, hung, propped or leant against the existing city landscape

Programme: anxiety and loss of "office" are confronted through maze of mock-up, white sets merging into images of dead monitor screens: transformation cut to "scene" sequences of night moonlight to day noonlight (analogue of natural lighting masked by interference patterns, screens and mandelbrot sets as turning mandalas) images of personal release hidden to amplify numinous effect.

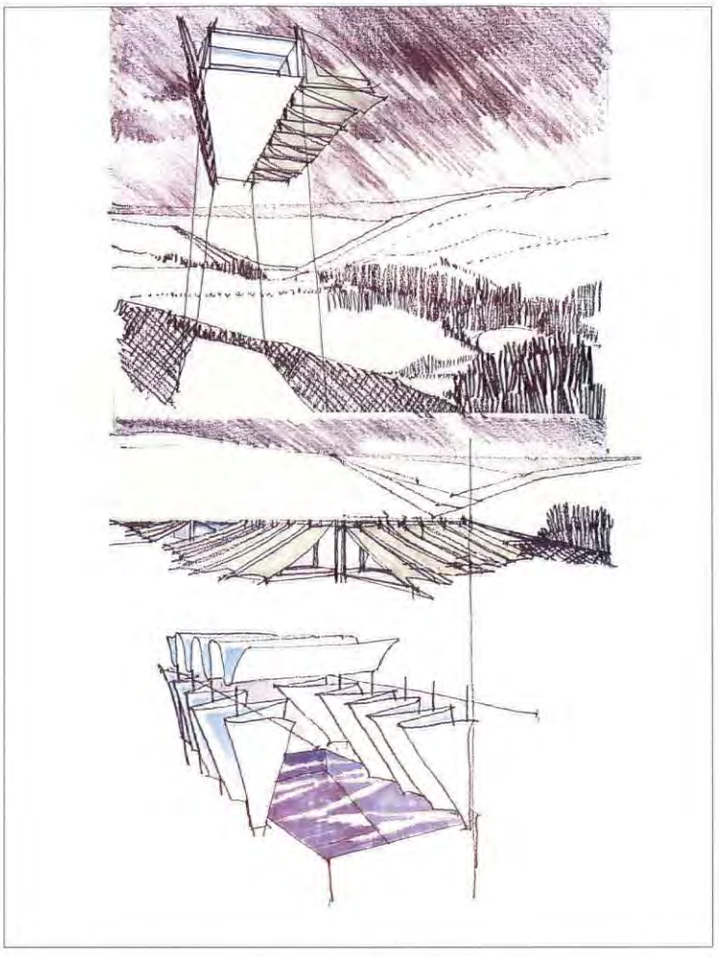
Zero-form in the Country

Model: "Coffin"

Target Tribe: hill-farmers (single men, border collies and microlite transport)

Configuration: insulated container cloaked in folding, dressed camouflage scrim giving instant earthwork/mound capability when chinooked into remote locations

Programme: (spread over single flotation tank): colour/heat saturation followed by floating and descent over water, submersion into pressure depths, where, within flickering light and sudden fish shoals, a centrefold "companion" is squeezed out to drift before the beholder. (Sensory deprivation effect of tank reversed into sensory maximisation.)



cate any architectural form. Interiors for silent movies were first shot on roofless stages where wooden scenery "flats" were naturally lit by the dependable and intense California sun. Effects (FX) were initially borrowed from the theatre arrangements - like forced perspective sets with ramped floor plates and lowered, angled ceilings. Driven on by the desire for a more effective realism a separate momentum developed through illusionist innovations like "glass shots" and back projection, themselves overtaken by in-camera processes, "matting" separately filmed sequences into a single scenic effect in depth. Now, in TV production, computer graphics systems like Quantel Paintbox allow live action in studio to be instantaneously combined with any place or setting, and the generation of a complete realism without any intermediary substance.

This trajectory from sunlit studwork to the cyberspace of Quantel exactly anticipates architecture's passage from the formal "natural relations" of Norberg Schulz to the endless thin entries of Jencks - "condition zero" by many other names.

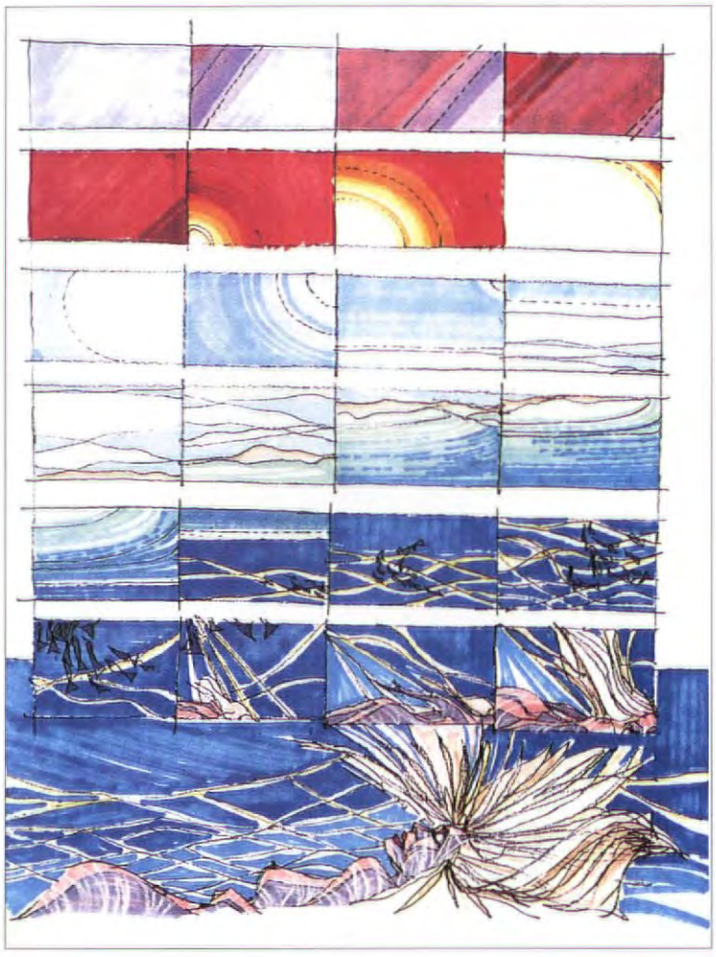
The subject matter in cinema and TV lived up to its technical sweep too. Biblical epics, historical romances, westerns, cops, crime and sci-fi, all ensured that every building type from temple to castle, from log cabin to diner, cave to office could be depicted simulated and married to any location from the Moon to Rangoon. So, from within the mass media of the first half of the century, these technologies literally manufactured an unspoken but total acceptance of the realism of appearance. Cutting across time and space, this public acceptance relegated the high design morality of the Modern Movement to the status of just one option among many.

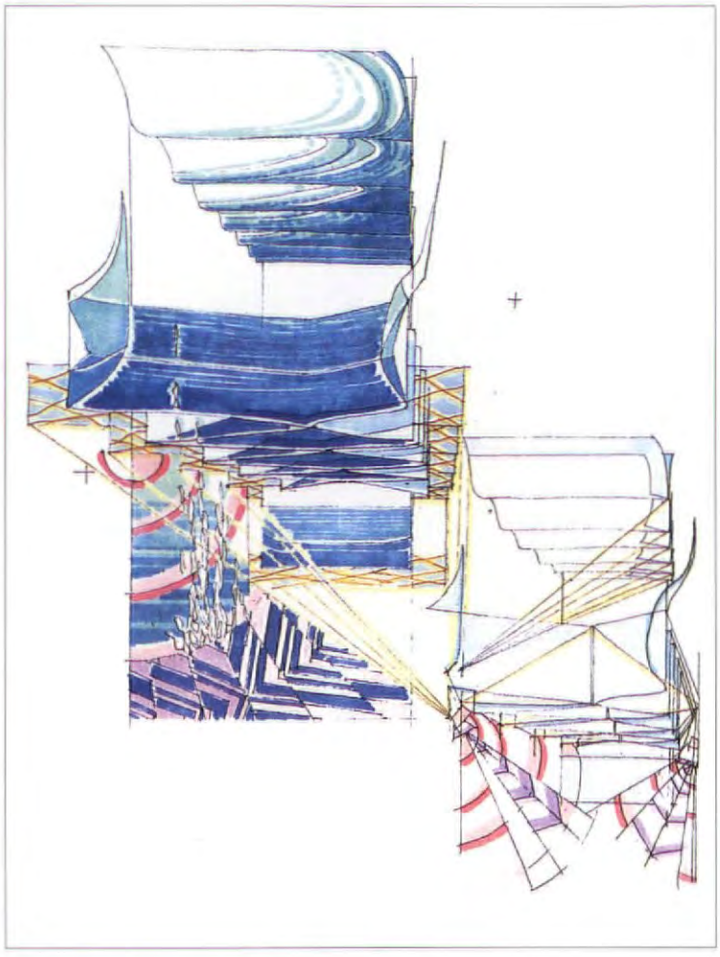
All or any combination of form and location become equally plausible and valid: even the question of the choice of combination now increasingly lies beyond the remit of the architect. Not just as a client veto but as a decision already made before the building is even commissioned, by management consultants as an integral element in a corporate image.

Image embedded in lifestyle supplants form following function and truth to materials. At home the winding ways of the new model villages by the volume housebuilder connect Tudorbethan cottage fronts with a glimpse of the Sainsbury tithebarn. At work, mirror-glass offices with splash logos supervise colour co-ordinated production sheds amid the undulating lawns of business parks.

Even this home-work duality is a representation of a condition that has passed. As an embodiment of a pre-electronic, mechanical separation of life into autonomous compartments, its clarity and contrast appears as a form of consolation in the face of the bewildering network mosaic of connections effected by IT in the world. The persistence of this kind of duality as a vision of ourselves is exactly the numbed reaction we would expect from what McLuhan called a "rear-view mirror" society, where the inner shock of continuing change renders the hold of the known and secure so hypnotic that the present and its operations cannot be acknowledged. This queasy mismatch between living in a new environment yet thinking and acting with the conditioning and responses of the old, induces a mental state of "critical anxiety". The tactical split in design, and the somnambulistic defence of the old status of the architect should both be seen as products of this anxiety, not as genuine responses to change.

When Virtual Reality systems first broke in the scientific community, there was an alternative name for them – "Artificial Realities". This title makes a useful probe for the present potential of architectural design. Using the language of IT, architecture can be redefined as a control system for our experiences of the world, filtering out the unwelcome and celebrating the desired. Looked at this way, it is true that architecture has always been in the business of creating "realities" for societies that are inherently "artificial" – the transformation being effected via form as mass and structure. But the decisive techno-leap that has beached these old conventions is the substitution of electronic simulation for form. At the extreme, this redun-





dancy is starkly revealed in Virtual Reality, where stereoscopic goggles, data gloves and suits are continuously interlinked to sensory sensor feedback. This represents a complete rejection of any traditional experience of the world and of real space as a field for action. VR is the electronic equivalent of the intravenous injection. It achieves an instantaneous environmental transformation.

Despite the technophobia VR arouses – both popular, "Lawnmower Man", and elitist, Baudrillard's "obscene ecstasy" – this is where the megabucks are going. With the enhancement of optical switching, third-wave IT will empower VR with not only voice response and synthesis, but also display capabilities now only present in the "Computer Dreams" showreels made by specialist graphics software companies. The design depth implicit in these displays outstrips any built form in the world: fractal and "string" geometries are extrapolated into cyberspace in a soaring intricacy that is opulently different to the reality its level of detail emulates. These displays, transplanted into VR, will become the "architectural" celebrations of economic and cultural power by the end of this century.

Architecture as the medium by which society celebrates its own artificial "reality" has been engulfed by the tidal wave of IT as it renders all experience of the world artificial. Architecture's conventions stand in relation to IT's power much as Newton's Laws stand in relation to Einstein's Theory of Relativity – a limited region within a wider field where the real action takes place.

Already inconceivable without electric light and climate control, today's office atria and shopping malls are primitive, unconscious rehearsals of the mass transformation of experience into the artificial. Soon buildings will become entirely unsupportable beyond any image value they might possess, unless their hulks are riddled with the electric worm of security and climatic intelligence overlaid with "ubiquitous" computing and communications sensors and outlets.

The electronically induced collapse of physical space as the arena of human action also signifies the death of the public realm and with it the city itself. Lewis Mumford, in *The City in History*, recognised the equivalence of the City and "our ingenious electronic mechanisms" as means of "transmitting a complex culture". Writing in 1961, he could not forsee IT overtaking and obliterating the City's "storage facilities (buildings, vaults, archives, monuments, tablets, books)". In time-lapse jerks, the City is consciously abandoned except for ceremonial and symbolic purposes. The Country, the artificial world landscape, is resettled through computer networking. Here, in patterns of decentralised low intensity, roles replace jobs and work is transformed into total involvement lived mythically and in depth – the predicted retribalisation of the global village.

In the meantime, deadtime, before wealth and power openly declare for electronic reality, and at the furthest limit of "condition zero" beyond mass, structure and site, a "zero-form" could emerge.

A "zero-form" could appear on top of, underneath, between, beside, wherever a contingent interstice occurs in the artificial landscape. In some cases, camouflage techniques would preserve the "scene"; in others, well, its not that important. The visual presence of "zero-form" could be anonymous to the point of invisibility, its proportions banal – tall and narrow or long and low. Spatial definition could be limited to the provision of vantage points, private places for privileged beholders.

"Zero-form" could contain by a compressed, convoluted, and enfolded contour, a cloying aromatic maze to be filled, suffused, and dematerialised by light, sound and air projections. As a layered kaleidoscope of information, situation and setting, these synchronise into a glowing immersion of the private body that drips with detail, advancing, enveloping and retreating – a swallowing oesophagus, an anemone in a deep sea current.

This induced interplay between the senses through the "touch" of "zero-form" is a broadcast tuned to the emotional and psychic fallout spreading from the electronic restructuring of the total environment and anticipating the changes as men and women respond. □

THE LAST MODERN PROJECT

The petrol filling station is the most instantly recognisable piece of architecture in the world. An epic minimalist structure honed by one hundred years of specialist design, its boxy portico, soaring canopy, dispensing islands and tall price-indicator laid out like plastic chessmen on a forecourt over thousands of litres of petrol in underground tanks. But today, with the Shell group of companies in the middle of an epic £500 million modernisation programme for all its 40,000 petrol stations worldwide, the Heritage Industry is gearing up for a move in the opposite direction, belabouring the global functionalism of filling station design with pitched roof ideas of its own.

The petrol filling station is a triumph of Modern design. Suspended from a delicate steel frame structure, all its elements are value-engineered down to minimum dimensions, and most of them are clad in self-coloured plastics made by the chemical industry from the same crude oil as the fuel it sells. In this and many other ways the petrol station is no ordinary building. A delicate composition of solids and voids, machines and alphanumeric characters, it is one of the purest creations of technology in the public realm. It is a piece of chemical magic made of space, energy and information, and nothing else.

Like the market for cars, in the beginning the demand for petrol stations grew out of the peripherals of horse-drawn transport. Just as the first cars were garaged in stables, so were the earliest petrol stations either converted from commercial stables or attached to blacksmith's shops. As automobilism spread and new roads were constructed, they began to appear in increasing numbers on the perimeter of urban areas, and then as isolated adjuncts to the new highways built for cars and lorries, robot buildings sustainable only by the novel means of transport they were built to serve, like signal boxes on the railways. Stand-alone petrol stations like this rapidly became a global phenomenon, quickly settling on the fundamentals of a near-standard design everywhere from former colonial territories - where they were often the first truly Modern buildings to be erected - to the sparsely populated rural areas of the developed world. As time passed they were absorbed into the global transport infrastructure of the twentieth century. The only resistance they encountered was where the reactionary defenders of traditional urban and rural life sought to constrain adaptations for automotive purposes, and object to the sometimes extravagant use of signage that the identification of such converted premises entailed. In Britain, from the late 1920s until the outbreak of World War Two, a voluntary organisation called the Council for the Preservation of Rural England (since renamed Council for the Protection of Rural England), ran a lengthy campaign against what it called ugly roadside features, which lavished special attention on petrol station signs. In the end all this opposition was

insignificant. In general, because the development of popular motoring between the two great wars was so dramatic, the image of the petrol filling station entered popular mythology as a different kind of symbol altogether, one of enthusiasm for the rootless mobility of the automobile age. Over the years successive artists and film makers capture the strange mixture of emotions generated by the enigmatic architecture and sociology of the filling station - a structure alien to its immediate surroundings, but indissolubly tied to the endless ribbon of road that linked all places in the Modern world.

Rural History Centre, University of Reading

The Golden Age of petrol station design

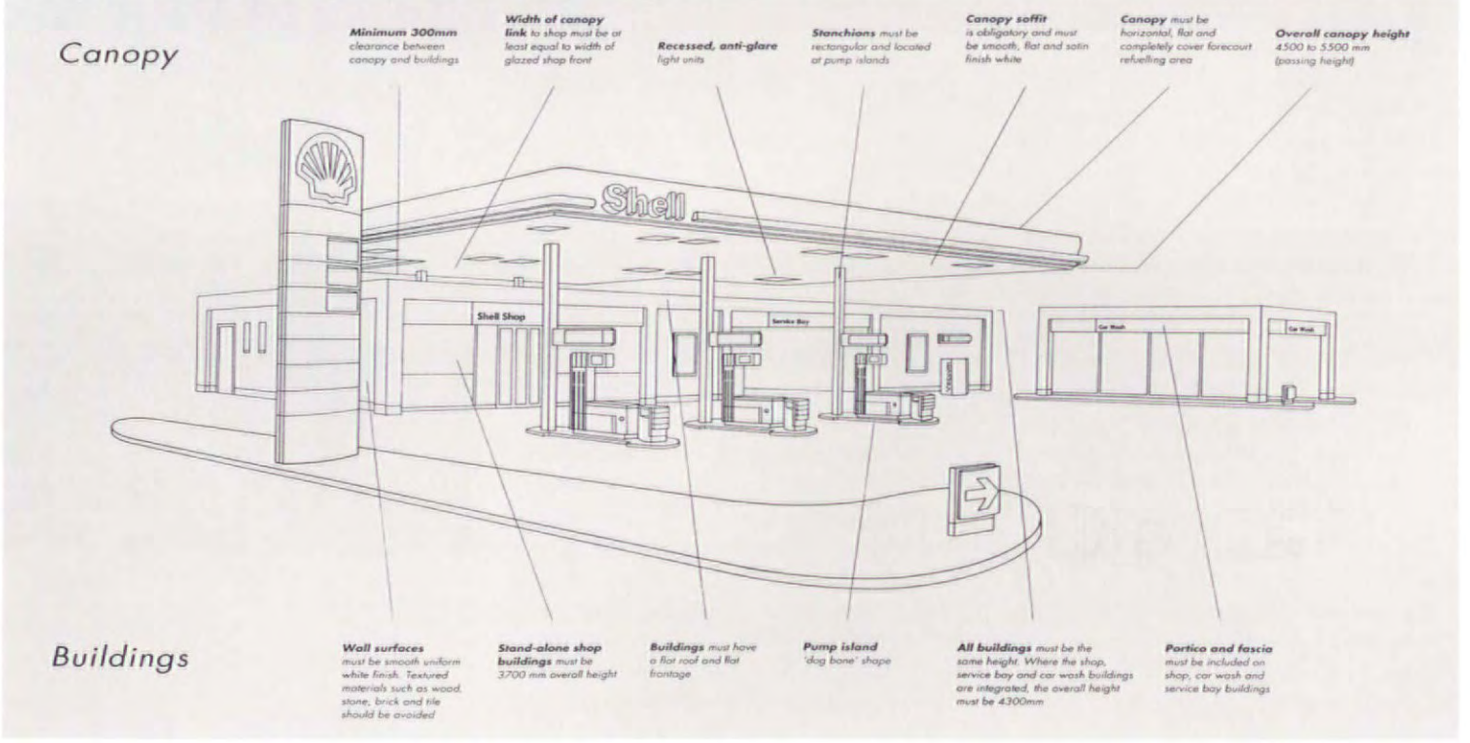
For forty years after World War Two the functional design of the stand-alone filling station underwent a steady process of refinement within the accepted canons of Modern design. From early exercises in wood and canvas it evolved into permanent concrete and steel, and finally the most advanced composites. Throughout the '50s, '60s and '70s it was universally accepted that, as the design of motor vehicles was a matter of evolving and improving Modern technology, so every aspect of road transport, from highway infrastructure to signage and road safety, must logically be treated in the same way. Thus came the motorway network, the cloverleaf junction, the service area and the overhead direction sign. Not until the 1980s, with the advent of post-Modern design in architecture and the coming of a strong popular reaction against the appearance of Modern buildings, did the hostility of the 1920s revive. This time a return of the pre-war concern for the integrity of traditional urban and rural vistas was joined by a new desire to suppress the fundamental Modern principles of standardisation and high functional visibility that the oil companies considered essential, not only for brand identification and marketing, but for instant recognition behind the wheel.

By the late 1980s all these objections had linked up with a vocal minority strongly opposed to the motor car itself, with its noise, toxic emissions and risk of accidents. This created a powerful alliance poised to move against the design of the Modern filling station, whose near-universality had made it particularly vulnerable to public opinion. Today the exponents of this view, which threatens all such unified, functional identities in the public realm, believe that petrol station design should be dominated by other imperatives than function, corporate identity and high visibility. The opponents of Modern petrol station design say that it should be changed in the light of environmental issues; that it should be more varied in the interests of national, regional and local architectural diversity, and that it should cease to be standardised across non-standard cultures.

In 1990 the influential English landowners' magazine *Country Life* published a number of revisionist designs for petrol filling stations and *The Times* newspaper took up their cause. The illustrations included

From blacksmith to pompiste *in the 1920s (top). What Heritage objected to (middle). Stripping it all away (bottom). The clean but complex lines of the RVI canopy (far left)*

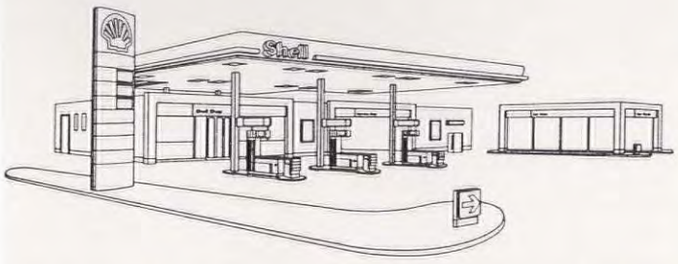
An RVI petrol station in the Netherlands (below) and all the elements of the Shell RVI "world design" (bottom)



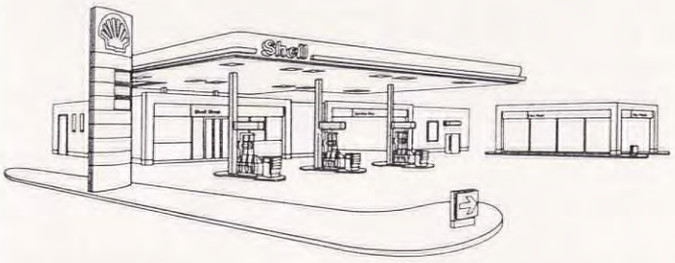
Graduated levels of RVI retrofit design (below left). Finished result (below) shows all RVI elements except monolith. Drawings show detailed specification of layout and finishes

Retrofit levels

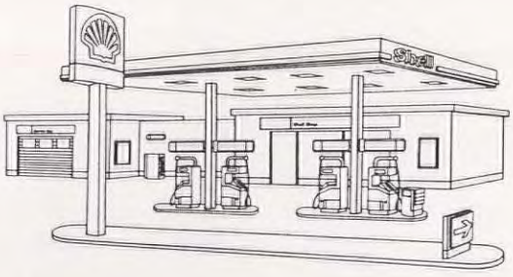
Sites are allocated to one of four retrofit levels



Level one Top specification for prime sites which includes all RVI elements and aims to create an 'as new' effect

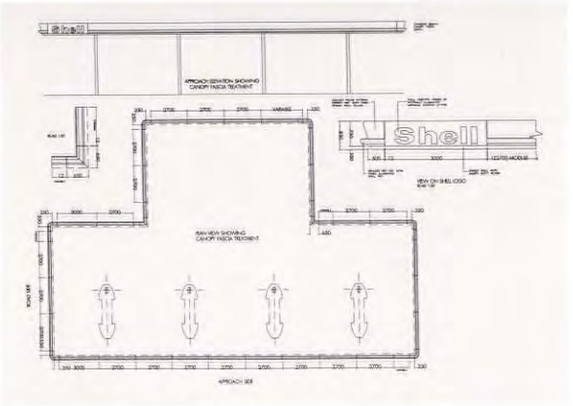


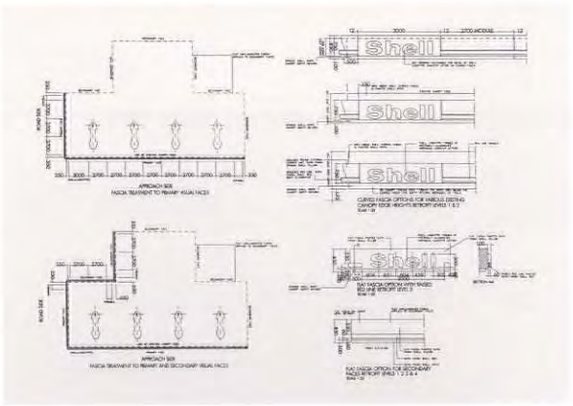
Level two Key sites, with reduced number of RVI elements and the maximum number of allowable options

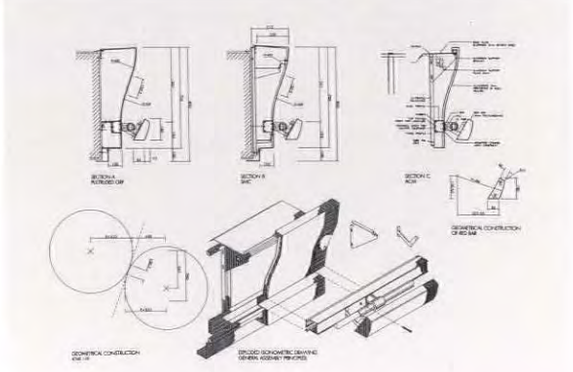


Level three Mid-range sites use basic range of elements but still achieving authentic RVI effect

Level four Minimum basic retrofit and refurbishment







A complete RVI filling station in Rio de Janeiro by night (top) and by day (above)

Classical filling stations with columns and pediments, vernacular filling stations with pitched roofs finished in thatch, and camouflaged filling stations painted so as to blend in with their surroundings. Heartened by these examples, it was not long before the Royal Fine Art Commission and various local authority planning departments began objecting to the previously unexceptionable standard designs of the major oil companies, requesting the addition of pitched roofs and decorative features to their filling stations. Today an increasing number of planners, amenity societies and advisory bodies in Britain and elsewhere have become convinced that the standard type of filling station that can trace the evolution of its design back to the dawn of the (still unchanged) function of vehicle refuelling, now requires not so much a new identity as an old identity. In their view it should either dissolve into the larger form of an out of town superstore, or retreat into the arcadian pitched roof pre-Modernism of the suburbs.

What this means in simple terms is that the petrol filling station, previously considered outside the realm of architecture, has now entered the same hostile critical environment as all other Modern buildings. The petrol filling station, long unrecognised by historians, is perhaps the last and greatest success story of the International Style. Now it too is heading for a final showdown with the forces of conservation, contextualism and conformity. Conservationist ancestor worship is finally threatening to corrupt and overwhelm the last established symbol of Modernity in architecture.

The prototype RVI filling station at Haydock (left) and its immediate predecessor the "visual manifestation" (above)

Shell's history of Modern design (below), London, Yokohama (designed by Antonin Raymond) and Stockholm in the 1920s

Rural History Centre, University of Reading

British Architectural Library, RIBA

British Architectural Library, RIBA

The empire strikes back

One of the greatest proponents of Modernism amongst the world's major oil companies is the Shell group, with ten times as many petrol filling stations as MacDonalds has hamburger restaurants. With 40,000 filling stations worldwide, as against only 4,000 MacDonalds fast food outlets, the Shell group is actually the world's largest retailer. Today it operates in 100 countries and employs over 100,000 people in the exploitation of one-tenth of all the proven reserves of oil and natural gas outside the former Soviet bloc.

Like MacDonalds, Shell has its own design tradition, but a much longer one that goes back nearly 100 years to the alliance formed between the Royal Dutch Petroleum Company and the "Shell" Transport and Trading Company in 1907. Shell has a long tradition of Modern design and an equally strong identification with progress and advanced technology. Today, despite one or two bruising encounters with planning departments and local amenity societies, Shell is not disposed to compromise with conservation as MacDonalds has. Dwarf golden arches may be OK in cathedral cities, but Shell still believes in Modernism and the international way. Where the same cars are sold, reasons the Shell group, the same design of petrol station is appropriate. Besides, the reasons for identifiability are not all to do with corporate identity and brand promotion. Petrol filling stations are part of a movement system that requires drivers to manoeuvre powerful vehicles and make split-second decisions that can effect other road users. High visibility is a safety factor, both in preventing breakdowns through lack of fuel, and in facilitating decision making at high speed. To call for "contextual" or camouflaged petrol filling stations, is at the same time to call for lowered visibility in an environment where visibility is crucial: in some ways it is no more logical than to call for the "contextualisation" or camouflage of road signs.

Three years ago the Shell group of companies embarked on what may be the largest corporate identity programme ever attempted. Within ten years every one of the group's 40,000 filling stations will be redesigned according to what is called the RVI (Retail Visual Identity) programme. Under this scheme the same corporate design guidelines, down to the smallest detail, will govern the appearance of every Shell filling station in the world, from Eastern Europe to Australia, and from Puntas Arenas to Anchorage, Alaska. According to a standard design manual developed in association with design consultants Sampson Tyrrell, Shell has specified the layout, dimensions, colours, lighting and lettering of its standard world filling station more tightly than ever before. In the sense of its geographical scope and its attention to detail, RVI is one of the greatest Modern architectural projects ever attempted. Even if it is successfully fought through against the expected opposition of nationalists, regionalists, planners and local amenity societies, it could still be the last truly Modern design project of the Modern Age. □

A LIGHT TOUCH

Lighting is to architecture as punctuation is to the written word. So said Georges Heinrich, one of the earliest authorities in the field. And since Heinrich's day the role of lighting in articulating architectural form has steadily increased in complexity and importance. But lighting will always be dominated by subjective judgments and well known personalities. What would Concord Lighting be without the famous Janet Turner? Graham Vickers suspects that it would be something else entirely.

I remember that the first time a met Janet Turner she was only intermittently visible behind clouds of cigarette smoke. That was a few years ago now and I remember thinking at the time how the combination of her bold make up, the dramatic Concord lighting that was my reason for going to see her, and all that smoke recalled the kind of *film noir* they don't make anymore, except as pastiche or homage. There may even have been a venetian blind in her office casting striated shadows, but I could be wrong about that. It was back in the days when Concord was located in London's shabby City Road. Today, after some changing fortunes, Concord's showroom and lighting design service are in High Holborn at rather more prestigious premises which Turner says are usually identified by taxi drivers as "that place with the funny things in the window". I thought of this when going to interview her, because there in the window surrounded by Concord products, was Janet Turner herself, being photographed for The Independent on Sunday whilst enthusing about a bit of Philippe Starck design. Under the circumstances she looked more relaxed than most people might.

It was a plausible enough tableau since to many architects and interior designers Janet Turner is Concord Lighting, although it now occurs to me that I have never been quite sure what her official role within the company is.

"I'm the person who takes care of the lighting specification schemes and the advertising and the catalogue, the showroom, the demonstrations" she says when the photographer has finished. Is hers then primarily a selling role, I ask innocently.

"When are you not in a selling role?" she replies briskly. "Whether it's yourself or an object, you need to sell. If architects can't sell themselves, they don't get the job".

I appear to have hit on something she feels strongly about.

"I always joke about the fact that I'm in trade because I recognise the fact that there are a lot of people who are very snooty about it" she continues, perhaps considering the possibility that I might be one of these people. "In fact if I were selling something that was not a product, maybe I'd feel slightly different about it. But I believe profoundly in products. I think manufacturing is one of the most exciting parts of the lighting business because you have an idea about what you want to do, and the design and research departments at Concord put it together, make it and are proud of it. Then comes the selling."

No kidding. But Turner's selling technique - if it is a technique - is so blatant that it is curi-

Bleak Grimshavian architecture at Heathrow (above) is enlivened by light.
Concord showroom (left) at formal opening, 18th October 1990

ously disarming. Behind it lies a genuine enthusiasm for art, design and the unique power of lighting to transform space. She also has a natural tendency to be colourfully indiscreet that must sit rather uneasily with the task of dealing with specifiers who may not always share her enthusiasms. So what career path led her into this particular branch of trade?

"I went to a boring school in the Midlands" she says, perhaps tautologically, "where my saviour was the art teacher. I suppose I was quite happy there, but art was the only thing I was any good at. I could draw and, because I was rather more interested in being a film star than anything else, I just used to draw film stars from photographs. Veronica Lake, Rita Hayworth, Clark Gable. I was very into glamour. Funny that I should end up in lighting".

At Dudley art school at the age of 17 she suddenly discovered that she was not alone - there were other out-of-step young people who, post-war and pre-Habitat, were obsessively interested in playing with environments, spaces, colour and other things that no doubt suggested to mainstream opinion of the time a profound unsuitability for any form of serious employment.

"Up to that point I simply couldn't understand why other people didn't want to arrange things, reorganise their rooms, do all the things that my school friends were not interested in" she says. "My favourite place as a child was an area at the bottom of people's gardens, over the walls that backed onto a canal bank. That's where they would throw stuff like broken crockery, broken glass, things they didn't like. One of my favourite occupations was to ferret along these walls and bring back these magical pieces of glitter and ceramic and - not stick them together - just arrange them."

Slender collateral for a career in the '50s perhaps, but just the sort of thing that art schools of the time encouraged. In fact today's art and design students would have some difficulty recognising the sort of educational establishment that nurtured Janet Turner. "It was all to do with the times" she says elliptically. "We had almost as many teachers as staff, and after the first year, you would just say what you wanted to do. The courses were structured by the students. My interest in interiors happened when I realised that I had to earn a living. I knew that I had to get interested in something that would earn me some money. Painting certainly wasn't going to, so I started doing interior design".

At this point Janet Turner also started selling, and the star product was herself. The art school's vindication of her preoccupation with

Paris Biennale by Carlton Hobbs (above left), Hazel Duct by Paul Atkinson (above) and infinite low voltage structure by Terence Woodgate, (right). Isaac Newton Institute, Annand & Mustoe (left)

"glamour" combined with the pragmatic need for an income and out of it grew a saleswoman *par excellence*. Turner easily made up in nerve what she lacked in experience.

"There was a furniture shop in Birmingham called Lee Longlands - it's still there as a matter of fact, nowadays looking rather sad. I went in and said 'your windows are terrible, your shop layout is terrible, you've got marvellous furniture and you haven't the faintest idea what to do with it'. Instead of throwing me out the boss said, 'well my dear I think maybe you should come and work for us'. So I worked for them for about £3 a week, absolutely killing myself, fighting everybody internally because they wanted to stay in the nineteenth century despite the fact that they were selling very modern furniture."

At Lee Longlands she found she was also to be responsible for exhibitions, and, characteristically, was not unduly fazed that she had absolutely no experience in this field. She was also instrumental in setting up the shop's interior design service with contracts for all manner of building types and interiors, as well as furnishing apartments.

"I think it was very successful. There was nothing like Habitat then. Heal's existed and there were little pockets around the UK where small, privately-owned companies could be found selling good quality furniture and fabrics. They were in the design business, but they were also very much in the minority."

She recalls walking in to Lee Longlands with some three-legged Arne Jacobsen chairs only to being sent packing by the furniture buyer. She at once resolved to specify them on a job in order to get them in somehow.

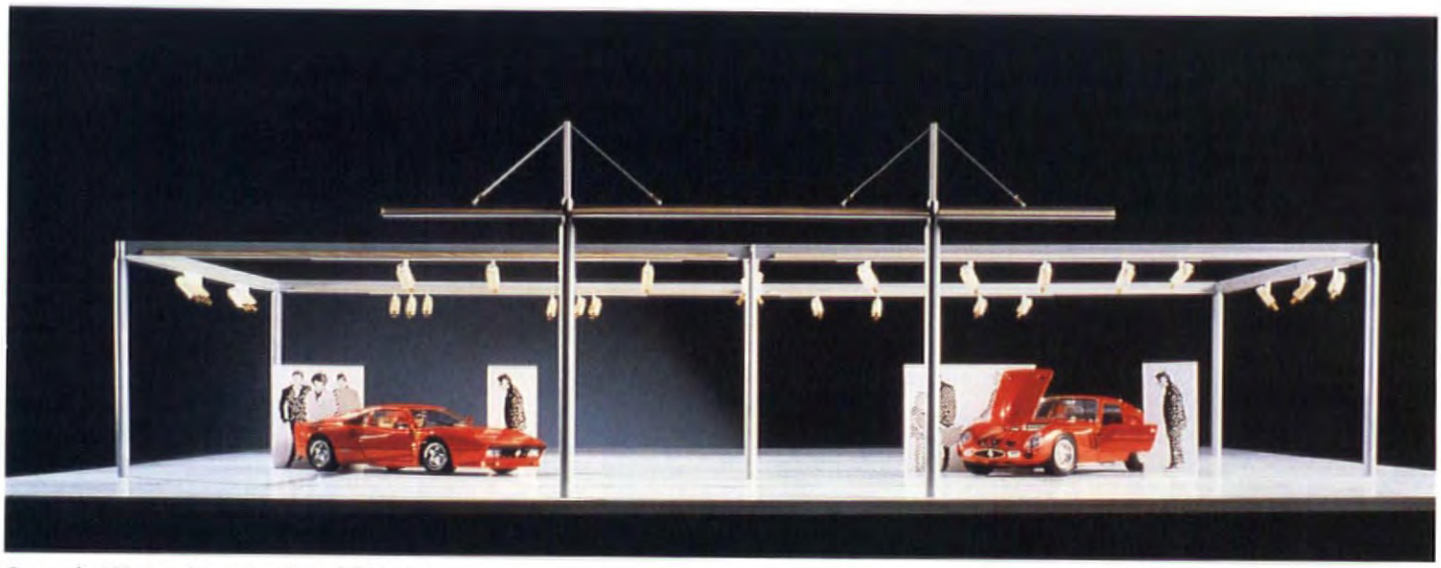
"You always had to do that sort of thing" she muses. "Afterwards I practised as an interior designer for a few years before becoming fascinated with lighting. I realised I'd been doing things with light without noticing. There isn't anything where light doesn't play an important part. So little is understood about form, texture, colour in relation to light. People understand distribution of light - glare, too much or too little - but when you say space can be manipulated, there are very few people who really do understand the possibilities."

Few perhaps, but some. Among Concord's clients are Terry Farrell (exterior lighting for Vauxhall Cross), James Stirling & Michael Wilford (the Clore Gallery interior lighting), Nick Grimshaw (Pier 4a, Heathrow), Sir Norman Foster (Willis Faber) and leading exhibition designers Stanton Williams (new galleries for Birmingham City Art Gallery and Classic FM headquarters, Camden Town).

By now we are in a Covent Garden restaurant just round the corner from Concord, and prior to turning her attention to lunch, Turner casts a world-weary eye at the interior lighting, which appears to depress her slightly. There seems to be a slight but real possibility that she may try to sell something to the maitre d', or even the waiter. How is business?, I venture.

She chooses to ignore the question, instead making a few impromptu suggestions as to how the restaurant's designers have got it all wrong. "When you put lights into any space, they are closely related to that space" she says. "Architecture and design are major considerations in how we conceive our products."

In fact she is right. Concord's great



Concord's "Horizon" structure for exhibition areas (above) designed by Paul Atkinson. The Control spot (right) designed by Robert Heritage

strengths have always been the seriousness with which it takes into account the views of its specifiers and the carefully-structured way it incorporates design into its broad product development strategy. Even so, the charge sometimes levelled at Turner is that her enthusiasm for leading-edge products can alienate less adventurous clients.

"People around me often say I don't understand what most people want, that I'm too avant-garde... But I don't believe that. I just don't believe that people will only buy crap if they are given a real choice."

Behind the ebullience there is an uncompromising streak too. "My father walked out on my mother when I was 3 years old" she reports, apropos of nothing. "I soon realised how tough life was and that there's no such thing as a free lunch".

As the entrées arrive I say that surely she thinks there are honourable exceptions to that.

"No I don't really" she replies. "I know that it's wonderful if people are on my side when the barricades go up, but if they're not I know in the end I'm going to have to get me out the fix I'm in. It's a kind of conceit on my part, because I think I can get other people out of the fix they're in too. When things go wrong I feel it's me."

She reports to the MD of Concord who in turn reports back to the head of the CLI Corporation, the company which recently acquired Concord.

Whether Turner's beguiling blend of flamboyance, aestheticism and toughness will continue to find favour at Concord in what look to be testing times, is anybody's guess. However her approach would seem to me to be a cherishable thing. Forged in a cultural climate where design was an obscure cause to be fiercely championed, she has since survived a period where design became an over-inflated craze and throughout it all there was always a legitimate need for her speciality - lighting - to be revalued as one of the architect's most potentially valuable tools.

Meanwhile she continues to rail against everything from popular notions of design ("people always think of consumer products - they don't think that good design is the way you go about everything that you do") to timid industry ("paralysis by analysis"). She will acknowledge some improvements ("in the 20 years I've been in lighting I suppose we now have a specifier who is much more aware") but is quick to qualify it ("the clever ones recognise that you can actually manipulate space, but my beef is they don't understand how major the role of light can be").

Finally, as dessert arrives, she lights up and resorts to hyperbole ("by introducing well-thought-out lighting into the environment you actually get more out of life... I mean if you judge waking hours as lit hours you actually live longer!"

Buy Concord lights and wave goodbye to mortality! What a saleswoman!

Is there anything else she would rather do? Honestly?

"In my other life I shall come back as a photographer" she promises and I see no reason to doubt her. "In the end it all goes back to the movies. Photography is all about light. It lets you make images of people so you can make them look however you want them to look. But I don't just want to do that. I want to make amazing photographs..." □

SPARSE BUT COMFORTABLE

The London ITV Network Centre commissions, sells and schedules £600 million of television programmes a year. It is a high-security operation created in response to Monopolies and Mergers Commission criticisms of the way the old independent television companies not only transmitted programmes, but produced them, sold them to one another, and scheduled them too. Today Network Centre's 140-strong staff work out of a specially fitted out floor in Sir Norman Foster and Partners' ITN building in Gray's Inn Road.

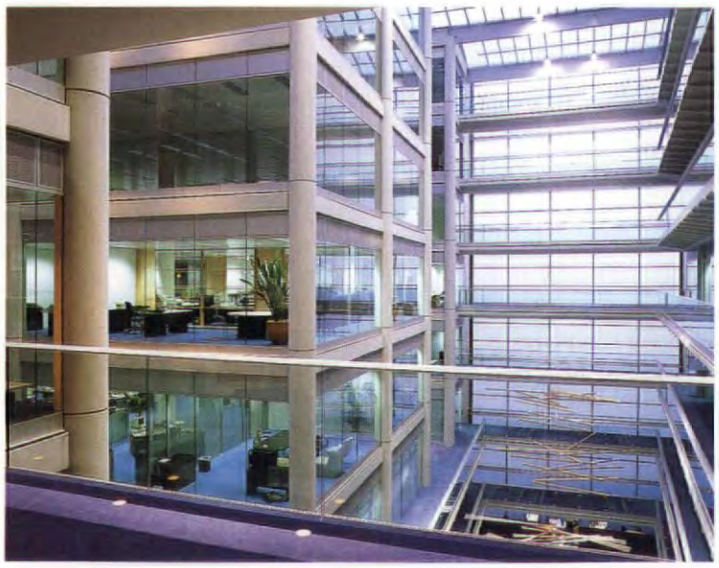
ORMS architects were invited by Stanhope Interiors to compete for the fitting out and interior design of the Network Centre in November 1992. The project, comprising the entire 25,000 square foot fourth floor of the shell and core ITN building, was completed in the summer of the following year at a cost in the region of £1.25 million. From the start ORMS job architect Martin Shirley admits that the firm felt the powerful directing effect of the original Foster design of the envelope, atrium and core areas, with its high speed lifts, acid-etched and tinted glass, light blue carpets, greenish blinds and silver anodised aluminium balustrading. Moreover, when the firm looked at the MTTRC Systems Floors raised floors and the Cape Fastrak suspended ceilings employed on the completed parts of the building, they decided they could do no better than to use the same products themselves. In fact the only departure from the Foster list of main subcontractors and suppliers was in the partitioning system, where the firm decided against the original equipment metal frame system and went for a wooden-framed glass design of their own instead.

With only a partitioning system, the choice of carpet and a lick of paint to stamp their personality on a huge, perforated rectangular floor plate 30 metres deep, ORMS settled on a restrained and minimalist approach. Their first move was to choose a darker blue carpet throughout, to comply with the building's own generic "uniform", but at the same time mark out the Network Centre's own territory. Then, when the client decided to re-equip the offices entirely with new office furniture to minimise unnecessary storage space, the firm was able to choose items from the Tecno range, including low-level "tomb" storage cabinets with round tops to prevent the unsightly stacking of papers.

"Transparent buildings need unified furniture", says Shirley, and there is no doubt that the choice of Tecno aided ORMS' pursuit of a sparse but comfortable ambience. Better yet, the ban on unnecessary document and oddment storage increased the available floor area per employee by an estimated 15 per cent.

All these elements of the design of the interior are of course purchasing matters. The main ORMS design innovation was a derivative of the wooden framed glass partitions first used by the firm on an earlier fit-out for a large commercial client in nearby Appold Street. At ITN improved "bespoke" partition

Views across atrium (above and below left). Minimalist "bespoke partitioning" shows to advantage (below right)



Plan (left) and interiors show skillful maintenance of transparency in a very deep plan building

panels to a similar design, beautifully executed by Cheesman Joinery of Kent, are used to enclose the allocation of cellular offices. These partition panels take the form of a long, flat, streamlined top and bottom rails and glazing bars, with push-fit airfoil section nosings that secure the glass. Access to these screened-off but still transparent areas is distinctive but complementary to the metal and glass of the shell of the building. In Shirley's view the term "fit-out" itself implies a kit of parts that does not belong to the original structure. "This kit arrived later", he says, gesturing towards the partitioning "and it shows. The junctions with the original are clearly expressed." In fact these junctions, though clear, are not obvious. An unobtrusive advantage of ORMS' custom-made partitioning is that all tricky encounters with the perimeter of the building can be resolved using glass, which provides a high-quality appearance, but can be easily and invisibly cut to fit.

Mindful of the deep plan of the Foster building, ORMS' own space planning centred on the use of broad, Foster-like internal "streets" to divide the organisation into zones, instead of traditional four foot office corridors. In Shirley's view deep plan buildings make perfectly acceptable working environments provided there is a generous allowance of space for each person, and the transparency of the cellular office areas, the low level storage cabinets and the broad thoroughfares that run from external wall to wall certainly enhance the impression of spaciousness. Apart from a pair of discreet, unmanned tea and coffee dispensaries and their adjoining "cafe" areas for impromptu conferences, the only real obstructions to a direct view across the building are the data processing machine rooms, with their dark blue painted plasterboard and glass block walls. The glass block walls are not transparent, but they do give what Shirley calls a "sense of light" in what would otherwise be entirely artificially lit working areas.

Standing in the centre of the Network complex a visitor is struck by the unexpectedness and ambiguity of all glass architecture, even in the most determinedly transparent office interior. In some directions a clear view can be had from one side of the building to the other. Elsewhere, wherever there is backlight, the view forward is rendered impenetrable by myriad unexpected reflections. In fact, because of the considerable shortage of non-glass wallspace, some areas of Network Centre have been provided with motorised roller blinds, but characteristically these retract automatically every midnight, ready for the next transparent day. □

INTERNATIONAL FORUM OF YOUNG ARCHITECTS PUBLICATION

The International Forum of Young Architects is a worldwide organisation aiming at stimulation of avant-garde trends, conceptions and projects in architecture.

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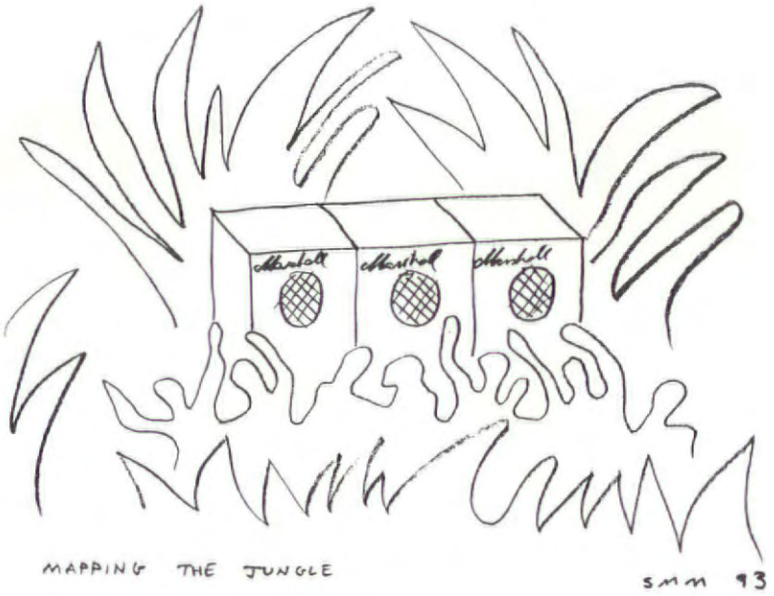
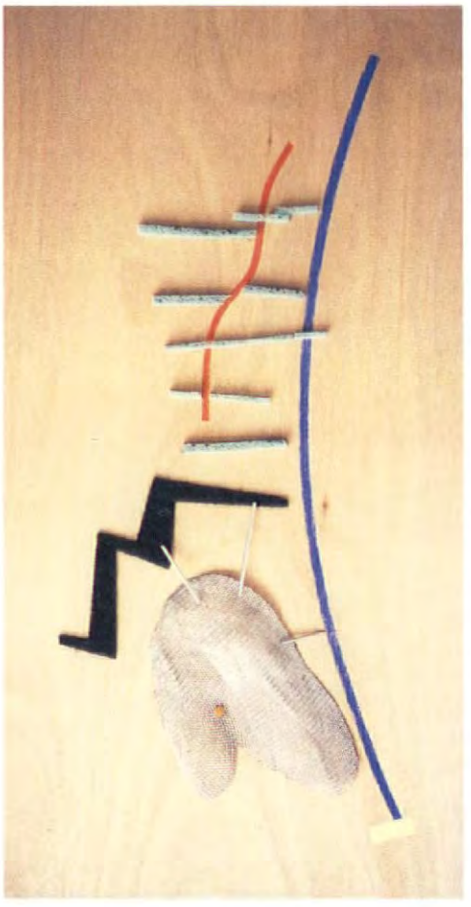
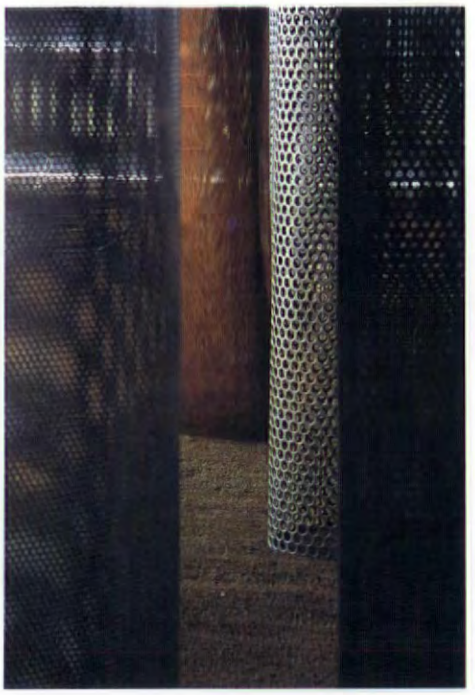




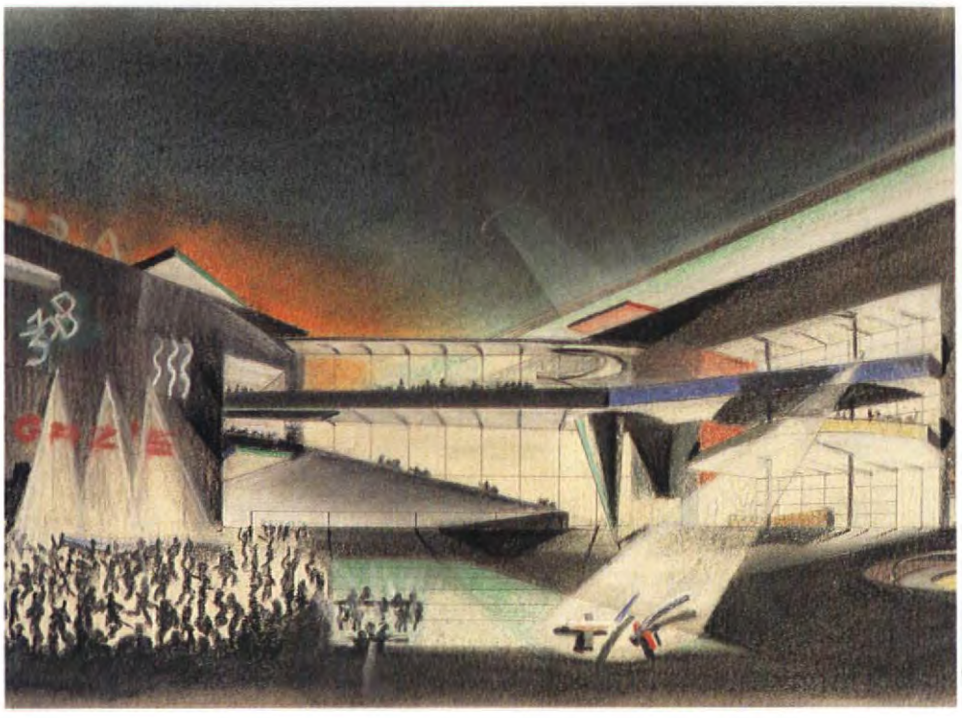
MAPPING THE JUNGLE

The Architectural Strategy of Stefano de Martino

The artificial environment today competes with the natural in complexity, unpredictability, non-controlled development and chaos. The ideal that the built environment functions as a "second natural world" for human beings forms the basis of the architectural philosophy of Stefano de Martino, a young Italian architect from the OMA circle who is based in London. Here, interviewed by Georgi Stanishev, he argues that the built environment has to be reconquered as a wild, non-cultivated post-industrial jungle.



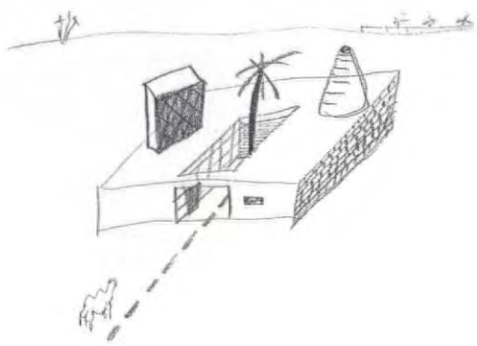
Opposite page, top right: Skyros Island Tourist Village. Project for the competition of the International Forum of Young Architects, 1988
Top left: A visual memory from Jamaica, illustrating the state of the contemporary jungle, "contaminated" with rock-n-roll, coca-cola culture
Bottom: Collage, contrasting natural and artificial environments, relating to the Museum of Docklands project and the "metal forest" created by the CHIAT/DAY Advertising Agency in London

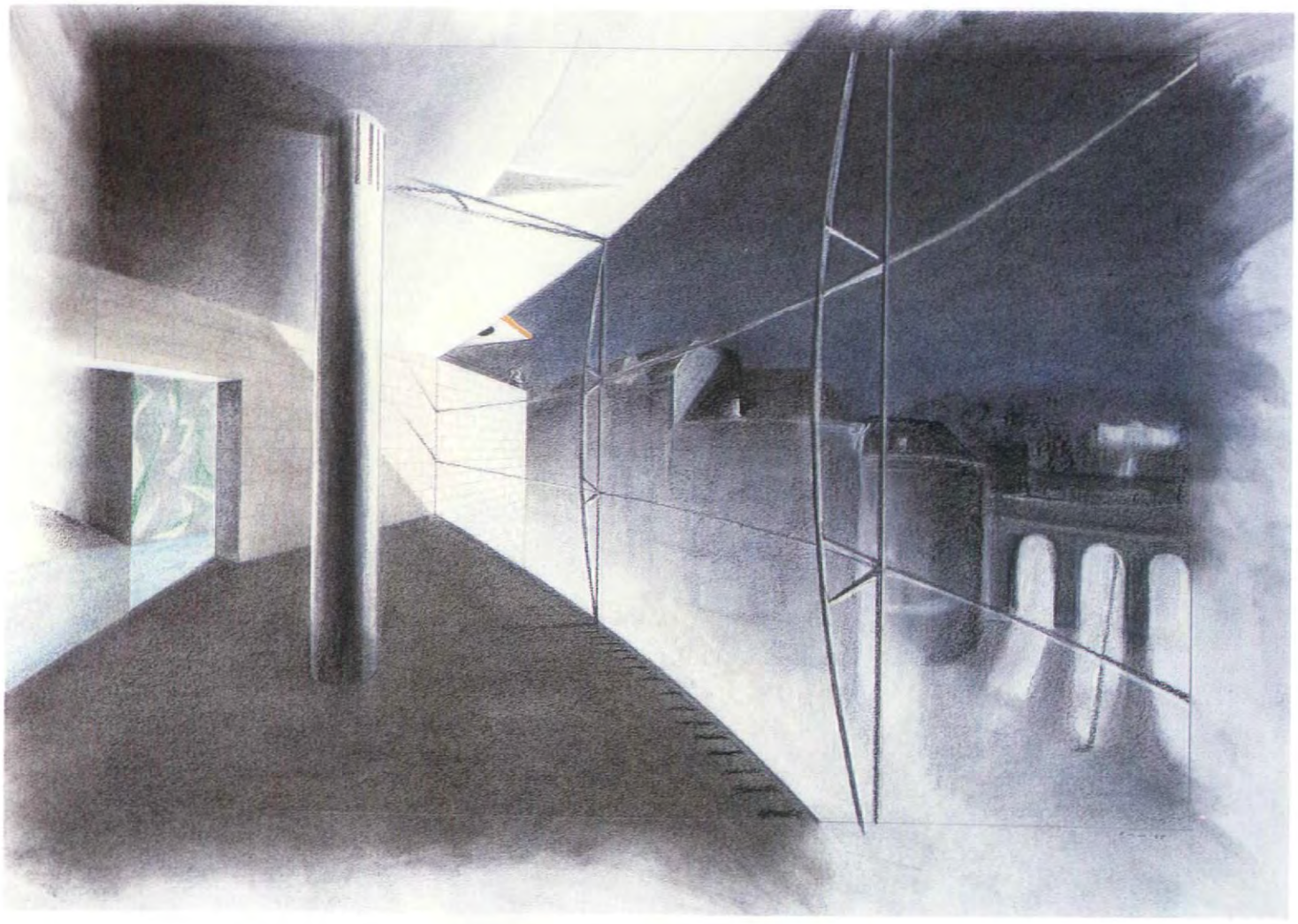


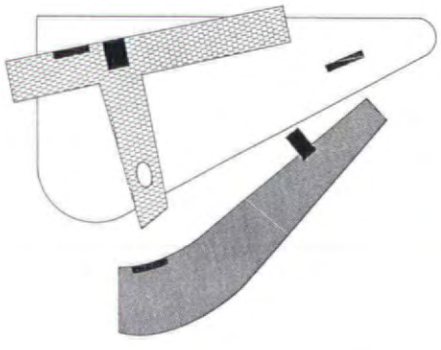
Above: Globe Video Building, Barnes
The site is partly occupied by an end of terrace house including a ground floor video tapes shop with a single family residence above and a derelict single storey extension at the rear. The new building faces the old across a two storey roof-lit lobby; the ambience of the rooms is quiet, with low murmur of electronic equipment and the flickering of video monitors
Below: Studio in Marrakesh. Miniature of the walled city

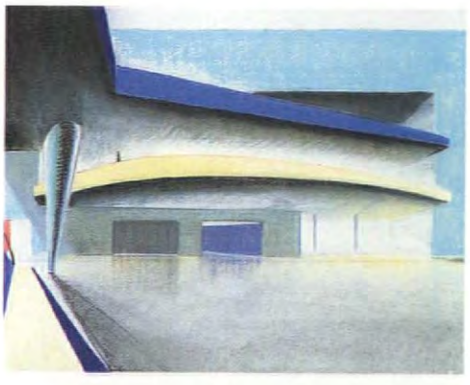
Let us fix our attention on the roots you grew from. Are these mainly the influences of the visual and conceptual culture of the '60s? I do not mean the esoteric avant-garde of the period, but the ordinary built environment of that period which many consider to be the apogee of ugliness.
On the contrary. I find the greatest pleasure in rediscovering the incredible beauty and innocence of things done in the '50s and '60s. They are objects done in the real spirit of a striking honesty, trying to achieve something of the modesty available at that time and still trying somehow to go beyond direct representation. I think there was incredible burst of inventiveness in that time, compared to the incredible lack of any truthfulness or invention that characterizes our own miserable times.
Was it OMA that opened your eyes to this type of environment, to modest inventiveness, distinguished ordinariness?
No, I grew up in Rome, in an apartment designed in 1954 – and my friends lived in apartments designed in the '50s – and so we enjoyed some very beautiful '50s and '60s architecture...

I was very aware in particular of being in such a historical city as Rome, constantly aware of its past – and also aware of its present – so I didn't have to try to reinvent the past. I was much more interested in the dialogue between the ancient past and the potential modern.
What was the role of the conceptual avant-garde in that period that obviously influenced you in an absolutely different way? Were you more impressed by the discourse of say, Peter Cook, or fascinated by the visually extravagant rhetoric of Superstudio?
A combination of both. I found the work of my predecessors from the 1960s incredibly exciting because it consisted of projects functioning as critical issues – not only projects filling up paper or filling up space. And on the other hand I saw them fantastically seductive as visual materials and I was convinced that a lot of them were designed in a spirit of rebellion, of provocation. And, simultaneously, these provocations were very poetic and I find them more innocent than the projects that have been built in recent years, and infinitely more visible now than they were before. I think that those projects have got a relevance now, they have got a new validity at a different level – I mean they can be seen almost as Biblical propositions in many cases.
The present day avant-garde – if it can be called that – lacks this innocence you are speaking about?
Yes, it is a retro-garde... The only time the avant-garde is mentioned is in the Dada proclamation. People describing themselves









Grand Buildings competition entry, Trafalgar Square. The building comprises two parts: a stone slab which forms a service and access backbone to the site, and a curved block with a glass skin, which contains office spaces

as being avant-garde today – that's for certain – are digesting themselves while proclaiming – it's a retro-garde.

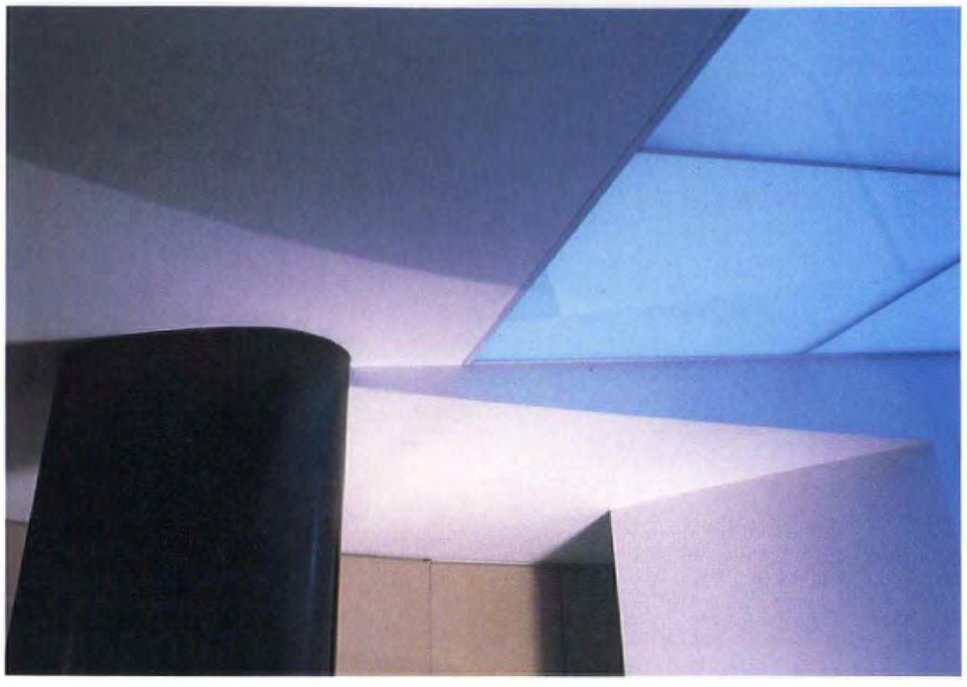
Is the avant-garde dead forever?

I think the avant-garde is something that causes change in artistic culture. Changes like the notion of modernity itself. It is not something that can be codified in a scale to particular period... The notion of avant-garde is changing permanently. It depends on the context – like most things – the revolutionary one day is reactionary and terribly obsolete the next. Eighty years ago people were celebrating a Communist Revolution in Moscow – and a few weeks ago policemen were beating Communists on the head in Moscow. That is why I tend to avoid categorizations, classifications and so on because the very exciting thing about time is that nothing is fixed, I mean we don't have any certainties and everything is in question and everything is possible, everything is true and everything is false. Nothing is true. Everything is permitted.

What did you learn from the OMA group, and reciprocally, what did you lose there when you left?

Well, first of all I was a student with Elia Zenghelis and then I started to work with them. I think that one of the most exciting aspects of belonging to OMA was the fact that you found a close group of people – Rem

Below: Redevelopment of The Ace Cinema Site, Brixton. The commercial and office facilities become a periphery defining a public void, a square, which is the core of the project



Koolhaas, Kees Christiaanse, Elia. And that aspect of co-operation, co-thinking, co-working is what I miss most.

What influence do you think the OMA circle has today? Is there an "OMA tradition" already?

No, I think following a tradition is probably a myth. The truth is more like cloning. Cloning is when you repeat something exactly as you see it... you reprint it... And it is a myth as far as people don't understand your reasons but underline the work very often and that's why we couldn't say there is an OMA tradition – because every tradition implies something more coherent and rational.

Isn't it the fate and destiny of any tradition in culture to be misunderstood and misinterpreted by its followers precisely by cloning it?

Probably yes. I think that today there are many people who follow things fairly superficially...

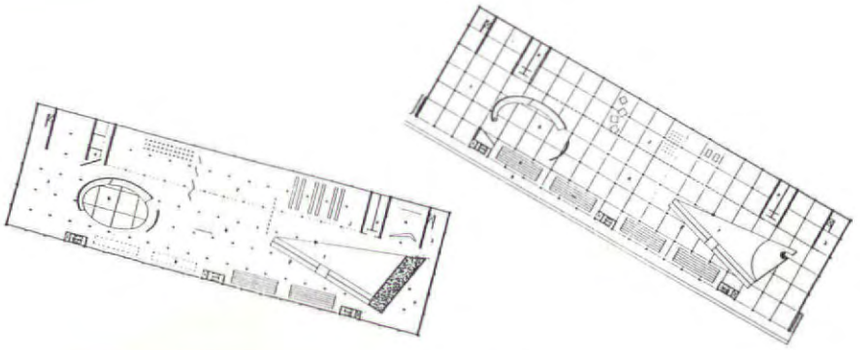
Never before has human culture reached such a point of global reproduction of itself. Look at the film industry. It is not only films that reproduce one another, as Emanuelle I, II, III etc., but the cinema culture has already started to re-issue actors as well. It is nearly obvious that Micky Rourke is a cover version of Jack Nicholson. Or Madonna a pale reflection of Marilyn Monroe in the shallow waters of American culture. Does the same thing happen in architecture?

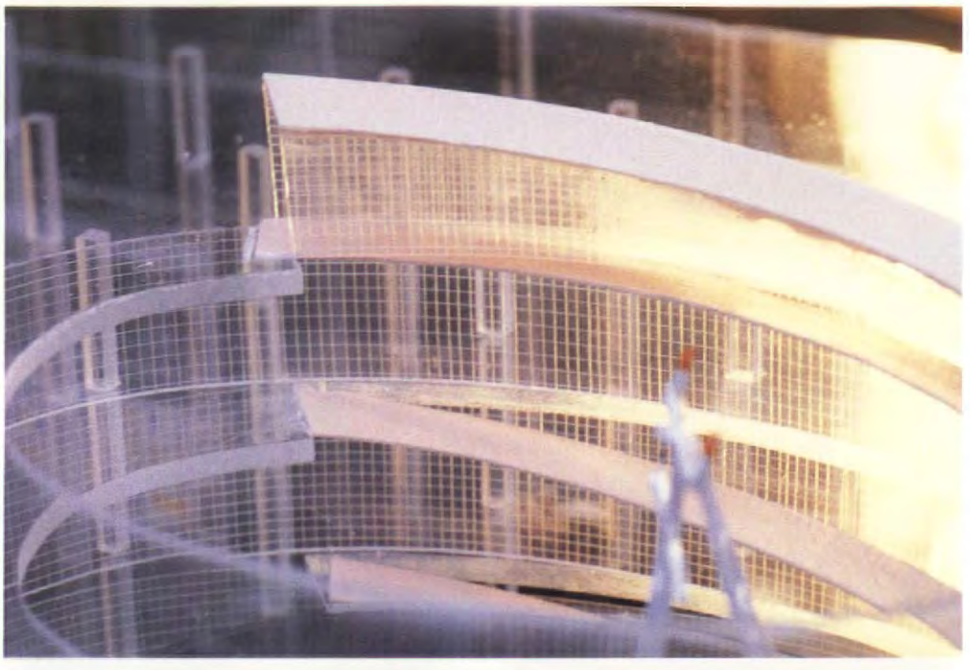
The repetition and the serialization of something is like mining. You can re-call a dream, but I think that signifies a loss of imagination, or a point of saturation that prompts the immediate repetition of something that has already been done. And the record industry is also an example of that. You know the new covers of old records? So many personalities are re-presenting themselves that they emerge out of the dead period in which they disappeared after the fame lapsed – then they reappear with a reformed new message – and I find the 1980s represents a period like that in architecture. In a way the whole of Post-Modernism was a way of re-issuing history at a very consumable level, a sort of mass architecture – you know you package it and make it digestible and consumable – so the '80s is really the age of re-issue. My work is very much the antithesis of that. I am not interested in that kind of Jurassic self-reproduction.

We are totally contaminated by contexts, memories, history, culture – acutely by culture. Physically we still can, as the Modernists did, design in a very innocent empty spatial situation just as in nature – but culturally we cannot imagine a virgin natural place in this planet any longer. Architecture is not situated in wild nature...

That was a kind of Utopia – an Arcadia... That was a part of the whole business of

Above: House for Zoe Zenghelis and Peter Crookston, London, (In collaboration with Alex Wall). The extension of this traditional 19th century house effectively turns the rooms from being parallel to the street, into spaces connecting the front of the house (street, city), with the back (garden, landscape), leaving the internal space poised between urbanity and a sense of Arcadia





Above: The Museum of Docklands, Royal Docks, London. (In collaboration with Alex Wall). A competition entry dating from 1985, the proposition treats the museum as a generator for future urban strategies. Instead of adding to the building, an alternative strategy of making voids in the existing structure is explored. One is for public performances, involving a system of ramps for spectators – and the other one is for exhibitions, with an enclosure for a theatre

colonising the landscape and appropriating territory – but I think that one can find a very real Arcadian dream to set against the terrible conditions prevailing in the cities. Today the emotion of global conversion comes into play as a perspective with which to consider territorial issues – which is what I explored with my own students in a number of projects – in other words an attempt to re-interpret fragments and constructing some logic from things that are still active – so that is a form of conversion really, a global conversion.

Isn't this conversion a metamorphosis of "natural nature" into "artificial nature"?
Yes, it would be very pleasant if you could disappear into the jungle – but something that becomes quite clear is that today there is a new phenomenon of jungle, a sort of cliché, but a materialised one. Vast stretches of urbanized, post-industrial areas are just a concrete jungle – like "virgin sites" in the real jungle...

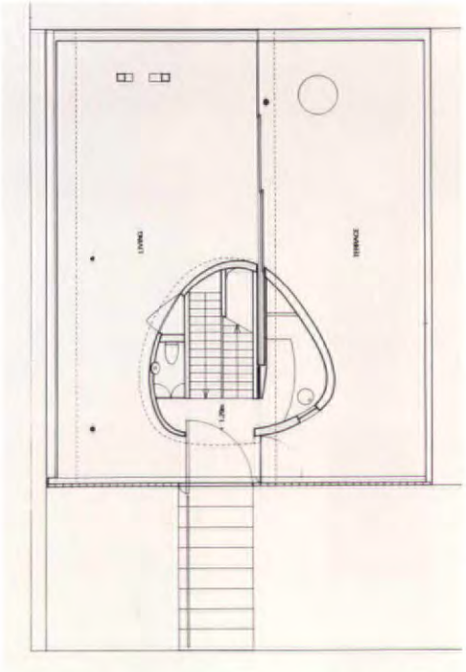
When you produce a meta-culture – from the point of view of which you see the previous culture as a jungle – isn't this a very Modernistic position?
Yeah, there are certainly parallels... So what?

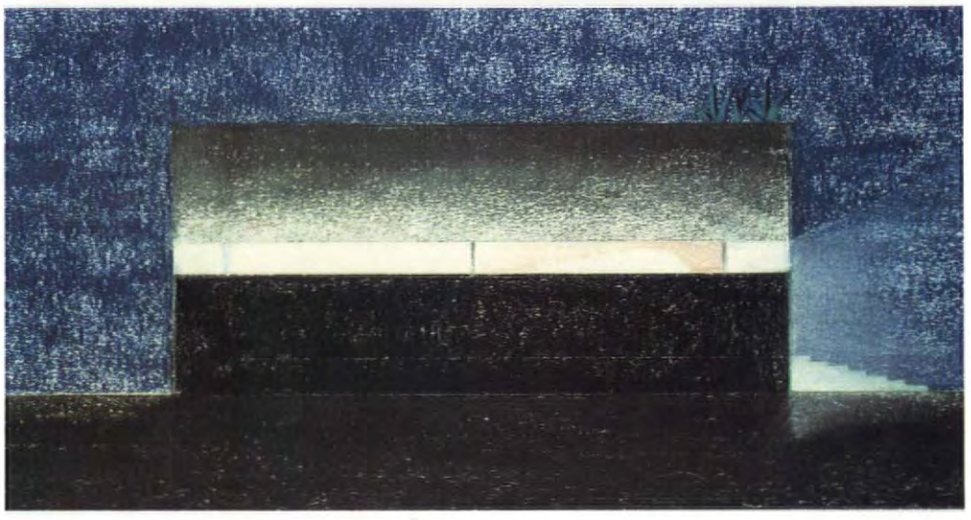
I'm amazed – it's extremely brave to look at this contaminated world as a "type of wilderness", as a result of the natural evolution of wild matter following the orders of Chaos, and then to say that against this "savage" reality of the built human culture you can counterpoise another "cultural culture".
It is not so nihilistic. I think it's quite clearly established that there is no consistent logic that applies any longer to our society in the way it manifests itself in the cities – so it's a totally inexplicable context that we are facing. It's all just a load of stuff that happened. Things are just about self-functioning – the city works more or less, but it works on the brink – it is when you work on the brink, at the edge of possibility, that everyone might just collapse...

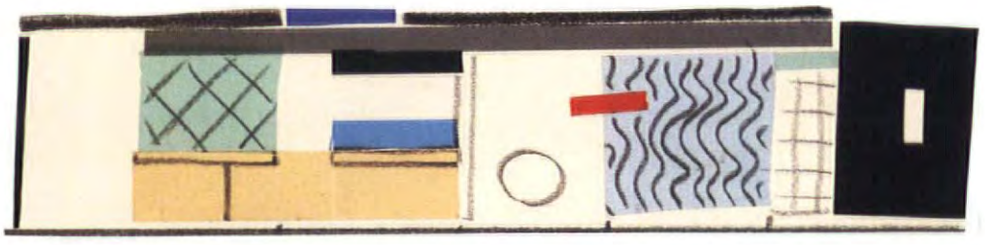
Decimation is wild since the 1950s. It has made the question of trans-urban projects over whole territories very doubtful, because planning has always concentrated on a kind of approach that has been too mild – a kind of tunnel vision – a nearness of sight which led to short-sightedness, focusing on very small immediate areas without ever attempting to understand the wider logic to which something might belong. I mean what we need again is very clear – it is a mapping of the post-industrial jungle. If you start looking around you'll discover that it is the way things are connected or linked that makes them unpredictable. Almost anything can happen now – the conditions are there for things to happen – everything is possible in present day culture – nothing is true and nothing is false...

What is the architect in that scenario? A Columbus discovering the New World Jungle, who must impose a new order on wild

Below: Villa 8A, The Hague, Holland.
The villa is a part of a wider scheme for the development of urban villas, with participation of Bernard Tschumi, Zaha Hadid, Franklin Israel and others.
The definition of the building is made through the conception of the internal court-yard, limited by four walls of a fence type. Following a number of factors like: orientation, noise, light and weather, its walls are made of wood, aluminium, corrugated plastic, and glass blocks

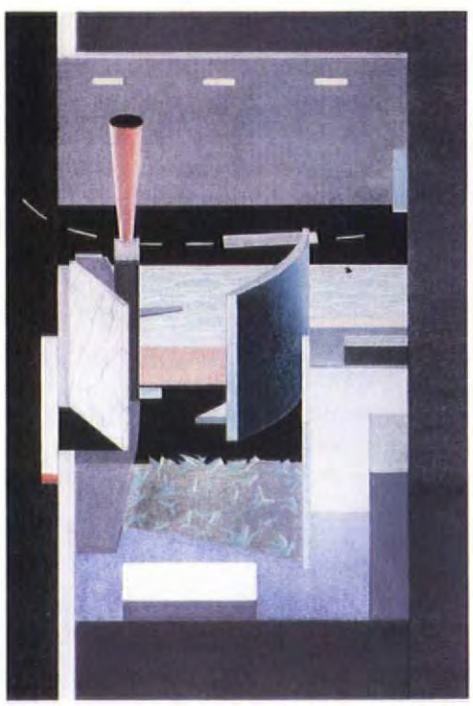




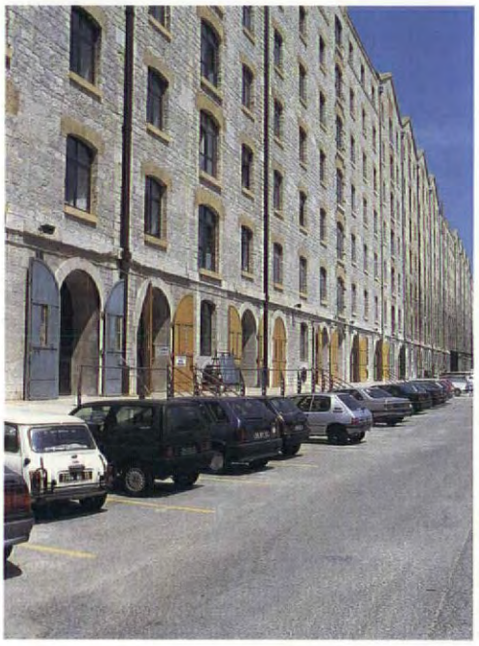


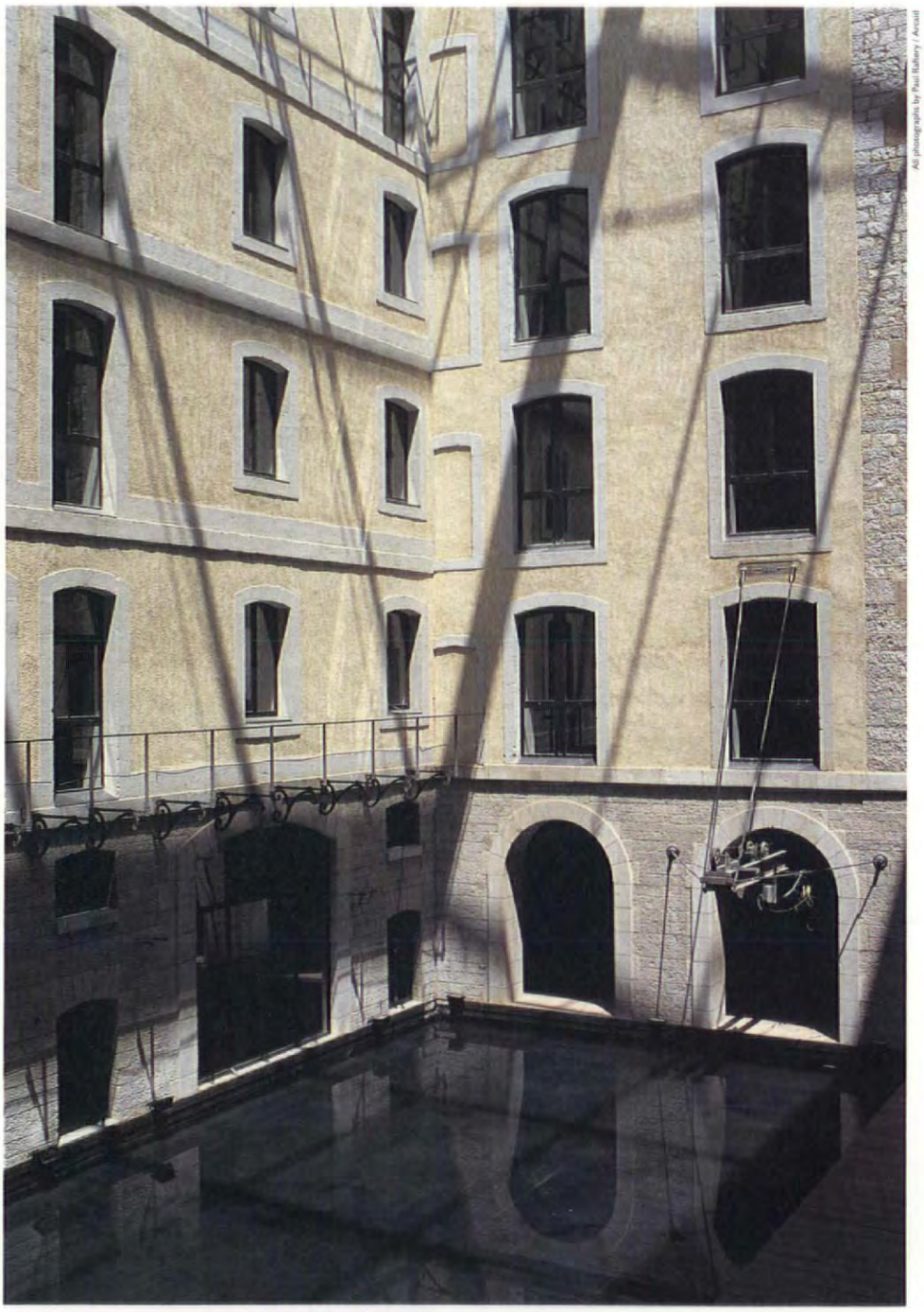
unpredictable reality? Or a researcher of the hidden orders of the jungle itself, with the intention to unveil them and then develop and re-apply them to your new world?
Architecture has a desire to achieve cohesion, unity, something that represents an entity, something that is essentially a piece of wholeness, and of course this is constantly contradicted by the complexities of the programme, by circumstances that interfere with the project like history, the site, the budget, all these things.

The activities that begin to shape and commission forms that explain – these combine and generate the project. But I think that in my response to this orgy of form and quick jobs, obsessive details, wallpaper materials and references and so on – has been one of restraint. The Gruppo Sette declared in its 1930s manifesto that it was a time for an architecture of restraint. That was a response to the obsessive sort of monumentalism, gigantism and historicism that was the official architecture of most of the regimes of the time – of Fascism – in the time of Mussolini, but you could see it also in France, in Germany, in Moscow, in America – and so in response they developed restraint, dealing with essential factors. Now that could be seen as a formal exercise, a kind of minimalism – and it's not only form that is at issue, it is very much the programme – the essential generating factor. □



Above and left: City House Project, London. Stretched over three back plots in a dense urban context, the City House establishes living conditions by "parking" elemental pieces which are the focus of each section: car-pit/barbecue and pool; fireplace and wall bench; courtyard bedroom. Each fragment is independent, running the cycle of its own rhythms, activities, associations





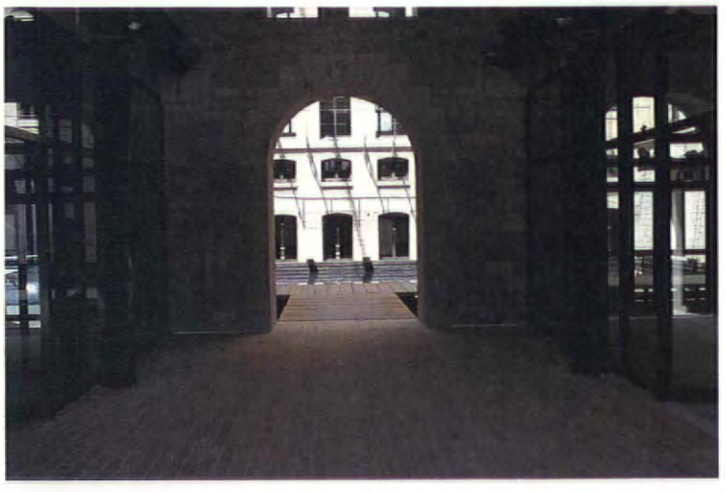
All photographs by Paul Raftery / Arcaid

Warehouse Conversion, Marseilles

Architect: Eric Castaldi, 1993

This elegant conversion called "Les Docks" was carried out at a cost of more than £80 million by the Paris development group SARI which is owned by the Banque Société Generale and the French water utility Campagnie Generale des Eaux.

More than 20,000 square metres of nineteenth century dockside warehousing has been restored and converted for residential and commercial use with the development company itself moving its Southern headquarters, library and resource centre into the complex and the architect too taking up residence there. The development is chiefly notable for its large size and the ingenious use of shading devices beneath the new glass roofs of the internal courtyards. Within the stone-built, rendered warehouse blocks new wood and metal staircases and glass partitions have created a cool minimalist environment.



Reyes House, Oakland, California

Architects: Tsui Design and Research, 1993

Vince and Remy Reyes live in a house in Oakland, California with their three children and grandfather. They needed more room in their home and wished to remodel an existing crawl space/basement as well as build an exterior recreation room addition to their home. The Reyes' wanted something innovative with the feeling of softness and continuity. The overall design was developed jointly between architect and owners. Working drawings and the issuance of a permit to build went very smoothly. The building department personnel were excited about the project. In fact, when the building inspector arrived to issue the certificate of completion, he brought his camera to take photographs.

This structure is the first instance of what Tsui Design calls "living" architecture. That is, using Nature as a basis for design and producing buildings that contain working and moving parts as significant features that respond to environmental, technological and programmatic requirements.

Professional cost estimators and contractors bid on the project with square foot costs in the $150 to $200 range. Some estimators could not give a cost to the design. These bids were beyond the budget of the owners therefore a team of intern architects at Tsui Design and Research organised to construct the design. As a whole the construction required eleven months of labour and the involvement of 26 skilled and unskilled labourers. A great deal of experimentation was involved in the design. New kinds of materials had to be found and new application techniques were created. For instance, a fire-resistant plaster material called "Structolite" was applied as an interior sculptural finish over one inch diameter "truckers rope" to create the undulating wall treatments.

This project has attained substantial notoriety and we have since found and educated building contractors in the ways of innovative construction. Our intention was to show that innovative and imaginative buildings do not have to be expensive. The interior encom-

passes 477 square feet of living space; the exterior 226 square feet of covered Solarium space. The interior portion contains a master bedroom, two walk-in closets, a hallway gallery, an office, a future bathroom and three large storage areas. A lighted stairway leads to the upper floor. The gallery culminates into the outer children's solarium room, half circle in plan. This glass, wood and stone structure is shaped like a truncated cone with an unusual wing-like roof with hinged fibreglass "wing" structures that open and close with the turn of a crank. This opening roof feature allows cool breezes and sunlight to enter the room directly and maintains an even and comfortable temperature range throughout the year. Experientially, the intention of this design is to let the viewer directly observe the changing qualities of light and to be sentiently aware of the movement of clouds, the sun and moon and the presence of the stars. In a poetic sense the structure is a window to the sky, diaphanous and enchanting. □

AGAINST THE FIRES OF ENVY

Terry Farrell: Urban Design *Academy / Ernst and Sohn. 300 pages. £45.00*

Reviewed by Andrew Rabaneck

Terry Farrell shares little with the traditional stereotype of a British Commercial architect. He is disarmingly honest where they dissimulate; he is passionately persuasive where they are obedient; he is charming where they are craven.

He is nonetheless an architect and planner most of whose work has been done for commercial developers. As such he is not the champion he might be within the profession, which remains snobbish about commerce. This is a great pity because Terry Farrell is a good paradigm of what could redeem the profession and perhaps recapture public trust. He is entrepreneurial rather than lofty, believes in public/private partnerships, is technically highly capable, builds teams and champions good ideas and causes. Oh, and by the way he is a good artist.

Those who still doubt Farrell's contribution should look through this sumptuous volume, which shows the evolution of his work, quite beautifully laid out in thematic sections covering The City, The River Thames, Railway Stations, Green London, Outer Villages and Learning from London.

Each section is a vehicle for a theme statement and the exposition of related projects and completed buildings. Historical and contextual background inform each scheme, and the illustrations are clear. Much use of figure/ground plans is made to show historical change or competing analysis of a given site.

Ken Powell's introductory essay emphasizes the importance for Farrell of his postgraduate time at the University of Pennsylvania. It would have been interesting to see more of the formative imagery illustrated in the book, but there isn't room for everything, even in a generous 300 pages.

Quite a few British architects made the pilgrimage to Philadelphia, and particularly to Penn, in the early 1960s, myself included. There, Louis Kahn, Robert Venturi, Ed Bacon and above all the urban theorist David Crane, held sway. Through their work and their teaching, and through the writings of Lewis Mumford and Jane Jacobs a powerful critique of Modernist planning and architecture was being built. In place of clinical zoning and wholesale redevelopment they made a plea to understand the existing city, its history, its public and private spaces, its networks and underlying geography. These, they argued, should inform all new work.

Farrell has remained true to these notions in his English work. They are more important to him than mere architectural style. Indeed he has evolved an architectural language to serve his urban design objectives which is neither Modern nor classical, neither wholly figurative nor wholly abstract.

This highly personal architecture subordinates the traditional generators of Modern architectural form to the demands of the site. There is no glorification of technical difficulties even when these have been awesome, as at Alban Gate or Embankment Place. There is no ruthless pursuit of visual hygiene, no tyranny of the structural grid, and yet Farrell's buildings are mostly harmonious in their context.

If Farrell's buildings have a rhetoric it is one of expressing adequately the place of the building in the city. Important public buildings are suitably monumental, while contextual and private buildings remain suitably modest. Traditional rules of composition are respected even when the motifs employed are highly mannered. A less often remarked quality of Farrell's buildings is that they are designed by an office which knows a lot about modern construction techniques, what can and cannot be accomplished. But construction is never allowed to become a fetish, as in so much British architecture.

Farrell continues the tradition of the architects of the great civic and commercial buildings of the Interwar years, men like Sir John Burnet, on whose Lloyds Bank in Lombard Street Farrell is currently working. Interestingly, these masters of context and composition came in the main from a Beaux-Arts tradition, rather than the Arts and Crafts tradition which gave birth to British Modernism.

Nor should Farrell's adoption of this mantle surprise. Philadelphia, which made such a strong impact on him was also the key cradle of the Beaux Arts in America. All at Pennsylvania lived in the shadow of its great planner-architect exponent, Paul Cret, who was Louis Kahn's teacher and whose influence was still strongly felt in the city in the 1960s. The orderly plan of William Penn and the great avenue slicing up to the Museum of Art were daily reminders of the power of this approach for city planning and civic architecture.

The disciplines of the Beaux Arts survive in Farrell's method of researching the underlying nature of the place's true identity which can then be reinforced through the adopted architectural program. But there is more, a willingness to negotiate and lobby for a result which rewards the site and the man in the street, as well as the client.

As mentioned above the book has much to recommend it. But its strength is its weakness in this sense. It has been assembled with love in the office of Terry Farrell and therefore puts the best foot forward of that remarkable collective; on the other hand a gorgeous book of seductive blarney is likely to stoke the fires of envy and disparagement which too often stand in for critical review of Farrell's work. That would be a pity; the work is really very good.

GOD IS IN THE DETAILS

Mario Botta: The Complete Works, Volume 1. *Artemis. 280 pages. £60*

Reviewed by Terry Farrell

Mario Botta: The Complete Works encompasses the work of this highly skilful and gifted Swiss architect in two volumes.

This publication, Volume 1, covers the work between 1960 and 1985. For me these earlier years of Botta's work are by far the most absorbing and of greatest interest. There is a tight, watch making-precision about his houses that doesn't translate to the larger more complex briefs of his later office buildings, residential complexes and arts buildings. By the time his now world recognised houses (such as in Massagno, Ticino) were finished, Botta's evolution seemed so complete, so much in harmony with itself. Each of these houses demonstrate that in the hands of a master architect a set of limited architectonic themes, a limited range of materials and a repeated use type, the family house, can show almost all the range and diversity that contemporary architecture should ever need. There is a conviction and a completeness that is so rivetting. It seems to make irrelevant our contemporary architectural world of noisy stylistic chaos.

Botta achieves this through high craftsmanship, a poetic handling of his language and by putting self evident traditional architectural values high above moralisation and ideology. This book is illustrated with personal photographs of his family and student years and it is clear from the latter the value he puts on the influence by Louis Kahn and Carlo Scarpa. This indebtedness to them is true and faithful and without much evident deviation - no mean achievement in our world of mass communications which bombards us architects with so many influences. This integrity and single minded purpose gives his work a somewhat (misleadingly I believe) local or regional character. Like his chosen mentors, his work has an emotional purity and geometrical strength, which appears to be independent of time and place. He somehow combines in a unique way the sensuality of Scarpa and the single minded cerebral formality of Kahn.

At the end of his balanced and elegant introduction, Tita Carloni appears to be posting his preference for Botta's earlier work and doubting his subsequent work. "I confess that I am strongly tempted to believe that Botta's works up to 1985 (*aetatis suae anni* 42) is written the grounding on which the rest of his work is based. From those works and on that basis, a very florid tree has grown (a rich and stunning commentary, if you will) in which an uninterrupted and complex branching, weaving and germination of architectonic events has gradually developed and become enriched to a level bordering on virtuosity. I hope one day this frenzied society we live in will give Mario Botta the time and peace he needs calmly to put in order the ethical, formal and technical principles of his work. Because society is treating him the same way it treats nature: it exploits all his resources without any qualms and beyond the bounds of reason."

The enlargement of Botta's international profile, the transference of his work to foreign sites, and in particular the move to complex briefs where the "self-evident" forms take longer to evolve and be given wings, has led Botta to later works which seem so much more the work of a mere mortal like the rest of us. Perhaps his early work is so good because it seemed to grow from isolation and self exploration, and from a fierce refutation of all influences other than his inspired choice of the few.

I had the great pleasure of spending a day showing Mario Botta around London some years ago. Much of the work of London's architects (old and new) seemed of only passing interest to him - as though he already knew he was not going to be very moved or influenced by the foreign and polyglot architecture of London. But time and again he stopped to look at small details of bricks and stones, noting I felt, how he could absorb and use these within his own specific vocabulary. The sense of purpose and single minded vision, so rare in today's world, is what makes his work so appealing. This volume of his early work charts chronologically the steps in what I believe are some of the most notable architectural achievements of our time.

"A ROLLICKING WAKE"

About Wright: An album of recollections by those who knew Frank Lloyd Wright.
By Edgar Tafel, FAIA, editor and author with an introduction by Tom Wolfe. John Wiley & Sons Inc. 326 pages. $34.95

Review by Sam Webb

Over forty years ago when the world's greatest living playwright married the world's most beautiful actress it was only natural that they commissioned the world's greatest living architect to design them a house.

So one day octogenarian Frank Lloyd Wright found himself in the back of a car driven by Arthur Miller with his new wife Marilyn Monroe in the front. Miller got a ticket for speeding at 48 mph through a 45 zone. "It was not", said Miller "an auspicious start." Wright slept through it all.

When they arrived at the intended site they left Marilyn with the smoked salmon picnic and walked up to some high ground to a north facing orchard. Looking at the magnificent view Wright undid his flies, peed and said "Good spot", then walked back down the hill. "His vitality", said Miller, "was amazing. He never drew a deep breath going up."

Late when asked his opinion of Marilyn by eager apprentices Wright said, "She carries herself well".

The house was never built. "It was", said Miller, "like a house from the movies, more suited for a corporation than two people."

When Wright died in 1959 the sketches of the house were returned to Mrs Wright. She made a habit of this, as well she might, assiduously tracking down and collecting the Wright drawings and locking them in the Taliesin archive which became a hedge against the future with its viewing fee of $100 an hour.

Money problems and insolvency stared Wright in the eye all his life. It was as if money haunted him and those he left behind.

Soon after he died on 8 April 1959 the State of Wisconsin slammed in an enormous penalty claim for $700,000 back taxes payable at $35,000 per annum over 20 years.

Such was the abiding hatred that Olgivanna Wright felt for the State of Wisconsin that when she died she left instructions in her will for Wright to be dug up from Wisconsin's ungrateful soil, his remains cremated and placed with hers in Arizona. And so it was done at dead of night to the eternal regret of Edgar Tafel and many who had known Wright.

This is Tafel's second book on Wright. If you have ever wondered what it is about the memory of this truly remarkable man who was born in 1867 before the West was won and died in 1959 at the birth of the Space Age then read "Tafel's rollicking wake", as Tom Wolfe calls it in his foreword.

The great and the good are all there with Wright from the Showgirl Marilyn to the Prince Olivier who once got up from his table at the Colony to walk across the restaurant to Wright's table to pay him homage. It would never have happened the other way round.

This is a wonderful book which should have been written years ago for the way it demystifies, throwing light on people who crossed Wright's path. The following encounter took place 100 years ago when a tipsy Louis Sullivan came back late to the office after a party. Wright was working on a project. "Frank, how many women have you had?" asked Sullivan. "Well Mr Sullivan I don't really know, but between five and six, something like that." "Why, you poor fool. Do you realise that if you took all the women I have had, Frank, and laid them end to end on the Chicago and North Western Railroad line, they would reach all the way from Chicago to Milwaukee?" Somehow in the midst of all that Sullivan still found time to design the Auditorium Building. □

DID ANYONE REALLY UNDERSTAND WHAT HAPPENED AT THE EUROPEAN BANK?

Sir,

I feel you have been too parochial in your "Philosophy of Opportunism" series. The trials and tribulations of developers are interesting of course, but they are by no means the greatest dramas that take place in relation to new buildings. I have, for example, yet to see, some six months after the eruption of a scandal over the European Bank of Reconstruction and Development (EBRD) that led to the resignation of the bank's president M Jacques Attali, any architectural defence offered against the charges of extravagance so widely publicised in the British press. The architects for the fitting out of the bank, the respected Paris firm of Berthet-Pochy, are one of the very few French practices to have successfully entered the London construction market, in partnership with Sidell and Gibson. From all accounts they were refused permission to present their side of this alleged story of waste, even though the cessation of work in May 1993 was in no way related to their performance as architects.

Berthet-Pochy in fact spent several months evaluating London buildings. Having settled on Broadgate, their task was to fit out a shell and core building to appropriate standards for a major European Community institution. Seen in this light the budget of £53 million for a building with 30,000 square metres of serviced floorspace on 12 floors was not considered unreasonable when the contract was let in 1992. Indeed it was less than the sum spent on the nearby Union Bank of Switzerland.

Why then was there such an outcry in your country when it was discovered that rough hewn, bush hammered and polished carrara marble had been introduced into the lift lobbies to replace the marble already there? The French architects responsible were not given permission to answer media questions about why this marble was required. In fact it was because the central design theme throughout the interior is the transition from rough to smooth: symbolising the manner in which the ragged and uncoordinated economies of Eastern Europe would be helped through a difficult transition to smooth operations by the European Bank in the years ahead.

This visual and tactile theme, repeated in the huge elliptical pewter column-casings and elsewhere throughout the building, was fundamental to the design conception. The replacing of Rosehaugh Stanhope's livid travertine lift lobby marble with cream-coloured carrara was essential to it. A far more questionable decision was probably that calling for the removal of two structural columns on the first floor to facilitate the inclusion of a 350-seat auditorium. This necessitated a large warren girder truss occupying the middle of the floor above to span the 36 metre gap: a considerable feat and a very considerable cost. But the media did not question it, perhaps because they did not understand it. And if they did not understand that, did they really understand that the budget for fitting out a shell and core building is very considerably higher than a budget for redecoration?

Perhaps one of the stories of development in your magazine in future should deal with the difficulties experienced by French, German, Netherlands and other EC architects experience in beginning to work in your country, and research how many of their results are shrouded in the kind of propaganda that upset so many people at the EBRD.

George Montfort
Lyon
France

WORSE STILL: DOES THE SCANDAL PROMISE HARD TIMES FOR EC ARCHITECTS?

Sir,

The British press has been completely wrong about the European Bank for Reconstruction and Development. The article in the *Financial Times* "The Bank that likes to say yes – to itself" chronicled architectural extravagance in fitting out EBRD's Broadgate headquarters. The auditors report put the total fit out cost for the 30,000m² at £66m but that probably includes furniture. Construction cost was £1,524/m² which is indeed about double what a shareholder-conscious bank would have spent. It included the now-notorious replacement of developer RSD's travertine in the lobby by Carrara marble, expensive hi-tech ceilings and dyed carpets.

It's hard to say what might have sparked the *Financial Times* initial attack, which was promptly parroted by the rest of the press. Perhaps Attali had refused an audience to the FT mandarins, or worse. In any event, the idea of overpaid bankers squandering the benevolence of the EBRD's backer nations while the bank's poor Eastern clients had to wait for their cash, was irresistible. It was even claimed that EBRD's running expenses to December 1992, at £128m surpassed its disbursements on projects of £101m in the same period.

In reality, in the same period, EBRD had approved but not yet disbursed 88 projects with investment of two billion Ecu's ($2.4 billion) of the bank's money, and involving a further six billion of equity and other finance.

But this was irrelevant in the face of more atavistic realities. First the bank was conceived by Attali, a Frenchman, and not himself a banker. A crony of Mitterand, Attali had succeeded in insinuating his brain-child into the very bosom of perfidious Albion. But the British government knew what it was doing; for an investment of a mere £40m it had secured an injection into the local economy of five times that sum. Part of the price to pay was the importation of Gallic attitudes that cut across British habits. Attali, the patron, brought his architect Jean-Louis Berthet of Berthet-Pochy with him instead of selecting an architect by competitive tender as is done in post-Thatcher Britain. Thus EBRD became a mini grand project in the manner of Attali's own patron, and this did not go down well with the congenital timidity and lack of artistic awareness of British clients.

Of course this is a gross generalization, but it carries a grain of truth. The worthy and practical but uninspired British commercial practice suits its own client base perfectly; they deserve each other. The flamboyant creator who turns all the details over to a Bureau d'Etudes suits a French self-image of patronage, often with equally ghastly results. Only American architects with their canny marketing skill and aura of fiscal rectitude have succeeded in breaching the defences of prim British clients. The EBRD case is interesting because getting M Berthet into London under the noses of the English, was as if Villeneuve had outwitted Nelson at Trafalgar.

Robert Mason
Brussels

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GONE WITH THE WIND

Chicago, a city so rich in works of architecture built in the last hundred years; without mentioning the cocktail parties, receptions, banquets and other entertainments. And of course, the traditional parade through the city streets, with flags, fanfares and majorettes. . . Pierre Vago reports on a fabulous UIA Congress.

Standing left to right: De Moll; De la Hoz; Vago; Stoilov; Hackney; Mayek Udumni. Seated: Bhalla. Seven UIA presidents in Chicago, July 1993

Once they were called Resolutions. The Standing Orders of the UIA (International Architectural Union) laid down a procedure developed from the experience of many past Congresses. So for each Congress a "Resolutions Committee" was to be set up, made up of the Rapporteurs of the two preceding Congresses and of the present one, together with other suitable persons chosen on the basis of their linguistic skills. This group was responsible for preparing the Resolutions in the official languages of the Union, putting them out for debate, and then drawing up a definitive version that the Congress might adopt on the basis of informed discussion. These Resolutions were then published by the UIA, and, so far as was possible, by the professional press of every country.

But in Mexico, in October 1978, the 7,000 or so Congress delegates adopted overwhelmingly a solemn "Declaration", whose first draft had been put out for discussion and amendment by all the national sections. This text was further amended at the Congress. It was a serious document, seriously prepared, seriously discussed and adopted.

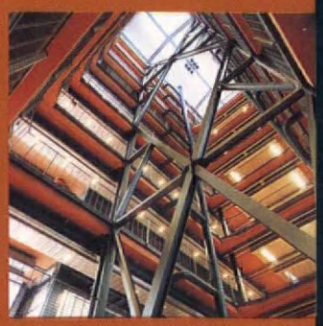
What happened to it? Hardly had delegates got home than the solemn "Mexico Declaration" was forgotten; the new leadership adopted by the next Congress, three years later, as the "Warsaw Declaration". This was the beginning of a series of documents, pompously entitled Declarations, which one has to say were of little consequence. Sometimes, as in Brighton, they would be badly constructed, barely comprehensible farragos of interest to no-one. And who remembers them? When these so-called Declarations become a triennial routine, they lose all value. This will probably be the fate of the Chicago Declaration, adopted without debate after the reading of the English text, and greeted with general indifference. Thank heavens the first version was submitted to the UIA Council, and fortunately shortened, and certain unjustifiably masochistic passages deleted altogether. Whatever becomes of it, this "Declaration of Interdependence", signed by the Presidents of the UIA and of the American Institute of Architects (which is, be it noted, itself a Section of the UIA), constitutes a joint "commitment" by the organisers of the enormous Chicago event, which included both the mighty Congress of the AIA and the more modest Congress of the UIA.

In this text there appeared eight times the highly fashionable slogan: "A Sustainable Future". Many Congress delegates wondered exactly what it meant. There were two French translations; the American organisers had *"Un avenir durablement viable"* (a lastingly viable future), while the French preferred *"viable et durable"* (viable and lasting). An interesting nuance. More interesting would be to know how we poor architects can commit ourselves to acting so that, for example, "all the constituent elements of the built environment: completed projects, their use and re-use, should conform to the requirements of sustainable development." While waiting for the exegesis which will probably never arrive, we can bet that this fine document will end up in the bottom drawer, if not in the waste-paper basket, like so many a noble declaration which preceded it.

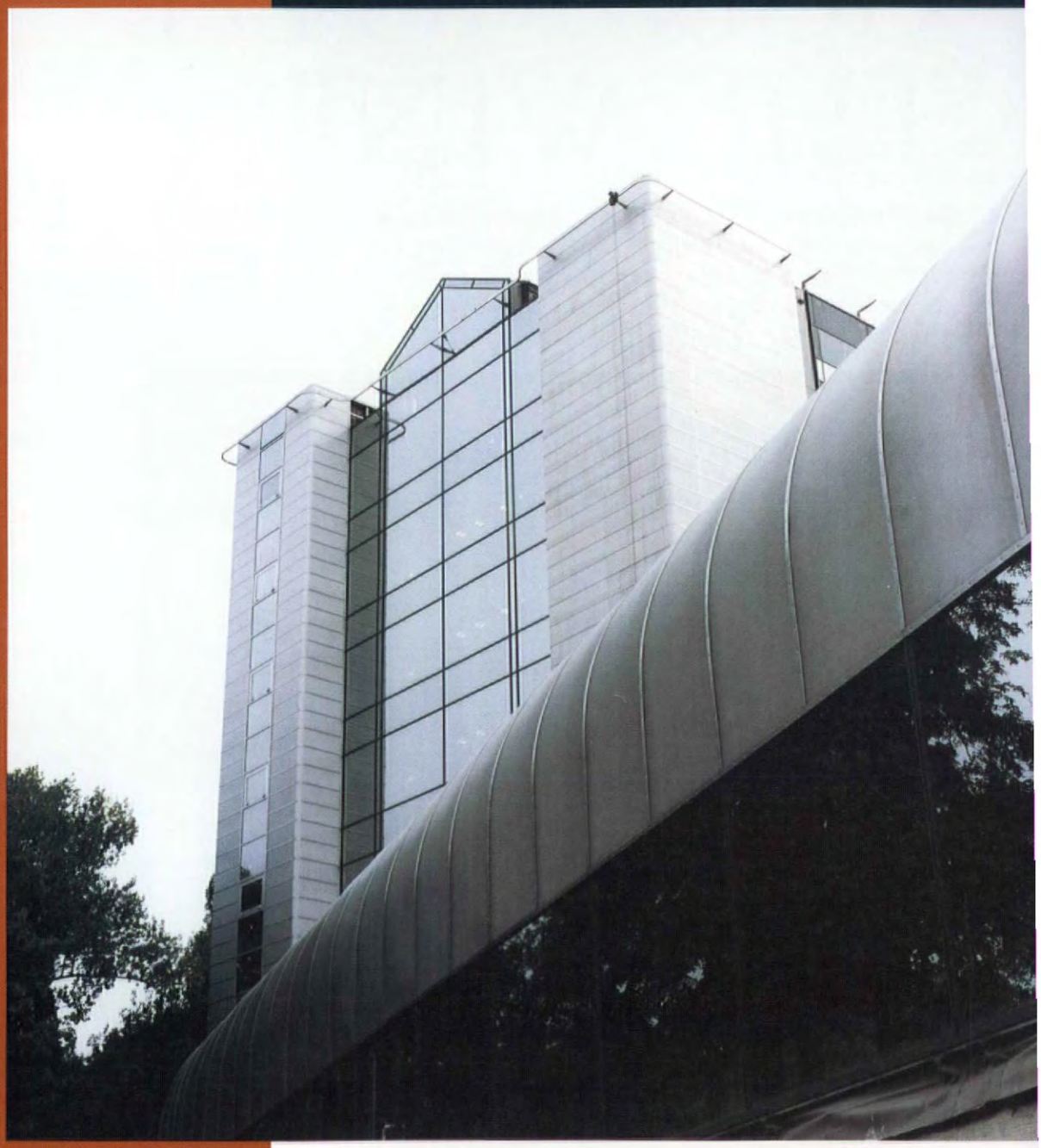
Should we not be more modest in our ambitions, more realistic, more serious, more constructive in the application of the principles we proclaim? More than Declarations, our profession, and the Union which represents it, need action.

Having said this, the Chicago Congress was a wonderful event. The programme was astonishing: apart from the numerous sessions of the Congress itself, there were 50 or so seminars, forums and colloquia (including three meetings organised by the CICA - the international architectural critics' organisation), as well as many exhibitions, meetings, and working-group sessions; innumerable working breakfasts; and 35 excursions in Chicago.

Overall, a well-filled week, which must have been interesting (and exhausting) for those who attended this great World's Fair of Architecture. What now will remain, apart from the memories? □



The head office of Profil ARBED demonstrates the extraordinary result of blending steel and concrete. This combination allowed the architect Prof. Gottfried Böhm to maximise the benefits of strength and heat-resistance inherent in both materials. The overall result is a building which is light and spacious, highly fire resistant and aesthetically stunning.



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Just beside the Luxembourg motorway, between the steelmills and the industrial city of Esch, the building's external features present a stunning image of harmony between tradition and progress.

The unmistakable stamp of architect Gottfried Böhm is reflected in the functional combination of architectural and constructional techniques: an outstanding contemporary 'ensemble' created out of the existing research centre, the castle grounds, the tower of the castle and an avant-garde office block.

The Project

The new building is made up of two identical rectangular wings joined at a 140° angle (total volume: 50,000 m3). The external walls are covered by glass and stainless steel. Four 60 square metre atriums intertwine over eight floors of both wings, creating an amazing network of horizontal and vertical beams of light. At the centre of the atriums, the steel columns, beams and cross bracings are visible to a height of up to 30 metres.

Together they constitute the main bearing system, to which are connected seven column rows of four columns each.

The floors are made of prefabricated prestressed concrete slabs, interlocked by reinforced in situ concrete. These decks transmit the horizontal loads to the longitudinal and transverse bracing systems. In the plane of the bracing lattices, the beam-column connections are designed to act as either rigid or semi-rigid. Composite action of steel and concrete, continuity of beams and columns, discharge the main bearing structure through load transfer.

The extraordinary blend of steel and concrete has enabled the architect to maximise the benefits of strength, deformability and heat-resistance inherent in both materials. Thus, by taking maximum advantage of technology, a major leap forward has been made in the practical application of steel construction.

Slim floor technique with integrated floor-beams has been chosen for the decks. The HISTAR 460 high-strength steel floor beams have an asymmetric cross section with a larger flange, upon which rest the precast prestressed concrete hollow core slabs.

The floor elements on either side of the beams are connected by reinforced in situ concrete, thus creating a monolithic deck free of downstand beams, made of erection friendly prefabricated elements, and offering a maximum of flexibility in the use of the building.

This innovative system, devised and implemented by ARBED Building Concepts, was awarded in 1993 as prize for innovation by the Industrial Federation of Luxembourg.

Integrated Fire Safety Concept

The vital role of caring for people.
A brilliantly conceived system of active fire fighting measures not only increases fire resistance, but improves the overall safety of the building. In the event of a fire, heat and smoke detectors trigger the fire alarm.

The automatic closing of all the fire doors secures the R60 sections, the automatic opening of the smoke vents creates optimal ventilation and the staircases guarantee safe exit as well as access for firefighters. In addition the whole building is covered by a heat reacting sprinkler system.

A realistic approach to fire resistance

Last but not least a realistic evaluation of the resistance of the bearing structure under a natural fire has been made, assuming a normal propagation of the fire and choosing a judicious combination of solicitations.

By taking into account the behaviour of the load bearing structure as a whole, the transfer of loads and the activation of the secondary frame when overheating of the main structure occurs, it has been possible to design a steel frame that has a much higher fire resistance than each of its components.

In total, fire-fighting measures, realistic risk-assessment and modern construction techniques, make the ProfilARBED Head Office an excellent example of a building, that with a high degree of fire resistance, takes full advantage of the architectural effect of bare and visible steel trusses.

Luxembourg, Administration Building Arbed

Building owner:	Arbed S.A., Luxembourg	
Architect:	Arch. Büro Böhm, Köln. Prof. Gottfried Böhm and Jürgen Minkus	
Collaborator/Competition:	Florian Trummer, Stephan Tebroke	
/Design and Planning:	Arch. Büro Böhm, Köln	Anna Ditgens
	Florian Trummer	Uwe Streit
	Elmar Wolf	Uta Geller
	Todor Obreschkow	
	Arch. Büro Batta/Kramatschek/Steier, Trier	
	Andreas Hirtz	Lothar Gillenberg
	Michaela Bredin	Wolfgang Felten
	Frank Hartmann	
Project Management:	Ake Larson Construction A.S.	
Electrical Installation:	RMC Consulting – Luxembourg	
HVAC:	Alfred Witsch – Dillingen	
Construction Engineering:	Schroeder & Associes – Luxembourg; Arne Hill A/S – Oslo/Paris	
Fire protection:	Dipl.-Ing. Karlsch – Köln	
Acoustics:	TÜV Rheinland – Köln	
Daylight:	Peter Andres – Hamburg	
Gross area:	ca. 15.000 m2	
Gross volume:	ca. 61.000 m2	
Time of planning and building:	05.91 – 09.93	

100W White SON projector with Gobo holder and medium beam lens option.

PAR 30 spotlight with barn doors.

Metal Halide spotlight.

CONTROL SPOTS

Art galleries to atria, cafes to cathedrals, *Control* creates discreet or dramatic lighting for every environment.

Low voltage and mains spotlights and projectors. Alternative light sources; incandescent, tungsten halogen, metal halide and White SON.

Low voltage projector with framing head, wide beam lens and filter holder.

Low voltage spotlight with optional glare cowl and filter holder.

BRITISH DESIGN AWARD 1993

if Auszeichnung für gutes Design

Concord

Catalogue available

Telephone: 071 497 1400

Fax: 071 497 1404

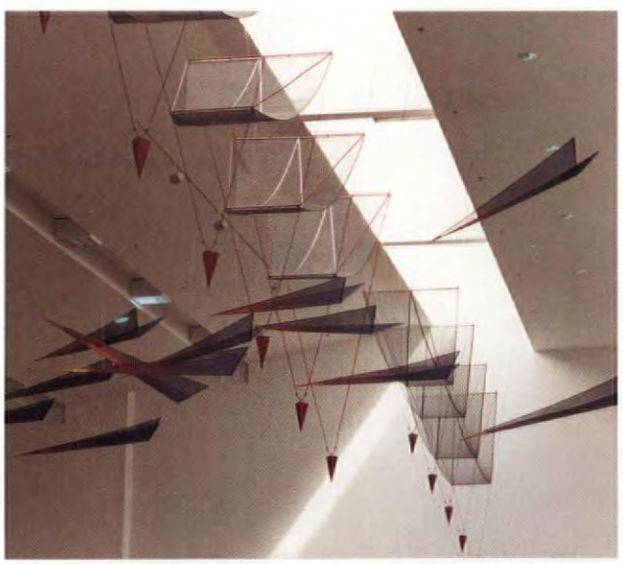
Koryn Rolstad

Bannerworks, Inc

Bannerworks, Inc.

a Seattle based Industrial Design and Environmental Sculpture studio specializing in textiles and art for public settings, as well as, developing solutions for lighting and acoustics through creative means. Founder and principal designer Koryn Rolstad has diligently worked as an artisan and craftsperson over the past eighteen years and successfully launched Bannerworks, Inc. into International status with highlighted projects in Canada, the Caribbean, Ecuador, Egypt, Mexico, Poland, Russia, Saudi Arabia, and South Africa.

US Department of State, US Embassy, Pretoria, South Africa



Capitol Court, Milwaukee, Wisconsin, USA

BNR Building, Dallas, Texas, USA

Bannerworks, Inc. focuses on the collaboration process between architects and the artist. Considering the community which will be occupying a specific environment, Koryn works with the architectural design team and transforms the space by establishing or re-establishing a visual context through the creative process.

Design projects include public spaces such as airports and libraries, corporate settings, exhibits, resorts, hotels and shopping centers.

558 First Avenue South
Seattle, Washington 98104 USA
206.622.8734 fax 206.622.5632

Koryn Rolstad

.....on, beyond banners

founder, owner and principal designer of Bannerworks, Inc., broadens the perspective of fiber arts by constructing a bridge between architecture and interior design through the creative use of textiles, metal and mixed media. With direct expression of the creative vision and a relentless drive, Koryn simultaneously supports and questions the ideas which shape our world. All the while keeping in mind her formula for success:

Live. Work. Prosper.

General Telephone Company
Everett, Washington, USA

Short of issuing corporate sunglasses and SPF 25 cream, facilities managers in buildings with large atriums, sky lights or window walls are finding the need to diffuse the sun's rays.

General Telephone Company (GTE) had eight, clear story windows with the reception area located on the third floor where the light was particularly intense. Koryn designed and fabricated a sculptural piece, easily adjustable to catch an entire years worth of light arcs. The colors and configuration represent clouds, rays and the outdoors.

Fabric, in addition to its unique capacity to be crisp and fluid in shape, soften and fill, lend life and color; can be used to baffle sound. Under the guise of function, Koryn is often called upon to develop solutions for audibility and fidelity. She often comments, "design can solve real problems, we should strive to go beyond aesthetics and marry the two concepts."

A small café located in a noisy corridor inside a large corporate building, Yonny Yonson's needed restoring to a sound state. Koryn's method of resolution: canvas fabric, Velcro applied panels stretched around custom steel frames, elevated and attached to the ceiling by airline cable and nautical hardware. The result: a beautiful, light system, easily removable for cleaning, that also hides the mechanical system above.

Yonny Yonson's
Seattle, Washington, USA

With the advent of corporate design merging with corporate art purchasing, more and more artists are looking to environmental design concerning interior and exterior spaces. As a result, environmental interaction becomes employed and the pedestrian becomes the canvas, a departure point. Koryn states, "It is no longer good enough to hire an artist with the hope that the proposed art piece, as a focal point, will work with the existing interior design. As an artist, I look at space with a visceral response. People should be in the space ~ moving, living, and working."

With the goal of developing and sharing the corporate culture, Mission Viejo Realty Group, a Philip Morris Company subsidiary, commissioned Rolstad to visually define the range of products and International character of the Philip Morris family. Trees, a familiar form, were the image chosen for property division. Half tones were produced from annual reports. Colors, representative of the flags of the International countries with whom Philip Morris is partnered, were chosen and dispersed in combinations throughout each banner. With many visitors, including International guests, a complete visual understanding is achieved through the use of these graphic impressions. Who, what, when, where and why are immediately construed.

Fire retardant code issues are always a question and any textile project should comply with code NFPA 701, fire marshall, state of California.

Mission Viejo Realty Group
Highlands Ranch, Colorado, USA

DANISH ACOUSTICAL INSTITUTE

Building 356, Akademivej
DK-2800 Lyngby, Denmark

Telephone +45 45 93 12 11
Telefax +45 45 93 19 90

The Danish Acoustical Institute is a non-profit organisation affiliated to the Danish Academy of Technical Sciences. The institute has been approved by the Minister of Industry as a public, yet independent, centre within the field of acoustics.

Activities include: Consultancy work as well as contract research within the field of acoustics, noise and vibration. Official testing of acoustic characteristics of materials, components, machines and equipment, hearing instruments, cars and propeller airplanes.
Building- and room acoustic design. Noise and vibration measurements for industry. Design of noise and vibration abatement measures.
The Institute is accredited according to EN-standards to perform calibration and testing in the field of acoustics.

Room acoustics and electro acoustics
Design of recording studios, theatres and cinemas, loudspeaker systems for halls and sports grounds. Testing of electro acoustic equipment.

Building acoustics
Laboratory and field tests of building components and acoustic materials. Consultancy work with the aim of obtaining the highest degree of sound insulation and acoustic comfort in buildings.

Airport noise
Prediction of noise exposure for planning around airports and airfields. Noise reducing strategies and requirements for airport noise monitoring systems.

Vibration techniques
Dynamic balancing of rotating machine elements, development of methods for condition monitoring, analysis and calculation of vibration of machinery, building-dynamic measurements and calculations, vibration analysis in connection with environmental protection.

Traffic noise
Prediction and measurement of noise from roads and railways.

Environmental noise
Noise mapping and planning, consultancy regarding environmental approval of new industrial undertakings, documenting noise measurement for public authority.

Noise in work places
Noise reduction development and techniques for noise control. Noise control as a design factor. Low-noise plant and machinery noise labelling measurements.

Technical audiology
Accredited testing of hearing aids as well as technical support to social welfare authorities and the hearing aid industry.

Signal processing
Custom design of software for PC-assisted analysis of noise and vibration problems. Development of acoustical measuring techniques and advanced signal analysis. Design of acoustic warning systems.

The Danish Acoustical Institute is a division of

DELTA Danish Electronics, Light & Acoustics

DELTA

DELTA is a merger of ElektronikCentralen, Light & Optics and the Danish Acoustical Institute.

THE A - Z OF CLADDING

A

Aluminium/steel profiled sheet systems are the most common form of cladding. Profiling gives stiffness and strength to thin and otherwise flexible materials and permits the fabrication of lightweight and economic weather skins

B

Board lining systems. The insulation is a rigid board, normally polyurethane, laid in metal tees. The surfaces of the insulating material are typically faced in aluminium foil

C

Composite panel systems, sometimes known as sandwich panels, may be factory produced or site assembled, and profiled or flat. They consist of two metal skins with a core of insulation material

D

Double skin systems consist of a shallow profiled metal liner and an outer sheet, separated by metal spacers, with insulation between

E

Enamelled steel panels are a combination of metal and glass, offering a decorative finish and providing a corrosion proof surface with minimum maintenance

F

Fasteners attach the cladding system to the frame or seal sheets together

G

Glass. The distinction between cladding and glass is becoming less clear. Glass is available in flat or curved panels and is usually mounted on a back up wall using secret fixings. It can also be used in conjunction with thin layers of other materials such as stone, which are bonded to the surface.

H

Horizontal cladding is often used to provide an aesthetic design feature, but it is more labour intensive and therefore generally more costly than vertically fixed cladding systems. It is particularly appropriate for low, wide areas of cladding offering limitless design permutations

I

Insulation. The most common insulating materials are mats or quilts of mineral fibre and cellular or foamed plastics. Some manufacturers now offer CFC free insulation

J

Joints are the vulnerable part of any cladding system and must take account of expansion and contraction to prevent water ingress into the building

L

Loading - wind loads must be taken into consideration during construction. Loads are calculated by computing the likely maximum design wind speed and using the result to determine the wind pressure

M

Materials - cladding materials may include grp, grc, aluminium, stainless steel, vitreous enamel, glass and natural materials such as stone and granite

N

Neoprene sealants are introduced to prevent condensation forming

O

Overcladding - provides a new external cladding to an existing structure, a cosmetic refurbishment

P

Precast concrete cladding is becoming increasingly recognised as a durable facing material with the facility of large panel construction. It can be used to reproduce classical features or have applied finishes such as granite, brick etc.

Q

Quality control procedures should be undertaken at bonding stage, as it is the adhesion between the core material and the skins which gives the panel its strength

R

Rainscreen cladding has an outer skin that sheds rainwater without being totally watertight. A well-ventilated cavity allows any moisture that penetrates the wall to evaporate away without damaging the insulation.

S

Sealants are used in metal sheet sealed construction to form a complete weather barrier

T

Thermal break is achieved by introducing non heat conductive materials into the construction to prevent cold bridging

U

'U' Values - the Building Regulations require a 'Ū' value of 0.45w/m² deg. C.

V

Ventilation and vapour barriers should be introduced in profiled metal sheet systems to reduce the risk of condensation and eventual damage to internal linings

W

Weatherboarding is a traditional form of cladding where strips of material are overlapped and nailed onto timber battens to provide weatherproofing

Z

Zed purlins - the structural member to which sheet cladding is fixed

ADVISORY ORGANISATIONS

The Metal Cladding and Roofing Manufacturers Association (MCRMA)
18 Mere Farm Road
Noctorum Birkenhead Merseyside L43 9TT
Telephone : 051 652 3846
The MCRMA represents the UK metal cladding manufacturers and publishes design guides for the specifier

European Panel Information Centre
95 York Street
London W1H 1DU
Telephone : 071 724 1607
Facsimile : 071 724 0106
EPIC has been formed by three leading UK producers of foamed metal composite panels to provide a free technical advisory service for the specifier

Architectural Cladding Association
60 Charles Street
Leicester LE1 1FB
Telephone : 0533 536161
The ACA is a product association of the British Precast Concrete Federation and aims to promote awareness among specifiers of the benefits of quality precast cladding

The Centre for Window & Cladding Technology
University of Bath
Claverton Down
Bath BA2 7AY
Telephone : 0225 826541
Facsimile : 0225 826556
The Centre has a membership of 140, comprising manufacturers, developers and contractors. It offers consultancy and advice to specifiers and publishes technical guides. □

(Right) The HQ of Lansforsauringar in Stockholm displays a 7500m² facade in Tolga white granite supplied by AW Liljeberg, Finland.

(Below) The impressive ten-storey Eagle Building in Glasgow features glass and metal panels designed and manufactured by Ebor Aluminium Systems

(Above) NACO sunbreaker has been installed at the new M.O.C. headquarters in the centre of Munich using 126 fixed silver varnished aluminium blades

(Left) The entrance of a vocational school at Porvoo, Finland, uses a combination of coloured tiles and bent steel sheet manufactured by CurveLine method and patented by Verho-Metalli Oy

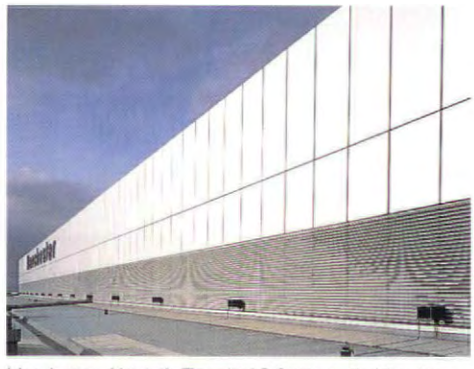
(Below) This project in the Parque Technologico, Zamundio, Spain is clad with 1900 m² of Pohl's Europanel system made of 3mm aluminium with powder coated gloss finish.

Tor Hill House has been refurbished with a new curtain wall by Prince Cladding. The project involved removal of the existing curtain wall (above left) and replacement with a new system (below left), to eliminate water penetration through the facade, upgrade the performance of the building and enhance the overall appearance of the external facades.

(Left) Danogips gypsum panels are an effective solution to the provision of curved wall and ceiling finishes. Custom made high quality panels are light and easy to install using standard dry wall techniques

(Above) Fosroc Expandite has supplied an extensive range of products to the Murrayfield Stadium project in Edinburgh where the north and south standing terraces were demolished and replaced with two new all-seater stands

(Right) Hinchcliffe Facades designed, manufactured and installed the first application of glass blocks into a curtain walling system at Building W3, Stockley Park.



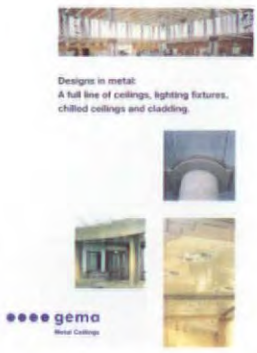
Manchester Airport's Terminal 2 features cladding from Felix Constructions SA, specified for its high level of noise reduction, thermal performance and optimum protection for the comfort of those inside the terminal

(Left) Cladding from Gail-Inax has been used on the new Deutsches Apotheker-haus in Eschborn

The d-line range is a series of fittings in stainless steel and polished brass, designed by Professor Knud Holscher, to suit virtually every interior requirement within a building. It has now been expanded to include a new hinged cantilever grab rail for the disabled (left). Featuring a distinct double tube, the rail has been developed with specific focus on the user and in co-operation with the Danish Disabled Association.

Brochure Showcase 1

To obtain your free copies of the brochures shown on these pages, circle the appropriate numbers on the reader reply card.



Gema Metal Ceilings

Gema Metal Ceilings are high on creativity and meet all aesthetic and functional requirements tailored to customer needs. Square and rectangular tiles. Linear and tartan grid ceilings. Vertical baffle systems. Unlimited design possibilities with special ceilings. Chilled ceilings putting an end to annoying cross-draft effects. Heater, wall and column claddings. Millions of square metres of metal ceilings speak for Gema. Ask for references for the following applications:
Airports, industrial and administration buildings, universities, schools, banks, insurance companies, shopping centres, hotels, restaurants.

Reply number 30

Harty

Harty Holdings Limited is involved in the design/development, manufacture, supply and installation of bespoke architectural cladding, curtain walling, windows and specialist sheet metal work.

Reply number 34

EDM Spanwall

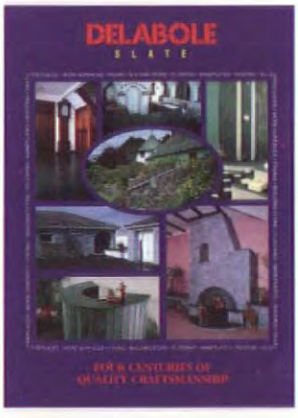
Spanwall is a precision, high performance, versatile, lightweight curtain wall/cladding system, incorporating composite metal panels, windows, doors and louvres to create a total building facade. It is ideal for industrial, retail, commercial and high technology buildings, both for new developments and the refurbishment of existing structures.
The versatility of the Spanwall Cladding System allows architects and designers to plan without constraints in design.
All types of curved shapes are possible, circular, quarter circle, asymmetrical curves, along with cranked and faceted panels.
EDM SPANWALL have undertaken some of the most demanding fast track projects to the highest standards.

Reply number 31

Geoform

Unique patented techniques, developed in Britain, have created totally new design horizons in both the use of the applications for postformed laminates and veneers. The Geoform system allows forming of laminates at any angle, on to any convex profile, whether of uniform or tapered section, simplifying the manufacture of splayed fascias, octagonal columns, pyramids and many other sections previously either difficult or impossible to produce. Applications range from fast food counters, retail displays and column casings to washroom cubicles and vanitory units.

Reply number 35



Delabole Slate

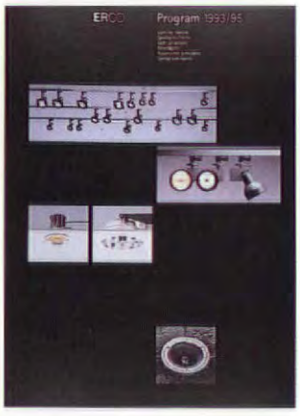
Delabole Slate has been used as a building material for well over 600 years, and has been quarried continuously since the early 17th century, when Carew in his survey of Cornwall wrote "in substance thin, in colour fair, weight light, in lasting long and generally carrieth good regard".
Today, by applying modern mining techniques and utilising only five skilled quarrymen, an average of 120 tonnes of slate block is still quarried each day. Using the latest diamond wire saws, 300 tonne blocks are sawn from the quarry face, virtually eliminating the age-old method of blasting.
"There's no substitute for the real thing".

Reply number 32

Fullflow

Fullflow Systems Limited suppliers, designers and installers of the Fullflow Syphonic Roof Drainage System offer a range of outlet materials and a choice of approved pipework and gutter systems. Using the latest CAD release II system and the British Board of Agrement assessed software, the design department works in close tandem with the architect and specifier so as to satisfy all design requirements.
Over 5,000 successful installations, including many prestigious and award winning projects are testimony to the company's quality product range and unrivalled commitment to service.

Reply number 36



ERCO

The new ERCO program 1993/95 is now available. An additional 82 pages make it a total of 372 pages, which underlines ERCO's policy to continually expand the product range. The new product ranges include Avalon, an extremely comprehensive tubular system and Quinta, designed for ERCO by the Danish architect and designer Knud Holscher. Also included is the new, very compact low voltage track system, Minirail which takes the Castor and Compar minispot ranges. Numerous additions to existing ranges are included.
The layout of the catalogue has been specially redesigned to accommodate the increase in products and to make the location of these products as quick and easy as possible. Black dividing pages identify the beginning of each product range and each product range has its own individual index.
The quality of this catalogue with its wealth of new products and information all reflect ERCO's dedication to selling light. Anyone studying this program 1993/95 will immediately see why ERCO are market leaders.

Reply number 33

Exterior Profiles

Exterior Profiles are a national external envelope contractor who are proud to be associated with some of the most high profile projects undertaken in recent years.
The range and diversity of Exterior Profile's capabilities are exemplified in the company's philosophy of overcoming the difficulties on-site on the drawing board. Our in-house drawing office enables full responsibility to be taken for the design development of architectural concepts, thereby helping to achieve the performance specification within the budget constraints whilst maintaining the design integrity.

Reply number 37

For information on how your company can benefit from the World Architecture Brochure Showcase, telephone +44 (0) 71 383 5757 or circle Reply number 62.

Brochure Showcase 2

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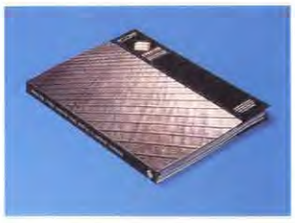


Eurocom
A Design Handbook for Traditional Sheet Metal Roofing

The lack of well-defined standards and codes of practice is no longer a difficulty with the 100 page document published by Eurocom Enterprise Limited.

All aspects of the adaptation of the traditional craft to modern building designs re-approached, together with a complete detailer.

The particular metal featured is the successful Uginox AME, termed stainless steel, developed to give a pewter weathered appearance to a marine grade stainless steel.

Reply number 38

Wade
Featured in this brochure are floral patterned gratings and tree grilles of nickel bronze, and gratings and channel of stainless steel.
Wade drainage products are manufactured under a Quality Management System which complies with ISO9002.

Reply number 42

R Glazzard
Architectural Structures
R Glazzard (Dudley) Limited have produced a brochure illustrating their range of involvements with specialised architectural steelwork, staircases and balustrading.

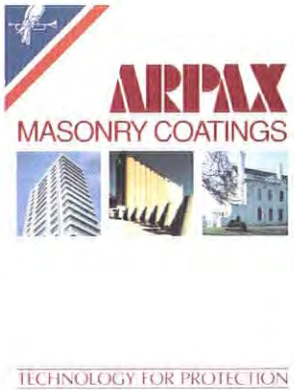
A full in-house service embracing design, costing, surveying, tech drafting, manufacturing and erecting of purpose-made metalworks is offered to the construction industry.

"Our only limitation is your imagination"

Reply number 39

Elemsystems Ltd
Sunset, designed by Peter Bysted, is the most recent edition to the Lampas range of lighting products distributed in the UK by Elemsystems Ltd, an Elementer Group Company. Available as both bollard and bulkhead luminaire, *Sunset* is finished in either sandblasted aluminium or die cast bronze, with a vandal resistant polycarbonate lamp cover. The directional light distribution makes it the ideal choice for exterior public applications. *Sunset* utilises the latest type of low energy fluorescent lamps and iis as standard supplied with power corrected 240V/50Hz control gear to take 13w tc-d.

Reply number 43

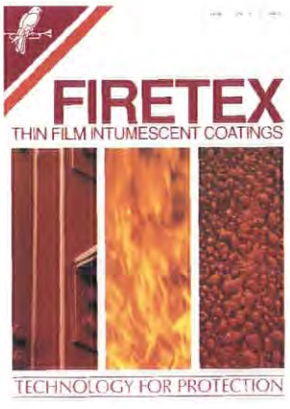


W&J Leigh
High Performance Masonry Coatings
Over 50 years of experience and continual research and development give the Arpax range its unique long term protection properties with proven durability well in excess of 10 years.

The coatings offer excellent weather proofing, colour retention and alkali resistance properties, with low carbon dioxide permeability.

This new Arpax range offers a wide choice of colours in textured, sheen and matt finishes to suit every type of building and environment.

Reply number 40



W&J Leigh
Every Second Counts
Firetex M70/M71 thin film intumescent coating gives up to 2 hours fire protection for structural steel, when tested to BS476 Part 21: 1987.

Firetex is Certfire approved.

Fast application by airless spray, of relatively low film thicknesses, with minimum disruption to other trades, saves contract time.

Firetex makes every second count – not only in fire protection but also in contract performance.

Reply number 13

Bushboard Parker
Bushboard, the pioneers of 'Fast-Track' washroom installations, offer a product of unrivalled choice, flexibility and value in BB1 Plus – the best, and best known washroom finishing system on the market.

Design options have now been extended – enabling over 100 colourways to be achieved.

The BB1 Plus system combines the style and quality appropriate to a prestige building or refurbishment project with the benefit of speed, economy and immediate availability.

Reply number 41

Bushboard Parker
Profiles
Purpose-made for use in leisure facilities where attractive appearance cannot be sacrificed in favour of physical durability. Profiles leisure cubicles feature a wide range of colourways and fascia shapes, the whole system manufactured in compact grade solid laminate.

Complementary products include WC cubicles, shower options and a full range of ducting and vanitory units, for use in virtually any environment.

Panels to BSEN4381 with a 10 year guarantee.

Reply number 45

For information on how your company can benefit from the World Architecture Brochure Showcase, telephone +44 (0) 71 383 5757 or circle Reply number 62.

WORLD ARCHITECTURE

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We believe colour is the spice of design.

NTT Shinagawa Twins Building, Tokyo*

NEOPARIÉS

Durability is an integral characteristic of Neopariés, the result of a new technology applied to crystallized glass by Nippon Electric Glass Co., Ltd. Neopariés has the beauty and depth of glass, resists acid 13 times better than granite, and with zero percent water absorption, it is impervious to freeze damage. But what about colour? Isn't that what architects and customers anguish over most? Neopariés is available in black, white and fourteen colours in between to satisfy every whim, fulfil every dream. So the next time you choose panels for your building project, be they perfectly flat or gracefully curved, you'll surely look for panels that are durable. But don't forget the spice — colour. Choose Neopariés, the innovative building material that gives you a choice.

**A joint project by the following construction companies: Taisei, Kajima, Shimizu, Obayashi, Hazama, Toda, Kyoritsu and Ando.*
Neopariés colour: Grey (586) Design: NTT

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