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The business magazine for the global architect

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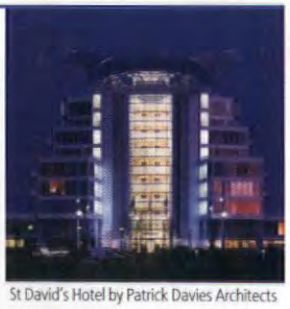
WORLD**ARCHITECTURE**

Contents **Issue number 81 | November 1999**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In search of an identity

For the last few months Taiwan has dominated the headlines in the world's press. First it was the sinister and familiar sabre-rattling with mainland China, then it was September's catastrophic earthquake which left the capital Taipei relatively unscathed, but ripped through the south-west of the island, demolishing more than 500 buildings. Although the Taiwan earthquake was more severe than its Turkish cousin of the previous month, the scale of death and destruction was considerably lower; up to 40,000 fatalities in Turkey compared with 2,100 in Taiwan.

These statistics might seem surprising. Taiwan has a reputation for crudely manufactured products and unremarkable, even ugly, buildings. Illegal construction of, and extension to, low- and mid-rise buildings, houses in particular, has been a part of life in Taipei since the influx of new arrivals from China in the 1949, and during the 1970s and 80s. That the number of casualties, both human and architectural, fell short of the Turkish disaster is partly due to the enormous strides which have been made by a minority of contractors, engineers and architects in Taiwan.

It would be romantic to paint a picture of a radically improved architectural scene; the fashionable belief is that "architecture is elsewhere", as first mooted by a leading Taiwanese critic earlier this year. To be critical, or even cynical, is the preserve of architecture's intellectual elite – such as it is in Taiwan. It must indeed be depressing to be surrounded by the box-like architecture that Taiwan has adapted from international precedents, and Post-Modern confections passing themselves off as "Chinese". But looking at the island from an objective distance it is easier to see the tide turning. You get the feeling that the mediocrity of the built environment to date is what's fuelling the creativity of this second generation of Taiwan's architects. It gives them something to kick against. For the first time outside Taiwan, *World Architecture*, publishes the work of some of these reactionaries in search of an identity for the island's architecture.

Nicola Turner, editor

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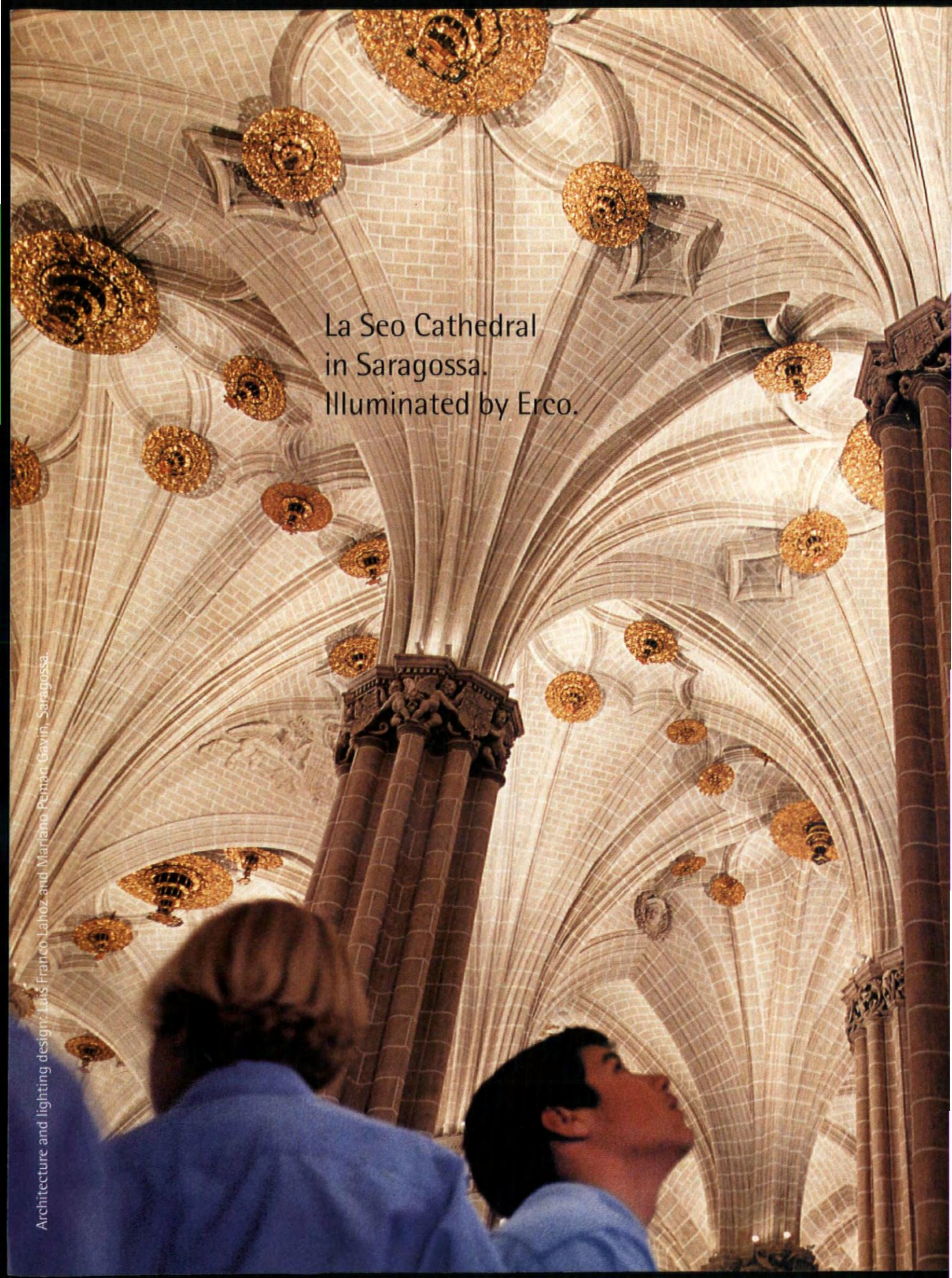
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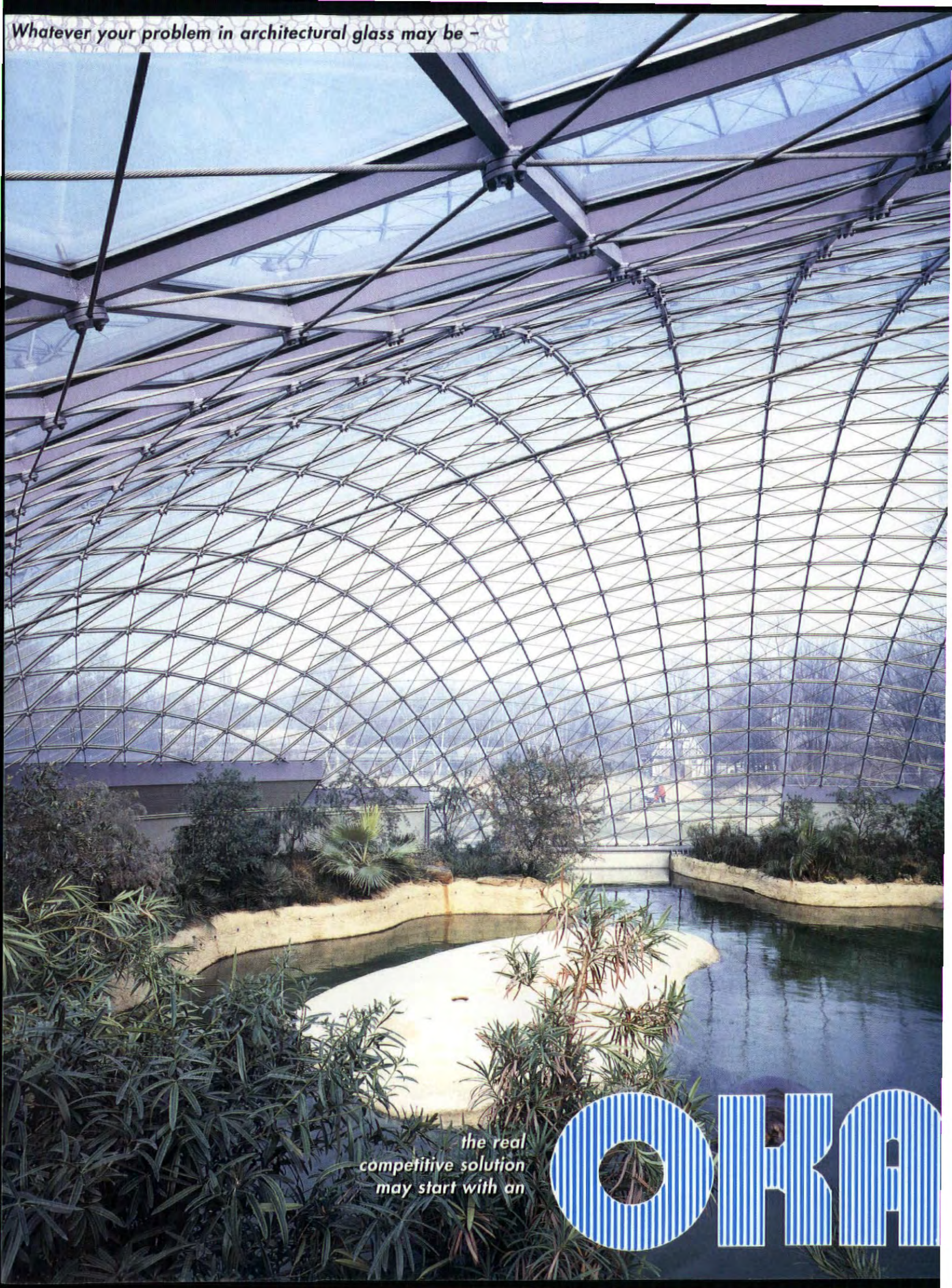
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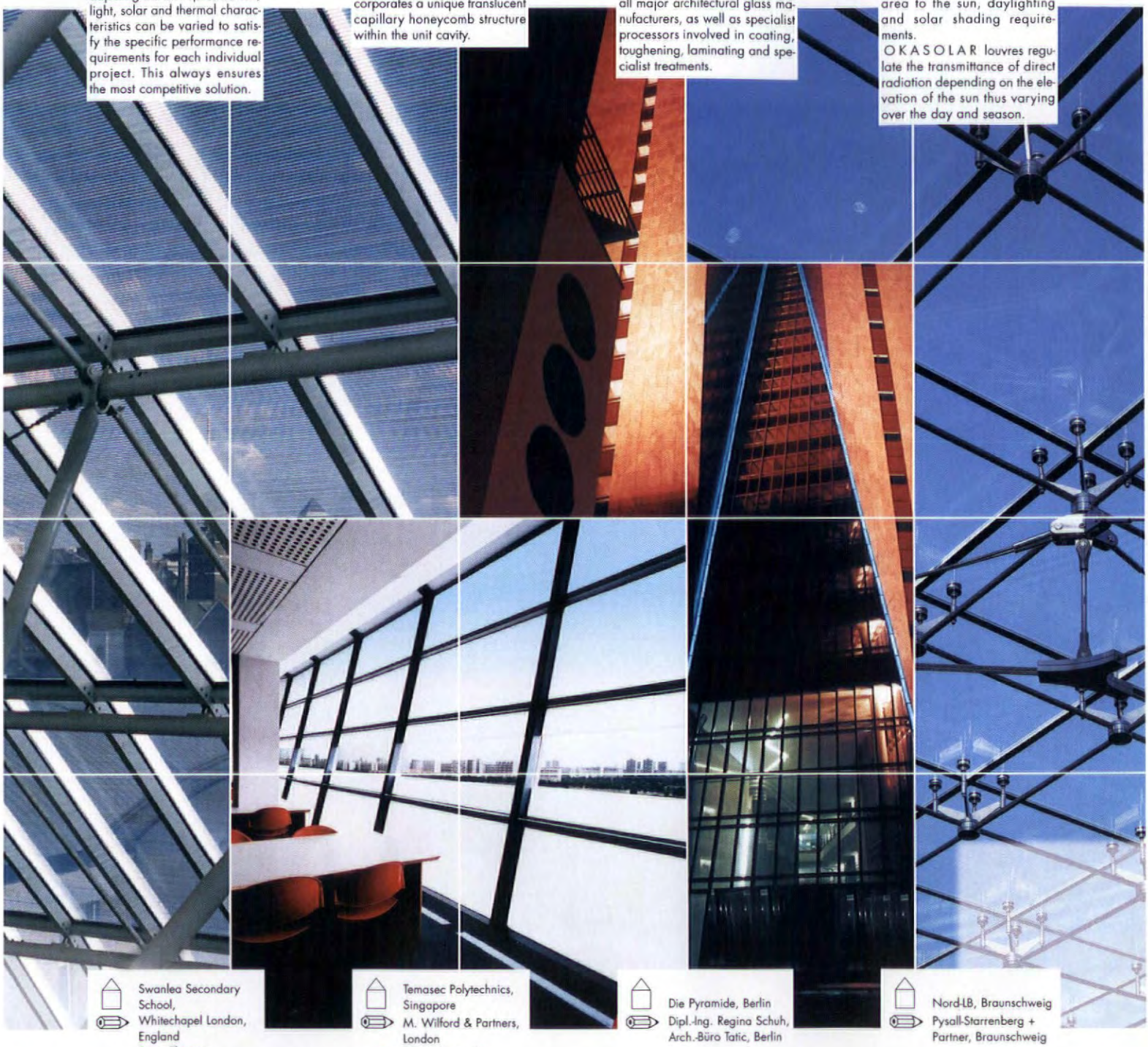

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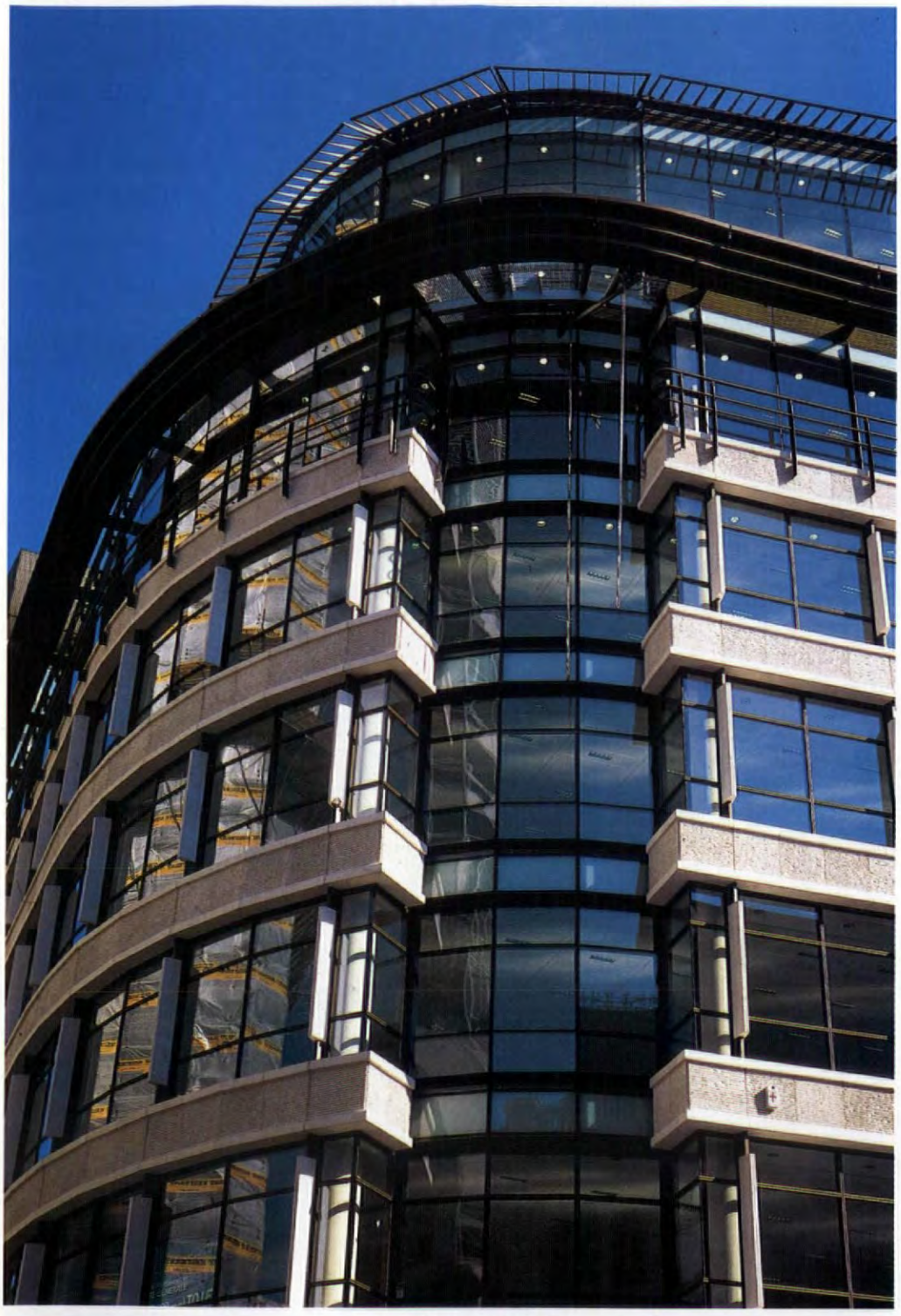

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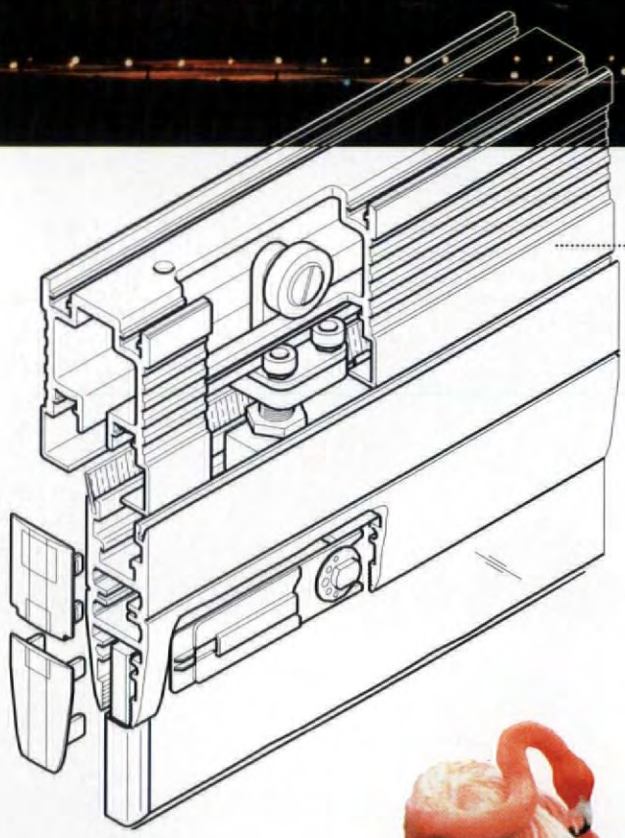

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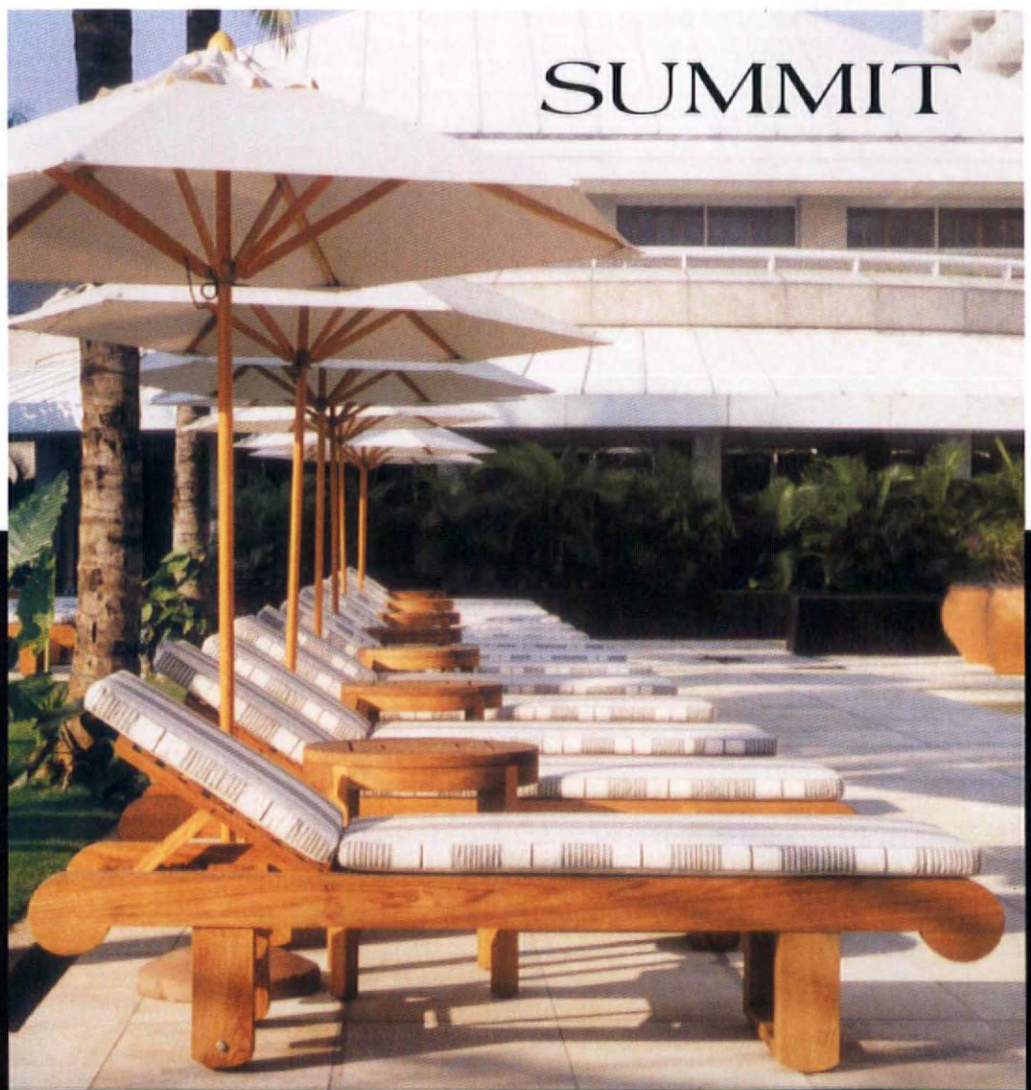

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The Jewish Museum in Berlin

Jewish Museum Berlin · Architect: Daniel Libeskind, Berlin · Lightplaning: Dinnebier Licht, Berlin

Daniel Libeskind

"Between the lines", is the way Daniel Libeskind describes the principal behind his architectural concept for the Jewish Museum in Berlin. The ground plan is characterised by a variety of reference axes and is symbolic of the broken star of David. The idea behind this structure is to create a series of voids. A symbol of the Jews now missing from German society. These spaces, which are filled with an atmosphere of oppressive emptiness, are located along an imaginary line that runs the length of the ground plan of the Jewish Museum.

In accordance with Daniel Libeskind's design concept, a lighting system has been developed that reiterates the structure of the ground plan and the facade design on the ceiling. Two kilometres of lines of light have been recessed into the ceiling at a depth of 30 mm. Apart from the lighting inserts, the profiles also take power tracks for the accent lighting, the smoke alarm system, the loudspeakers and the antennas for the radio-controlled security system.

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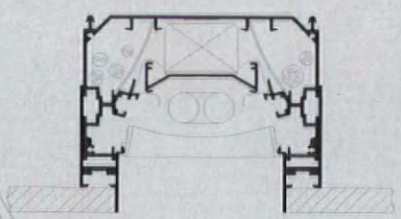

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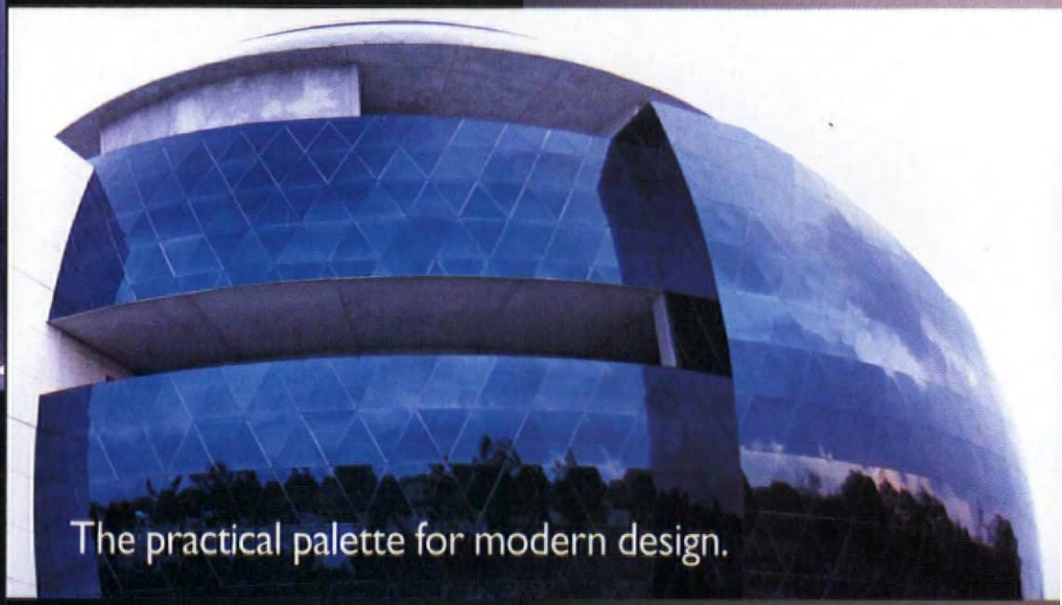

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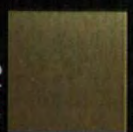
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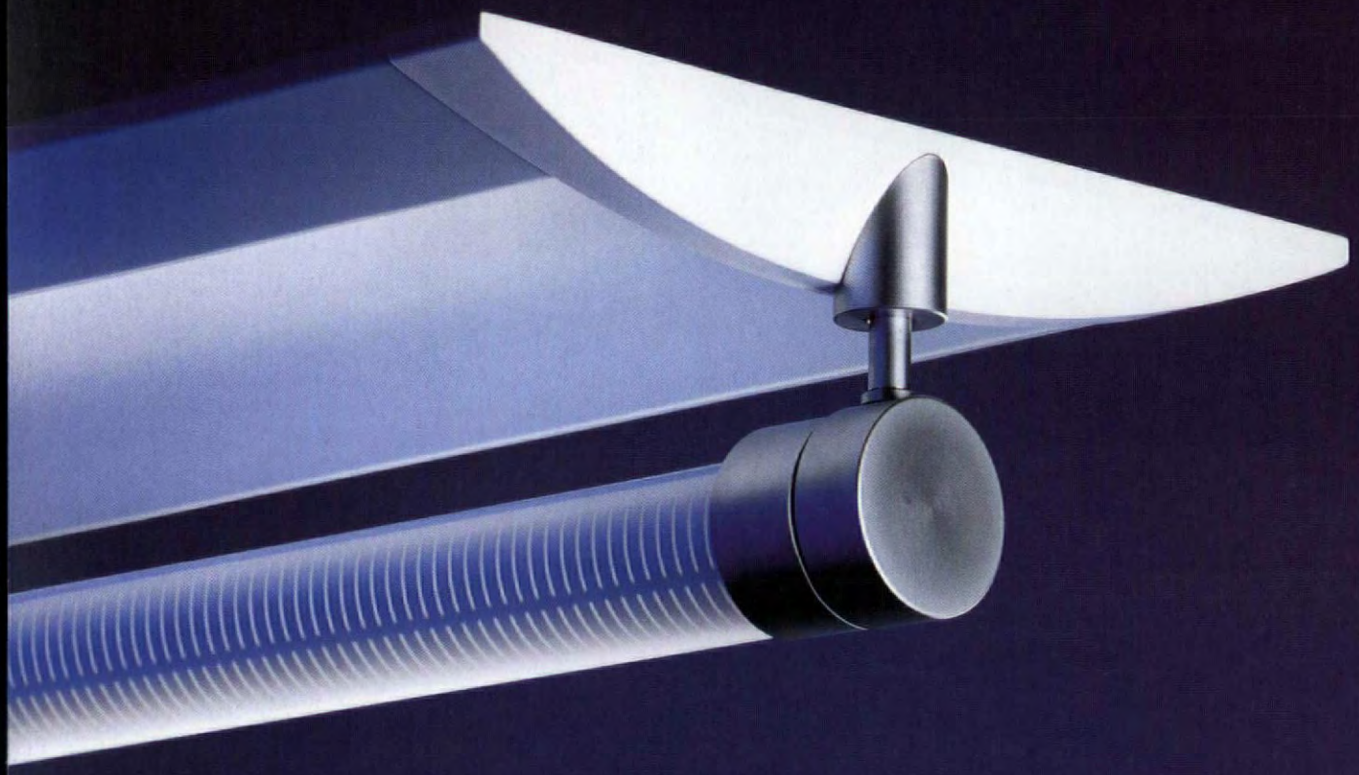

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News

Peace of the action

"I like both peoples," says special envoy Massimiliano Fuksas

ISRAEL

Italian architect, Massimiliano Fuksas, is finalising designs for an amazing double commission.

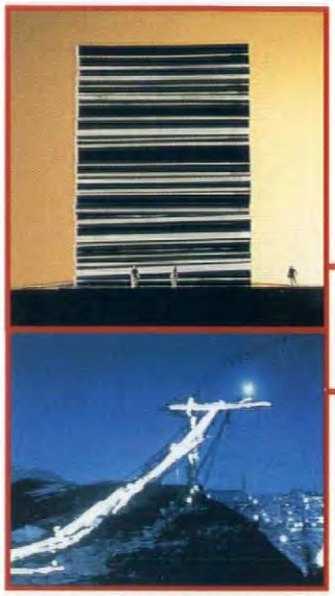
He is working for both Yassir Arafat and Simon Peres, respectively leader and former leader of the Palestinian and Israeli communities in the disputed territories of the West Bank.

Negotiations for peace between Israel and Palestine started in September this year, with the deadline of 13 September 2000.

Peres and Arafat are working with Fuksas to find appropriate symbols to mark what (it is hoped) will be the end of the long-running and bloody conflict.

Fuksas was the only architect approached by Peres and Arafat, two former Nobel Peace Prize winners. Speaking to *WA*, Fuksas says: "Arafat called me in my Paris office, we had lunch and I agreed to his proposal. I like both the two peoples. I can't understand how they have not managed to find a peaceful solution to their problems for so long."

The designs he is completing are for a peace centre in Jerusalem, backed by Peres, and a monument in Bethlehem sponsored by Arafat. The Bethlehem structure, a "Staircase to Heaven" of steel, limestone and granite, has 1,000 steps intended to symbolise 1,000 cities of the world and their diverse cultures.



Far left top: The Peace Centre, Jerusalem. The facade represents the sedimentary process of negotiations for peace.
Far left bottom: Sketch of the "Staircase to Heaven", a 1,000-step monument to cultural diversity

The Jerusalem Centre's facade is composed of alternating bands of translucent glass and concrete to represent "the laborious, sedimentary process of negotiations for peace between the Israeli and Palestinian communities".

If all goes to plan, the two structures will be complete in time to coincide with the settlement deadline next year.

• Fuksas has also been made the director of next year's 7th Venice Architecture Biennial, for which he has chosen the motto, "Less aesthetics, more ethics" as the theme. "Watching the devastation to people's homes caused by the recent earthquakes in Turkey, Greece and Taiwan I was struck by how far removed today's architects are from the origins of the profession. Architects these days just want to design museums."

The Biennial opens in June and runs until November 2000. AM

For further information about the Biennial go to:
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This month's tallest building – 7 South Dearborn

USA

Chicago, the spiritual birthplace of tall buildings, is to regain its position as home to the world's tallest.

The city's Plan Commission has approved plans for the 472-metre 7 South Dearborn tower, designed by the Chicago office of Skidmore Owings and Merrill. When complete, it will be 20 metres taller than the Petronas Towers in Kuala Lumpur – or 157 metres taller if you include three tubular transmission masts. (See "Does this count?" *WA*79.)

"It will be 20m taller than the Petronas Towers – 157m if you include the transmission masts"

7 South Dearborn is a 108-storey vertical city, complete with retail, commercial and residential space. It will cost US$500 million to build and take four years to complete. The developer, European American Realty, says that funding will not present a problem.

Local reaction to the planning approval has been surprisingly muted. *USA Today*, suggesting that skyscrapers are outdated statements of vanity, no longer relevant to the US, pointed to the New York Planning Commission's proposal to put the first ever cap on building heights in the city's history as evidence that the US has fallen out of love with the skyscraper. AM

IM Pei rises to Beijing challenge

China's favourite son makes rare attack on Communist government

PRC

I M Pei, the most famous China-born architect in the world, has launched a rare attack on the Chinese communist party.

Speaking to Chinese newspaper *China Youth Daily* Pei claims that the party's attempts to spruce up Beijing in the run-up to the 50th anniversary of the founding of the People's Republic of China have resulted in the "destruction" of the Chinese capital.

"They should not have knocked down the old Beijing City Wall," says Pei, who was born in Guangdong but educated in the US. "They should have preserved it, and the old city inside, and built skyscrapers outside as Paris did," he continued.

In the early 1950s, Liang Sicheng, who founded the architecture department at Qinghua University, made just such a proposal to the government. But Mao Zedong, late chairman of the communist party, rejected the idea and demolished the wall to build a ring road and a subway. He installed himself and his government in Zhongnanhai, in the heart of the old city, which has become a chaotic mix of shopping centres, government buildings and the few historic courtyards to have escaped demolition.

Development continues pretty much unchecked in Beijing however. Whereas before the authorities were keen to sweep away old buildings for ideological reasons, now the wrecking crews are sent in for motives of profit, as rentals in the city climb ever higher.

Pei's call for preservation is both rare and lonely. "The courtyards should be preserved as a whole, not split up into little pieces. They represent not only the architecture of Beijing but all of China." There has been no comment from the Chinese government, an establishment not noted for its tolerance to criticism.

China-watchers have suggested that Pei is the only architect with a sufficiently high profile to influence events in Beijing. He made his comments during a visit to the new Bank of China building in Beijing, being designed by Pei Partnership (New York) which is headed by IM's son DeeDee. The building is expected to open in early 2000. AM

The Eisenman cometh again

New Yorker wins third major of the year

SPAIN

Peter Eisenman has capped an incredible year by winning the competition for the US$100 million City of Culture in Santiago de Compostela (*WA*78 page 53).

Sponsored by the regional government of Galicia, the complex – including two museums, an auditorium, opera hall, library and archives – will sit on top of a wooded hill, on a 70-hectare site (see model, right).

Eisenman says that the undulating design was inspired by both the fan-shaped shells that are a symbol of Santiago, and the city's historic core, which he also compares to a shell.

Eisenman was selected from 12 finalists: Steven Holl, Gijon and Guyer, Rem Koolhaas, Daniel Libeskind, Jean Nouvel and Dominique Perrault as the foreign contingent; local architects included Manuel Gallego, César Portela, Ricardo Bofill, Juan Navarro and Santiago Calatrava.

The mayors of Galicia's other main cities, Vigo and La Coruña, have criticised the concentration of new cultural facilities in the region's capital, including the 1994 Galician Museum of Contemporary Art by Álvaro Siza, an auditorium by the late Madrid architect Julio Cano Lasso, and a congress centre by Alberto Noguerol. The Galician government hopes to begin construction next year.

In June, Eisenman was awarded the contract to design the Holocaust Memorial in Berlin, bringing to an end the decade-long competition (see *WA*77 pages 26-27). A month later, he picked up the US$100,000 cheque for the inaugural IFCCA Prize (*WA*79 page 19). DC

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THIS MONTH

page 28 — The competition for the last of the French state's Grand Projets may be the best-kept secret in architecture. Find out who's on the shortlist.

page 29 — Zvi Hecker's Jewish Cultural Centre is the highest profile project to open so far in the revitalised German city of Duisburg.

page 31 — A proposed bridge across the Niagara River has exposed an aesthetic rift between the Americans and Canadians on either side.

EUROPE

New contracts

CYPRUS

Kohn Pedersen Fox's London office has completed design development on the Cyprus House of Representatives, Nicosia. The US$41.25 million, 20,000-square-metre development has been designed in anticipation of a reunification between the divided Turkish and Greek communities in Cyprus. KPF developed the designs in association with local practice **D Kythreotis & Associates**.

GERMANY

Angéli/Graham/Pfenninger/Scholl Architects, a practice with offices in Zürich and Los Angeles, has won a competition to design and landscape an administration centre and conference and education facilities for Adidas-Salomon AG in Herzogenaurach.

UK

KMB Associates has been appointed as architect for what is allegedly the world's first stadium purpose-built for both able and disabled athletes. The US$10.5 million scheme in Boston, Lincolnshire, will feature, among other things, Braille signage at wheelchair height and ramped access to all entrances and exits. **KMB Associates**, which has offices in London and Lincolnshire, will also act as quantity surveyor and planning supervisor on the project.

UK

The UK office of giant US architect **Gensler** has been appointed to masterplan and design a US$63 million terminal at Liverpool Airport. Gensler is working with local practice **Leach Rhodes Walker** and civil, structural and environmental engineer **Scott Wilson Kirkpatrick**. The first phase of the development is due for completion in 2002.

Return of the MAC

The last of the French Grand Projets

FRANCE

Tadao Ando, Renzo Piano and Norman Foster are among the superstar architects competing for the right to design the last of the French state's Grand Projets.

A shortlist of three will be chosen to develop proposals for the Musee des Arts et Civilisation (MAC) on 4 December. It marks the end of a glorious era for French architecture, in which state input has far exceeded public expectation.

The MAC will go up on the Quai Branly, at the foot of the Eiffel Tower, a site originally earmarked for the last of François Mitterand's Grand Projets. Plans for Mitterand's conference centre were scrapped, for budgetary reasons, by the incoming Jacques Chirac – the former mayor of Paris. In June this year, Lionel Jospin's ruling socialist government endorsed the only public undertaking of the Chirac presidency.

A competition was run to find an architect for the Conference Centre in 1990. The winner, Francis Soler, a little-known French architect, has made it through to the second stage of the MAC competition. He is on the list of 15 – chosen from 105 entries.

The programme calls for 25,000 square metres of development on the riverside site, with a projected budget of US$180 million.

The MAC will house the collections of the existing Musée de l'Homme and Musée des Arts d'Arfique et d'Oceanie. Work is expected to start in spring 2001. NH

The shortlist in full

Jean Nouvel
Chaix and Morel
Patrick Berger/Jacques Anziutti
Peter Eisenman/Felice Fanuele
Foster and Partners
Future Systems
Dominique Jacob/Brendan MacFarlane
Rem Koolhaas
Peripheriques and MVRDV
Renzo Piano
Christian de Portzamparc
Rudy Ricciotti/Pierre Lombard
MAA Schmidt/Hammer & Lassen
Francis Soler
Tadao Ando/Jean-Michel Wilmotte/Masakazu Bokura

South London looks up

UK

The regeneration of the South London borough of Southwark continues apace. Following Herzog & de Meuron's new Tate Gallery (open next year) and the Lord Norman Foster-designed Millennium Bridge, comes a new office building by Alsop & Störmer (below).

Known as Southpoint, the 28,000-square-metre, 13-storey scheme will be the headquarters for Blackfriars Investments.

Southwark has long been primed as a new focus for development in London. The opening of the new Jubilee Line underground extension has convinced investors that it is a viable alternative to the City and the Docklands as a business location.

Alsop & Störmer's municipal library in Peckham, also in South London, opens in January.

Over in the Netherlands, Alsop & Störmer has been shortlisted to design a US$33 million national audio-visual archive in Hilversum. The practice is the only non-Dutch architect under consideration. Bethem Crouwel, Mecanoo, Neutelings Riedijk and Architecten Cie make up the five-strong list. The 25,000-square-metre building will house the Netherlands Broadcasting Museum. AM

London eco-store sustains attack

UK

The first building to be completed on the Greenwich Peninsula in London, near the Millennium Dome, has come in for criticism from an environmental pressure group.

Designed by UK practice Chetwood Associates the Sainsburys outlet has been billed as Britain's most environmentally responsible supermarket. It is expected to save Sainsbury's nearly US$100,000 a year in energy bills. It features natural ventilation, heat recycling and wind turbines that power illuminated advertising masts (above). However, eco group Friends of the Earth has found fault with it, describing the car-parking provision as "outrageously excessive", pointing out that a building cannot be considered sustainable if it encourages car use.

No doubt, the reaction to the Millennium Dome itself will be just as negative. AM

EUROPE

One Hecker of a guy

You don't have to be Libeskind to design a Jewish landmark

Michael Kruger

Above: Zvi Hecker's Jewish Cultural Centre in Duisburg is takes the form of an outstretched hand

BUILDINGS ON SITE OR COMPLETE IN DUISBURG INCLUDE:

- **Foster and Partners' Micro Electronics Centre.**
- **Schlaich, Bergermann and Partners' pedestrian bridge, completed earlier this year.**
- **Residential complexes in planning by Auer and Weber, Ingenhoven, Overdiek & Partners and Steidle, Schmitz and Partners.**
- **Herzog & de Meuron is working on the conversion of a mill into an arts centre.**
- **Local architect Kohl & Kohl has designed a new-build old people's home.**

GERMANY

Israeli architect Zvi Hecker, of Tel Aviv and Berlin, has completed the Duisburg Jewish Cultural Centre for the west German city's growing Jewish community. It is the first major landmark in the revitalisation of Duisburg's port district.

Local critics have described the 2,650-square-metre, US$6.5 million synagogue and civic centre complex as a hand, whose fingers spread out into Duisburg's dilapidated river port. Hecker prefers to think of it as a book: "Its pages spread open and recount five chapters in the history of the Jewish community of Duisburg," he says.

It is flanked by a residential district and a public park, landscaped by architect Dani Karavan. In the longer term the numerous former mills and warehouse in the district will be transformed into residential and office buildings.

Duisburg harbour has been in decline for 150 years. But thanks to the government-funded Internationale Bau-Ausstellung (IBA) Emscher Park initiative, Duisburg and the surrounding district has become home to a series of new-build and renovated buildings, by both local and international architects.

The revitalisation was based on a 1991 masterplan developed by Foster and Partners in association with LEG Düsseldorf – Kaiser Bautechnik Duisburg and THS Essen. AM

(See also Zvi Hecker's Heinz-Galinski Jewish Elementary School, Berlin WA49 pages 132-135.)

Marks deducted from Foster

Bungesbaugesellschaft withholds fee over "faulty" Reichstag renovation

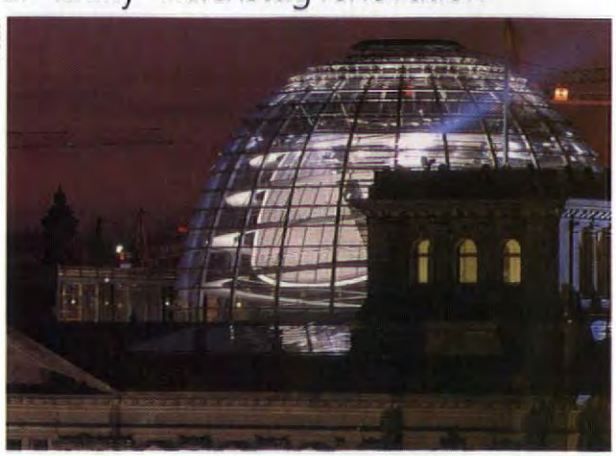
GERMANY

Foster and Partners, architect of the renovated Reichstag, has become embroiled in a dispute which could result in the with-holding of the final installment of its fee.

The London-based practice is still owed US$2.5 million of its US$20 million fee for the widely acclaimed project. The Bundesbaugesellschaft (BBB), the public/private agency handling the project has claimed that it will not pay the arrears until a series of costly faults are rectified. Leaks on the glazed cupola and a shaky visitors' gallery are among an alleged 45 separate planning and construction errors.

Opinions of those who use the building and those who have visited it have been divided since it opened in May. (See also Analysis, pages 34-35.) AM

H G Esch



In brief

AUSTRIA

Bright young things

Five young European architects will present their designs for the development of the Graz-Maribor corridor, which links Austria with Slovenia, later this month. Labfac (Paris), West 8 (Rotterdam), Sergison Bates (London), Actar (Barcelona) and Drost & Klose (Hamburg) were all invited to put forward proposals by Roger Riewe and the Graz Association of Architects.

BELGIUM

EU's non-committee

A European Commission committee of architecture is to be cut by a third in a drive to eliminate bureaucracy and waste. The cuts to the 45-strong body Architecture Advisory Committee for Education & Training have lead to fears that the group could be scrapped altogether. At present, the committee, which meets annually, comprises three delegates from each member state – one from the architectural profession, one from a professional body and one educational representative. The educational representative will be the first to be axed.

GERMANY

Einstein's overhaul

Erich Mendelsohn's Einstein Tower (1927), on the Telegraphenberg in Potsdam, has reopened after a two-year refurbishment. Architect Pitz & Loh carried out the work, which included reinstating the original pale ochre external paintwork. The restoration was funded by the Wustenrot Foundation, a body set up to restore modern buildings in the former German Democratic Republic.

THE AMERICAS

New contracts

US

London-based practice **Terry Farrell & Partners** has won its first US commission. It was selected to design a new aquarium in Seattle, ahead of **NBBJ** (see below) and a joint venture of **EHD Architecture** (San Francisco) and **Hewitt Architects** (Seattle). Design proposals for the US$150 million, 18,580-square-metre complex, which will be at the forefront of a renewal of Seattle waterfront, are expected in the first quarter of next year. Terry Farrell & Partners is also working on a major aquarium and urban renewal project in Hull, UK. Completion of the Hull project is scheduled for April 2001.

US

Peter Pran of **NBBJ** has designed a new 28,000-square-metre headquarters for Vulcan Northwest, also in Seattle. Vulcan Northwest is owned by Seattle resident Paul Allen, co-founder of Microsoft, who has also commissioned **Frank Gehry** to design the Experience Music Project in the city (*WA*73 pages 50-51). The headquarters will be the centrepiece of the US$250 million redevelopment of the area around Seattle's Union Station. Completion is anticipated by the middle of next year.

US

Meltzer/Mandl Architects is designing a museum of digital art – Atelier 450 – in a new nine-storey building in Chelsea, NYC. It has been designed according to feng shui principals. The building will accommodate video, animation and digital collections, as well as art installation space, a gallery, rooftop cafe and a 170-seat theatre. The museum and new media think tank are sponsored by the Atlantic Foundation.

New York misses out

AIA's oldest chapter looks outside Big Apple for this year's awards

US

The American Institute of Architects' oldest chapter, New York, has announced its 1999 award winners. And despite the city being one of the acknowledged hot-beds of world architectural talent, none of the major awards went to projects in New York.

Honor awards – the highest level – went to Gluckman Mayner Architects, for the Acadia Summer Arts Program in Mount Desert, Maine; Steven Holl Architects for the Cranbrook Institute of Science Renovation and Expansion, Bloomfield Hills, Michigan; and Sean O'Brien Architect for Pinnacle Technologies, Warren, Michigan. Awards were also given in the categories of interior architecture and projects.

Steven Holl Architects, Bernard Tschumi Architects and restoration specialist Beyer Blinder Belle were the pace-setters, each receiving two awards or citations. Tschumi received an award for his recently completed student centre at Columbia University and Beyer Blinder Belle received a restoration citation for New York's Grand Central Terminal. SOM picked up a project award for its striking Pennsylvania Station Redevelopment Program. BB

Above: Acadia Summer Arts Program building, by Gluckman Mayner Architects. **Right:** SOM's proposed redevelopment of Pennsylvania Station, New York

Morphosis and the Mayne attraction

Enfant terrible in General Services Administration contract surprise

US

Los Angeles practice Morphosis, led by US architecture's *enfant terrible* Thom Mayne, has been chosen to head up the General Services Administration's new Design Excellence Program.

After a generation of lacklustre projects, the General Services Administration (GSA) has announced its intention to use its new programme to improve the public perception of federal architecture.

The programme is dedicated to commissioning the country's top architectural talent, making the choice of Mayne something of a surprise. Speaking to WA, one US architecture critic, who preferred to remain nameless,

> **"[Mayne's] designs are not the stale monumentalism typical of government commissions in the US"**

described Mayne as: "An iconoclast, a mould-breaker, à la Peter Eisenman. His designs are not the stale monumentalism typical of government commissions in the US."

Mayne had already designed two federal court buildings, one in San Francisco, (developed in association with SMP/SHG) and another in Eugene, Oregon (developed in association with the DLR Group).

The US$120-140 million, 60,000-square-metre San Francisco project will be built on a key site in a dilapidated area south of Market Street, and is due to open in 2001/2002.

The Eugene courthouse has yet to secure a site, but Mayne and DLR have already produced a preliminary design. Images were unavailable for publication, but the architects describe it as an attempt to use form and space to symbolically represent the significance of a courthouse in American culture.

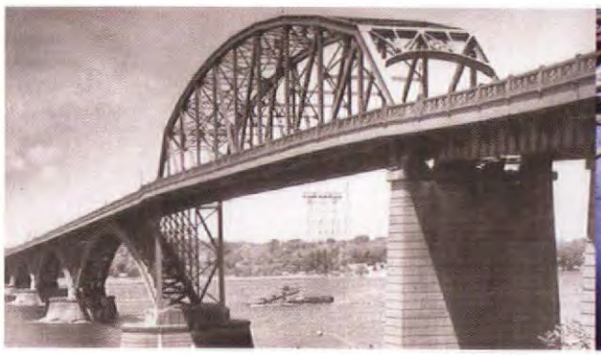
Speaking to the US press, Mayne explained that he sees the GSA contract as an opportunity to question the office as a building type. He also explained that he is anticipating looking at the potentially conflicting issues of street frontage, federal security, and public accessibility in the contemporary urban context.

With Mayne at the helm, it seems safe to assume that this story won't end here. BB

THE AMERICAS

Niagara bridge exposes divide

Canada and US at loggerheads over bi-nation link



US/CANADA

The question of what form a new bridge over the Niagara River should take has divided opinion among the Canadian and American communities on either side.

The focus of the debate is the Peace Bridge (above left), which is becoming increasingly unable to cope with the pressure of commercial and tourist traffic – every summer 3 million trucks, 6.2 million cars and 78,000 pedestrians cross the bridge. The one thing everyone agrees on is that something should be done – in fact the new bridge is supposed to be under construction already.

Canadians on the Fort Erie, Ontario side of the Niagara River are quite satisfied with the idea of building a replica of the existing 72-year-old bridge, but Americans on the Buffalo side hate the plan and want to build a replacement instead. The controversy will come to the boil at public presentations later this month, when an international bridge consultant, invited by the Community Foundation for Greater Buffalo will describe the viable alternatives.

While their expert opinion won't be binding, it will add weight to the arguments of the clients (the City of Buffalo and Erie County) and two Buffalo community groups against a design approved two years ago by a bi-national Peace Bridge Authority (PBA).

The PBA, made up of five Canadians and five Americans, approved the idea of twinning the three-lane, 1,075-metre-long bridge, with an almost exact copy. The road on the old bridge would be resurfaced and extra three lanes would relieve the growing pressure of traffic.

The ensuing uproar in Buffalo over this essentially engineering, rather than architectural, solution inspired public hearings, and a review last summer, amid a flurry of court actions to stop the PBA-endorsed bridge.

The American side favours replacing the bridge with a design proposed a year ago by Bruno Freschi, a Canadian architect and principal of Cannon Architects (Grand Island, New York), and bridge engineer T Y Lin of San Francisco. This curved suspension bridge with a central pylon (above right) would be, he says, "a plausible alternative to a disaster". The bridge to be twinned, he says, "is very ugly, old technology, old steel and not worth restoring". His US$85 million scheme would replace it.

Gale Johnstone, executive director of Community Foundation for Greater Buffalo, invited New York-based Ammann & Whitney consulting engineer and the Louis Berger Group of East Orange, New Jersey, to evaluate a number of suggested designs. Christopher Gagnon, vice-president of Ammann & Whitney, will present the findings at the meeting. AW

Latin America's largest resort on site

BRAZIL

Brazilian practice André Sá & Francisco Mota Associates has designed what is thought to be the largest tourist and entertainment complex in Latin America. The fast-track US$200 million Costa do Sauipe Resort is under construction on a coastal site, 70 kilometres north of Salvador. The resort comprises five hotels, six themed "inns", Vila Nova da Praia – a village based on traditional local design, as well as banking and retail facilities spread over a 172-hectare site. The complex also includes convention facilities for up to 2,000 people. Costa do Sauipe is being funded by PREVI, the pension fund of Banco do Brasil. It will open on 2 July 2000. RA

In brief

USA

Celebration of new urbanism

The US "New Urbanist" movement is gaining ground – over 24,000 hectares of it. Last year *The Truman Show* brought the neo-traditionalist Seaside, the grandaddy of these planned suburban communities, to the big screen. Then the Disney imagineered town of Celebration in central Florida became the subject of two new books. Now Richard Rummell, one of developers of Celebration, has branched out to form the St Joe Company, which will build Southwood on an enormous hilly tract of land outside Tallahasee. Breaking ground before the end of the year, Southwood residential project will hark back to the utopian communities of the 19th century and include an industrial park. The first phase of the development will cover over 2,000 hectares.

USA

Reiser + Umemoto win high-powered prize

Reiser + Umemoto (R+U), the highly regarded young firm led by husband and wife Jesse Reiser and Nanako Umemoto, has won the DaimlerChrysler Award. Formerly the Chrysler Award for Innovation in Design, the prize is awarded to six innovative designers from fields ranging from new media to fashion. R+U was recently selected as one of the five finalists in the Canadian Center for Architecture's competition for Manhattan's West Side – won by Peter Eisenman (*WA*79 page 19). Judges, including Frank Gehry and Philip Johnson, applauded the team's innovative vision for the site. The award includes a US$10,000 prize. The trophy itself was redesigned by two of last years recipients, architects Billie Tsien and Tod Williams.

ASIA PACIFIC

New contracts

PRC

RTKL Associates has won the contract to undertake the interior design for the recently completed Hubei Stock Exchange. The 22-storey, 21,000-square-metre scheme will be carried out by the firm's Washington DC and Los Angeles offices. The stock exchange was designed by the **Chung Nan Design Institute**.

TOKYO

Australian practice **SJPH Design** has won an international competition for a US$10.5 million underground tourist entertainment complex in Shanghai. The 647-Shanghai Pujiang Tourist Tunnel Entertainment Project will run under the Huangpu River, linking the Puxi and Pudong districts of the city. The project is the first under-river pedestrian tunnel in China.

PRC

Taisei Corporation of Tokyo, has been commissioned to design a 27,000-square-metre, six-storey expansion of Sony Music's Tokyo headquarters. Construction on the US$41 million scheme will start in February 2000, with completion 14 months later. Amazingly, more than 75 per cent of Sony's budget for the expansion has been swallowed up by the high cost of land in the Japanese capital. The cost of the 4,450-square-metre plot, in the centre of Tokyo is US$123 million.

AND ELSEWHERE . . .

The US State Department has selected **Tai Soo Kim Partners** to design the new US$42 million US embassy complex in Tunis. The firm, based in Hartford, Connecticut, has been contracted to produce a masterplan for the 9-hectare site, as well as three new-build structures with a combined floor area of 7,500-square-metres.

What a song and dance

Jørn Utzon agrees to draft new Opera House outline

AUSTRALIA

After a 32-year absence, Jørn Utzon, the man who gave Australia its icon, will again apply his mind to the Sydney Opera House.

In a huge coup for the Opera House Trust and Australia, Utzon, who left Australia in despair when only the famous white shells were complete, has agreed to draft a statement of design principles outlining his philosophy. The statement will inform all future work on his masterpiece.

Utzon's 1966 departure followed a debacle with the New South Wales government, which insisted that he had resigned. Utzon claims that he was forced to go because he did not have the funds to run his office anymore.

The chairman of the Opera House Trust, Joe Skrzynski, says the statement will become a blueprint to set the context for all future work.

It will be the framework within which Denton Corker Marshall will work to correct the shortfalls that have become apparent in the 25 years that the building has been open. Few, if any, of these shortfalls are attributable to Utzon, because the interiors were carried out by architects brought in after his departure.

Among the problems are the discomfort of the orchestra pit in the Opera Theatre, the acoustics of the Opera Theatre and the Symphony Hall, and disabled access. AS

Successful exhibitionists

Japanese/Chinese joint venture beats competition

JAPAN

A joint Japanese/Chinese design team has won the competition to design an exhibition centre in Hailkou, capital of Hainan Province.

The province, occupying Hainan Island off China's southern coast near Vietnam, is one of China's largest" special economic zones".

Tokyo-based Ishimoto Architecture and Engineering Firm and Wuzhou Engineering Design and Beijing's Research Institute beat six other international teams with its scheme arranging three wings of the exhibition centre around an existing opera house, a solution the review committee deemed "harmonious" (see pictures right).

The 70,000 square metres of exhibition space can be subdivided into smaller, flexible exhibition spaces. The design team is working on final design.

The project will be split into three phases for construction with work on the first to start by the end of 2000, with completion by July 2000. DN

Grollos are back

AUSTRALIA

The family of developers behind Melbourne's aborted Grollo Tower is pursuing a new record-breaking project.

Grollo Tower, by Denton Corker Marshall, was to have been the world's tallest building at 560 metres. But the plans stalled because of a dispute over an upfront payment to the state government. The dispute may yet be resolved, but in the meantime the Grollos have lowered their sights to just designing the tallest building in Melbourne.

With architect Nation Fender Katsalidis, the Grollos are proposing an 80-storey, 270-metre high residential tower. Assuming everybody reads the contractual small-print the tower will be complete by 2003.

The new building, Eureka Tower, is taller than the city's existing tallest building – Rialto Tower, another Grollo family project. AS

Yet another tall story

PRC

Work on the stalled World Financial Centre in Shanghai will resume next year.

The Kohn Pedersen Fox-designed tower was the most high-profile victim of Shanghai's construction overload earlier in the year.

The news that Japanese developer Mori Building has the funds to complete has surprised analysts, who did not expect completion before 2005. Minoru Mori, company president, says that it is evidence that Asia's economic troubles are easing.

The financial centre has been slightly redesigned, making it even taller than the planned 460 metres. Mori refused to say how high it will be: "We can't announce it yet, because people might want to surpass it again," he explains. (See also "This month's tallest building" page 26.) AM

Letters

Cup of cheer

From Chun, Young-Il, media director, Korean Organising Committee for the 2002 FFIF World Cup

Regarding your article (*WA*80 page 92 "Bidding to build or building to bid?"), I would like to point out two facts. With regard to the construction schedule (of the World Cup stadiums in Korea), all are progressing smoothly either on schedule or ahead of schedule, except Pusan which is slightly behind.

As for the construction funding, there is absolutely no problem – Korea has not "overstretched itself". The funding is not made in a single year but rather spread over a period of three to four years. We are confident that we will be able to meet the goal without any difficulites, particularly with the rapid economic recovery Korea has been showing since the beginning of this year.

For your interest, of the 10 World Cup stadiums in Korea, five receive partial funding from central government, with the rest entirely funded by local government.

The Thai-d is turning

From Huang Soi Keh, student of architecture, Bangkok University

What a shame to see that the Herne-Sodingen Academy marks the end of building at the IBA Emscher Park (Duisberg, Germany). But what an achievement that what started out as a provincial urban regeneration initiative has produced some of the most inventive and liveable energy-efficient architecture in the world. Let's hope it bodes well for local green design in the future – Europe still has some catching up to do.

South African praise

From Cobus van den Berg, WS Atkins Overseas, Abu Dhabi

I am an architect originally from Cape Town currently working in Abu Dhabi. I am a dedicated reader of *World Architecture* and I find the statistical comparisons on a global level highly informative. I specialise as a concept designer, and as a primary design publication the magazine is stimulating and inspirational.

Thank you for the huge contribution *World Architecture* is making towards the global architecture arena, allowing architects across the globe to constantly be aware of developments world-wide.

Errata

The photographs in *WA*80 (pages 84-85) of the Safeco Stadium, by NBBJ, Seattle, were taken by Lara Swimmer/Swimmer Photography. *WA* apologises for this error.

The photograph on page 55 of *WA*78 captioned "CAD view of Wong Tung & Partners' masterplan" (for the Hong Kong Cyberport) was in fact City Plaza in Shenzen, another Wong Tung project.

WA welcomes letters from readers. Please send them to the editor via email: Nicola_Turner@tbg.focusnet.co.uk or fax: +44 171 560 4191.

WA Top 300 – Survey of the world's largest architecture and design firms

World Architecture's exclusive survey of the world's largest architecture and design firms is in its seventh year. Compiled with data received directly from the architects, *WA*300 is a must-read guide to who has been doing what, where and when. Find out which firms have merged with which, and what effect this has had on the ranking tables, and come face-to-face with the new number one.

We will also be predicting trends and developments for 2000. Will the US economy celebrate its longest-ever period of sustained growth in March 2000? And if so, will the confidence spill over into the rest of the world? Are there signs of an economic upturn in South-East Asia?

And what's happening in Japan? Reports from the country which acted as the world's economic pulse in the 1980s, and which this year has been home to five of the top ten largest firms, suggest that all is still not well in the land of the rising sun.

The year in review

In 1999 architectural debate has spilt over from architecture circles into the public domain more than ever. In Germany, Daniel Libeskind and Norman Foster realised talismanic projects at the end of one of the most momentous decades in world history. The Jewish Museum and the Reichstag are the two most acclaimed projects of the year – and Germans have welcomed these heavyweight additions to their cultural, architectural, not to mention socio-political, heritage.

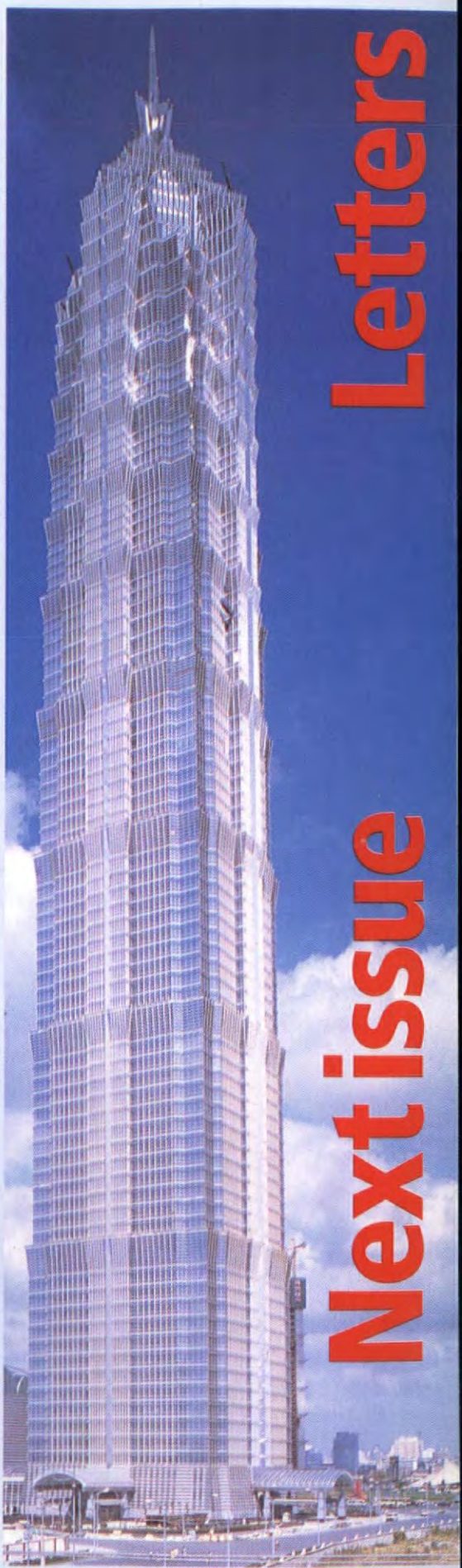
In England, the amount of money spent on Richard Rogers Partnership's Millennium Dome approached $500 million, while the number of tickets sold on the first day of availability approached a mighty 25 – the public waits anxiously to see if the Millennium Exhibition which the Dome will host is going to be a flop.

Battles of civic and political egos continued between Chicago, Melbourne and Hong Kong – but it looks as though they will all lose out, with the world's tallest building accolade heading to São Paulo and the Maharishi movement, for the time being at least. And the completion of Stadium Australia and the Sydney 2000 Olympic complex even sparked Australians into fervent discussion of the architectural symbolism of lightweight steel and fabric structures.

World Architecture looks back, discussing the major stories of the year and developments in the countries featured in our 1999 Regional Focus reports.

Technical – Office environment

Designing the inside of a house is interior design, but designing an office is business consultancy, or so such pioneers of the office environment as HOK Consulting and DEGW have been saying for years. Now that pontificating over business efficiency is an established profession, designers really do have their part to play. *World Architecture* asks what this shift in approach is having on the finished product, and looks in detail at HOK International's new self-designed base at Oxford Circus, London, as well as other international projects.



Above: The biggest and the best of 1999: SOM's Jin Mao Tower? Arguably. The next issue of *World Architecture*? Indubitably.

Analysis

You're so transparent

European government buildings have made headlines in 1999, and not always for the right reasons. Few have a good word to say about the European Parliament in Strasbourg, with some brave souls even daring to criticise Foster's revamped Reichstag. Adam Mornement looks for common denominators behind the complaints, and asks whether transparency really is a metaphor for democracy.

G Fessy

Above: The US$410 million European Parliament, Strasbourg, opened in August. For the first time, the spirit of the European Union was crystallised in built form

"Fascism is a glass house into which all can look ... there is no encumbrance, no barrier, no obstacle between the political leaders and the people." This was how Giuseppe Terragni, architect of Mussolini's Fascist Party headquarters in Como, interpreted the relationship between ideology and glass in 1936.

Mussolini and Terragni used glass to challenge the centuries-old belief that government edifices should be adorned in heavy stone-work and steeped in notions of permanence and impregnability. The symbolic value of, what was then, an expressly modern material to a political party of revolutionary intent is there for all to see. But over 60 years later, architects are still struggling with the metaphorical associations of marrying transparency and politics.

See what I mean?

The new US$410 million European Parliament opened in Strasbourg at the end of the summer.

Designed by Paris-based Architecture Studio Europe, the parliament is the first built representation of a unified Europe. As such, it was always going to be open to criticism. From dysfunctional lifts to dubious green credentials, the press had a field day.

"Somehow, it seems almost appropriate that, born as a result of a political fix, [and] costing the earth, as yet nothing in it seems to work. You don't have to look far to find metaphors here," said one British newspaper – possibly alluding to the fact that members of the European Parliament will only actually use the building for 60 days a year. But what does the looming glass and steel edifice actually say about the practice of politics in the European Union?

Architecture Studio Europe explain that the aim of the design was to "reflect EU transparency, incarnate the idea of democracy in motion, and escape an architecture which runs the risk of totalitarianism by its scale alone". The curving glazed facade, which looks out imposingly over the River Ill, actually resembles an immense office block.

Jane Loeffler, author of *The Architecture of Diplomacy – Building America's Embassies* (Princeton Architectural Press, 1998) explains that the idea of governments projecting themselves as corporate institutions is nothing new. "American architects began to adopt the office building ideas of Le Corbusier and other Europeans in the 1950s and 1960s, and apply them to [US] government buildings," she says.

Lawrence Vale, author of *Architecture, Power and National Identity* (Yale University, 1992), takes up the point: "In many ways, the new European Parliament is a logical extension of the idea [of corporate imagery]. After all, it is the headquarters of a multi-national... literally."

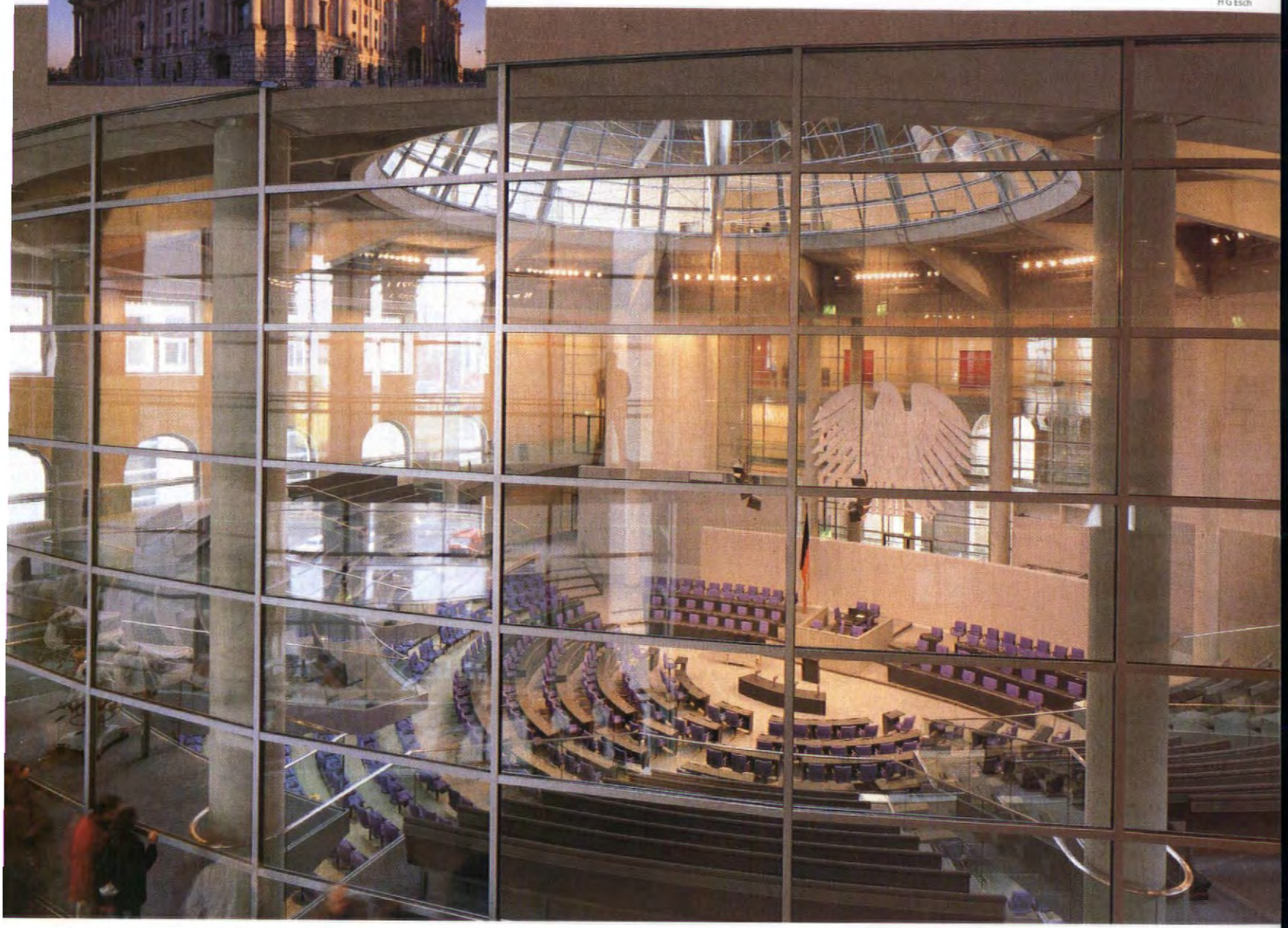
But the European Parliament is not just projecting the idea of the EU as streamlined, hyper-efficient and hierarchical. Vale also suggests that it was designed as an expression of neutrality. As governing bodies go, the EU is still in an embryonic state. Indeed, much of the criticism levelled at the EU at the opening of the parliament was based on a widespread confusion about what the EU actually does, and who it represents.

So, from fascism to corporate culture to global nothingness, are governments today unsure how to they should ask architects to crystallise their intentions in a single building? And if so, what chance did Architecture Studio Europe have of getting it right anyway?

A bit of both

The Reichstag embraces this confusion. Foster and Partner's wholesale renovation of the Berlin landmark is a blend of both styles and metaphors.

When he was awarded the commission, Lord Foster was confronted with the remnants of a classic, pre-20th century government building – a mass of stone-clad monumentalism. His addition of an elaborate, glazed cupola, (the one that's dominated the covers of architecture magazines all year) has been lauded as the symbol of a unified Germany – few critics commented on the quality of the renovated stonework.



H G Esch

Main picture: The debating chamber at the Reichstag is flooded with natural light from the glazed cupola. **Inset:** Few commented on the quality of the restored stonework when Foster and Partners' renovation was unveiled

The presence of a transparent feature (however cosmetic) does add a necessarily humble sense of fragility to a building synonymous with the Third Reich. The practicality of exposing the debating chamber to natural but changing light has been lost on some of the people who actually use the building. Television executives have complained that it's no good for television broadcasts, so in session the chamber is bathed in the sweaty glow of studio lighting. "We have to get the focus on to the work of the government," says one member of parliament newly installed in the Reichstag. Since it opened the Reichstag has become Berlin's premiere tourist attraction. (See also News page 29.)

Of course, the Reichstag's cupola cannot be read in the same way as the glass in the European Parliament, but the Reichstag is an exceptional building in an exceptional city.

Trends end

Next year, at least two more parliament buildings will go on site in Europe. The Richard Rogers Partnership-designed National Assembly for Wales in Cardiff and the Cypriot House of Representatives, designed by Kohn Pedersen Fox, in Nicosia. Both are state-of-the-art transparent buildings. As KPF's press statement says: "Like many of its contemporaries, the new Cypriot Parliament has been designed to espouse the importance of accessibility and the accountability of modern democracy." The trend will have to end somewhere. To this end, a look at events in the US is instructive.

"The European Parliament is a logical extension of the idea [of corporate imagery in parliament buildings]. After all, it is the headquarters of a multinational."

Since SOM's heavily glazed US embassy in Ottowa opened in September, critics and residents have complained that it is isolated from the people it's intended to serve – it is set back 100 metres from the street as an anti-terrorist measure. As Lawrence Vale says: "The more you show openness through using glass, the more you must compensate through other means." WA

WA83 will include an analysis on government buildings

News in pictures

Moneo on the rocks

Below: The Kursaal Congress Centre and Auditorium, in San Sebastián on Spain's Basque coast, is wrapped entirely in translucent glass, reminiscent of Frank Lloyd Wright's Johnson Wax Building

by David Cohn

The Kursaal Congress Centre and Auditorium, Spain's news cultural attraction and the latest work by Rafael Moneo, received a glamorous debut this autumn as host to the International Film Festival of San Sebastián.

For two weeks it was a daily feature on televised news reports from this elegant Basque seaside resort, with pictures of Hollywood stars waving to the crowds against the dazzling backdrop of its opalescent glass walls.

Conceived 10 years ago after a limited competition, the Kursaal remains a strikingly contemporary and original design. Its two auditoriums, wrapped entirely in glass, rest on the city's famous La Concha Beach at slightly tilted angles, like stranded ships or boulders, each pointing towards one of the two hills that frame the city's magnificent bay. Moneo's design resolves the site's challenges, in terms of urban scale and the context of the city's seafront, with volumes based on the abstract sculptural terms of the landscape.

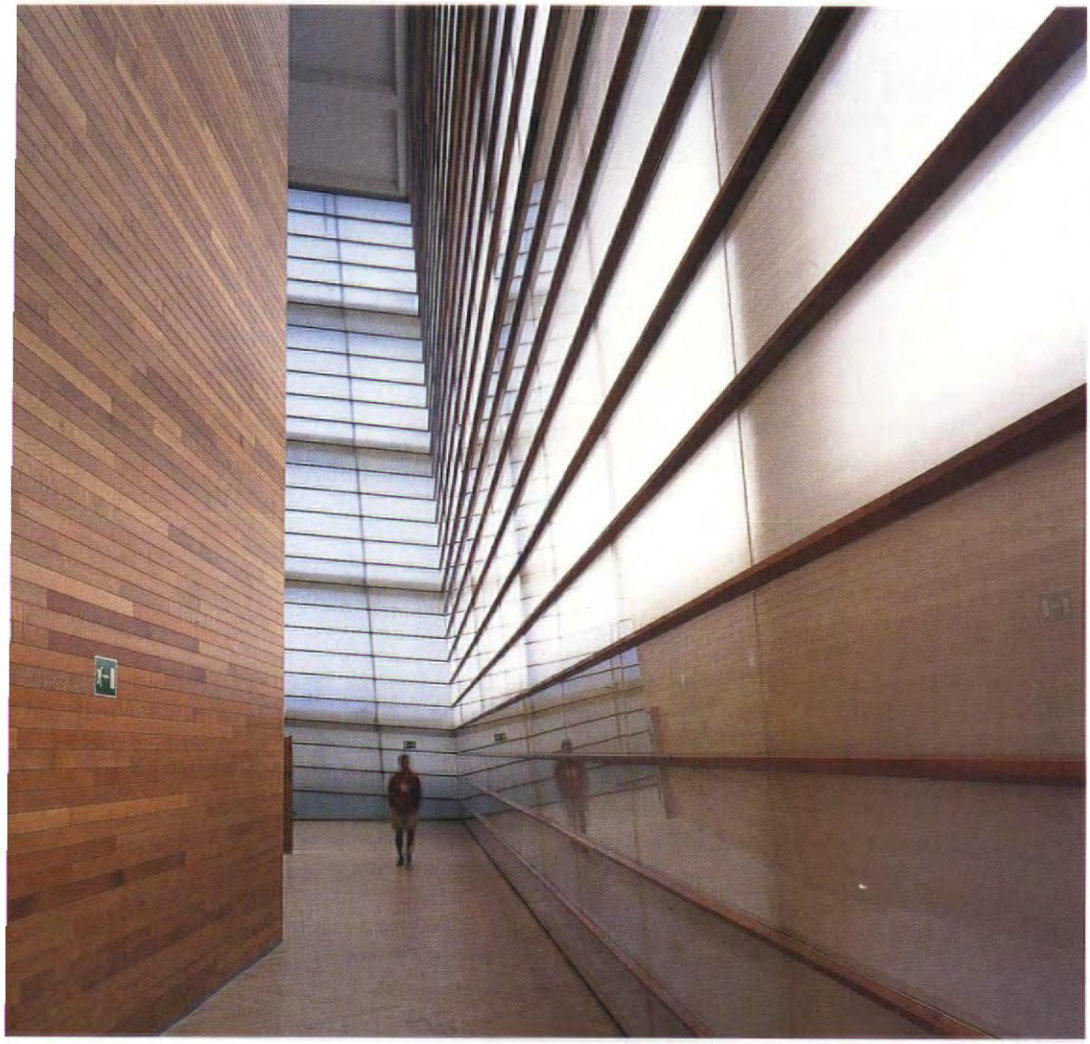
Moneo uses the glass cladding like masonry. Its curved horizontal strips, reminiscent of the tubular glass at Frank Lloyd Wright's Johnson Wax Building, are fashionably translucent, as if clouded and softened by sand and surf, though they are actually composed of pressed tiles. They form a thick double wall that encloses the cedar volumes of a 1,850-seat concert hall and a 600-seat chamber music hall. The auditoriums sit on a low plinth containing foyers, services, meeting rooms, a 1,000-square-metre exhibition hall, a luxury restaurant with banquet facilities, and shops which open on to the street.

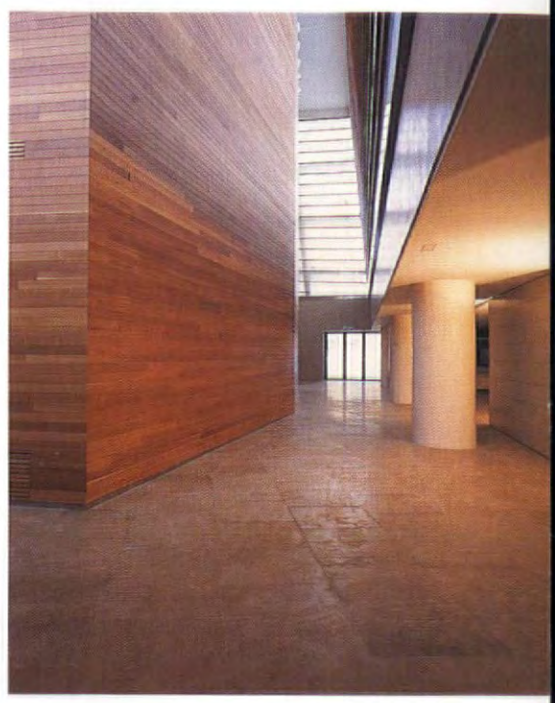
The Kursaal is named after the casino that originally stood on the site. Built in 1922 in a grandiose *Belle Epoch* style, it was closed only two years later due to a ban on gambling, and languished until its demolition in 1972. Plans to redevelop the site were unsuccessful, and it passed into the hands of the city in 1976. For the 1989 competition, Moneo beat five other invited participants: Juan Navarro, Mario Botta, Norman Foster, Arata Isozaki, and the team of J A Corrales and Luis Peña – winner of an unrealised 1973 competition for the site.

The combination of cultural and business programmes in a single facility is a popular formula in many Spanish cities. The Kursaal faces competition from the Euskalduna Congress and Music Centre in nearby Bilbao, also opened this year (see *WA*77 pages 34-41), the festival Theatre of Santander, Vitoria's Europa Palace, and a future centre for Pamplona, a project won in competition this year by local architect Francisco Mangado.

The Kursaal's managers hope to

Below left and right: Abstract, sculptural forms, inside and out, reflect the surrounding landscape. The tilted auditoriums are wrapped in rich cedar and protected from the elements by double-thickness glass strips



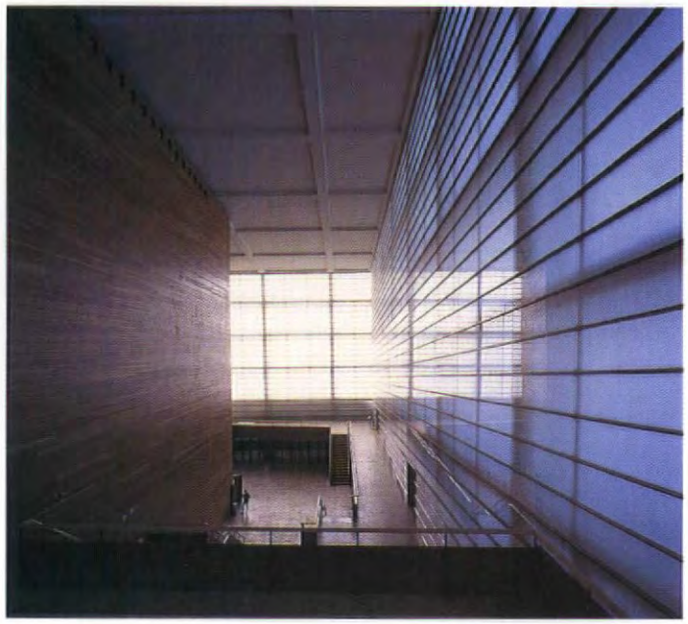


Inigo Bujedo Aguirre

turn this proximity into friendly rivalry and cooperation. They anticipate a certain knock-on effect in terms of commercial exposure, particularly with Bilbao's Guggenheim Museum, only 75 kilometres away.

The cost of the Kursaal's 50,000 square metres was US$56.25 million. The project was built without a general contractor, to lower bid prices and overheads. It was financed by a consortium of the city, the province of Guipuzcoa, the Basque regional government and the central government. The managers hope to make it economically self-sufficient within three to five years' time.

David Cohn is WA's Spain correspondent



Left: The auditoriums rest on a low plinth, housing foyers, services, meeting rooms, a 1,000-square-metre exhibition hall and access to street level

Books

Professor Mario Gandelsonas' X-Urbanism is the latest in an illustrious line of glamourous New Urbanism texts. Andres Duany, one of the founding fathers of the movement, offers an appraisal.

Academic polemic

X-Urbanism – Architecture and the American City. By Mario Gandelsonas. Princeton Architectural Press, New York, US. 200 pp. 40 colour and 140 b&w illustrations. US$37.50 Sfr 54 DM65

By Andres Duany

Whatever one may think of the New Urbanists, this much may be fairly granted: they seem to have made urbanism glamourous again. Excellent designers who once seemed militantly content with creating *petits objets precieux* now bestride the literature with colossal urban proposals. Among these is *X-Urbanism*, by Mario Gandelsonas.

Professor Gandelsonas, of Princeton, states that *X-Urbanism* has taken 15 years to prepare, and indeed the result confirms an enormous time investment; this is in evidence as both an exhaustive exploration of the subject and a methodology now completely out of date.

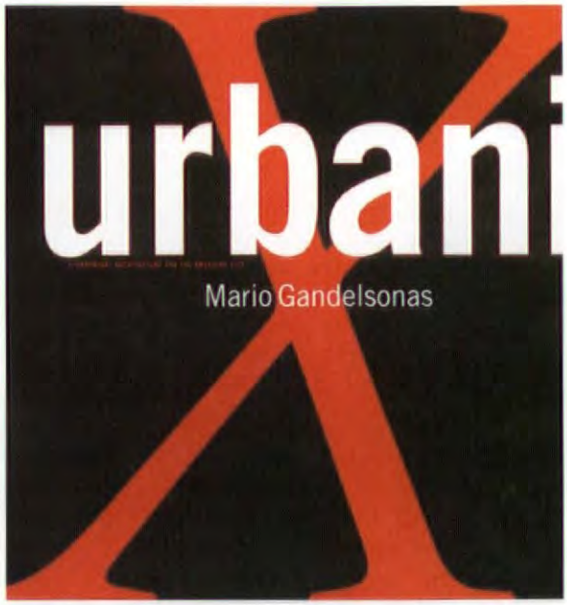
X-Urbanism consists of two sections. The first is a decent history of American urbanism and the second a series of beautiful graphic representations of urban thoroughfare networks. The two sections are only loosely related as the thesis of the second part is this: that it is an interesting and appropriate phenomenon that urban grids vary and interconnect in different ways, especially in America. Now, this is an elemental treatise, even in a field which supports simple-minded theory like no other. But that is perhaps to complicate matters. No concept is necessary to justify the beautiful series of diagrams so obsessively created, as long as nothing much is claimed for them. More about this later.

The historical section that precedes brings the American city to the cutting-edge present, while proving the credentials for the neologism "X-Urbanism". This is an intriguing term of reference, at least compared to the clunky but explicit synonym 'conventional suburban development' that the New Urbanists have been wielding.

This text is grounded in the reality, and thus useful, although substantially less entertaining than either Milosav Sudjic's nihilistic *Hundred-Mile City* or Rem Koolhaas' poetic kiss of death for Atlanta, both on similar projects. Anyone actually wanting to find out how its really done should take to Jonathan Barnett's books, among which *The Elusive City* and the *Fractured Metropolis* stand out in their rare combination of know-how and literary quality.

The term "X-Urbanism", as I have said, is catchy. It has been absorbed into the omnivorous lexicon of the New Urbanism, appearing in the conceptual vicinity of Joel Gareau's *Edge City*. These lexical definitions differ from those of their authors only in their interpretation, as they appear crossed out (in the manner of Le Corbusier), along with other terms for practices that generate social and environmental problems. This is typical of the current debate in America. The reform-minded New Urbanists see suburban sprawl, aka X-Urbanism, as a pervasive practice to be rooted out, while Professor Gandelsonas tries to maintain a proper, non-judgmental stance.

Suburban practices in America may well be an exhilarating discovery to the academy, particularly because they seem to be so excitingly out of the control of the architect, who is thus liberated to be "irresponsible", as Koolhaas suggests. And exciting it would be, except that the American suburb being out of control is a conclusion that could only be reached by theoreticians with no experience as engaged designers. In fact, everything about suburbia is prescribed with precision, albeit by methods not encountered in the libraries of



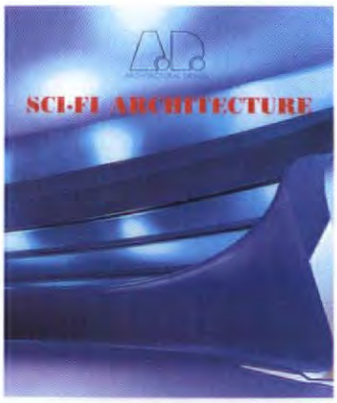
the academies. Powerful, dumbed-down, permeating determinants such as the manuals of the traffic engineers, environmental laws, the codebooks of the planners, the focus groups of the housebuilders and the checklists of the mortgage bankers, all fall outside the vision of the learned, amateur urbanists, including Gandelsonas. But such Marxist surveys are flummoxed by the unaccountably high quality of life that the American developer delivers to the average American worker. Without understanding such things, no text can be useful.

Professor Gandelsonas' take is different. X-Urbanism is an intellectual period piece, a reminder of the good old days at the Institute of Architecture and Urban Studies where exhaustive formalist analysis seemed to matter desperately. But a practical text it is not. X-Urbanism purports to engage in the public discussion that accompanies urban-scale decisions, but it palpably cannot. It utterly lacks the common touch. In fact, it achieves the opposite: a simple tactic, that of the connective network of thoroughfares, is made complex. Thus, Gandelsonas adds support to Jane Jacob's truism: "...although city planning lacks tactics for building cities that can work like cities, it does possess plenty of tactics."

The second half of *X-Urbanism* consists of many handsome diagrams of street grids, coloured, and with a three-dimensional implication. These did once, years ago, seem interesting mainly because they claimed to be computer-generated and rather daringly photographed directly off the video screen. Alas, computer technology has roared by, leaving Gandelsonas to play pick-up sticks in the dust. Everyone else is simulating cities interactively. How easy it is for an academic, under the time investment required for thickening a treatise, to become an inadvertent Luddite. It is in this section that Professor Gandelsonas has been completely taken over by events. Why would an urban analysis methodology be confined to laboriously constructed drawings, when there is now Russian spy satellite imaging commercially available? If one just wanted to analyse grids, the colouration, which is arbitrary with Gandelsonas, could serve a useful purpose, such as Bill Hillier's method analysing the density of connectivity as colours become more saturated at the most permeable parts of the urban tissue. That, at least, can help one decide the mundane but elusive question of where shops should go, or to put it in highbrow, those sectors with the greatest socio-economic potential. And finally, nothing beats the magnificent US geodesic survey maps for integrating the complexities of nature into the picture. This is a rather important aspect of urbanism for which Professor Gandelsonas has not yet devised graphics.

What, then is left for all the effort? "X-Urbanism" – a perfectly good term, perhaps worth the price of the book.

Andres Duany is a partner at US-



Future isms

Sci-Fi Architecture. Edited by Maggie Toy. John Wiley & Sons, Chichester, UK, London, UK. 112 pp, illustrated b&w and colour throughout. US$30.00 £19.99

By James Fitzpatrick

As the title suggests, one expects to be dropped into a world of surreal imagery, the joining of the visual world of *Alien* with the vivid mind of Stanley Kubrick. You will not be disappointed.

The beginning of the journey is marked by a seductive Kovac Malone image. A well-written editorial finishes short, using the method of a dictated round table discussion to fill us in on the myth of High Tech, and the rebirth of sci-fi. Why not continue the imagery and supply this discussion on CD, viewable on our personalised sculptured IMacs, in quadraphonic splendour?

Well-written essays by Iann Barron, Robert Maxwell, Rachell Armstrong, and a long-winded Karin Damrau set the scene and deserve the luxury of a slow read.

Our first view of the goods is the AT&T Atlantic Olympic Pavilion. Remember the games? Yes, well as the writer states, it's a harping back of the "dreams of architectural activists of the 60s..." Move on...

Kolatan/MacDonald Studio shows us imaginative examples of urban planning for 5th Avenue New York. The concept of expanding horizontally, linking and merging the mid-air roofscape is explored with seductive computer collages. More please... This is followed by their vehicle project for the San Francisco Museum of Modern Art. This work actively explores the relationship of vehicles through the experience of objects. I admit to being joyfully lost in search of meaning.

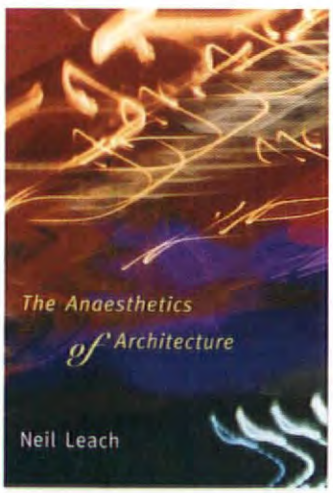
A mixture of built works follows from the offices of Takasaki Masaharu, Schneider and Schumacher, Bernard Tschumi and others. While very interesting, I fail to see an architectural blending of science and fiction. Well resolved, beautifully executed, seductive images of High Tech – but...

The last half is what we want. Van Berkel & Bos lead the repocharge through a "wormhole" of responsiveness. An exciting group to watch. Coop Himmelb(l)au continues with the "buoyant and changeable" CLOUD#9 project, too quickly followed by Foreign Office Architects' statement, "...not interested in the future, but in the virtual, as a source of new architectural possibilities".

Kovac Malone finishes the ensemble with a collection of work morphing between a Queen Street Bar and a Little La Trobe Street apartment building. The written word tries to follow this visual orgasm, to no avail, but leaves the reader in no doubt who leads this search of thought.

Another well-written, well researched AD/Wiley publication, and a worthy extension to one's virtual matrix of reading material.

James Fitzpatrick is a senior designer with Rice Daubney, in Australia



No pain no gain

The Anaesthetics of Architecture. By Neil Leach. MIT Press, Massachusetts, US. 120 pp., 30 b&w illustrations. US$16.50 £9.99

By Tom Leslie

The role of the image in architecture has been a primary theoretical concern since the rise of photography, and in the current age of instantaneous communication, the cultural and social effects of the superficial have aroused predictably intense discussion. Neil Leach, director of architecture and critical theory at the University of Nottingham, has added a coherent summary of these issues in practice and theory.

Leach's argument is organised around five essays, each examining an aspect of architecture's cult of the image. Baudrillard's notion that the proliferation of information has paradoxically diminished meaning is Leach's starting point, and theorists as diverse as Walter Benjamin and Guy Debord are involved in the construction of his thesis. Leach's fundamental point is that the "saturation of the image" noted by Baudrillard has infected architectural discourse, erasing traditional notions of ethics and morality. A cocoon of surface imagery has thus subsumed the socio-political role of architecture, and so-called "revolutionary" architecture has actually been co-opted by economic forces to create an "anaesthetising" architecture which seeks to eliminate critical discourse.

This argument is presented efficiently, and the book is quick to isolate problematic examples of this unwitting alliance. Using Benjamin's description of fascism as the "aestheticisation of politics", Leach quickly focuses on the recent work of Lebbeus Woods, in particular his project for the ruins of Sarajevo. Leach finds that behind this "veneer of sympathetic rhetoric" lies just such an aestheticisation, a "fetishisation" of tragedy that is, in Leach's view, equivalent to an intellectual war crime.

Similar criticism is applied to Venturi's *Learning from Las Vegas*, and Kevin Rhobotham's *Form to Programme*, in which Leach detects a slick intellectual slope that allows surface appearances to be fetishised, or divorced from their social consequence. Leach again turns to Baudrillard to show that this mode of production conceals a reactionary politics. In each case, forces of conceptual "seduction" are linked to forces of consumption. Leach examines the similarities between such seductive works of architecture and those of advertising, where the work must anaesthetise and seduce the consumer. The notion of a surface, or "veneer" of seductive image over an interchangeable socio-political message can even, Leach concludes, apply to philosophy's relationship to architecture.

This discussion falls short on two minor counts. First, his dependence on the Situationist argument that capitalism has eliminated "genuine ontological experience" ignores a trend in philosophy that dates to Berkeley, Hume, et al. Leach's argument thus fails to address a history of "seductive" architecture dating back to Piranesi and Boullée. Second, after lamenting the hegemony of the image in architecture, Leach does not speculate on potential courses of resistance. His argument therefore falls into a purely analytic camp, one that is in danger of being exploited as theatrical rhetoric.

Despite these flaws, *The Anaesthetics of Architecture* deserves reading as a concise summary of current theoretical speculation. Leach successfully probes the consequences of architecture's intellectually irresponsible co-habitation with the cult of the image, and his admirably succinct essays should inspire precisely the debate intended.

Tom Leslie is an architect and writer in San Francisco

Events

Lectures, congresses and conferences

Austria

Metropolis Now! The Future of Global Cities/Global Cities of the Future

This seventh Viennese architecture congress will discuss architecture and culture in Asian cities, and assess them as a model for progress. From 5 to 7 November at the Architektur Zentrum Wien, Museumplatz 1, A-1070 Vienna.
Tel: +43 1 522 3115
Fax: +43 1 522 3117
email: azw@t0.or.at
Web: http://azw.t0or.at

Italy

Fourth International Festival for Architecture in Video

Organised by the University of Florence, the festival is designed to explore the documentary relationship between architecture and new means of communication, particularly the digital media. From 9 to 12 December, in Florence. Contact the International Festival for Architecture in Video, IMAGE, Via Scipione Ammirato 82b, 50136 Firenze.
Tel: +39 055 666 316
Fax: +39 055 624 1253
e-mail: image@architettura.it
Web: architettura.it/image

The Netherlands

9 + 1 Young Dutch Landscape Architects

This symposium on 2 November at the Netherlands Architecture Institute – accompanying its exhibition (until 2 January 2000) on the work of young Dutch landscape practices – will examine how new generations can contribute to future Netherlands landscapes. Contact the Institute at Museumpark 25, 3015 CB Rotterdam.
Tel: +31 10 440 1200
FAx: +31 10 436 6875
email: infor@nai.ni

PRC

Megacities 2000

Themed "Environment and Technology", this conference will explore the extent to which technology can be used to manage urban growth, and suggest initiatives for a sustainable post-millennium environment. From 8 to 10 February in Hong Kong 1999. Delegates must be registered by 31 December. Contact the Department of Architecture, the University of Hong Kong, Pokfulam Road, Hong Kong SAR.
Tel: +852 28592133
Fax: +852 255 96484
e-mail: fylfung@hku.hk
Web: http://arch.hku.hk/events/megacities2000

Spain

First World Congress of Granite in Architecture

Architects, engineers, even politicians will have their say about architectural granite at this congress in Vigo. The congress incorporates seminars, exhibitions and the Antonio Palacios Awards for the Use of Granite in Architecture. From 11 to 13 November. Contact Ana Montenegro, Montenegro & Associados, c/- arenal, 138 of 7, 36201, Vigo, Pontevedra.
Tel: +34 986 447 550
Fax: +34 986 447 551
e-mail: m.asoc@teleline.es

Architecture and design competitions

Italy

Milano 2001 Millennium

Milan City Council is inviting architects to design a two-storey construction to mark a new millennium for Milanese architecture. The key criterion is that the building will be at its most spectacular when lit up at night. The entry deadline is 30 December. Contact L'Arca Edizione, the Competition Secretariat of Milan 2001 IIIrd Millennium, Via Valcava, 620155 Milan, Italy.
Tel: +39 02 325 246
Fax: +39 02 325 481
e-mail: arca@tin.it

Japan

Sapporo International Design Competition 2000

This competition calls for designs for the city of Sapporo "characterised by the harmonious coexistence of humanity and nature". Categories include planning, environmental design, industrial design and graphic design. Entries to be submitted in Japanese or English by 31 January 2000. Contact the Secretariat of Sapporo International Design Competiton Executive Comittee, c/o Hokkaido Mirai Sogo Kenkyusho (Hokkaido Institute for Future Advancement), Sumitomo Kaijo Sapporo Bldg, 8F, Nishi 7, Kita 1 Chuo-ku, Sapporo, 060-0001.
Tel: +81 11 207 2630
Fax: +81 11 261 4882
e-mail: design@voicenet.co.jp

US

Parish church and shrine for Our Lady of Guadeloupe

Competition to design a church for Hispanic Catholics near Fort Wayne, Indiana, to accommodate a weekly congregation of 500. First prize is the contract for architectural services. Registration and submissions are due by 29 November. Contact Linda Furge, Jubilee 2000 Design Competition, Diocese of Fort Wayne-South Bend, 1330 Washington Center Road, Fort Wayne, Indiana 46825.
Fax: +1 219 483 3661
e-mail: lfurge@fw.diocesefwsb.org

USITT 2000 Architecture Awards

The United States Institute for Theatre Technology Architecture Awards honours excellence in the design of theatre projects. Built projects anywhere in the world can be entered, but submissions must be in by 2 November. Contact Paul Westlake, USITT Architecture Commissioner, van Dijk Pace Westlake Architects, 925 Euclid Avenue, Suite 1900, Cleveland, OH 44115-1407.
Tel: +1 216 522 1350
Fax: +1 216 633 1357
e-mail: Paul_Westlake@mail.culturenet.ca

Central California History Museum Design Competition

Two-stage open competition to design a new 4,500-square-metre, US$17 million museum in the town of Fresno. Architects must be registered or licensed to practice in the state of California. Entrants who

DEMNARK: COMPETITION

Arhus Harbour Area Competition

Masterplans are invited for regeneration of the harbour areas in the Danish provincial city of Arhus, which reconcile the environmental needs of the inhabitants and the commercial concerns of the city authorities.

The fast and free growth in the port during the last 50 years has neglected the architectural relationship with the masterplanned town centre and university. The brief calls for designs to recreate the traditional quayside identity of the centre without dampening the efficiency of the harbour.

One hundred and thirty hectares of land are to be reclaimed from the sea to allow the building of a new container port and other industrial facilities. The evntual aim is to encourage shipping activity out of the current port to enable it to be freed up for a quayside regeneration programme.

Specific concerns include efficient traffic circulation along the waterfront, the conversion of redundant port areas into recreation spaces, and sensitive housing planning.

The jury includes local planners and representatives of the Danish federation of architects. The prize fund is DKK 1,800,000 (US$250,000). Entries required by 13 December 1999. Contact Bent Kolind, Competition Secretariat of the Federation of Danish Architects, Strandegade 27A, DK-1401, Copenhagen K.
Tel: +45 32 83 69 00
Fax: +45 32 83 69 01
e-mail: konkurrencer@dal-aa.dk

reach the second stage will receive a prize of US$7,500. The registration deadline is 24 January 2000. Contact the Fresno Historical Society, PO Box 2029, Fresno, California 93718.
Tel: +1 559 441 0862
Fax: +1 559 441 1372
e-mail: fresnomuse@aol.com

Exhibitions

Cuba

The Havana Project – Architecture Again

This exhibition of architectural solutions to Havana's social problems, by internationally renowned architects including Coop Himmelb(l)au and Thom Mayne, has travelled the world for the last three years (see *WA*76 page 57). It will be in Havana until 9 January 2000, at the Centro Nacional de Conservacion, Restauracion y Museologica, Contento de Santa Clara, La Habana.
Tel: +537 612 877
Fax: +537 335 797

France

Casablanca – The Birth of a Modern Town Under the African Sun

Exhibition examining the development of urban spaces in Morocco's largest town, tracing the invention and implementation of an African modern architecture.Until 28 November, at the Arc en Rêve Centre d'Architecture, Entrepot, 7 Rue Ferrere, F-33000 Bordeaux, France.
Tel: +33 5 56 52 78 36
Fax: +33 5 56 48 45 20
e-mail: info@arcenreve.com
Web: www.arcenreve.com

The Netherlands

Kisho Kurokawa, Architect

This retrospective of Kurokawa's work – presented through models, drawings and photographs – takes place in the new Kurokawa-designed wing of Amsterdam's Van Gogh Museum (see *WA*76 pages 46-53) until 14 November. Contact the Van Gogh Museum, Postbus 75366, 1070 AJ Amsterdam.
Tel: +31 20 570 52 00
Fax: +31 20 673 50 53
email: info@vangoghmuseum.ne

Morphosis: Work in Progress

Dedicated to the work of Thom Mayne's practice, dealing with the idea that "silent collisions" between a building's local, historical and cultural contexts create a meaning for the architecture. Until 16 January 2000 at the Netherlands Architecture Institute, Museumpark 25, 3015 CB Rotterdam.
Tel: +31 10 440 12 00
Fax: +31 10 436 69 75
email: info@nai.nl

US

Design from the Heartland

The contributions of Mid-West industrial designers Henry Glass, Richard Ten Eyck and John Polivka to office, domestic and transportation environments of local enterprises will be on display at the Art Institute of Chicago until 27 February 2000. Contact the Institute at 111 South Michigan Avenue, Chicago, Illinois 60603-6110.
Tel: +1 312 443 3600
Fax: +1 312 443 0849

The Architecture of Graphics – Designs for SCI-Arc

A selection of posters by prominent designers to promote SCI-Arc, the US's independent school of architecture which, since its inception in 1972, has been spearheaded by the likes of Eric Owen Moss, Mike Davis and Thom Mayne. The work commissioned by the school over the years is intended to represent the active relationship between architectural and graphic experimentation, via the principal media of posters, books and film. At the San Francisco Museum of Modern Art from 19 November 1999 to 20 February 2000. Contact SCI-Arc, 5454 Beethoven Street, Los Angeles, California 90066.
Tel: +1 310 574 1123
Fax: +1 310 574 3801

US: EXHIBITION

Holding Light – Contemporary Glass Sculpture

Exhibition pushing the defining material of contemporary architecture to the limits of its expression. The exhibits range from intimate to architectural in scale, with the glass houses of Mayme Kratz a highlight. Until 31 December 1999 at the Austen Museum of Art, PO Box 5568, Austen, Texas 78763.
Tel: +1 512 458 8191
Fax: +1 512 454 9408

Damian Priour's 2m-high *Stoneliths* in limestone and glass on show at 'Holding Light'

Trade shows

France

Batimat France

French leg of the Batimat series of international construction trade fairs, at the Porte de Versailles Expo Centre, 8-13 November. Contact Miller Freeman, 70 Rue Rivay, 92532 Levallois Perret Cedex.
Tel: +33 1 48 13 54 71
Fax: +33 1 47 32 00 00
e-mail: anne_le-heude@unmf.fr

Taiwan

Taiwan Furniture

Organised by the China External Trade Development Council (CETDC) to promote international trade. From 8 to 12 March 2000. Contact Ms. Irene Tsai.at CETDC.
Tel: +886-2-2725-1111
Fax: +886-2-2725-1959
e-mail:furnex@cetra.org.tw

UK

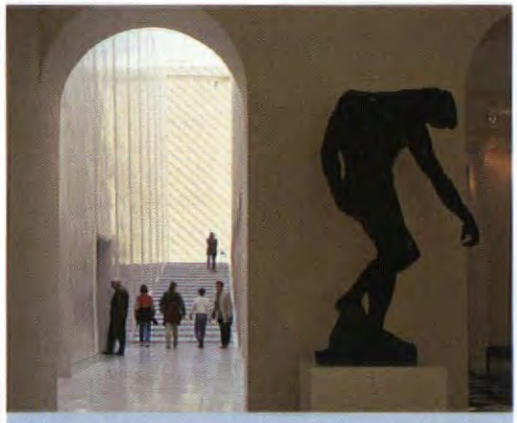
Nemex 1999

Show covering energy management and facilities management. From 17 to 18 November 1999 at the NEC Birmingham. Contact Inside Communications Media, 8th Floor, Tubs Hill House, London Road, Sevenoaks, Kent TN13 1BL.
Tel: +1723 464154
Fax: +1723 464454

US

AEC Systems Fall

This exhibition and conference for architects, engineers and contractors, will feature computer software and products, and seminars on design and productivity. From 9 to 11 November in Chicago. Contact AEC Systems
Tel: +1 800 451 1196
email: info@aecystems.com
Web: www.aecsystems.com



Jens Lindhe

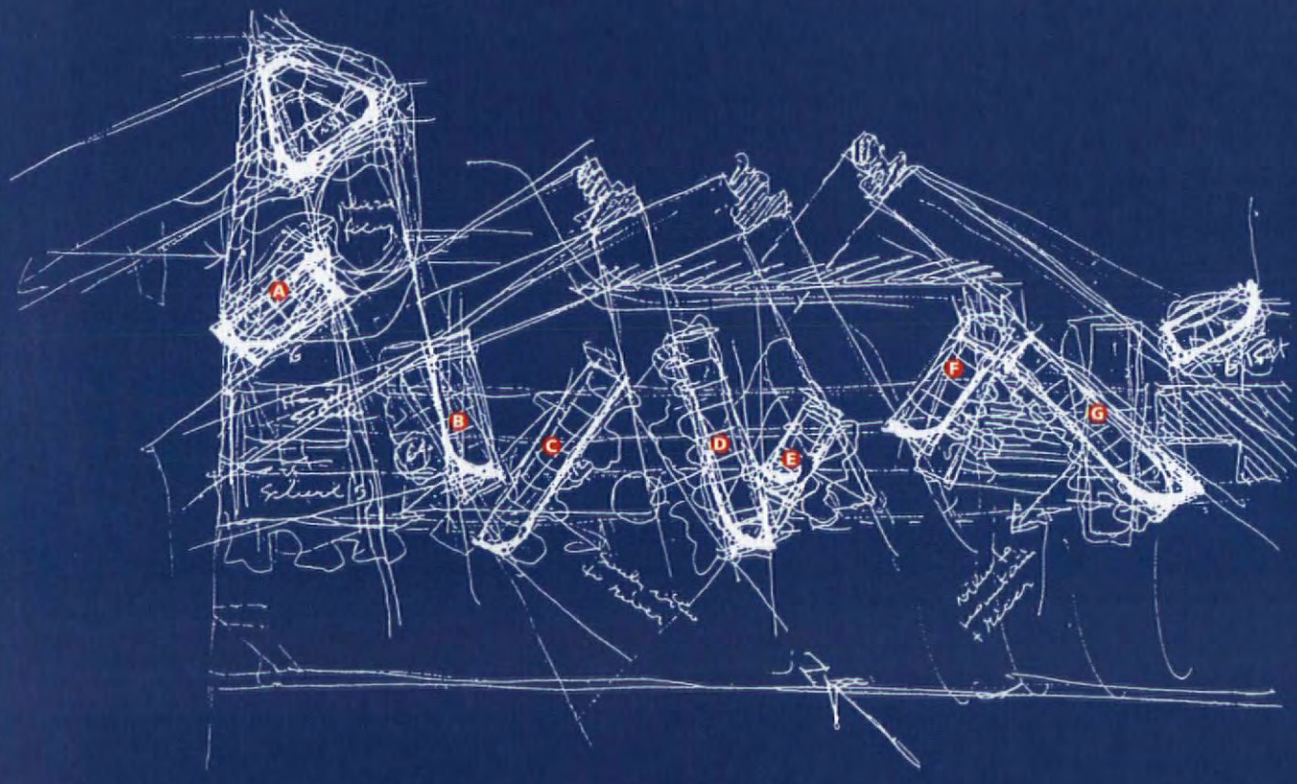
DENMARK: EXHIBITION

The Architects' Studio – Henning Larsen

The work of Denmark's internationally acclaimed designer and thinker will be presented in an exhibition space designed to evoke his studio. Larsen develops the functionality and purity of traditional Danish architecture with a sophisticated and contemporary formal idiom. From 12 November to 27 February 2000 at the Louisiana Museum of Modern Art, DK – 3050 Humlebaek.
Tel: +45 4919 0719
Fax: +45 4919 3505

Henning Larsen's acclaimed Ny Carlsberg Glyptotek (*WA*71 p68)

Homing instinct



Sketch of site
A Cineplex
B–G Accommodation blocks

Australian architect Harry Seidler was, in fact, born in Vienna. In September he returned for the opening of his community housing scheme, the Wohnpark Neue Donau. Liesbeth Waechter-Böhm reports on a very modern solution. Photographs by Eric Sierins

Building study

Above: Wohnpark Neue Donau , a major community housing scheme, is next to the Danube in Vienna. The complex comprises 800 apartments as well as civic facilities

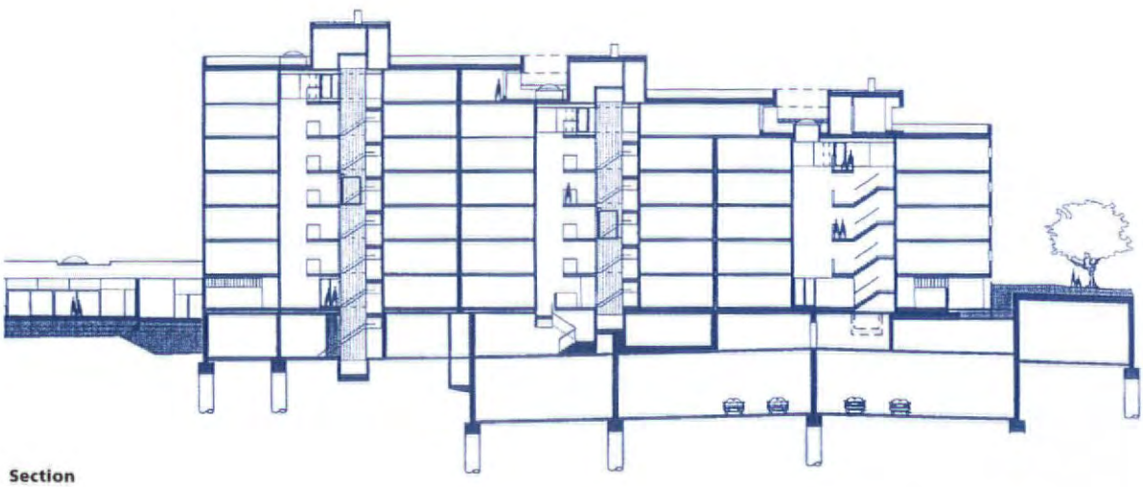
Left: Undulating curves on the balconies lend a sense of fluidity to the otherwise simple lines
Right: The kindergarten was designed by Seidler's local architect, Nehrer & Medek. Provision of child care facilities is standard in Viennese social housing

Residential accommodation with a view over the Danube is a rarity in Vienna. Especially as, until recently, the river hasn't so much flowed through Vienna as around it. But with the opening of Harry Seidler's Wohnpark Neue Donau things have changed. Urban development in Vienna has spread out towards the periphery of the city, on to what was wasteland. It is on one such site – only eight minutes by underground from the city centre – that Seidler has erected his residential complex on what wasn't even a proper site, but an elaborate structure spanning a motorway which had cut off the Danube bank from its surrounding area.

Behind the new residential complex lies a legendary complex of social housing used by the Red Cross between the wars, as well as 1950s and 60s residential tower blocks up to 16 storeys high. The inhabitants of these buildings, while very much in favour of covering the noisy motorway, were totally against anything being built which would take away their view of the Danube. Any new development therefore had to appease the people of Anrain and respect their interests.

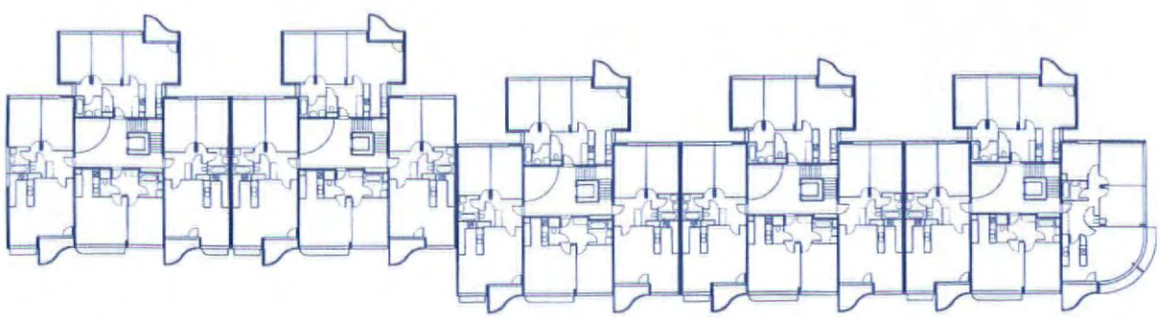
The original study by the Vienna city authorities projected an end-on-end layout for the area, with the individual houses standing at right angles to the city. This would have meant that only the narrow elevations of the buildings would have faced the Danube. Also, each 27-metre span was only supported by five beams, already built across the expressway. "A rather unintelligent solution," says Seidler.

Seidler's proposal involved placing the buildings diagonally,



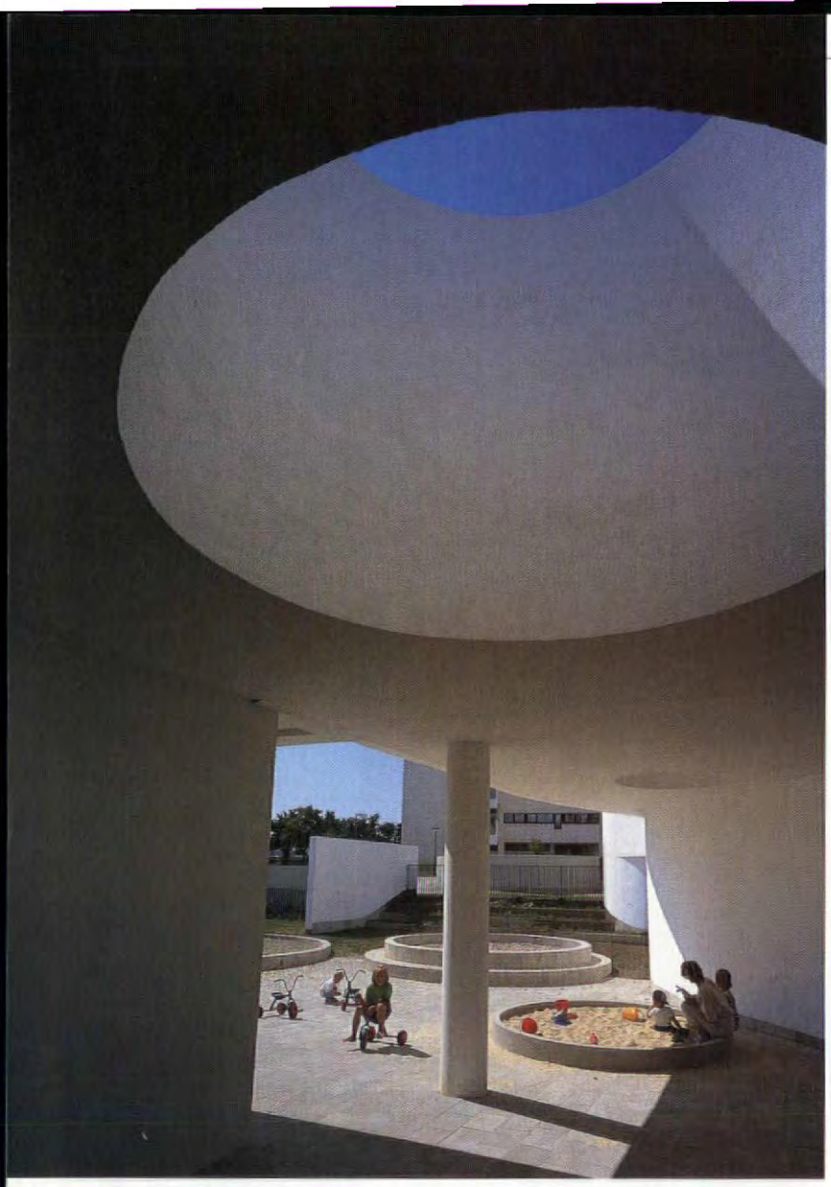
Section

Key to section through Block B
1 Expressway
2 Open well
3 Communal hall



Floor plan

Typical floor plan of blocks B, D and G
Four flats per lift/stair core



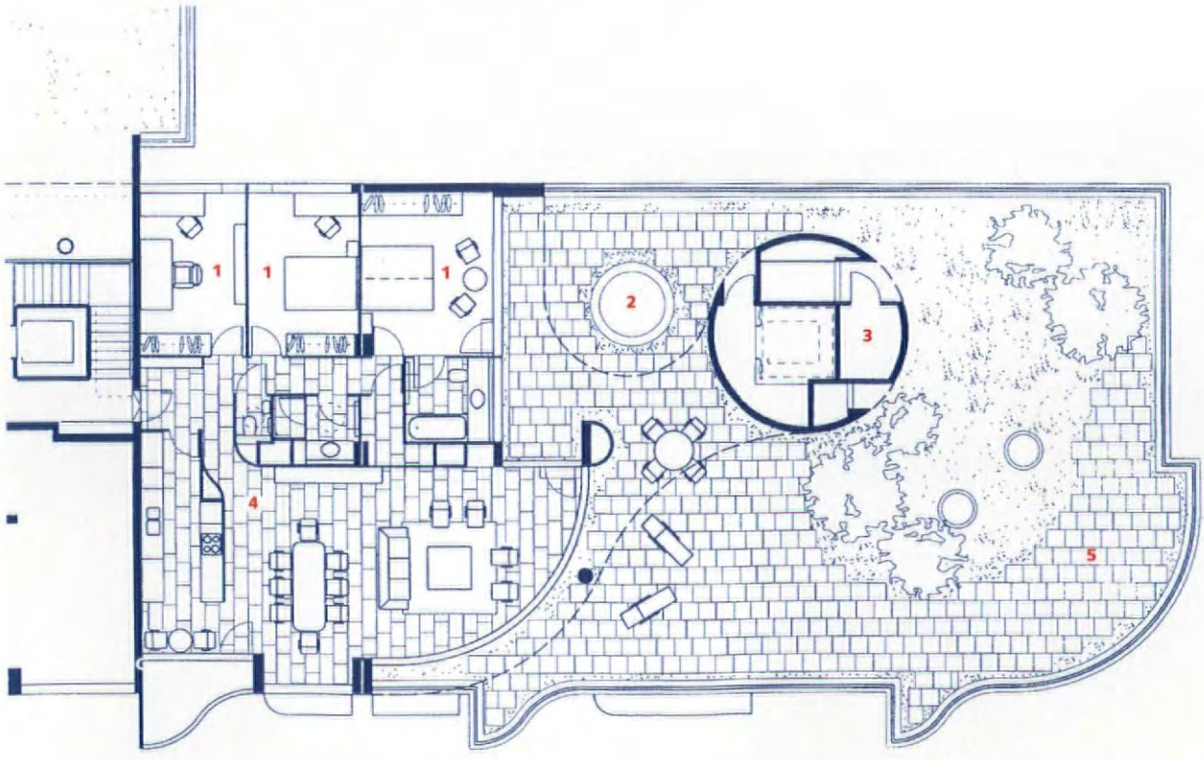
with 18 beams bearing the weight of each building, with viewing corridors to enable residents of the buildings behind to see the Danube. This meant that the blocks could rise to eight storeys, and that the Anrain protesters had the wind taken out of their sails.

The residential units are connected by a lift and a top-lit staircase. Each has a loggia or balcony or, if they're on the ground floor, a generous garden. The flats on the top floor have private roof terraces, thanks to the way the buildings are staggered to command views of the Danube. The living area of each residence faces south or south-west onto the river.

The curved glass of the balcony balustrades impart fluidity to the simple lines of the buildings and, together with the aluminium sun screens which keep off the midday sun, give the residences a sense of dynamism and rhythm. Seidler stayed well within the permissible maximum price limit set as part of the conditions by using mass-produced, pre-fabricated units.

A kindergarten, designed by Seidler's Viennese partners, Nehrer & Medek, has also been incorporated into the complex, as well as a cinema and leisure complex by Seidler, which will screen the noise from the nearby Reich Bridge across the Danube. Construction of a residential and office block by Seidler is about to start.

The provision of a kindergarten and leisure facilities for the general public, and the high price-performance standard, are all down to Vienna's tradition of social housing which, though it has plumbed the architectural depths, has provided the mass public with high-quality accommodation. Developers erecting housing purely for profit are virtually non-existent in Vienna; ▶

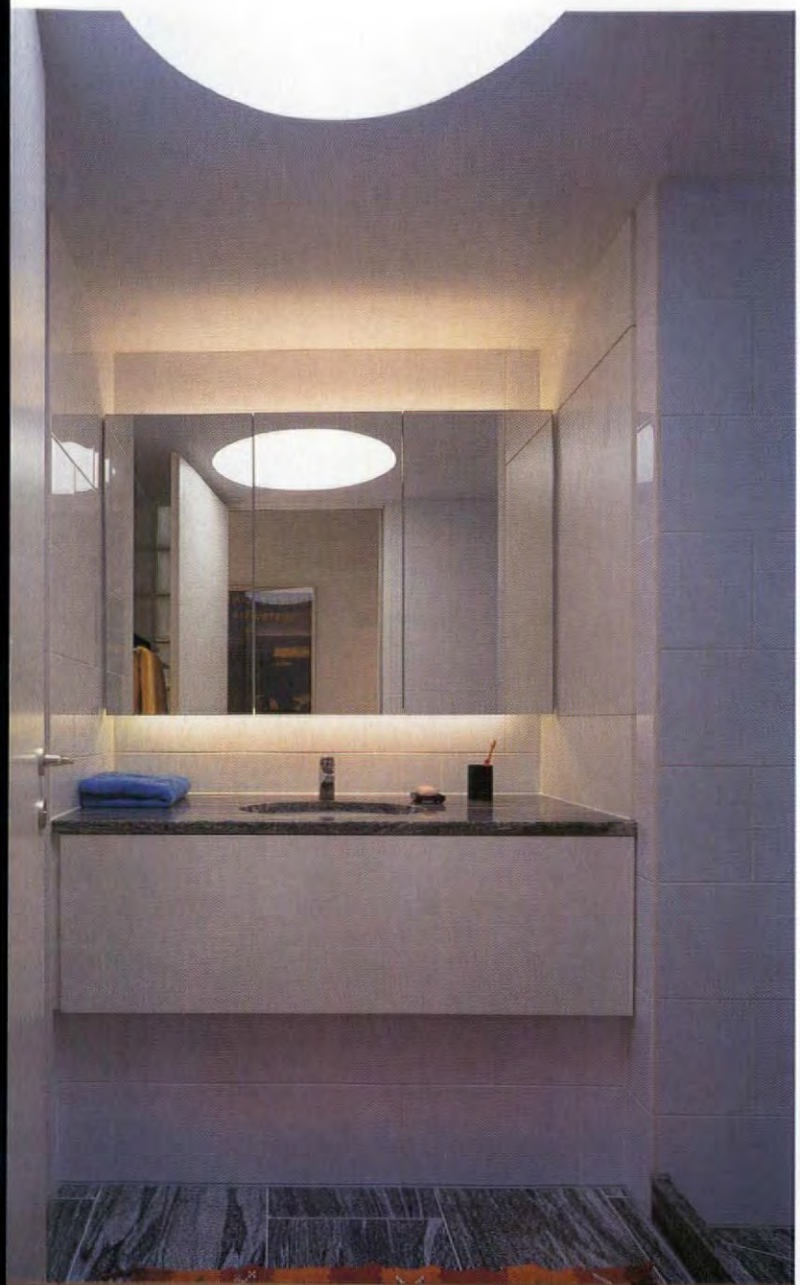


Typical penthouse floor plan

Key to floor plan

1 Bedrooms/studies
2 Light dome of adjacent core
3 Life equipment of adjacent core
4 Open-plan living space
5 Balcony with view over Danube

Facing page above: View of kindergarten. **Above:** Night view of Harry Seidler's own apartment



instead, the city has very clear policies and standards controlling the density of population, specifics of apartment size and mix of types, and the consequent number of kindergarten units, primary schools and shops. House-building is undertaken with support from the public taxes which, as well as allowing the city of Vienna to influence and keep control of what goes on in terms of building, gives the citizens say in the design and allows them to use the facilities. As well as the kindergarten and cinema, all internal facilities of Seidler's 800-unit complex can be used by the city, as can a three-storey car park, and two primary schools, not yet built, by Nehrer & Medek.

The residential complex has not escaped architectural criticism. That has something to do with Seidler's stance as a post-functionalist, his architecture which does not deny its roots in Modernism, and the fact that his concept of urban construction does not correspond to the traditional Viennese mindset. Viennese thinking on residential building is still based around grand, fin-de-siècle tenement buildings, and residential courtyards from the inter-war period. Anyone who builds meandering forms which do not conform to either of these patterns will have a hard time.

Travelling outwards from the "historic city", across the Reich Bridge, one sees opposite Harry Seidler's residential complex on the right-hand side, also on a motorway overspan, another urban development area incorporating residential property. Here, some young, rather ambitious Austrian architects have been active. From a formal point of view, they are moving more with the times than Harry Seidler. He tends towards an aesthetic language that clearly speaks of Modernism's methodology, extending it aesthetically and demonstrating adherence to its formal discipline. The young ones operate on a much more multilingual level. But what use is a building – good or bad – if it obstructs the view of the Danube and if the building densities are simply so great that nobody feels at home?

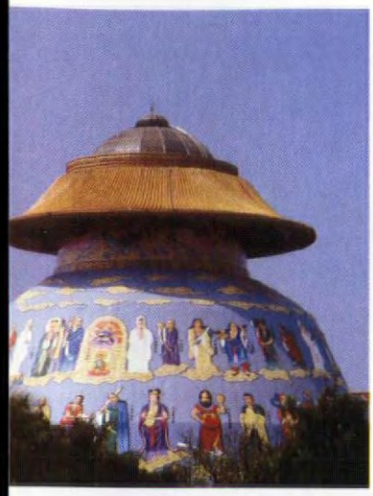
It's about time that Vienna's architectural scene acknowledged Harry Seidler's solution as rather clever. He has delivered the finest detail, which is what is required of a residential building. As the clientele of residential construction come from very different social strata, there can be no binding formal language anyway. There are only the underlying qualities. Say there's a glass balustrade in front of a balcony, and the resident doesn't want all and sundry looking in. If an architect responds to this requirement for privacy by putting printed dots on the glass balustrades, as Seidler did, allowing a view out from the inside but no view in from the outside, then, quite simply, he has done more for the perfectly normal inhabitants than any architect harbouring formal ambitions.

Housing represents the backdrop of our cities. It must be economical and ecological, it must be durable and it must be functional. In addition, the houses must be affordable. If we want a civilised society, we must take the issue seriously. Born in Vienna but long since resident in Australia, Seidler has taken these requirements on board and drawn on them accordingly. As a result, he has overtaken his young colleagues. And he has reminded us all that what the functionalists of the modern era came up with can not have been so far wrong after all. WA

Architect and urban planner
Harry Seidler & Associates, Sydney and Vienna
Associate architect
Nehrer + Medek und Partner, Vienna
Structural consultant
Friedreich & Partners, J Mayer, Vienna
Mechanical consultant
Freudensprung Engineering Consultants, Vienna
Public art works
Lin Utzon, Copenhagen

Facing page: Typical bathroom and kitchen and, **above** open-plan living space in typical penthouse

Focus on – Taiwan



These images of Tainan in Southern Taiwan provide relief from the mundane concrete boxes of many of the other major cities, but are still far from "architectural"

With thanks to Gene King

COMING OF AGE

Taiwan has long sought an individual identity. For 20 years it was viewed as a temporary refuge from the communist forces in China, and its architecture was sidelined as a result. As the island matures, and the confidence of its people grows, a small group of architects is challenging the status quo. Nicola Turner reports from Taipei.

Visitors to Beijing are able to orientate themselves immediately by entering the city through its main gate, Zhengyangmen. This way the north-south axis of the clearly planned city can be appreciated. In Paris, ascending the Eiffel Tower or Arc de Triomphe affords a similar sense of orientation. In Taipei, however, such landmarks or urban grid are all but absent. To orientate yourself in Taiwan's capital city you would do better to sit in the rush-hour traffic or dodge the insane cab drivers on foot. But by 2001 Taipei will be adorned by a 391.8-metre soaring landmark – the Taipei Financial Centre designed by the only architect widely known outside Taiwan, C Y Lee. Asia's latest supertower (which was originally designed to be 508 metres tall, and may yet be shortened further) will provide the inevitable starting point for any tour of the city. Indeed, the peculiar looking A-line Hung Kuo office building which houses Lee's office is already used by some as a navigation point. (See profile on C Y Lee *WA*54, March 1997).

But not everybody likes Lee's clunky Post-Modern buildings. In 1990 two US magazines, *Fortune* and *Newsweek*, produced surveys of principal Asian cities. Taipei, they concluded, was the "ugly duckling" of East Asia. "Worst of all," they declared, "it *is* truly ugly", with Lee's buildings apparently doing little to dissuade them. Nine years after the survey, Taipei is still suffering from an inadequate infrastructure, polluted air and heavy traffic; not to mention the continued sabre-rattling with the mainland, and the devastating effects of September's earthquake. Sadly, it is true to say that much of Taipei is still "ugly", that the bad buildings still far outnumber the good – and indeed, that the good would probably still be judged mediocre in the west. But the return to Taiwan of a handful of determined and inspired designers from education in the US and UK has brought the first glimmer of a change in fortune.

Come the revolution

Slowly but surely a new generation of architects is battling against the odds (unreliable contractors and a lack of planning regulations) to design buildings of a structural and aesthetic quality never before seen in Taiwan. A significant number of major enterprises, and public authorities, particularly in Taipei, are now in the hands of the second generation of Chiang Kai-shek's Taiwanese (see history, page 52), who settled on the island in 1949. This generation has witnessed "how it [construction] can be done", explains Victor Yu-chu Su of Taipei's Stonehenge Architects International. "Now we have the chance of developing good teams." Most of Mr Su's fellow 40-something generation see the likely prospect of joining the World Trade Organisation by the end of the year as a further step towards introducing more competition from overseas, ►

HISTORICAL BACKGROUND

- Aboriginal inhabitants on the island since 1500 BC.
- Chinese settlement began in the 12th century, but was not significant until the 17th century.
- Portuguese settled on the island in 1517 and named it Ilha Formosa ("beautiful island").
- The Dutch won control in 1642 after a battle with the Spanish.
- Dutch expelled in 1662 by the Ming dynasty loyalist Cheng Ch'eng-kung, better known in the West as Koxinga. His successors were overthrown by the Manchus in 1683 and Taiwan was placed under effective Chinese imperial rule and administered as a prefecture of Fujian province, until it was made a province in 1886.
- After the Chinese defeat in the Sino-Japanese war in 1895, Taiwan and the Penghu (Pescadores) Islands were ceded to Japan and remained under Japanese control until 1945, when they were surrendered to the Allies and occupied by Chinese nationalist forces. It came under formal Chinese control in October 1945.
- In December 1949 the nationalists were defeated in the civil war on the mainland by the communist forces under Mao Tse-tung. The government of the Republic of China under President Chiang Kai-shek moved to Taiwan, together with around two million supporters. But the nationalist administration maintained its claim to be the legitimate government of the whole of China and set up a national government on the island.
- Chiang Kai-shek resumed office of President of the Republic of China on Taiwan in 1950 and held it until his death in 1975.

POLITICAL BACKGROUND

- The political system was virtually frozen for almost 30 years while the island was ruled under martial law. This was lifted in 1987, and opposition parties were legalised in 1989. Ongoing political reform has resulted in a transformation from a one-party state to a democratic system of government.
- The ruling party in Taiwan is the Kuomintang (KMT). It no longer claims to be the government of the whole of China, but still maintains a "national government" as the "Republic of China on Taiwan" as well as a local provincial one for Taiwan province. The KMT has had a practical monopoly on political power. The main opposition party is the Democratic Progressive Party (DPP) which is steadily increasing its proportion of the popular vote. Parliamentary elections in December 1998 were expected to see further gains, but to no avail.

RELATIONS WITH THE PEOPLE'S REPUBLIC OF CHINA

- Both the PRC and the nationalist authorities on Taiwan used to maintain that there was only one China, of which Taiwan was a part, and looked forward to eventual reunification. The Taiwanese now hold that China (mainland and Taiwan) should be seen as a historical, geographical and cultural entity, but that it is now a divided state with two separate political and economic entities.
- In the mid 1980s relations improved. In 1987 Taiwanese authorities agreed to allow family visits to the mainland, and a further relaxation of controls followed, as did increased interest and investment in the mainland. Direct trade is still theoretically banned, and much of it goes through Hong Kong. Direct flights are also blocked – businessmen and visitors also having to fly via Hong Kong.
- In 1997 only 29 minor nations gave diplomatic recognition to Taiwan, while 158 "major" nations recognised the People's Republic in Beijing. This remains unchanged. Taiwan is neither a sovereign state nor an offshore island, but an "economic entity" in limbo.

ECONOMIC GROWTH IN TAIWAN

Rate of economic growth
1950s: 8.3%
1960s: 9.1%
1970s: 10.2%
1980s: 7.9%
1998: 4.83%

GDP (US$billion)
1978: 26.8
1988: 123.1
1998: 261.4

Per capita GNP (US$)
1978: 1,577
1988: 6,379
1998: 12,040

ECONOMIC FEATURES OF TAIWAN 1998

Economic growth rate :	4.8%
Inflation rate :	1.10%
Unemployment rate :	2.69%
World trade ranking :	15th (US$215.4 billion)
World exports ranking :	14th (US$110.6 billion)
World imports ranking :	14th (US$104.7 billion)

Left: Luminary Buddhist College in Taichung by Kris Yao of ARTECH **Facing page:** Yuan-ze University main library in Taoyuan, one of ARTECH's first "breakthrough" buildings in Taiwan

thus strengthening the domestic architectural product.

Kris Yao of ARTECH is at the forefront of the revolution. Although it is his private commercial projects that are making his name (see CEC headquarters page 60-62), his portfolio is impressively wide. In the heart of Taichung lies one of his most captivating designs, for the Luminary Buddhist College (see left and cover) where his aim of creating an oasis of calm in the middle of a city has produced a building which is unexpectedly turned in on itself. Yet it contributes much to its surrounding context: small openings are randomly scattered over the washed exterior wall, and street-level two-storey high asymmetric openings allow glimpses of the central courtyard. This building is one of the most visible contradictions to the classic image of crude, brash Taiwanese architecture.

The obstacles

The barrier to an internationally recognised architecture has several aspects, not least the education system and the misguided interpretation of Western architectural history and techniques. It is 50 years since the Chinese nationalists were defeated by Mao Tse-tung, and the government of the Republic of China, under President Chiang Kai-shek, moved to Taiwan with around two million supporters. For 20 years afterwards the island's inhabitants viewed Taiwan as a temporary refuge from the communist forces, meaning that only temporary measures were employed for all urban developments. There was no urban planning to speak of, and buildings were flung up with little thought or expertise. Even today, a large number of activities take place in temporary

COUNTRY FACTFILE – TAIWAN

The land: Taiwan, formerly known as Formosa, is an island of 36,179 square kilometres. It lies about 160 kilometres off the southeast coast of mainland China, about 1,200 kilometres south of Japan and 320 kilometres north of the Philippines. It sits astride the Tropic of Cancer. The bodies of water around the island include the Taiwan Strait and the South China Sea to the west, the East China Sea to the north, the Pacific Ocean to the east, and the Bashi Channel to the south. The island is dominated by a rugged central north-south mountain range that covers over half of the island. The lowlands, primarily on the northern and western sides of the island, are densely populated.

Climate: The climate is generally subtropical, except for the extreme southern end of the island which is tropical. Climatic conditions vary greatly over short distances because of the mountains. Monsoon winds influence the climate.

Capital: Taipei (2,597,197)

Other principal cities: Kaohsiung (1,433,015). Taiwan's major port and third largest container seaport in the world.

Taichung (890,538). The seat of Taiwan provincial authorities. Industries include light engineering, textiles, food processing.

Tainan (717,066). Textiles, food processing, fishing.

Keelung (379,096). Port in northern Taiwan. Shipping and fishing.

Hsinchu (351,200). Centre of computer science industry.

Population: 21.9 million; 66% urban, 34% rural. Density is 605 per square kilometre.

Language: Mandarin Chinese. English is spoken by business people in the larger towns. Very little signage in English, however.

Ethnic composition: Indigenous Chinese (84%), Mainland Chinese (14%), Aborigine (2%). Most Taiwanese are Han Chinese descending from the Ming dynasty migration of 1644.

Religious affiliation: Buddhist, Confucian and Taoist (93%), Christian (5%), other (2%)

Time difference: Taiwan is eight hours ahead of Greenwich Mean Time (GMT) and 13 hours ahead of Eastern Standard Time (EST).

Currency: New Taiwan Dollar, divided into 100 cents.

Airport Information: Chiang Kai-Shek International Airport, 40 kilometres from Taipei, serves the northern end of the island. Kaohsiung International Airport serves the southern end.

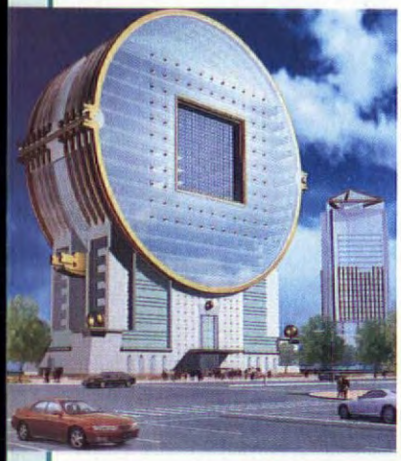
ECONOMIC DATA

Consumer price index:	1996=100	Exchange rates:	New Taiwan $ per US$
1996	100.0	1996	27.54
1997	100.9	1997	32.62
1998	102.6	1998	32.26
1999 (estimate)	102.6	1999 (August)	32.06

Information provided by Hanscomb

C Y LEE

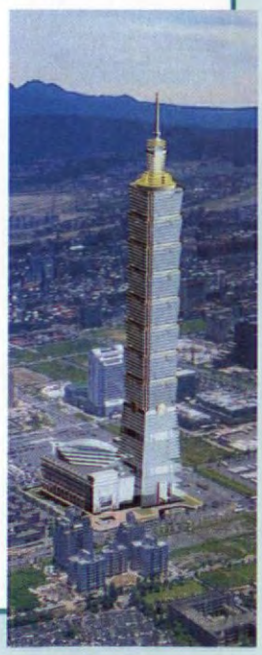
Post-Modernism burst onto the scene in Taiwan in the mid-1980s, largely due to the efforts of C Y Lee (see profile *WA*54 pages 78-117). His over-sized, over-confident creations are criticised by many as nothing more than crudely decorated boxes or towers, and some are sceptical of his adoption of all things Chinese – from the clothes he wears, to the practice of t'ai-chi and adherence to Confucian philosophy. But the majority of local architects admire his tenacity. Few deny that he is a talented designer, and all agree that he is a shrewd businessman with his finger firmly on the pulse of the real estate developers. He is one of the few Taiwanese architects to have made significant in-roads on the mainland.



Despite being an outspoken critic of Post-Modernism, Gene King, editor of Taiwan's *Dialogue* magazine thinks "CY does have a real sense of mission about being Chinese. His designs are a result of the frustration of being in America and not being the tall white male. He therefore developed a sense of cultural identity."

Lee is so convinced that his path is the right one, that he seems unperturbed by criticisms of his work. He describes a 1988 public housing project in Taipei, completed with red tiled pitched roofs on even the high-rise buildings: "I don't think people 100% like it... but it's a statement." And that is what he 's after. "My personal mission is that the Chinese architects should be producing Chinese architecture. We must have our own style, and not that of SOM or whoever."

To the charge that the Taipei Financial Centre is reminicent of SOM's latest creation in Shanghai, the Jin Mao tower, Lee replies with confidence: "It's very Chinese, the segmenting. It is more like bamboo." Another source informs me that the eight sections of the tower were a cunning design ploy to give confidence to the client: "your fortune is as big as eight buckets [to carry the gold]", as the saying goes. Eight is, of course, a lucky number in China.



Above: One of C Y Lee's commercial projects in Taipei, in the shape of a coin **Right:** Taipei World Trade Centre.in the Financial Shinyee District, next to podium/shopping mall to be finished by 2001

Victor Yu-chu Su and Shu Chang are two of the more outspoken pioneers of a "new" architecture for Taiwan.

VICTOR YU-CHU SU – STONEHENGE ARCHITECTS INTERNATIONAL

He believes that a major development in architectural design will come about because "a lot of the work of creative groups which started about 10 years ago is now reaching fruition..."

The disadvantage Taiwanese architects have is the relative youth of its culture. "In Europe you get the feeling it's all in the genes, which have been marinated for thousands of years!"

Bird sanctuary and museum, Kenting National Park, by Stonehenge Architects

SHU CHANG – SHU CHANG ASSOCIATES

- "Now is such a wonderful opportunity, but it's out of such a weak educational base. Chinese architecture has gone. By Confucian standards to live 'well' is a sin, you should always be worrying about the state of things, not dabbling in art. For a long time the government wouldn't dare build fancy public buildings for fear of being criticised."
- " 'Chinese' architecture is a built form of a social order. There is one building type for a place, temple, school and so on. Since 1949 it has been impossible to keep these traditional elements."
- There is a problem with political and cultural identity. "Half the world denies we are a country"
- "Architectural education is getting worse. It's become much more theoretical and not practical. This is a huge problem, there's no craftsmanship"

EARTH SHATTERING

The Chi-Chi earthquake shook Taiwan on September 21, 1999 at 1.47am. To date, 2,100 people have died as a result. Taiwan's earthquake registered 7.6 on the Richter scale, yet the extent of the damage and human loss was far less than that in the Turkish earthquake, which killed an estimated 40,000 people, despite its lower measurement of 7.3. King-Le Chang, principal of Ove Arup & Partners in Los Angeles, and K C Tsai, professor of National Taiwan University in Taipei, explain the fundamentals of the island's seismic code requirements.

The Taiwan Seismic Building Code is based on seismology, geophysics, geology, probabilistic seismic hazard/risk analysis and the characteristics of the structural systems. This is no different than other seismic codes implemented elsewhere in major seismically active regions.

There are four categories of earth quake, according to their severity. In a "frequent" earthquake, the building is expected to remain elastic , with building functions remaining fully operational. In an "occasional" earthquake, the same is true, but with some damage to non-structural elements such as ceilings and partitions. In a "rare" earthquake, with a "return period" 475 years, the structure will undergo inelastic deformations with repairable damages to the structural system, but non-repairable damages to the non-structural elements due to excessive building movement. In a "very rare" earthquake, the structure will undergo large inelastic deformations with non-repairable damages and near collapse of localised areas, but it will not endanger human life with immediate catastrophic collapse.

Associated Press

Above: A 12-storey building lies on its side after it collapsed on top of a lower neighbouring commercial building in the Taipei suburb of Hsinchung on 21 September 1999

Design parameters of the Taiwanese codes and the 1994 Uniform Building Codes

Using the static lateral force applied to a building structure as an index, both the Taiwanese and UBS Codes use the 475-year return period peak ground acceleration (PGA) to predict the minimum static forces applied to the building. The PGA force level is adjusted for structural system types (based on stiffness and ductility) and soil type. The Taiwanese seismic intensity map (see map, page 56) includes four zones with peak ground acceleration of 0.33g, 0.28g, 0.23g (zone 2) and 0.18g. These are compared to PGA used in different UBC zones as follow:

UBC zone	PGA
1	0.075g
2a	0.15g
2b	0.2g
3	0.3g
4	0.4g

The Chi-Chi / TaiChung region is in zone 2, with a specified PGA of 0.23g for a 475-year return earthquake.

The adjustments between PGA and static lateral force on both codes are similar in concept but slightly different in magnitude. For a moment (rigid) frame structure with a long period, the Taiwanese code has the reduction factor of 1/4.2 and UBC has the reduction factor of 1/12. Therefore, the designed lateral force on the building structure is 0.055g (equal to 0.23g/4.2) for the Taiwanese Code, versus the UBC value of 0.033g (equal to 0.4g/12). Thus, the assigned lateral design force on a moment frame building is structure larger in the Taiwanese Code than the UBC Code.

Chi-Chi

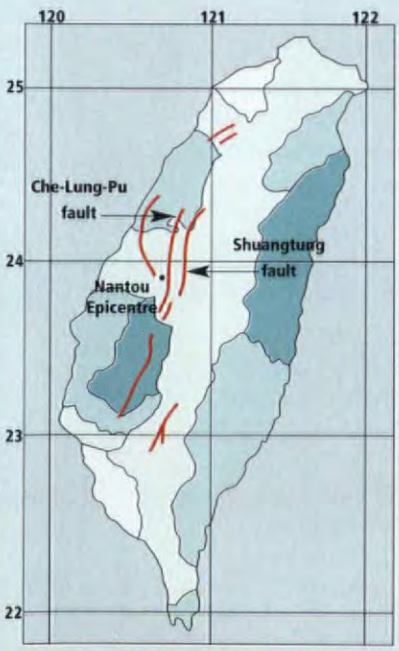
The epicentre of the Chi-Chi earthquake was 12.5 kilometres west of Sunmoon Lake (see map, page 56). The recorded magnitude was 7.3ml. A seismic station in Nantou (station TCU 129, 10 kilometres from the epicentre) recorded a maximum vertical ground acceleration of 0.35g, north-south ground acceleration of 0.62g and east-west ground acceleration of 1.0g. Chi-Chi is being observed as the combined movement of the Che-Lund-Pu and Shuan-Tuang faults (see map, page 56).

Two seismic events have been recorded at the Che-Lung-Pu fault, 5.8ml in 1946 and 5.4ml in 1935. A seismic hazard analysis by the National Centre for Research on Earthquake Engineering for the Tai Chung Rapid Transit System in 1996 suggested the maximum possible earthquake magnitude of 7.31ml along the Che-Lung-Pu fault. The predicted peak ground acceleration for a 475 year return period is 0.3g-0.34g, which corresponds to the rare earthquake event as described above. We can conclude that the Chi-Chi can be estimated to occur much less frequently than the code index of 475 years and therefore should be considered as "very rare" event.

The observed damage

As this report went to press, over 2,100 people were reported killed, more than 6,600 people injured, 210 people still missing, and at least 100,000 people left homeless. The total number of building collapses due to the earthquake is well over 570. Our observations noted in this report are limited to visual inspections of the building exteriors.

- Low-rise building. In general, extensive and often severe damage was observed in a very many low-rise (three- to four-storey) concrete buildings near the epicentre. This type of building accounts for the majority of total building collapses due to tremendous seismic force and large soil movement under their foundations.
- Mid-rise building. About 10 to 15 mid-rise (10- to 15-storey) concrete buildings collapsed. Some failed due to extremely high ground acceleration, soft-storey effect and poor construction. Depending on whether the buildings were occupied by flats or offices, some contained stiff brick partition walls on the upper levels. With open retail space occupying the lower floors, this combination ultimately contributes to the soft-storey effect. In addition, some buildings with poor construction detailing of reinforcing splice locations and lack of column ties contributed to the lack of building ductility.
- High-rise building. For the high-rise (20 storeys and above) building category, there is no report of any building collapse. Most high-rise buildings are constructed of structural steel with moment or brace framed systems to provide enough ductility. However, the beam to column moment connections will need further investigation to determine the actual building condition.



Conclusion

The Chi-Chi earthquake, with recorded peak ground accelerations at in some places of 1.0g, is classified by most building codes as "very rare". There is no doubt that there were examples of questionable, even shoddy, construction practices, non-ideal floor arrangements, and unauthorised building renovations that led to the collapse of some mid-rise buildings. I believe that the relatively low percentage of mid-rise buildings that sustained heavy damages or near collapse, and the fact that no high rise buildings collapsed, is indicative of Taiwan efforts in the past 15 to 20 years to improve their code requirements and structural engineering practices.

▸ buildings. Gene King, editor of Taiwan's *Dialogue* magazine on architecture and design claims that these buildings are so abundant that they have become "the essence of our real landscape, and they actually retain our lives".

It is easy to see what he means, standing on the 10th storey of a hotel or office block and looking down on the corrugated rooftops of Taipei. Many buildings are augmented by illegal additions and decorated by crudely coloured signs. It becomes something of a game to try and work out where the entrances to these buildings might be, such is the density of the tightly packed dwellings and the random nature of the winding streets. Taiwanese architects have had little respect for the process of architecture. King gives an example: "It took seven years for planning and two years for construction for the New Tokyo City Hall, whereas it took one year for planning and nine for construction of the Taipei City Hall."

Split personality

At the root of the Taiwanese architectural problem lies the island's split personality, as described by King: "It seems like we are progressive, aggressive and even invasive in practical matters, while we are extremely conservative and even superstitious mentally. Our society is highly contradictory, and we own a collective split personality, and that is why we produce these shacks faced with Greek temples, high-tech [industrial] plants with conservative taste, and ash pagodas with electronically choreographed rituals." He sees the continued production of temporary buildings as a craving for instant stimulus "like a teenager". The one foreigner to have set up a permanent office in Taiwan, British designer Mark Lintott, also uses this analogy, but gives it an optimistic twist. "I've always thought of Taiwan as a stroppy teenager, but maybe it is now about to come of age!"

Learning curve

The education system in Taiwan is impressive. Ninety eight per cent of the population is literate, and it is relatively easy to hire competent personnel across many industries and professions. But creativity has never been high on the education agenda. The more successful architects have been educated in the US or UK. When they return to Taiwan the tendency has been to reach for foreign design magazines and recreate what they saw overseas.

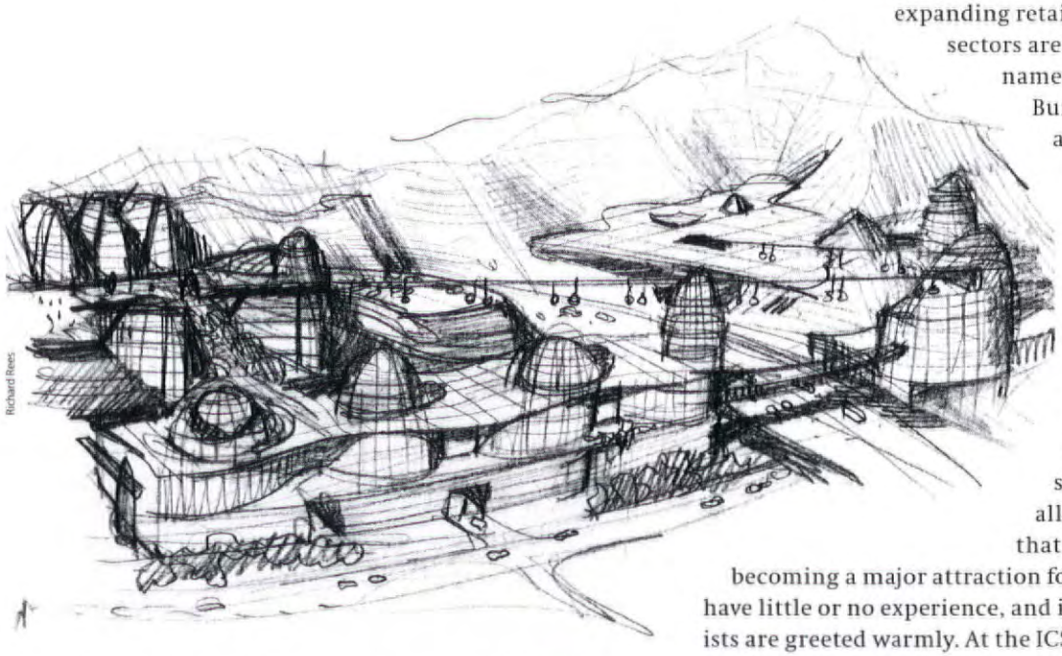
Taiwan is a young, modern culture. "Traditional Chinese culture has been smashed to pieces. Creativity hasn't recovered fully, and this is a problem in architecture" says King. "The worst thing about architects here is that they don't know how to develop themselves. They are too uptight with the business. They need to have more humour in this department, and become more serious about design. They now have so much work they can't handle it, and just go for packages and copies." It is this copying that is most apparent on a tour of any major city. With such a young culture architects and clients were keen to import fashions and styles from around the world. But

without the social and philosophical context in which movements such as Modernism grew it was doomed to failure. Many of Taiwan's buildings from the last 20 years look "Modernist", but they have none of the social or philosophical qualities to underpin the design.

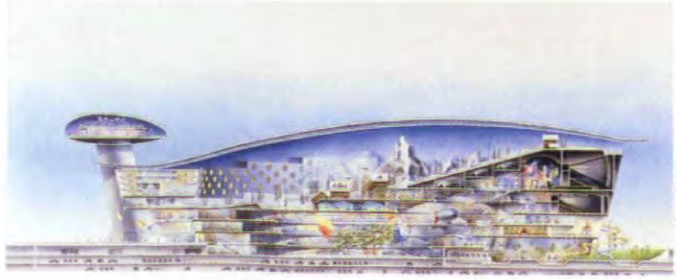
Foreign intervention and booming sectors

Other than British designer Mark Lintott, no overseas firms have had the confidence or commitment to set up an office in Taiwan. There are various reasons for this, the two most compelling being the frustrations of dealing with a relatively young construction industry and the complicated process required for getting a licence. However, as the Asian crash continues to have less of an impact in Taiwan than elsewhere in the region, and as the quality of local firms improves, an increasing number of practices – particularly from the US and UK – are biting the bullet.

There are few completed projects by international designers; SOM, RTKL and engineer Ove Arup & Partners being three notable exceptions. But the rapidly expanding retail and high-tech engineering sectors are attracting some new big names, including London-based Building Design Partnership and the US-based Jerde Partnership.



Richard Rees

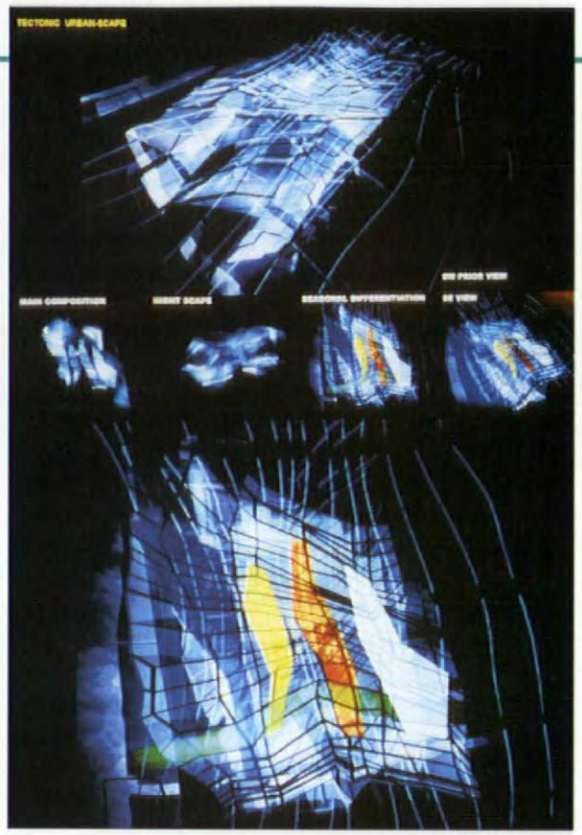


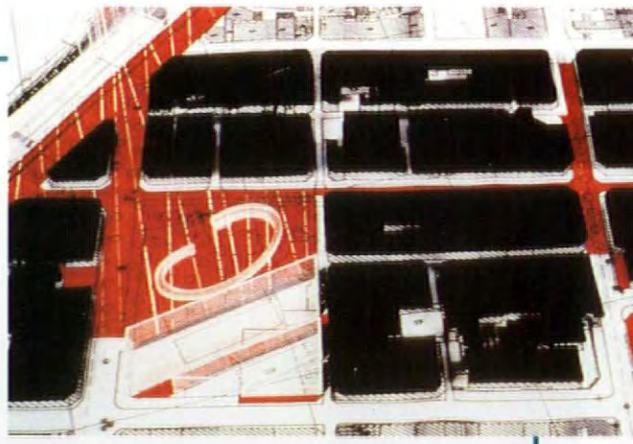
Steve Huntley at RHWL

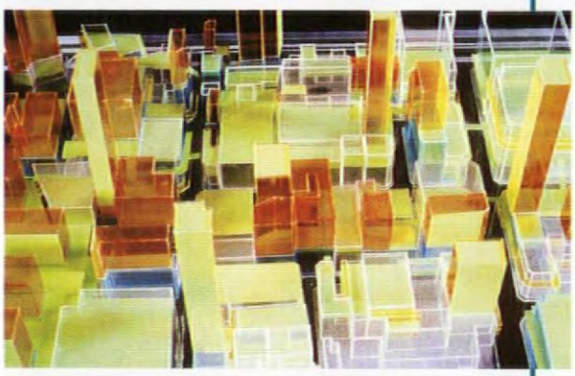
Top: Compal Electronics headquarters to be completed in the capital later this year, by ARTECH **Above:** Concept sketch from London-based Building Design Partnership of a major suburban shopping centre development by Aurora **Below:** Concept sketch by RHWL (London) of a shopping centre with snow dome, currently on hold

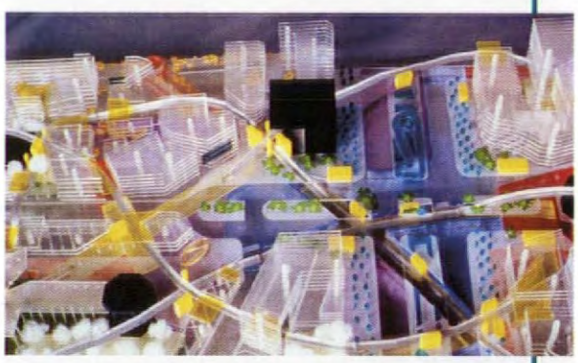
These are the areas for aspiring designers to target. Taiwan is surprisingly new to the shopping centre phenomenon with, apart from the Tai Mall in Taipei, no conventional out-of-town shopping malls. The suburban shopping experience, with all the entertainment facilities that go with it, is therefore fast becoming a major attraction for developers. Local firms have little or no experience, and international retail specialists are greeted warmly. At the ICSC Trade Exposition in September Investec Property of Taipei listed more than 20 new shopping centre developments, most of which are scheduled to come on line by 2002, several with overseas consultants on board.

The high-tech engineering sector is better understood and further developed than retail, and several local firms are more than competent in this area, including J J Pan and Partners, Ying-Chun Hsieh and Shu Chang Associates (see pages 63-65). The government is widely considered to have done a good job in directing the industrial boom. Natural resources are relatively scarce, and during the 1970s and 80s the government realised that agriculture could not be relied upon for export. Hence the concentration on science-based ▶









Clockwise from left: Chul Kong proposed a glazed roof for the area around the Theatre District, one of the sites under discussion; Sharni Howe suggested a building that would bridge the river and take up the level differences within its own compass; Garry Chang added green surfaces to key vertical and horizontal planes and incorporated a number of new mini-tower developments; on the West Gate Circle site Ng En-Loon and Laurence Liauw proposed a floating pedestrian loop around the circle and through many of the surrounding buildings; back on the Theatre District site local architect Victor Yu-chu Su thinned out the built fabric to form many pocket parks, provided one new luminous building and proposed a high-level walkway along the 36 -kilometre top of the flood wall

10TH ASIA DESIGN FORUM, TAIPEI, AUGUST 1999

The Asia Design Forum meets each year to debate regional architectural issues. Few thought they would see the day that it would meet in Taipei.

In previous years ADF participants were asked to focus on recent work, but this year were asked to devise a design proposal for one of three sites to the west of the original walled city of Taipei.

The city has an interesting structural hierarchy, with a grid of "grand boulevards"; "boulevards" with side lanes, streets and lanes, and a super-order of freeways. Matching its economy of small enterprise is a finer urban grain than most Asian cities. The site in question was a neglected area which, as is often the case, has become the focus for the city's entertainment industry. The sites chosen were the Banyan Court, to the west of the Presidents Palace with a 10-12-lane boulevard running to north south along the site of the original city wall; the West Gate Circle, a site bridging this road; and the Theatre District between the circle and the river to the west, hidden to the city by an eight metre high flood wall. The new mayor of Taipei took a personal interest in the workshop – it addressed development needs he had identified in his election campaign – and dubbed it "West Side Rhapsody".

Three of the participants came from Taipei; the others from Kuala Lumpur, Tokyo, Singapore, Hong Kong, Mexico City, Bangkok, New York, Perth and London . Many were concerned about designing at such range, and this was certainly a concern for me, as I believe that our cities will only improve if local cultures are nurtured. The workshop and exhibition was carried out in dialogue with locals, and the designs were provocative and inspiring to those charged with the business of making a difference to their city, and raising the urban design awareness and expectations of the citizens.

Leon van Schaik, chairman of the 10th ADF

▸ parks. Explains Joshua Pan of J J Pan and Partners: "The government started to take advantage of the high literacy and good public education... but then there was the brain drain in the 1960s and 70s. In the 1980s, when the US and Europe slowed down, the trend reversed and people returned."

Interiors is another area of constant activity. Indeed, in many buildings more has been spent on the interior fit-out than on the construction of the shell. Lintott's firm – Mark Lintott Design – has capitalised on this area, designing interiors for numerous nightclubs, bars, restaurants and hotels. Lintott confesses that he ended up staying in Taiwan "by accident" after working on a one-off interiors job with his UK firm. Ten years later he is swamped with work and has no immediate plans to leave. "Everything works on a very immediate basis. For a long time Taiwan was known for its knock-off architecture. Now things have changed. The government, as well as the private clients, weren't ready until now for decent architecture. Their priority was just to survive and concentrate on the economy. The last eight years has seen them relax a bit. When I first arrived here I was treated as something of a celebrity. They were not used to seeing foreigners in Taipei, and seemed to have a blind trust. Now they are less naïve."

"I've always thought of Taiwan as a stroppy teenager, but maybe it is now about to come of age!" Mark Lintott, MLD – the only office to have set up independently in Taiwan

But foreigners are still popular throughout Taiwan – as are foreign products. Lintott relates the story of a client who insisted he go to the Czech Republic for a chandelier to go in a hotel lobby. On his return he discovered that the same thing was available locally. "My client didn't care. He didn't trust locally made products."

The opportunities to impress in Taiwan are enormous, but the local competition is hotting up. This is the first time that the architecture of Taiwan has been published internationally. Fifty years after the creation of Taiwan as we know it, its architects are finding a voice. WA

After its successful shopping centre trade mission in September, British Trade International is supporting a New Urban Environments Exhibition and mission to Taiwan in spring 2000. For further information contact Brian Gazeley, tel +44 1372 843022, or Brian Nicholson, tel +44 171 215 4939.

GENERAL CONSTRUCTION INFORMATION *provided by Hanscomb*

Construction outlook: The construction market in Taiwan is depressed, due to the Asian financial crisis. In early 1999 the government provided low-interest loans of NT$30 billion (US$961 billion) trying to stimulate the construction market. Most people do not expect any great improvement in the market next year. As of late summer this year, highway work is the leading construction market sector. The high-tech sector is the major sector in the building industry with significant new work, but there is also considerable speculation in the shopping mall sector.

Rates of inflation: Construction cost inflation is expected to be between 1 and 2% for 1999. Cost inflation has been minimal for the past several years.

Procurement of construction: The typical method for public sector construction procurement is the traditional design-tender-build. A project is usually tendered after design is 100% complete. Only properly licensed contractors may tender on a project. Following the tender, the government will enter into negotiations with the selected contractor. Construction projects are usually awarded as lump-sum contracts. However, unit rate contracts may be used on larger projects, which will be tendered using a bill of quantities. In the private sector just about any method of procurement can be used, depending upon the owner's desires.

A bid package will include drawings, specifications, forms of contract, bill of quantities (if used), and form of tender. A public sector project will have a supervision team to monitor the project during construction. Typically, the architect will provide the construction contract administration service, but it may be performed by a consultant.

Design professions: Traditionally, the architect leads the design team. The owner will contract directly with the architect who will hold subcontracts with the other design disciplines. The architect is usually responsible for construction administration.

Contractors: There are four levels of contractor's licenses in Taiwan based on a combination of contractor experience and ability and the number of completed projects.

Special concerns: Taiwan lies in an earthquake belt. Many shocks are recorded each year, September's earthquake being the worst for decades.

CONSTRUCTION MATERIAL AND METHODS

Material and equipment availability: General construction materials (concrete, sand, reinforcing steel, aggregates) can be obtained locally. While many building products are imported, most are readily or easily available, as is construction equipment.

Labour availability: There is a shortage of construction labour in Taiwan. To be competitive, contractors will obtain labour from countries such as Thailand and the Philippines.

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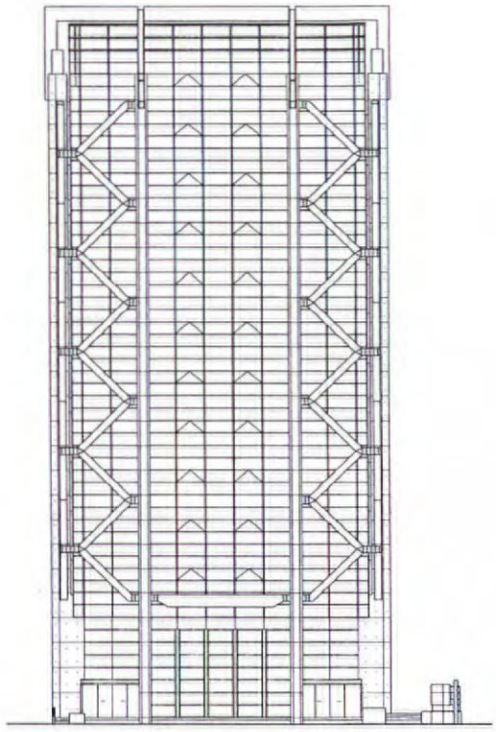
Architect
ARTECH
Reviewed by
Nicola Turner
Additional structural data
King-Le Chang, Principal Ove Arup & Partners, California

Towering strength

Continental Engineering Corporation (CEC) headquarters, Taipei

Above: At night the lighting creates the impression of a film negative. The three-storey clerestory and four corner balconies of the executive floor are clearly illuminated, "hanging" from the steel trusses



Above: North elevation clearly defines the structural system devised with Ove Arup & Partners, California
Right: Elevation detail showing the combination of exposed concrete, steel, glass and aluminium

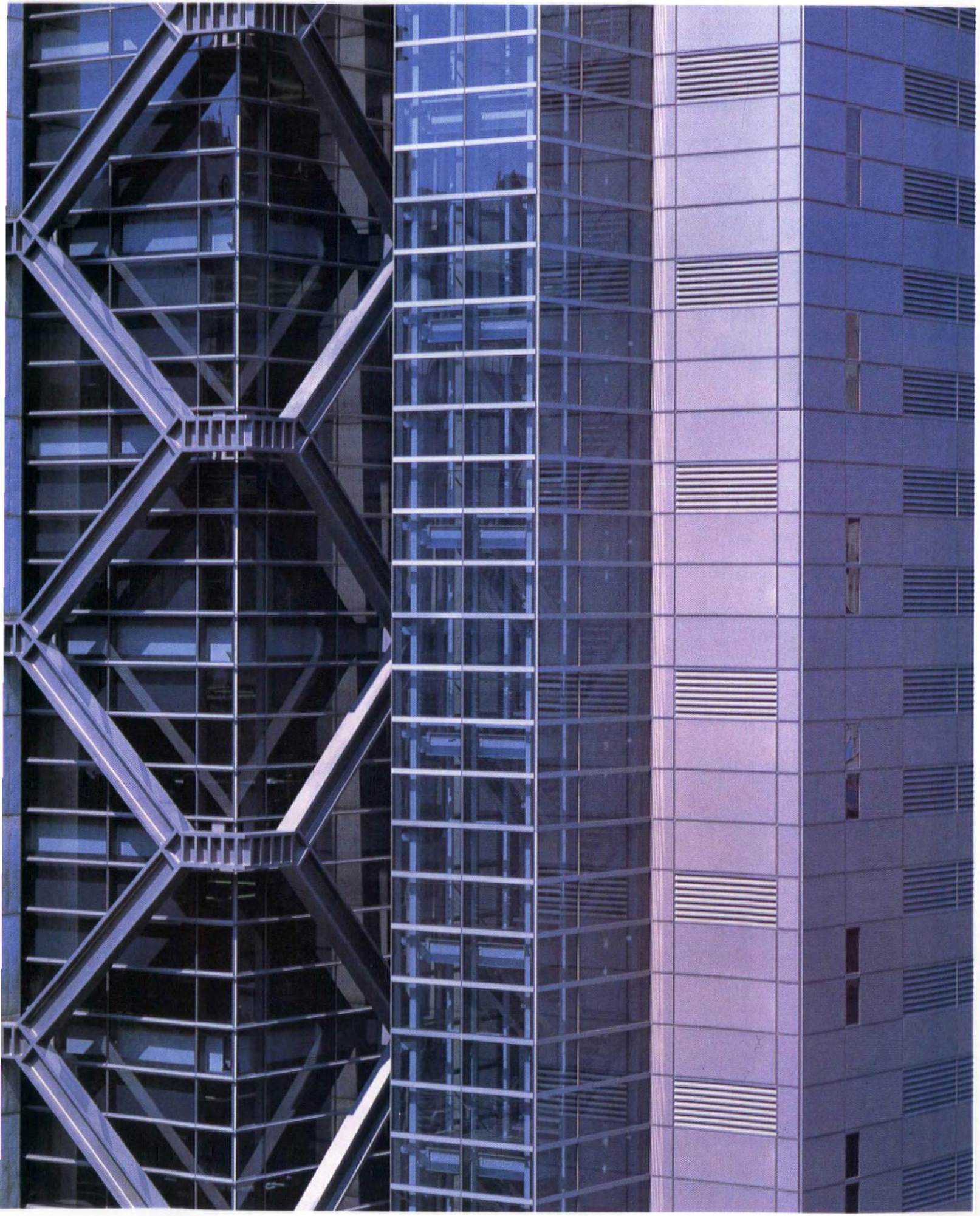
The most impressive practice in Taipei, at least in terms of pure professionalism and slick presentation, is ARTECH, run by US-educated Kris Yao. It was Yao, in collaboration with Skidmore Owings & Merrill, who designed one of the capital's finest buildings – the Fubon Bank. Now, ARTECH's recently completed Continental Engineering Corporation headquarters has in many ways eclipsed the Fubon Bank – despite its overt references to precedents by western architects, not least Foster at the Hong Kong Shanghai Bank. The simply articulated eight-column concrete structure with its steel exoskeleton cross-bracings has no precedent in Taiwan. The form was chosen partly to express the work of the tenant, one of the better-known contractors, and partly to allow for larger than normal floor plates and efficient seismic design.

Yao explains the evolution of the design: "We decided that the use of external cross-bracing would make the exterior look too much like giant Xs, which is not a welcome symbol in Chinese culture... the idea of diagonal cross-bracings, bent at a 90 degree angle, allowed the main exterior facade to be free of bracing and leave our original concept of a glass box intact." It also allowed for unobstructed views from all offices.

The use of exposed concrete is unusual as there are few Taiwanese contractors who successfully work with poured in-situ exposed concrete in large-scale projects. In this case the client, CEC, had experience with the material on foreign and domestic civil projects. The results are surprisingly good.

The entrance lobby is at first floor level, reached via an escalator from street level, providing an oasis of calm for visitors after the bustle of the street. Directional lights illuminate the concrete waffle slab ceiling, which shares its 1.2 metre modular grid pattern with the polished grey granite floor. Rich mahogany wall panels provide the only warmth in an otherwise cool, tranquil interior.

Because the office floors are glazed on four sides and column-free, the spaces are completely flexible and unusually light. The executive floor has four corner balconies and a three-storey clerestory, visible from the exterior as a transparent volume hung from the steel trusses. ▶



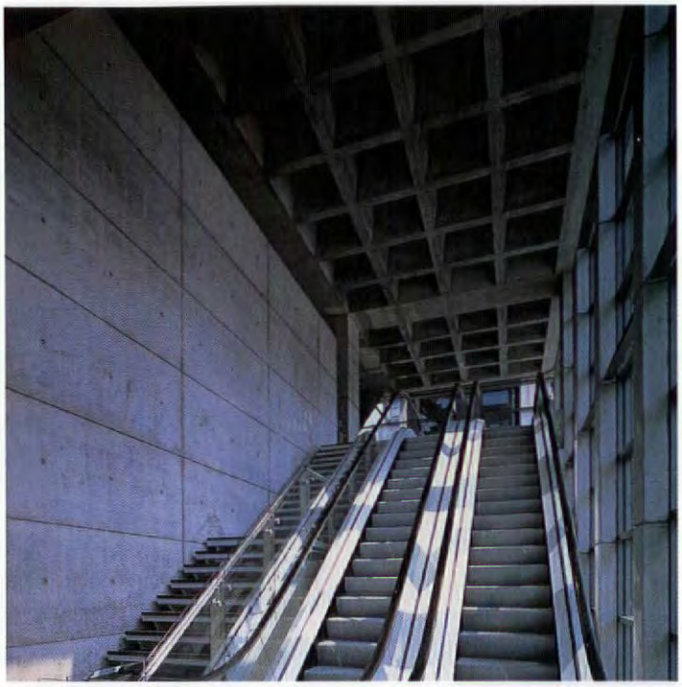
▸ Sophisticated structural systems

All the exposed architectural elements were designed as major structural components, to create a harmony between architectural form and structural function. The above-grade structure is composed of two distinct systems; a reinforced concrete system from the ground floor to fourth floor, and a steel eccentrically braced-frame (EBF) system above. These two systems are connected by eight exterior composite columns, creating an overlap between the concrete-framed base and the steel eccentrically braced frame superstructure.

The superstructure comprises two independent systems: a gravity load-carrying system – consisting of simply supported wide flange beams supported by four trusses, which in turn are supported by eight exterior composite columns, to allow for a column-free interior space – and the lateral load-carrying system. The primary lateral load-resisting elements above the third floor comprise four steel EBFs, with link beams folded at 90 degrees to fit the corner shape of the main office floor. There is therefore one EBF frame at each corner of the tower.

The steel corner EBF frames are designed as the primary system for seismic resistance and the EBF corner link beams the major energy dissipation elements. In addition, the secondary system of moment resisting frames provides structural redundancy. These frames comprise four long-span steel trusses, moment (rigidly) connected to the exterior composite columns.

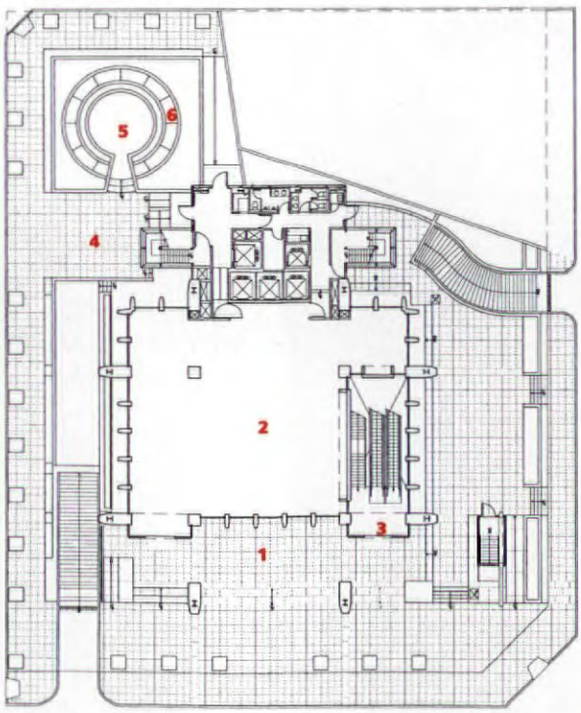
Since the CEC building is in a high seismic zone and has an unconventional structural system, a three-dimensional computer model of the building was developed for testing before construction. It was found that the ultimate lateral load-carrying capacity of the building is almost 2.7 times that of the Baiwan Building Code's minimum design seismic force, and inelastic behaviour to absorb seismic energy was essentially confined to the EBF link beams. The recent catastrophic earthquake which sent tremors through Taipei put the CEC building to the test. It has survived unscathed. WA



Above: The ground floor is given over to a high street bank. An escalator delivers visitors and personnel to the CEC headquarters' lobby on the first floor

Above: The waffle slab ceiling of the lobby is reflected in the pattern of the polished grey granite floor – both of which share a 1.2 metre modular grid

Key to ground floor plan
1 Arcade
2 Bank
3 Escalator to first floor lobby
4 Service entry
5 Outside seating area
6 Glazing providing light for staff dining below



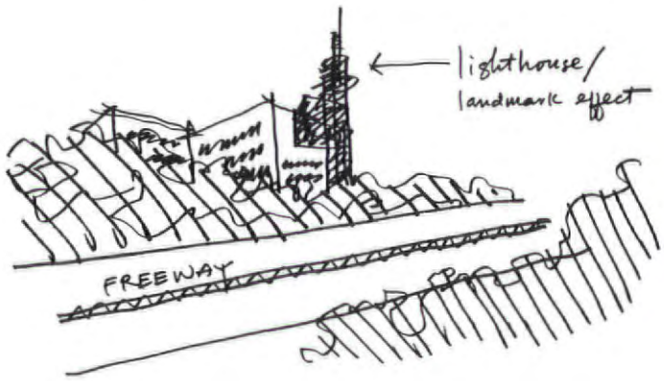
Client
Han Der Construction
Contractor
Continental Engineering Corporation
Engineers
Supertech Engineering Consultants, Taipei
Ove Arup & Partners, California
Continental Engineering Corporation
M/E/P
Lincoln Scott
Continental Engineering Consultants

Architects
J J Pan and Partners; Shu Chang Associates
Reviewed by
Nicola Turner

Joshua Pan and Shu Chang are among a select few architects who have been responsible – in very different ways – for revolutionising the approach to high-tech science buildings in Hsinchu, near the capital.

Breaking the mould

High-Tech Industrial Park, Hsinchu



Ying-chun Hsieh, along with Joshua Pan and Shu Chang, has spent several years attempting to inject quality architecture into the High Tech Industrial Park at Hsinchu, an hour outside Taipei. One of his first forays in the science park was with Walter Gropius at TAC. They were designing an exhibition hall as "a symbol of development in the Third World". Sadly, it was a catalogue of disasters from beginning to end.

"The orthodox Modernist design rammed into the existing styles of Taiwan and ran aground on the rocks. The rational kernel of the plan was destroyed by the Chinese bureaucratic system... meetings consisted of bureaucratic and polite approvals, but the resulting plans were overturned the day they were delivered." Eventually, TAC dissolved the collaborative relationship in the middle of the construction process. "This entire process should give us food for thought," wrote Hsieh in Dialogue earlier this year.

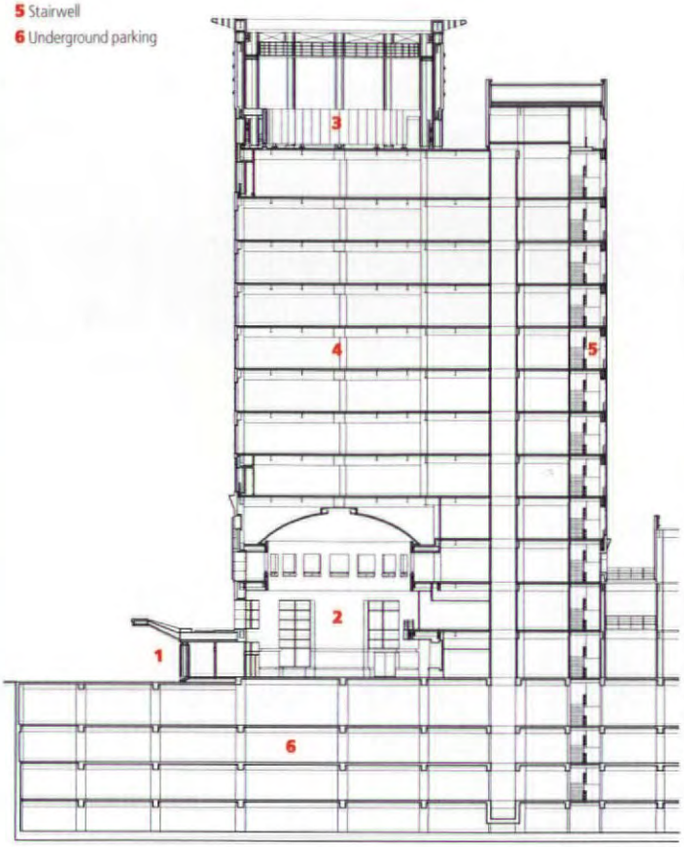
There is now evidence to suggest that the tide is turning. Joshua Pan has been responsible for bringing architects to the forefront of the process of designing buildings for the high-tech industry, where previously they had been sidelined to the point of redundancy. Pan's firm prides itself on providing design, service and delivery – with an emphasis on the latter two. This has proved a highly marketable tool for attracting clients in the science park, as has an international background in architectural education and practice.

At the science park, explains Pan, "90 per cent of the investment is in plant and tools. It's not in the architecture. These are huge commissions, but with only a small 'luxury' budget for the architecture. But they [the clients via their buildings] also ▸

Top left: Concept sketch by Joshua Pan of the 38,400-square-metre Etron Technology headquarters. The seven-storey building is divided into production and administrative zones, with parking and plant rooms on the two basement levels
Above: The "lighthouse" feature at the top of the main stairwell takes advantage of the site overlooking a highway. The feature is visible day and night to reflect 24-hour activity

Key to section of Macronix HQ

1 Entrance
2 Lobby
3 Circular conference and reception rooms
4 Offices
5 Stairwell
6 Underground parking



Above: Chie-Hsio Road entrance to the Hsinchu industrial park by Shu Chang and Associates. The high-tech materials and design contrast sharply with the concrete entrance arch at the other end of the park designed by Pan more than 10 years ago

Top left: The 67,000-square-metre headquarters building for Macronix International by Joshua Pan includes an R&D centre, staff training and recreation facility alongside an existing production plant. The seven-storey R&D building, shown here, faces a future park. It joins the conference centre and existing production plant to form a courtyard **Left:** The circular lobby and domed roof of the Macronix HQ

Above: ABBA TEK Precision Technology building by Shu Chang Associates. The eighth floor acts as a highway billboard, the multiple levels of fenestration and colour blocks evoking the image of a complex silicon chip

Above: Sculptural installation also at the Chie-Hsio Road entrance, by Shu Chang Associates. Architecture for architecture's sake is almost never seen in Taiwan

▶ have to look trustworthy and prestigious". This is what they expect the architects to help them achieve. Many of Pan's early buildings in the park are unremarkable concrete structures, clad in the ubiquitous easy-clean tiles. In the context of this portfolio, his latest two headquarters buildings, for Macronix International and Etron Technology, are something of a pleasant surprise.

The exterior of both headquarters are irregular and break away from the typical box-like treatment of their neighbours. Both are more overtly corporate, successfully establishing the success of the clients, and waving the flag with vertical landmark features; a "lighthouse" for Etron, and a circular conference and reception room tower projecting above the main lobby for the Macronix building.

The Etron headquarters has a reinforced concrete and steel structure clad in a metal curtainwall with sun screening, glazed tiles and granite colonades. At Macronix the reinforced concrete basement has a steel superstructure and a granite and metal curtainwall.

In a western context neither of these buildings would be particularly remarkable, their interiors lacking the imaginative space planning of their Silicon Valley counterparts. But given the problems typically faced by architects at Hsinchu, and illustrated by the experience of TAC, they mark a significant breakthrough. Overseas architectural firms looking to break into this rapidly expanding sector would do well to consult Taiwan's king of service and delivery.

Shu Chang takes a decidedly more academic and philosophical approach to his designs. His latest additions in the science park, at the Chie-Hsio entrance and for ABBA TEK Precision Technology, will turn the head of any visitor. There is little of this visual quality in Taiwan, let alone the science park. Sadly, the quality of construction on the ABBA TEK building is poor, and the end result belies the quality of the design on paper.

Nevertheless, Chang's efforts to alleviate the boxy appearance of the building are impressive. The eighth floor provides the advertising landmark effect; multiple levels of fenestration and coloured blocks a metaphor for a complex silicon chip. An irregularly set folding panel which extends from the wall to the roof integrates the various quadrants of the building sections.

The complex incorporates an existing brick building. This is reflected in Chang's choice of materials for the new building – brick blocks are layered with metal panels and glazed curtain walls.

Shu Chang admits that producing a building such as ABBA TEK requires more than architectural skills. He claims that he had to "trick" the client into allowing him to do something less formulaic. They should be glad that he did. This is a building in a class of its own in Hsinchu.

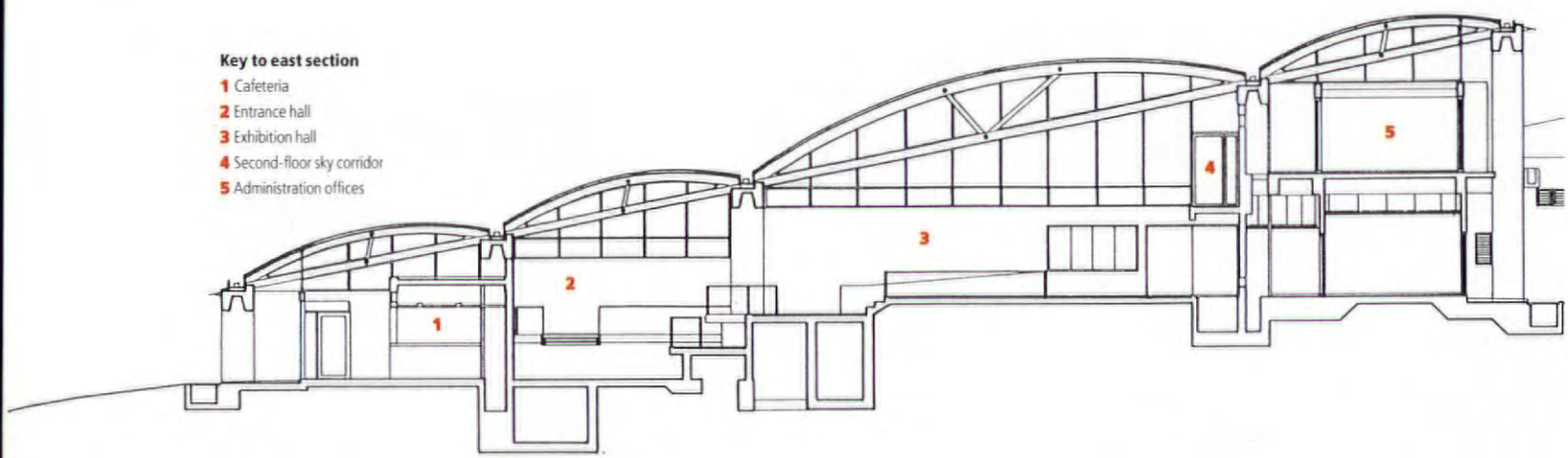
Chang is the first to admit that to design High-Tech buildings – in stylistic terms – is quite different to designing buildings for the high-tech industry. There will seldom be opportunities for wannabe superstars to perform in this sector. At Hsinchu the architects have had to deal with the practical considerations of the manufacturing process and machinery installation, even before tackling the complex building codes. It takes patience and imagination to come up with a refreshing aesthetic solution, something this architect appears to have in abundance. WA

Landscape architect at Peinan Cultural Park
Chung-twn Kuo, LEF Laboratory for Environment and Form
Architect of Meinung Museum of Hakka Culture
Ying-chun Hsieh
Reviewed by
Gene King/Nicola Turner

Two museums completed this year in southern Taiwan signal the beginning of a new approach to defining Taiwanese culture. Gone are the garish colours and obviously "Chinese" forms.

Culture club

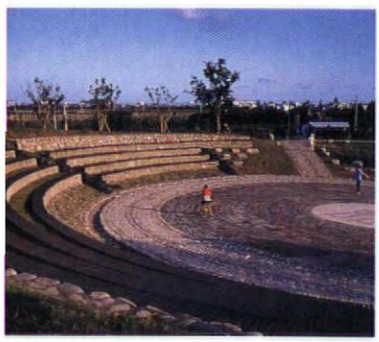
National Museum of Prehistory, Peinan Cultural Park (Chung-twn Kuo)
Meinung Museum of Hakka Culture (Ying-chun Hsieh)



The last three decades have seen an economic boom in Taiwan so explosive that traditional values have been swept away. Being successful in business has become more important than any other aspect of the architects' work, meaning that much Taiwanese architectural culture has become adolescent and vulgar. In this context the work of landscape architect Chung-twn Kuo is all the more remarkable. Ms Kuo won the 1991 international competition to design a cultural park and National Museum of Prehistory in Peinan, the first of its kind in Taiwan, and has spent the last eight years making it a reality. Construction and design fees were low, but her designs were impressive enough to attract a team of prominent Japanese consultants including Naito Architects and SDG structural engineer (of Tokyo Forum fame), for the design of the visitor centre at the heart of the park.

The park is to be built on a flat fan-shaped site at the base of a cliff, the line of the building following the natural contours of the land. The roof of the museum slopes parallel to the site and is supported with post-tensioned RC beams spaced no more than 16 metres apart. The upper section of the truss frame is made of composite materials and is, according to architect Hiroshi Naito, the "the first large section composite material structure in Taiwan". A wood structure was chosen ►

Below, clockwise from top left: Original amphitheatre on the site; detail of the time trail tunnel, from past to future; timber-frame entrance plaza reflected in the water at night; the visitor's centre in the context of the Peinan Cultural Park



► for climatic reasons, and to create a warm space. The bowed upper and lower sections are designed to resist typhoons, to which the region is prone.

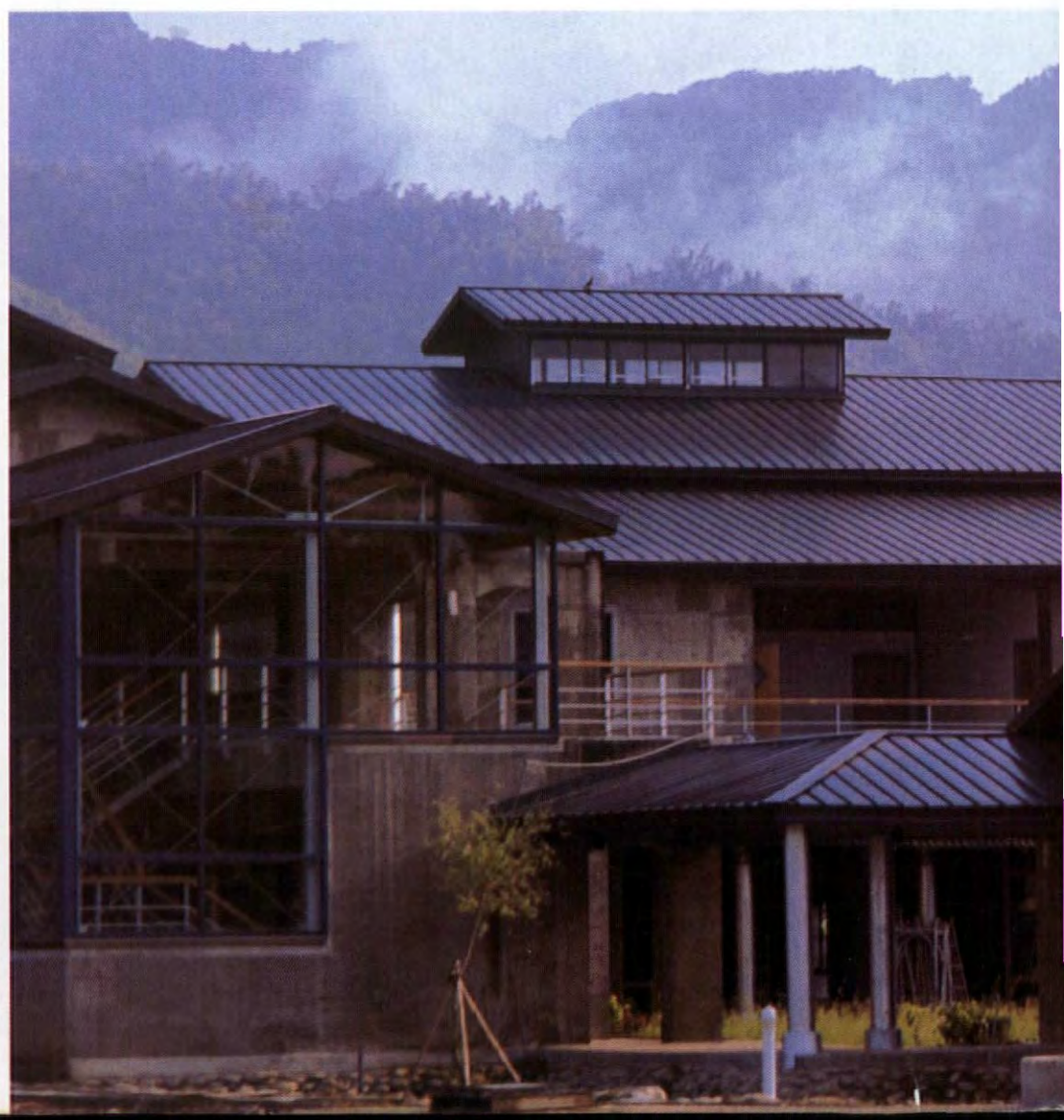
Going against the flow

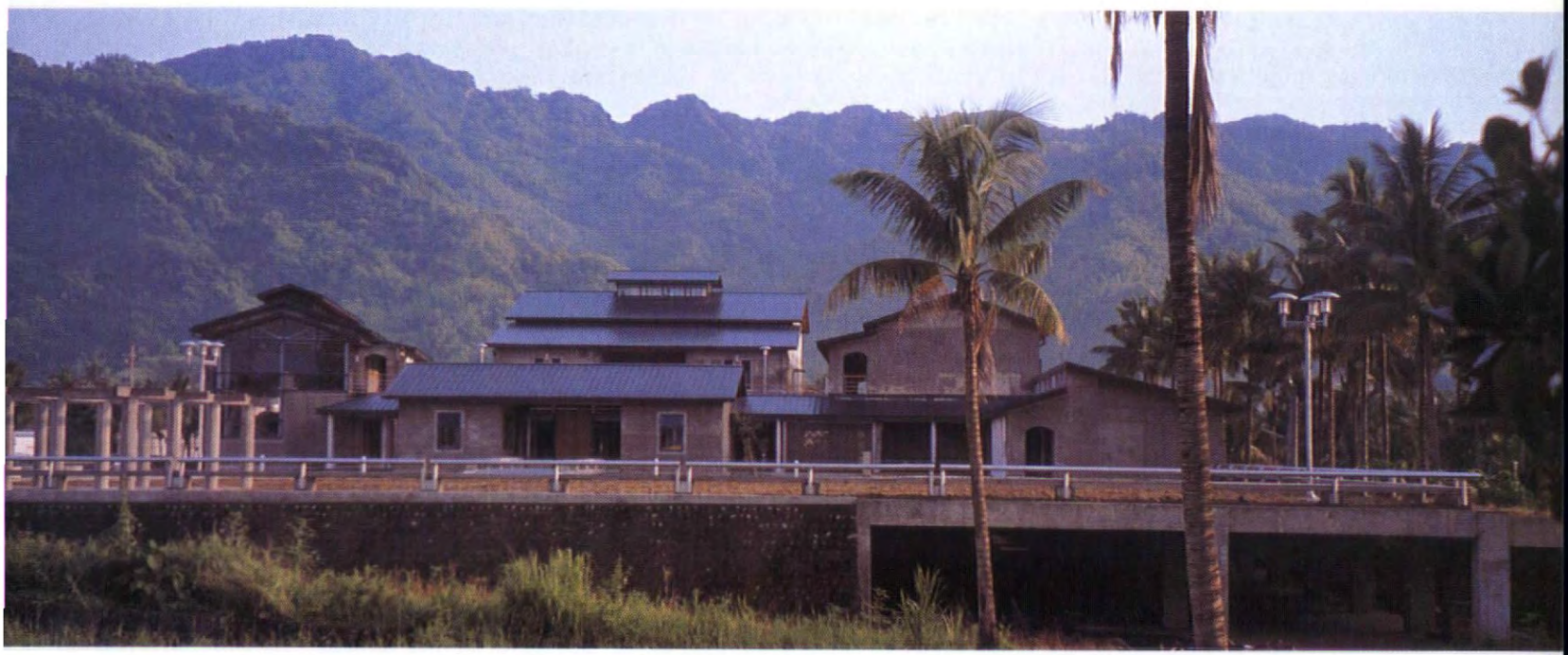
In southern Taiwan, Ying Chun Hsieh overcame the odds to produce a remarkable Museum of Hakka Culture, in Meinung, also completed this year. Hsieh worked as a contractor for eight years before receiving his architect licence. A self-taught architect, he brings the same approach of dogged persistence to all his projects – a shed on a mountain, a junior high school, buildings for the high-tech industry (see page 63) and cultural centres. At the Hakka museum Hsieh immersed himself in the project, taking his whole office down to Meinung for months on end. As a result the building is firmly rooted in its site.

The museum follows the form of traditional Hakka houses, which are large and circular, with many families living under one roof. Tobacco farming was once a major industry for the community, so Hsieh has incorporated a "tobacco chimney" form as a source of light and air circulation. In place of traditional mud Hsieh has used concrete, keeping the exposed structure that would have been seen in the large span animal sheds. All the materials, other than the steel roof, are locally sourced. The door frames are painted blue, in reference to Hakka clothing, and the clustered composition of the museum complex, complete with traditional courtyards, evokes the rambling structure of a local village.

Despite the architect's sensitivity to the subject of the museum (he is Hakka himself), the project has proved enormously controversial. Every stage of the four-year construction process has been hampered by protests and boycotts by the local community. Criticisms included the use of black roofs, traditionally a symbol of death, and some see the reference to the tobacco chimney as a painful reminder of the years of Japanese occupation.

Although the Hakka museum has received critical acclaim from Taiwanese architects and writers, Hsieh's experience has shown that there is still a long way to go before Taiwan will accept less conventional representations of culture and tradition. Architects will have to turn their gaze from the party to find a true vernacular architecture for Taiwan. It is a gaze that is tired yet persistent, serious yet humorous, anxious yet patient, questioning yet affirming. WA

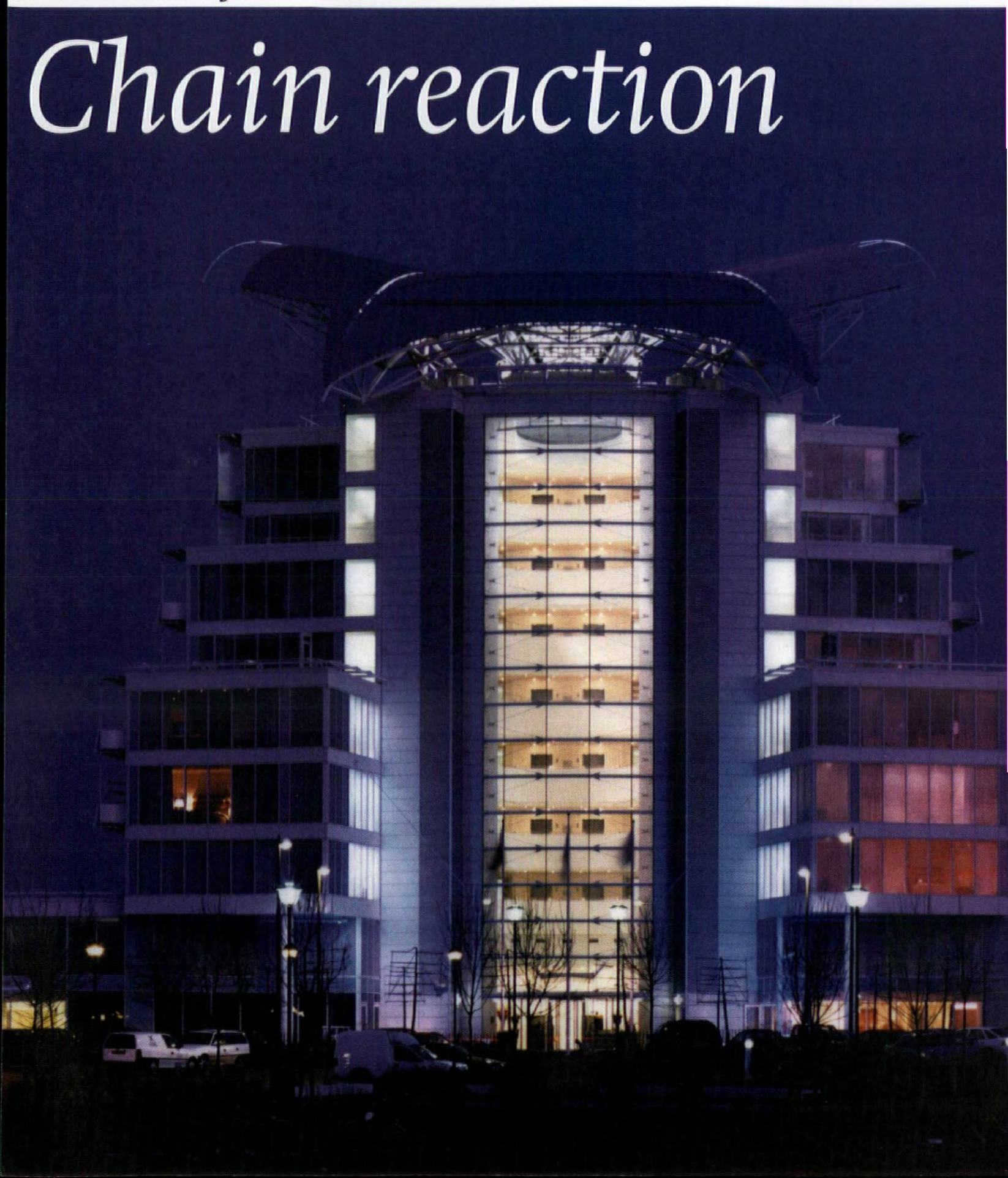




Far left: External corridor showing door and window unit with steel mullions and operable louvres **Left:** Mist rising from the mountains behind the south-west corner of the courtyard and hall. The "tobacco chimney" form makes reference to Hakka culture, as well as providing light and air circulation **Above:** The grouping of the separate elements of the museum emulates the cluster formation of Hakka villages. Hsieh has kept colours muted and used locally sourced materials **Below:** Interior of the lounge. Colour is introduced in the tiled floor

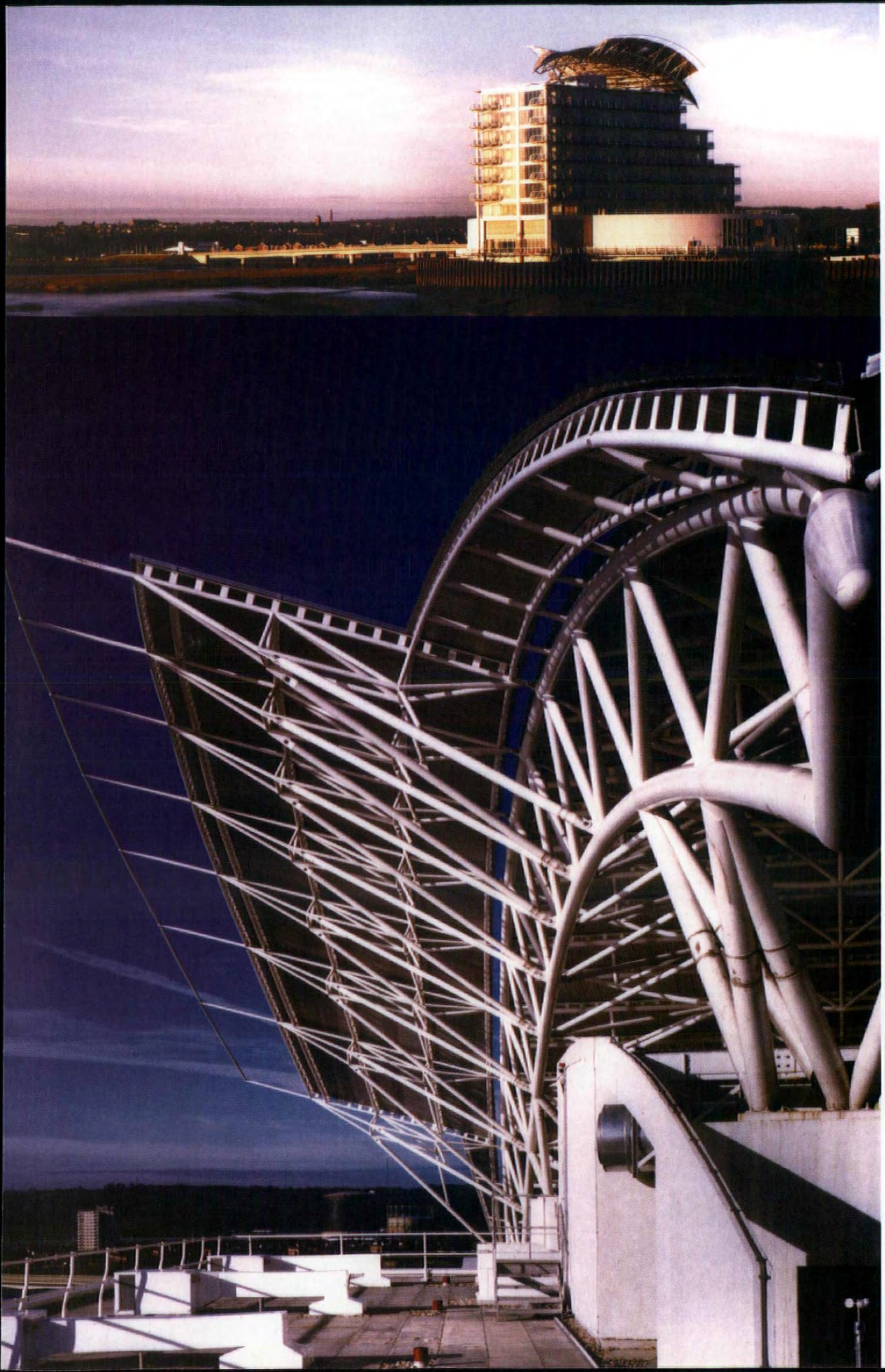
Sector analysis – Hotels

Chain reaction



Gone are the days of homogenised hotels where weary businessmen and tourists were wrapped in familiar surroundings. Today's travellers are demanding individuality and affordable quality and comfort. The choice of hotels – from trendy minimalist creations to urban resorts – is greater than ever. Even the hotel chains are redefining their product. In Cardiff, Wales, Patrick Davies has recently completed St David's Hotel for Rocco Forte, previously of Trusthouse Forte fame, without a swag in sight.

Left: Central to Davies' design for St David's hotel is the full-height atrium, which divides the two wings of accommodation



Right, top and bottom: Where did you get that hat? No mere ornamental gesture, the "hat" both shades the full-height atrium and acts as a beacon, turning the hotel into a landmark

Patrick Davies' St David's Hotel on – in fact virtually in – Cardiff Bay surprises in two ways. Firstly it is an all-new hotel in a clearly contemporary idiom for the Forte hotel chain – which in the past has not been noted for its patronage of young modernists. And secondly, it is an unusually expressive form of modernism. Er – what's that big hat doing on top?

Davies' architecture has always baffled purists. He appears to spring from the English High-Tech tradition: his designs show many of the qualities of "white-modern" restraint. Yet he habitually incorporates elements into his buildings that are purely decorative – or sculptural. He does not employ the old High-Tech device of including ornament by stealth, incorporating it in needlessly over-elaborate expressed structure and services. No; Davies' ornamental gestures are overt and challenging.

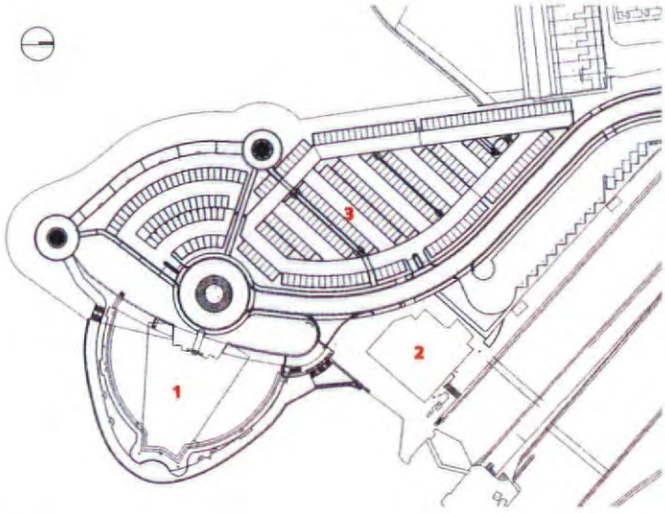
Which brings us to the roof of the St David's Hotel. It is not, as it happens, a redundant item. Its great curving latticework wings, poised on the roof like a bird about to take flight, happen to shade the roof of the full-height atrium lobby within. Of course this could have been done a great deal more modestly, with near-invisible louvres or even specialist solar glass. But its other function is much more important: simply, to be a landmark. You can, just, make out this building from the other side of the Bristol Channel. Within Cardiff, it is very prominent. It helps to anchor the new development of the Cardiff Bay area. And of course, it provides instant recognition for the hotel and, by extension, for what is the second Forte hotels empire: Rocco Forte, son of the founder of the dynasty, is starting afresh after his previous company was wrenched from him in a hostile take-over bid.

It is a prescient move: at present the hotel stands on its man-made peninsula, its feet in the mudflats of the bay, but very soon, with the completion of the Cardiff Bay barrage, it will sit on a non-tidal freshwater lagoon. The image of the floating seabird will be complete. As for the hat, I like it: my only reservation is that it is smaller than Davies originally designed – it was originally meant to swoop lower over the brow of the hotel. Now, it looks rather as if it is being worn on the back of the head. But if you removed it the building would be considerably poorer visually and proportionally: it would be bipartite in elevation rather than classically tripartite: base, stem, top.

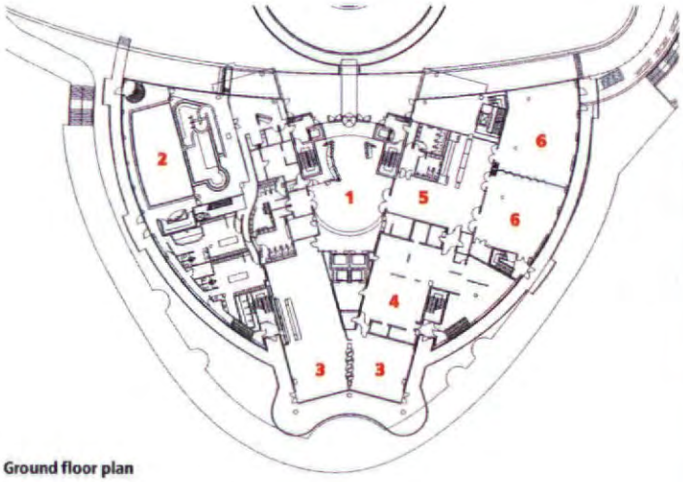
Beneath the hat, the hotel is a strictly rational, bilaterally symmetrical, affair. Effectively two rectangular wings of outward-facing hotel rooms are placed in V-formation on top of a semicircular podium of ancillary facilities. Put another way, a standard dual-aspect, central-corridor hotel plan has been wrenched apart at one end. The widest part of the V forms the entrance and lobby atrium. The sharp end (in fact expressed as a blunt re-entrant angle where the two blocks meet) forms a prow looking out across the bay. Angling the accommodation in this way means that every room gets its sea view.

The maritime character of the building is reinforced by continuous timber-decked balconies running along the sides and round the front. A suspended low-level boardwalk carries a public coastal walkway round the podium, which contains restaurants, function rooms and a large health club and spa.

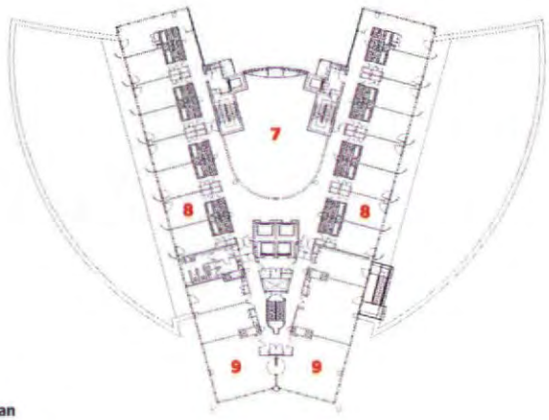
Perhaps the hotel's strongest suit, however, is the simple and effective gesture of the lobby atrium – surprisingly small on plan. From the outside, this is defined by a full-height glazed slot. Inside, the wings of accommodation are to either side of ►



Site plan



Ground floor plan



Level 4 plan

Key to site plan

1 Hotel
2 Sports cafe
3 Car park

Key to floor plans

1 Reception
2 Health club
3 Restaurant
4 Kitchen
5 Function area
6 Function room
7 Atrium
8 Bedroom
9 Meeting room

Clients
Sir Rocco Forte & Family (hotel)
Cardiff Bay Development Corporation (infrastructure works)
Architect
Patrick Davies Architecture Ltd
Edward Canel, Patrick Davies, Peter Denney, James Gott, Steev Gravett, Marc Palmer, Spencer Pugh, Kevin Wylde
Bedroom and meeting room furniture
RF Hotels – Olga Polizzi, Tim Young
Restaurant interior design
David Collins
Structural and fire engineer
Hulle & Kirkwood
Infrastructure and remediation engineer
Kenndey & Donkin
Quantity surveyor
Bucknall Austin
Landscape architect
Jenny Coe
Planning supervisor
Stride Treglown
Acoustician
Equas
Windtunnel Test
Bristol University
Remediation and environmental consultants
EAG/Aquaterra/SGS Environment
External lighting
Concord

Costs in US$

Total cost of hotel (excluding furniture): $3,960,655

Total of cost of infrastructure: $5,205,930

Gross built area: 15,136 square metres

Hotel cost per square metre excluding fee: $2005

Infrastructure cost per square metre: $274

Element	Cost	Cost per square metre
Sub-structure (minipiles and sheet piling)	$1,267,200	$83.72
Concrete frame (insitu using Cordeck)	$4,308,150	$284.62
Balcony steelwork	$394,680	$26.07
Balcony gratings/decking (Elefantriste steel grills)	$202,785	$13.40
Balustrades (glass and steel)	$193,050	$12.75
Astraglaze (ceramic fused blocks)	$714,450	$47.20
Curtainwalling (Low "E" double glazing)	$2,255,550	$149
Atrium and planar glazing (Pilkingtons)	$496,650	$32.82
Metal panels (Ame Euro aluminium composite)	$113,850	$7.52
Flat roof finishes (single-skin polymer)	$166,650	$11
Curved roof and atrium steelwork	$478,500	$31.61
Symphonic drainage	$26,400	$1.75
Curved roof covering (KalZip)	$100,650	$6.65
Podium balustrades	$19,800	$1.30
Mechanical services (fancoil/VAV)	$4,974,750	$328.35
Electrical services	$3,567,300	$235.67
Sprinklers	$458,700	$30.31
Doors (American oak/white ash veneer)	$966,900	$63.89
Stairs (steel)	$67,650	$4.47
Sanitaryware (excluding bedrooms)	$135,300	$8.94
Drylining (Lafarge)	$1,287,000	$85.02
Wall and floor tiling	$198,000	$13.08
Suspended ceilings	$24,750	$1.65
Atrium balustrades and finishes	$169,950	$11.22
Bathrooms pods (BRS Denmark)	$1,745,000	$115.34
Painting and decorating	$127,050	$8.40
Brise soleils (Lucas Sails)	$90,750	$5.99
Lifts (Otis)	$709,500	$46.88
Window cleaning and lightning protection	$201,300	$13.29
Vanitory units, kitchen equipment etc	$1,617,000	$106.84
BWIC	$244,200	$16.14
Preliminaries and OHP	$4,636,500	$306.32
Infrastructure works for CBD/RF hotels	$5,197,500	

Facing page: Views of the mud flats from the gallery **Above:** Rooms are wrapped around the "Guggenheim-style" atrium **Left:** Reception

you, defined by the white strips of the balustrades overlooking the atrium, rising up and up like an extruded Guggenheim, each level picked out in its halo of halogen lights. Ahead, the balustrades curve round in a smooth sweep, creating substantial circulation space on each floor just where it is needed – at the point where visitors congregate before descending in the cluster of lifts to the lobby below. As a result, there is the minimum of corridor space in the hotel.

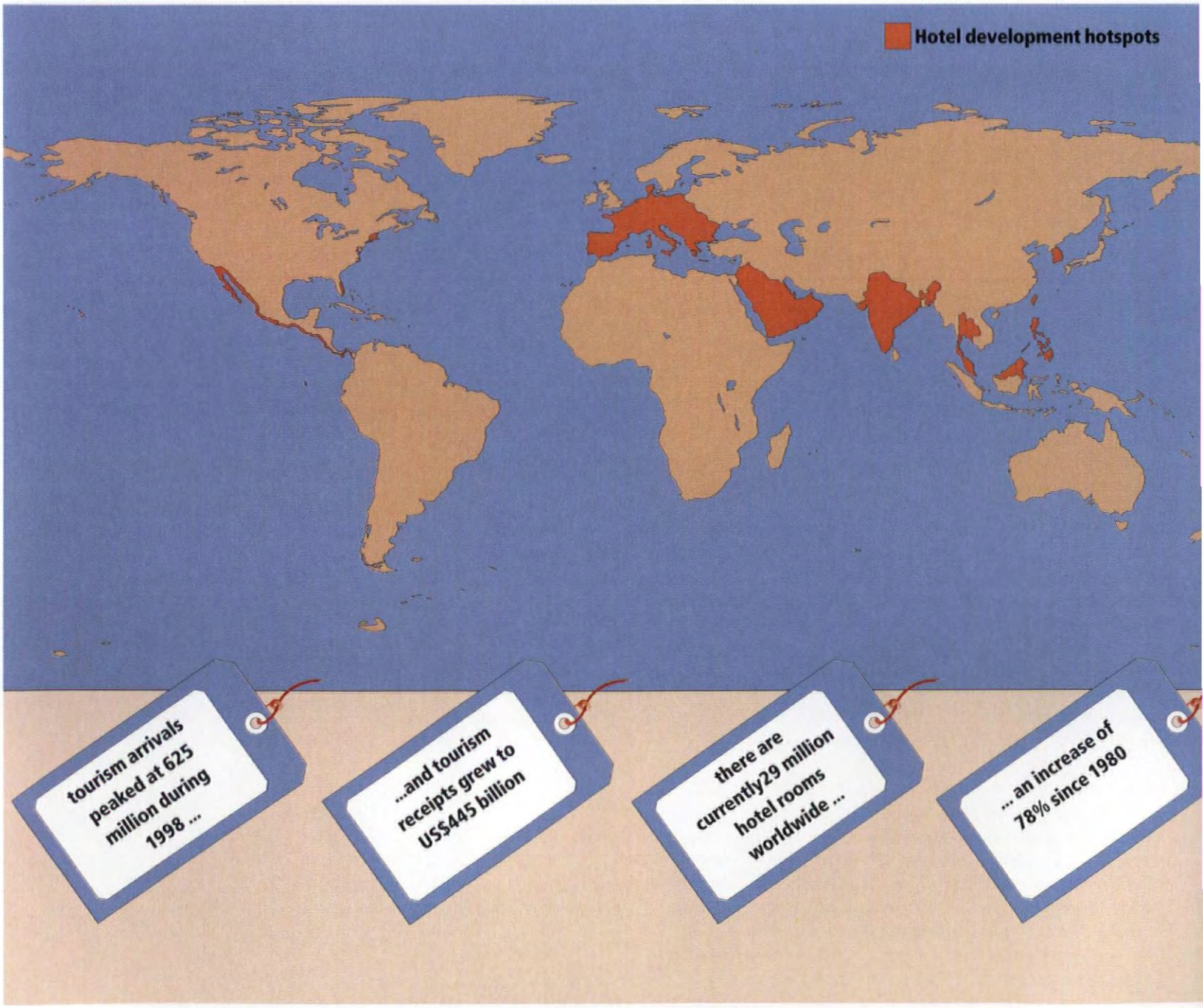
The rooms themselves, interior-designed by Olga Polizzi, sister of Rocco, are done with a reasonably contemporary touch, but in any event fade into insignificance compared with the big view of sky and sea: guests tend to immediately fling open the sliding windows on to the balconies as if to sleep under the stars.

We are now used to city-centre "boutique" hotels, usually conversions, being designed in the modern idiom. But this – the flagship hotel of a mainstream, top-of-the-market chain being all-new, all-modern and by a rising architect rather than a safe established name – is enormously encouraging. WA

Hugh Pearman

Checking in

Tourism is one of the world's fastest-growing and most profitable industries. As competition and consumer demands have forced hotels to diversify, architecture has taken on an increasingly important role. Sophy Roberts talks to leading hotel designers and clients about the changing face of hotel design.



The hotel sector, once an architectural backwater, is emerging as one of the most dynamic and diverse sectors of the trade. "Everything has changed," says architect David Rockwell. "Until recently, hotels were anonymous, designed to please everyone when they actually pleased no-one. Now architects must acknowledge that guests want choice."

According to Smith Travel Research, an organisation that monitors trends in the lodging industry, the global hotel business is enjoying record levels of profitability. Last year, tourism arrivals hit a peak of 625 million worldwide, showing an increase of 199 million in the last decade; meanwhile, tourism receipts grew to US$445 billion, an average annual increase of 8.1 per cent, according to the World Tourism Organisation. Surprisingly, tourism revenues fell by only 4 per cent in East Asia and the Pacific following the Asian financial meltdown. According to the WTO, there are now 29 million hotel rooms worldwide, a 78 per cent increase since 1980. Geographically, the hotspots to watch are the Middle East, Continental Europe, and the west coast of the US and Central America . Taiwan, South Korea, India, the Philippines, Thailand and Malaysia are also picking up, proving the resilience of tourism to economic crises. Bob Cottar, European vice-president of Starwood Hotels and Resorts Worldwide, the world's largest hotel company, says the industry shows no sign of slacking. "As new wealth keeps being created, business and leisure travel will grow even more in the next 10 years than they have in the last decade."

This economic activity has placed pressure on architects. In a very short period of time, travellers have become more sophisticated and subtly differentiated, forcing the market to diversify. It is within this context of mass customisation that architecture has become a critical distinguishing characteristic. In the words of Isadore Sharpe, CEO of Four Seasons and Resorts, "you can no longer cookie-cut hotels".

According to Michael Nowlis, CEO of the International Hotel and Restaurant Association, we're now seeing a growth in very specialised hotels as the market divides and sub-divides into everything from urban resorts to automated budget hotels where your room key is your credit card and your bathroom "self-cleans". Long-stay apartment hotels, dedicated spa resorts, eco and ethno-resorts are all on the rise. To stay on top, chains like Marriott have had to develop a wider variety of products (in the last three years, the company has branched into six new brands, ranging from long-stay hotels to the five-star Ritz-Carlton). It seems that success in the hotel business is now about identifying a niche position, and creating a very specific architecture to suit. Says Herbert Ypma, author of the new book series *Hip Hotels*: "The architect's role in the hotel business has stepped into the forefront."

"In a very short period of time, travellers have become more sophisticated and subtly differentiated, forcing the market to diversify."

Small is beautiful

The boutique hotel – small, unique, with an emphasis on design – is one of the most dominant growth areas. It started with hotelier Ian Schrager in 1984 opening the Andrée Putman-designed Morgans in New York. Schrager identified a vertical market more concerned with how things look than what they cost. It was a case of "don't like it, don't stay", yet knowing the style leaders would. Denton Corker Marshall's 34-room Adelphi Hotel in Melbourne targeted the same crowd when it opened in 1993, its creative confidence directly linked to DCM's ownership of the property (the glass-bottomed pool is cantilevered over the street). But since the Adelphi, there's been a shift in expectations; the design-conscious minority has turned into the majority. The boutique hotel has gone mass market.

It was Schrager's consistent occupancy rates of over 80 per cent that made his competitors pause to re-think (and persuaded investors to support Schrager's expansion with two new properties in London and five in the US). In the UK, the Patriot American Hospitality group is hitting the same design-sensitive market with its new Malmaison boutique business hotels in Leeds, Glasgow, Manchester, Newcastle and Edinburgh, with plans to open in Birmingham and London. Those five hotels have a rate of revenue growth higher than any other brand in the Patriot stable. Last year, Starwood – the world's largest hotel company with properties including Sheraton and Westin – launched the W brand, opening its Rockwell-designed New York flagship in December 1998. Now, three further Ws have opened and there are plans for 11 more by 2002. According to Cottar, growth in the boutique sector is a reflection of the public's increased appreciation of residential design. "The customers," says Cottar, "are driving us there."

Back in London, the fashionable philosophy of feng shui (Chinese for wind/water) has taken hold in the heart of the West End. The Conran Design Partnership is responsible for myhotel Bloomsbury, a contemporary town house hotel influenced by the owner's interest in the East, providing a counterpoint to the frantic pace of life outside. An internal street inside the entrance links all the public spaces through a series of enfilade doors. Limestone, zinc and leather are used throughout the public spaces in contrast to the timber staircase and dark-wood door ▸

Far left: the New York W hotel, **Left** Patriot American Hospitality's Malmaison boutique hotels in Manchester

frames. A fish tank links the bar with the reception – an essential addition to any feng shui interior. Hidden in the basement a womb-like library and juice bar provide spaces for relaxation and meetings. Each bedroom is individually designed and furnished, and art throughout the hotel was specially commissioned – much of it depicting photographic scenes of Asia. Such is the reputation of the hotel that it is already being talked about in South-East Asia. It seems architects there are surprised it's taken this long for feng shui to catch on.

At the other end of the UK Andrew Doolan Architects has completed phase two of the acclaimed Edinburgh City Travel Inn; a mid-price hotel which has not compromised on design or quality of finish. The Travel Inn sits on a formerly derelict site. Phase two incorporates black polished granite facing and an arresting glass roof light, as well as a distinctive ground floor stainless steel colonnade. The link block connects the two phases by means of one of the biggest and brightest windows on any building in Scotland's capital. The local and national consensus is that Doolan's latest hotel venture is evidence that new-build economy accommodation can make a significant contribution to urban form.

"It was Schrager's consistent occupancy rates in excess of 80 per cent that made his competitors pause to re-think."

Urban resorts

Traditionally, urban hotels were for business, resort hotels for holidays. But recently a hybrid has emerged – the "urban resort". This type of hotel architecture combines traditional components of a fantasy resort with the city skyscraper, answering a demand for resort-like entertainment facilities in an urban area (it's particularly popular in Japan where hotels pull in more revenue from their communal functions than their guestrooms).

The year's most fashionable and talked about high-rise hotel is the Grand Hyatt. The five star hotel designed by Bilkey Llinas Consulting of Palm beach, Florida occupies the top 34 floors of Skidmore Owings & Merrill's 421-metre Jin Mao tower in the Pudong district of Shanghai (see *WA*79, page 67). Officially the highest hotel in the world, its dramatic 33-storey lobby starts on the 56th floor. Access to the guestrooms is via an elliptical flyover where six high-speed glass elevators encased in a translucent enclosure provide vertical transport to the residence floors.

Far left: Bar at myhotel Bloomsbury, by Conran Design Partnership
Left: The glazed link block of Andrew Doolan Architects' Edinburgh City Travel Inn

The Hyatt describes the style of its newest acquisition as "contemporary Art Deco combined with traditional Chinese imagery". *WA* has not yet visited the hotel to judge whether this unlikely combination of three cultural eras is successful.

Another earlier high-rise is Cesar Pelli's Sea Hawk Hotel and Resort (1995) in the port town of Fukuoka. A 36-storey hotel tower block forms the backdrop to a glass, barrel-shaped atrium which functions as a resort-style oasis, containing a piazza, palm house, botanical garden and mock temple. The same idea is at work in the new Tadao Ando-designed Westin Hotel and Conference Centre complex on Awaji Island in Osaka Bay. When it opens in Spring 2000, this 201-room hotel complex set in 100 hectares will be complimented by an open-air amphitheatre, 1,300 square-metre convention hall, and a 6,500 square-metre greenhouse, providing a tranquil space for people living in the crowded Osaka-Kobe area.

Going the whole way

The growth of the urban resort is at its most advanced in Las Vegas, and connects with the boom in gambling which, according to the American Gaming Association, is now worth US$22-25 billion in the US alone. In this unique marketplace where supply begets demand, architects have had to come up with ever more extreme surrogate worlds.

In the last 12 months, the Strip has had a face lift. Last October saw the opening of Bellagio, a 3,000-room resort based on the eponymous Italian village, with a 4-hectare artificial lake inspired by Lake Como. The following March, Mandalay Bay Resort & Casino opened, a 25-hectare property with an 4.5-hectare tropical pool. In September, the Paris Las Vegas Casino Resort opened, complete with copies of the Palais Garnier, Louvre, Arc de Triomphe, and a half-scale Eiffel Tower. But it was the US$1.2 billion Venetian Resort-Hotel-Casino that really raised the ante. It opened in April with actual-size replicas of Venice landmarks – the Doges' Palace, Campanile, Rialto Bridge and Bridge of Sighs, Grand Canal and St Mark's Square (see page 82). Designed by global hospitality architecture firm Wimberly, Allison, Tong & Goo, the Venetian goes beyond cartoon copies and set design. According to Howard Wolfe, vice president of WAT&G, "half-theming" has had its day: "It's no longer enough to come up with a gimmick; it just looks like an afterthought rather than an idea integrated into the entire concept. With the Venetian, we've gone that extra step in terms of authenticity. As offensive as this sounds to the people of Venice, this is the real thing transported."

Designing for a global culture

The creation of a fantasy environment in a place that has no environment is peculiar to the Nevada desert. Elsewhere, the▸

pressures of globalisation have made us more aware of the locale. Ypma believes that understanding this shift is key to succeeding in the current climate. "Forty years ago, travellers would encounter huge cultural differences – in food, languages, and fashion. They would want their hotel room to be like an old friend, to be familiar and remind them of home. But now it's different. Every major city has a Gap, an Armani, a MacDonalds. Everywhere is becoming the same. All of a sudden the notion of staying somewhere individual becomes imperative."

Says Malaysian architect Cheong Yew Kuan: "It's as if the more globalised we are, the more tribal we become. We try to rediscover what we were as original people from a certain place in a certain time. This instinct is probably more exaggerated in Asia because of colonisation."

"Forty years ago, travellers would encounter huge cultural differences. [Now] the notion of staying somewhere individual becomes imperative."

According to Roy Paul, senior vice-president of development for Four Seasons Hotels, the dominant trend in travel is to experience the culture, history and essence of a destination. In terms of location-specific architecture, Edward Tuttle's designs for Amanresorts have set the pace for the last decade. At the new Amanjena opening this month in Morocco, Tuttle has once again combined his clean-lined style with the physical context; a 60 metre-square bassion, traditionally used to collect water from the High Atlas mountains, forming the centrepiece to the high-walled resort.

WAT&G's design for the Dead Sea Resort in Jordan (see page 82) hits for the same effect by only using indigenous materials and referring to traditional Middle Eastern building forms. Even in fantasy resorts, like the new Atlantis in the Bahamas (WAT&G), architecture is increasingly being themed to the location. "Because of that, people think of Atlantis as a destination," says Sol Kerzner, chairman of Sun International and Atlantis' owner. But Begawan Giri, a villa-style property that recently opened in Ubud, Bali, takes specificity of place one stage further.

Designed by Cheong, every detail at Begawan relates to its location and Indonesia's architectural heritage. The site is a jungle-covered promontory overlooking the Ayung River. The architecture can be broken down into its elements – traditional Balinese alang-alang roofing, sharp lines drawn from ►

Facing page: Begwan Giri in Ubad, Bali **Above, top and bottom:** The Grand Hyatt on the top 34 floors of SOM's 421-metre high Jin Mao tower in Shanghai **Right:** Cesar Pelli's Sea Hawk Hotel and Resort in Fukuoka. The combination of hotel and oasis will be echoed in Ando's Westin Hotel and Conference Centre on Awaji Island in Osaka Bay, to open in 2000

old Javanese houses – but it's the sensitive deference to the site's innate natural drama that distinguishes Begawan, with the elevations carefully considered to maximise the location. "We didn't sit around pontificating; it came as a natural extension from a particular site in a certain part of Bali," says Cheong.

According to Michael Nowlis, this trend for location-specific architecture is mirrored by the boom in conversions of historic buildings where a sense of past, not just place, becomes part of the guest experience. But the bottom line is really economics. "There's a richness in existing buildings which would be too expensive to recreate today. With historic buildings you get a leg-up," says Wolfe. This vogue for conversions is also a function of supply and demand. In a lot of cities, there are too many offices and not enough hotels. In London, Philippe Starck has just turned a former office block on St Martin's Lane into a Schrager Hotel (see pages 86-89), and in July 1998, Jestico + Whiles converted the grand Edwardian offices of the *Morning Post* into One Aldwych, a 105-room five-star hotel (see pages 90-91).

This desire for historical character is also being injected into hotel new builds. At both the Soho Grand (1996) and the soon-to-open TriBeCa Grand in New York, both hotels are made to look like they've always been there. Designed respectively by Helpern Architects and Hartz Mountain Industries the exteriors have the classic lines and proportions, large squared windows and decorative cornices that relate to the area's "cast-iron" manufacturing buildings. They are designed to give guests instant heritage. Says Ypma: "Everyone has less time, trips are much shorter, and the traveller is most likely there on business. They have little time to explore so the hotel becomes a very important part of the guest's experience."

In a context where the hotel less enhances than constitutes the travelling experience, the pressure is on architects to create something individual yet not too much "of the moment". Trendy is hot, then it's turning cold. Sir Rocco Forte speaks for every hotelier, developer, and investor when he says the true test of a hotel is the longevity it can sustain and the repeat business. Nowlis fears that some of the newer city properties are so concerned with being "individual" that they've missed the point – the need to target a certain group in a new and non-homogenous, fragmented market. "I'm just not sure they're timeless," says Nowlis. "In 20 years time, they might become laughable, like the fern bars of the 1960s." WA

Sophy Roberts is a freelance journalist, writing on architecture, design and tourism. She was previously with Condé Nast Traveller.

Far right, top and bottom: WAT&G's Dead Sea Resort in Jordan uses only indigenous materials and traditional Middle Eastern building forms **Centre and left:** The Venetian Resort-Hotel-Casino in Las Vegas, also by WAT&G

DESIGNING AN EFFICIENT PRODUCT *provided by Hanscomb*

Design

It is critical to select a qualified design team that is innovative, adaptive and aware that a successful front-of-house design requires integration with a successfully designed back-of-house.

Lobby spaces are likely to continue to get smaller, but with higher-quality finishes, with an efficient visual layout. This shrinkage has a positive design impact for younger price-point sensitive guests who are using lobbies as their living rooms.

More time is being spent in the bedrooms, which must accommodate sleep, work and lounge areas. During the 1990s desks in guest rooms have evolved into real work places, as technology allowed business travellers to take the office with them. There is a stronger emphasis on bathrooms and dressing areas, the most expensive construction space in a hotel, as guests want a more casual and relaxed hotel atmosphere. Guest rooms are probably at the optimum size. John Miller, design and planning manager of Peninsula Hotels, says that the trend over the last two decades of bigger guest rooms is gone. To be economically viable hotels must be more efficient.

Technology

State-of-the-art guest room technology is quickly becoming more sophisticated. An example is the Sennercom system developed by Hilton, which detects the level of activity in the guest room and can adjust HVAC, as part of the energy management system, accordingly.

Peninsula Hotels features a proprietary low voltage system with a multi-function bedside electronic control panel that enables the guests to set lighting levels, adjust draperies and even control the television from the bathtub. It too can be linked to a full building management system to allow real time assessments of the activity in the hotels.

Restaurants

In the US there is a trend for in-town business hotels to minimise restaurants and, in the interests of space, just providing only one restaurant, which can be arranged in various ways, and one or two bars. Hotels in the US haven't been making money on restaurants, unlike in Asia, where the local population uses them extensively for large social functions, and each hotel has several outlets.

Where is the market?

In the mid-90s Asia was the hottest market for four- and five-star hotels, but cooled rapidly in the 1997 economic crisis. Any work there is in South-East Asia is very focused. The US market, dormant for several years, has exploded to life. The most active areas are the full service hotel market, particularly in Orlando and New York; hotels related to convention centres; and downtown five- hotels and four-star business hotels. Opportunities in South America are increasing for mid-priced properties, but much depends on how well the economies support the growing middle class.

Shrewd investments

Hotel investors need to be sensitive to the cycle in the hotel market between property value and construction cost. The high-end hotel market in the US has shifted from renovating existing properties to building new ones, but a wariness about the heated market suggests that the cycle may begin to shift back. In Asia, most hotel work is the result of properties being sold or traded. Hotels carry a higher risk than office or retail projects, where costs and revenues are generally more predictable. They are among the most difficult projects to make work financially, which makes them very cost-sensitive.

Costing

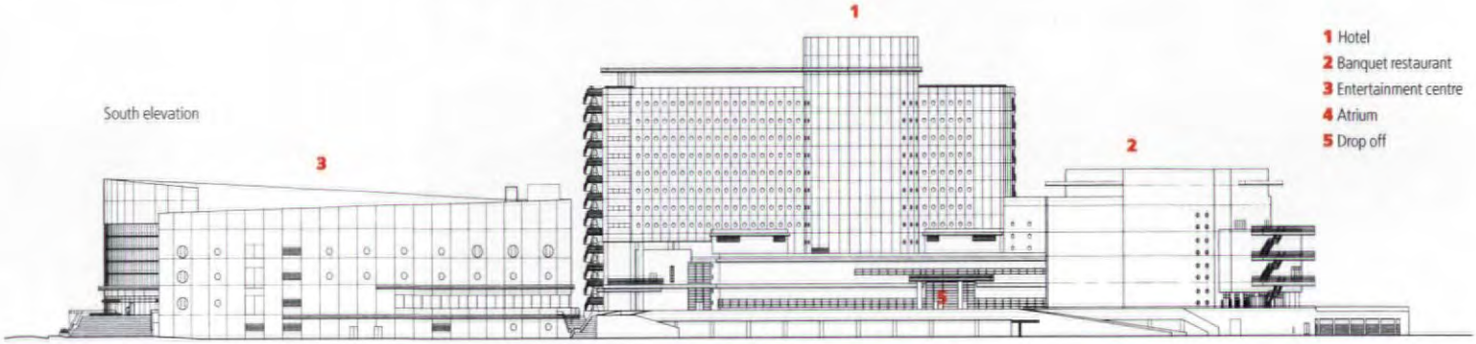
Costs are traditionally cited in two ways: costs per room and cost per unit of gross floor area. Cost per room varies according to type of hotel and local market forces. The relationship between number of guest rooms and other areas is not necessarily linear. While the number of guest rooms is important in determining the ancillary space provided, there is a stair step function to this. A typical net-to-gross ratio for the guest room block (adding for corridors, lifts, stairs, linen rooms, vending area and storage) for a higher grade hotel is approximately 1:1.5. It can be 1: 1.6 for a single-loaded corridor design, or as low as 1:1.35 for highly efficient hotels.

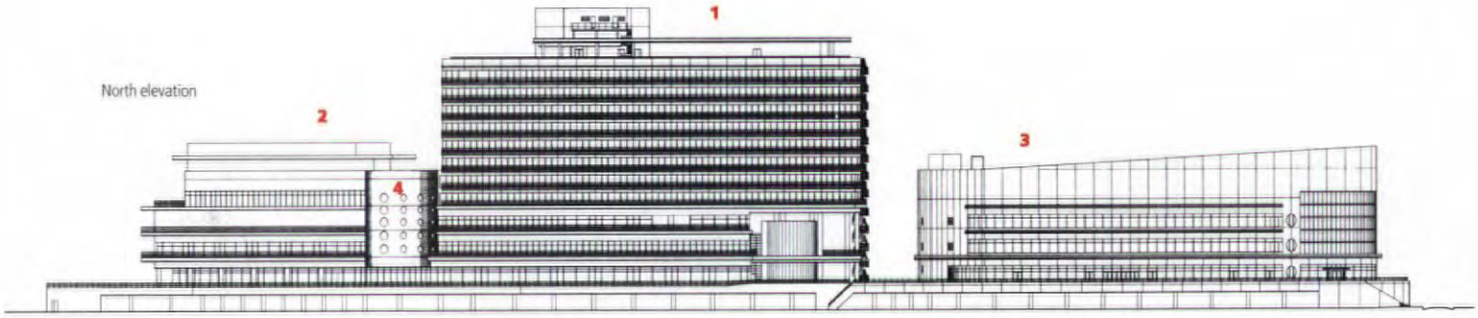
While the net floor area of the guest room is the single biggest cost component, the quantity of space for restaurants, bars, function and back-of-house areas contribute the greatest variation to gross floor areas between hotel grades. A rule of thumb is that the guest room areas generally account for 65 to 75 per cent of the total floor area.

Unit construction costs are influenced by the usual factors such as building height, configuration and site conditions. Special features may be less important now than finishes, flexible spaces, and comfort. Other influencing factors include the level of soundproofing, extent of balconies, type of mechanical system, and level of integral structural parking.

Rooms with a view

Biwako Hotel, Lake Biwa, Japan





Cesar Pelli's curvaceous Biwako Hotel – on the shores of Lake Biwa, Japan – replaces a 1934 hotel on the site. The curves throughout the 23,000 square metre hotel and 26,000 square metre entertainment complex maximise the views of the lake from the buildings, while also making reference to the surrounding mountains. All 170 guestrooms on the 13 floors face the lake, and each has a private balcony.

The full complement of Asian hotel facilities – including banqueting rooms, an outdoor roof-top restaurant and an oval-shaped chapel – is supplemented by entertainment facilities including a bowling alley, a cineplex, retail and further restaurant outlets. This is a hotel which invites public use through its architecture. The rooftop dining terrace and boardwalk are open to everyone; both spaces are used for special events for the citizens of, and visitors to, the city of Otsu. The chapel has an elevated garden and generous stairway, leading to a public terrace below. Pelli describes the hotel complex as "an urban building and a lakeside resort. Its forms are dynamic, youthful and contemporary".

The lakeside elevation is transparent, in contrast to the city elevation which is "composed with rhythms of circular windows and bands of colour". Colour is used extensively throughout, such as in the chapel, whose walls are composed of polychrome glass which open on to the lake.

Of his use of colour, Pelli explains: "The building is constructed of blue-green tiles to create a rich texture. Silver and yellow accents enhance the form while horizontal patterns accentuate the curves of the building. The building forms are inspired by the waves of Lake Biwa and its colours are the blues and blue greens of the sky, the water and the distant mountains."

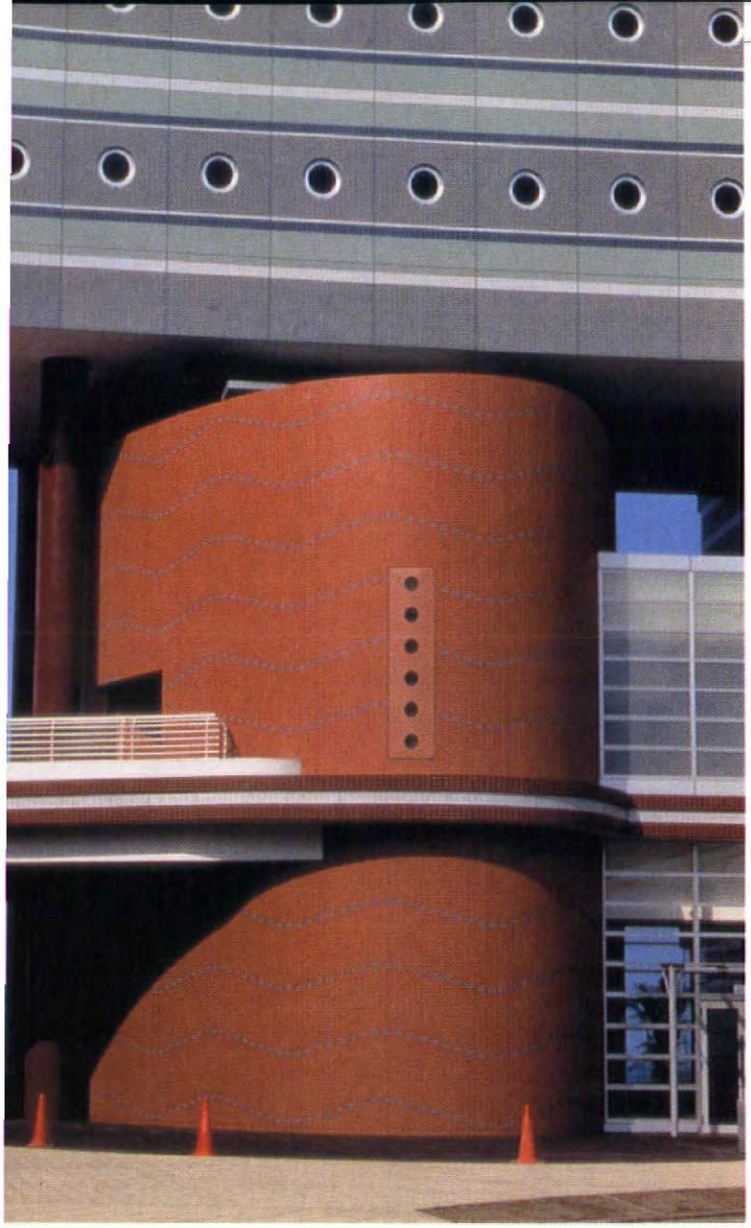
Inside the hotel, the architect is most proud of the soaring atrium space with the light pouring in from "a constellation of curved windows and skylights that glow as if from a sky with many large moons".

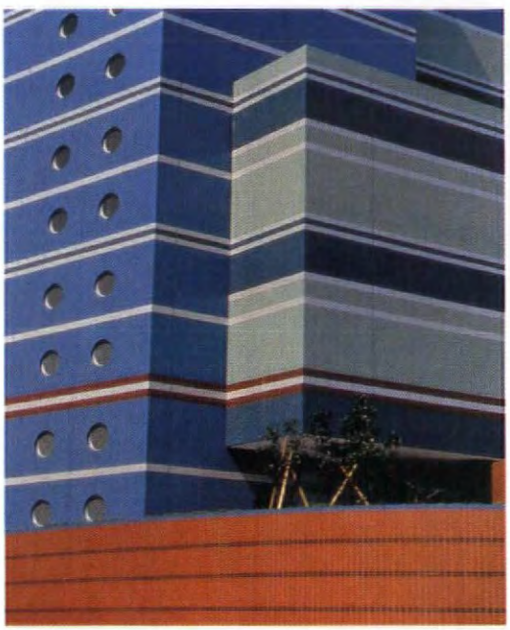
Completed in 1998, both the Biwako Hotel and Entertainment Center have proved a valuable addition to the visual and economic life of the city of Otsu.

Nicola Turner

Horitaka Otsuji

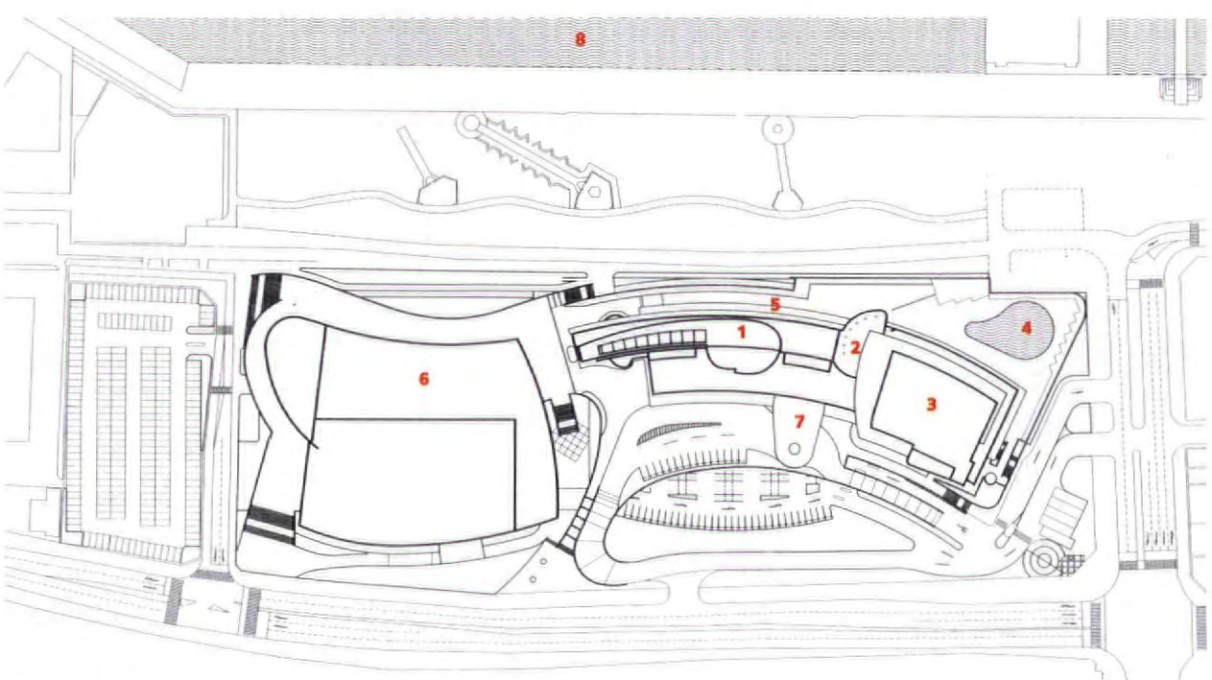
Client
Keihan Electric Railway Company, Osaka, Japan
Architects
Cesar Pelli & Associates
Jun Mitsui Associates
Architect of record, general contractor, structural, mechanical and electrical engineer, lighting consultant and landscape architect
Takanaka Corporation





Hiroaki Ohtsuji

Facing page: The city elevation of the hotel invites use by the residents of the city **Above, left to right:** Boardwalk and atrium to the hotel; the south, or city, elevation uses bands of colour; all hotel rooms have a view over the lake



Key to plan
1 Hotel
2 Atrium
3 Banquet restaurant
4 Pool
5 Boardwalk
6 Entertainment centre
7 Drop off
8 Lake

Starck shows his true colours

St Martin's Lane Hotel, London

Richard Davies

Left and below: Corridors and rooms are washed with light, which shines through to the exterior. Colour in the rooms can be selected according to mood

Richard Davies

On 7 September, New York hotelier Ian Schrager opened his first European outpost in St Martin's Lane, London. The boutique-style property is a collaboration between Romanian architect Anda Andrei, president of design for Ian Schrager Hotels; Philippe Starck, Schrager's long-time associate responsible for the hotel's "overall design"; and Schrager himself.

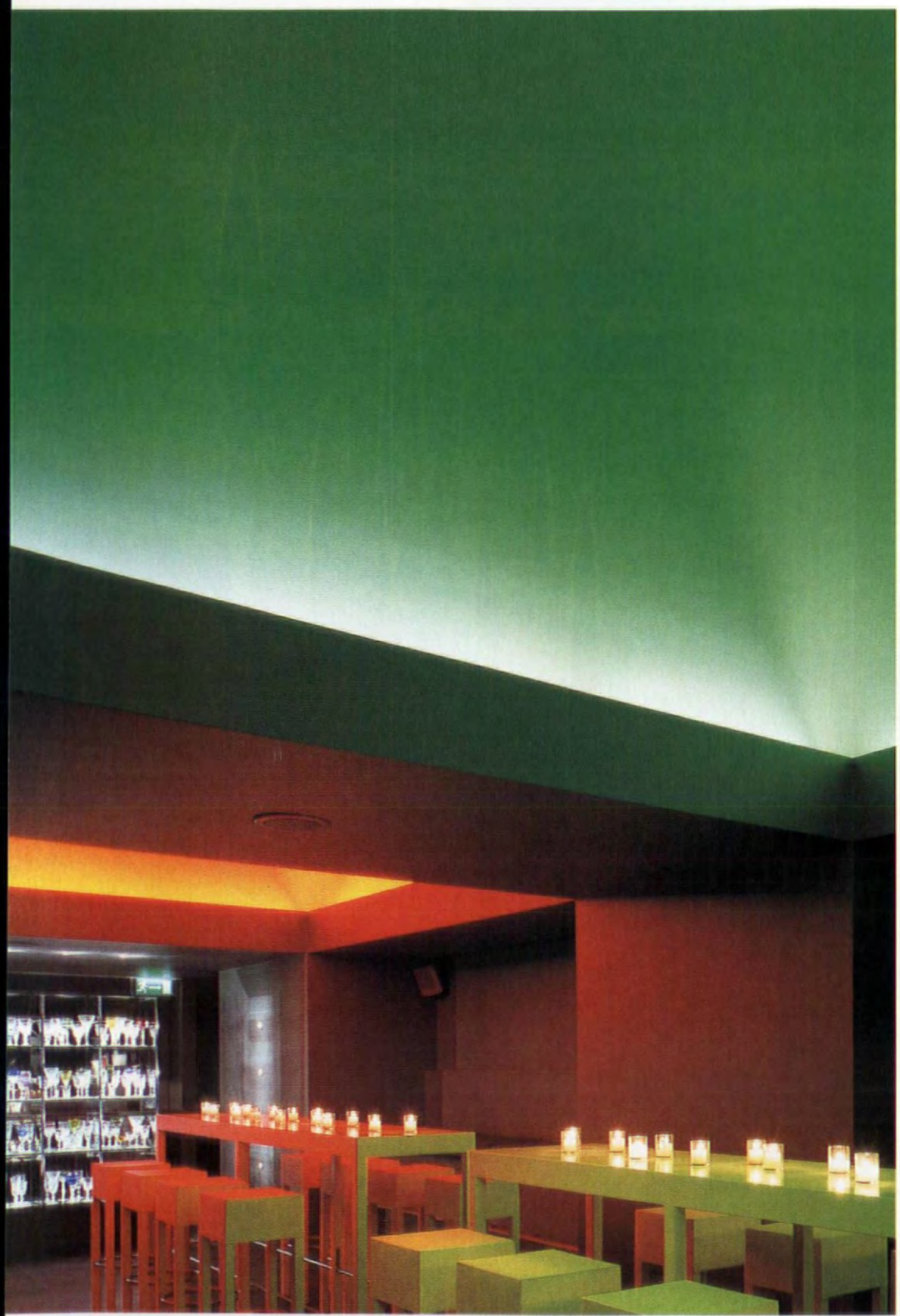
The 204-room, seven-storey building occupies a former 1960s office block and the old Lumière cinema in the city's West End, or theatre district. It sits at the top of a gentle slope, affording elevated views of the skyline towards the Coliseum, home of the English National Opera.

The exterior of the cube-like structure is largely glass with floor-to-ceiling windows on every floor. The ground floor's double-height west elevation is of acid-etched yellow glass, brightening up the otherwise dull London light. The slight opacity of the coloured glass is repeated on the ground floor of the south elevation. In both cases the panes are subtly frosted from waist-height up, enabling guests to retain their privacy inside the hotel, while giving passers-by a chance to see just how well-heeled the clientele is.

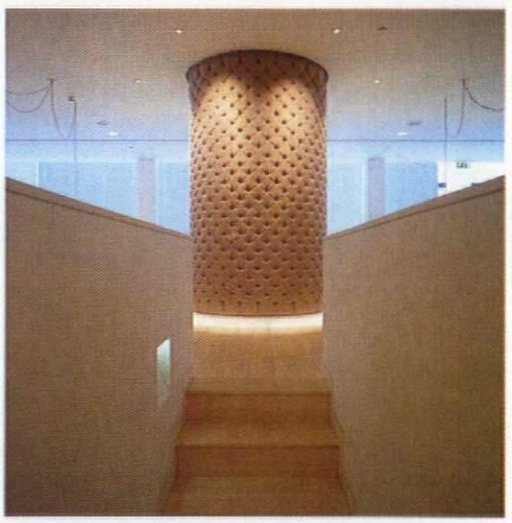
This playful touch, typical of Starck, follows through to the upper floors. Every room has at least one wall of glass (the corner rooms have two). At the head of each bed, a custom-made dial allows guests to "paint their mood" in coloured light on to the room's white walls. Every room is flooded in a different shade of the colour spectrum, so that at night, these colours illuminate the entire hotel to create one big, ever-changing light-box. The interior effects become the hotel's exterior.

Theatricality is what gives the otherwise dull office architecture its original edge. The entrance area is oversized and immediately engaging (it's a space for Schrager's "lobby socialising"). The soaring height is manipulated into seeming even larger by whimsical details used to skew the proportions – wide, oversized columns, huge galvanised flower pots, and small stools in the shape of garden gnomes and molar teeth.

The lobby merges into six discrete and smoothly interwoven public areas. At the heart of the building, opposite the improbably tall yellow- glass revolving door, is the Light Bar, its long narow space featuring a ceiling divided into four 8-metre-high cube-shaped voids. Then, towards the rear of the building, are



Richard Davies



Above: The Light Bar, at the heart of the hotel, with its four cube-shaped voids **Left, top to bottom:** The largely glass facade allows each bedroom at least one glass wall; one of the hotel's three restaurants; a typically theatrical Starck touch

the Rum Bar, Asia de Cuba restaurant, the Sea Bar (sushi restaurant), Saint M (continental-style brasserie), and the Sidewalk Café and Outdoor Garden Restaurant in the pedestrianised Mays Court. Intelligent layout is used to divide spaces rather than doors; the whole effect is like a free-flowing stage set, with "wings" replacing walls (one side of the Sea Bar is made up of bubbling water). Where doors do exist, their barrier effect is deliberately minimised. For example, the entrance to the Light Bar, which is closed during the day, is illuminated with a projected light installation.

At once simple and subversive, this is "anti-brand" architecture, a new paradigm that turns the conventional hotel on its head.

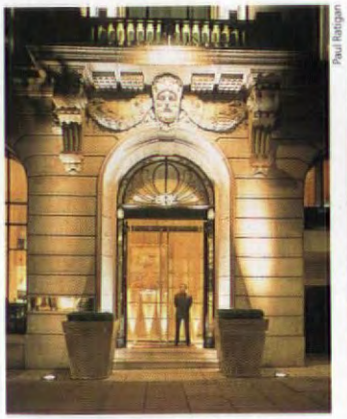
Sophy Roberts

Client
Ian Schrager London
Managment company
ISUK Management
Architect
Philippe Starck
Graphic design/room amenities
Michael Nash Associates
Lighting design
Arnold Chan

Below: The height of the oversized entrance lobby is accentuated by visual trickery – a huge vase of flowers or some tooth-shaped stools

Looking after number one

One Aldwych, London



Paul Ratigan

Paul Ratigan

Above: The hotel entrance from bustling Aldwych **Left:** The calm of the double-height lobby **Facing page:** Reception to the health spa

Gordon Campbell Gray knows a thing or two about top-class hotels. He was the owner and creative force behind the Feathers in Woodstock, the Draycott in London and East Hampton's Maidstone Arms. Beautifully designed and commercially successful they put Campbell Gray firmly on the hoteliers' map. But his sights were set on a bigger prize – a substantial, five-star London hotel, distinguished for unstuffy personal service and a sleek, clean design. In other words, a modern classic.

One Aldwych opened in July 1998. Housed in the magnificent Edwardian home of the *Morning Post* (by Mewes and Davis, architect of the London and Paris Ritz hotels) it realises Campbell Gray's ambition to create a hotel that is contemporary and comfortable, but not trendy. "A lot of modern design is very industrial, and a lot of hotel design is hard-edge and hip... I wanted a modern design laced with Classicism." He was not prepared to sacrifice comfort for design. "I think you can be both modern and sumptuous."

Architect Jestico + Whiles' solution uses the decorative exterior of the 1907 building as the classic front for a modern, but not alienating, interior. From bustling Aldwych you enter the calm atmosphere of the double-height lobby. The hotel's focal point, it succeeds in blending old with new. The windows' original dark wood panelling contrasts with the stone floor, stainless-steel mesh screens and contemporary sculptures. Interior designer Mary Fox Linton carried the lobby's restrained design through the 105 rooms, health club, pool, two restaurants, coffee bar, meeting rooms and a private screening room.

The building's unusual shape – a triangle curving round the Aldwych – made it complicated to convert. "We were prisoners of the building in a way," says Whiles. The bedrooms and suites are laid out around a central core. Because of the floor plan and the building's steel frame, each room had to be designed individually, a task made more complex by the desire of the

Client
Gordon Campbell Gray
Architect
Jestico + Whiles
Interior designer
Fox Linton Associates
Structural and M&E consultant
Cundall Johnston & Partners

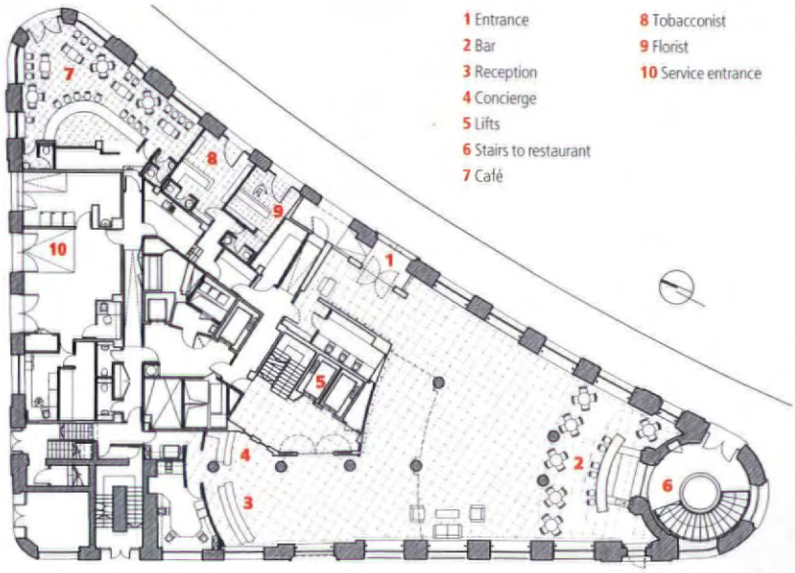
Paul Ratigan

client and architect to get away from "the standard bathroom/cupboard channel". The clean design of each room, complemented by Fox Linton's luxurious silks and limited palette of colours, does not stop at their doors. Each triangular course of corridors has a colour theme and features an impressive array of contemporary art.

The hotel's hidden success lies in the ingenious incorporation of its services. Campbell Gray insisted that the hotel be built around the air conditioning ("I am manic about temperature. The heating and air-conditioning are crucial"). A pioneering vacuum drainage system eliminated the need for access ducts and large WC fittings. And Whiles' desire for a subtle means of escape was achieved with fire doors, held open and designed as an integral feature of the walls.

It is this marriage of technology with innovative contemporary design and a recognition that "good old can sit next to new" that distinguishes One Aldwych. It certainly isn't trendy or hip. It is far cleverer than that, designed to survive passing fashions.

Joanna Watt



Local hero

Prince of Wales, St Kilda, Melbourne, Australia

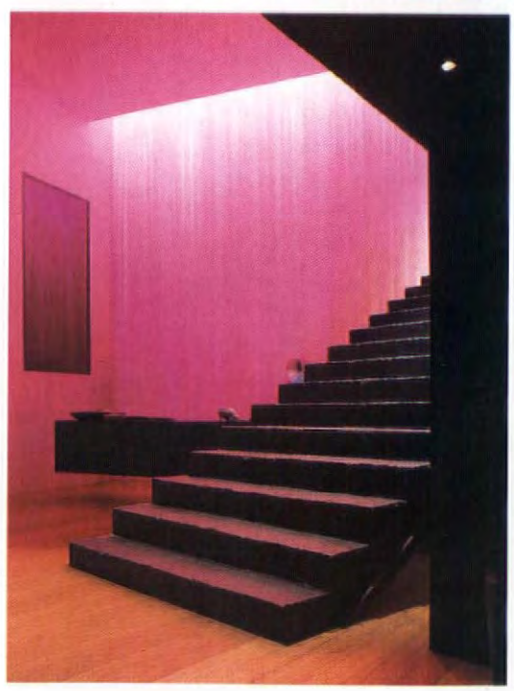
Until now, Melbourne could boast only one designer hotel – Denton Corker Marshall's Adelphi, famous for its glass-bottomed pool projecting over an inner city lane. Now it has been joined by the Prince of Wales in bayside St Kilda 10 kilometres from the city centre; once a fashionable seaside resort, then one of the city's bohemian quarters, now a locale for the beau monde.

The Prince of Wales, according to the hotel itself, "is an institution in St Kilda. An elegant Deco building. It was, until recently, home to the grunge element in St Kilda." Sensitive to the poetics of the area, architect Alan Powell – who grew up there – has renovated the exterior, the public rooms and the famous bar. He speaks of how the colour range for the venture was set by the glistening red of the Fitzroy Street tarmac as the sun sets, the putty colour of the hotel, and its shiny black tiles.

The grunge of the bar on Fitzroy Street has been lovingly respected, treated as a patina of memories of decades of gay revelry. Huge black doors give access to function rooms to one side. Subterranean eatery, Mink, and a bottle shop are tucked in behind. Cunningly, the entrance to the hotel also acts as the entrance to the Circa restaurant half-way up the hill behind: a black vitrine entrance canopy leads to the hotel foyer with stairs to the restaurant along the side of an "Alice in Wonderland" courtyard, the scale of which defies assessment. Another flight leads to a health club currently being designed by architect Wood Marsh.

On the level above are two floors of guestrooms, accessed from a black, race-track corridor, anchored at diagonally opposite corners by startling, top-lit red chairs. The size of rooms ranges from suites with stunning views to the western horizon, to standard rooms facing into the "Wonderland" courtyard. No two rooms are the same. The suites have a bed space and a living area, the smaller rooms are well appointed, while a challenging twin-bed room has two mattresses in line

Facing page: No two bedrooms are the same, and all have a view of either the far horizon or the courtyard. **This page, clockwise from left:** Bathrooms fit in with the Pacific aesthetic; the black racetrack corridor to the bedrooms is punctuated by dramatically lit chairs; one of the hotel suites; stairs from the lobby



on a plinth with mirrors: a room "for the adventurous". Paul Hecker, who worked on Circa with Alan Powell, designed the rooms.

The design celebrates the past of the hotel depicted in Earl Carter's enlarged photographs of its decayed state and David Band's oil paintings. The aesthetic is achieved via a vaguely Pacific theme, comprising polished wooden floors and raised wooden bed plinths, charcoal carpets, waxed plaster wall finishes, off-white tiling, woollen and cashmere throw, and linen couches. Stained wooden fittings, elegantly placed bowls, raw wooden stools, wickerwork lamps, white broad-slat blinds and bamboo ladders acting as towel racks combine with these to create an ambience of restrained luxury.

This is a hotel that is both romantically exotic and locally poetic; a rare combination in a world of interchangeable five-star hotels.

Leon van Schaik

Client
John and Frank van Haandel
Architect
Alan Powell
Interior designer
Paul Hecker
Contractor
Trent Alexander for Demor Constructions

Glass of 99

Glass has come a long way – in terms of both public perception and technology – since I M Pei's Louvre pyramid caused such uproar in 1993. Almost any architectural idea can now be expressed in glass, and it is the defining material of many of this year's most acclaimed projects. Dan Fox reports.

A n 80-metre glazed cone is the characteristic feature of Kisho Kurokawa's latest Japanese work, a double concert hall in Kuji, Japan. "Many exhibition halls are very restrictive," Kurokawa told *WA*. "But here, the glass cone acts as a common foyer for both halls. It is a light, comfortable space where the audiences of two different events can mix and enjoy the views." The structure can be seen from all around Kuji, and acts a beacon of culture for the region. It is indicative of a year in architecture during which the expressive qualities of glass have been put before a bigger audience than ever.

In 1999 the symbol of a united Germany's political future is a glazed cupola; Shanghai's reward for its belligerence in the face of the Asian crash is a shimmering glass-clad super-tower visible to the whole world; and the last word in energy-efficient design is a glass box in Duisberg. Glazing has long been the idiom of the technically and environmentally advanced building, and with its aesthetic connotations of sophistication and democracy, there has been no material better suited to the architectural avant-garde of 1999.

Kurokawa's conical glazed atrium is one of his established signature moves, but in Kuji the device is more than a landmark – it is an omnivisible icon of culture in the city. Sheets of float glass with punched aluminium sunshades surround the lower levels, while on the observatory floor double-glazed panes help control condensation at higher levels caused by extremely low external temperatures. Kurokawa also draws attention to what he calls the "cracking windows" – a series of fragmented glazed openings peppered across the side walls of the auditorium. "You'll have seen them used this year by Libeskind (on the Jewish Museum, Berlin) – remember that I invented them," he says, jokingly.

Seeing through the politics

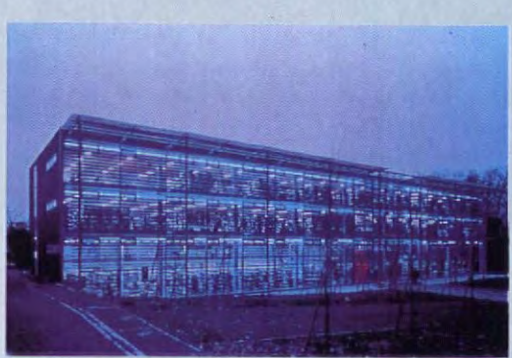
In Europe, Foster and Partners' glass Reichstag dome, 1999's most published work, was completed. This freestanding glass structure was executed in the face of extreme cultural sensitivity and complex technical requirements. Natural ventilation inside the atrium space is key to the design, and each 5-metre by 2-metre pane is part of a motorised espagnolette locking system which can configure the entire glazed shell in relation to wind pressure. The cladding system contains 3,000 square metres of laminated safety glass (two sheets with a central layer of vinyl foil), hardened to such an extent that the building has "the acoustics of a cathedral".

The dome reflects the contemporary fashion of asserting the concept of transparency and openness in parliament buildings through liberal use of glass – the idea is also apparent in Architecture Studio's European Parliament building in Strasbourg, opened this year. Ultimately, however, what the Reichstag demonstrates is that glass now has an established place in the architect's pallete and the urban fabric – it threw up none of the controversy that surrounded I M Pei's glass pyramid at the Louvre in 1987, a project with comparable physical and theoretical contexts.

The traditionally recognised "green" properties of glass were also seen at their best this year at Jourda and Perraudin's Herne-

Tomio Ohashi

Above and left: Kisho Kurokawa's glass cone at the Amber Hall, Kuji City, comprises untreated strengthened float glass – sunshading is achieved with white punched aluminium screens and fancoil units



Decq and Cornette's School of Economic Sciences and Law Library at the University of Nantes, France. Facade by RBS Glas

The Skywalk, by Shultz und Partner, Hanover, Germany. Glass facade and ceiling panels by Magnus Mueller form two intersecting circles resulting in a double-tube

HG Esch

The Herne-Sodingen Academy by Jourda and Perraudin, Duisberg, Germany. HL Technik AG's glazed hall is hung from a wooden support frame and incorporates photovoltaic cells which are positioned to allow maximum light through the roof.

▶ Sodingen Academy (see *WA*80 pages 44-49) in Germany. It is the final part of the IBA Emscher Park project, an experimental development of groundbreaking energy-efficient buildings, which has spawned Rhode Kellerman Wawrorsky's DB Call Centre and Foster and Partners' Duisberg offices. A 72 x 168-metre glass and wood hall houses nine individual buildings, with "microclimactic" laminated glass skin units suspended from a wooden frame. On the walls 8-millimetre thick sheets of toughened glass are bonded with silicon into aluminium frame elements, and on the "roof" laminated glass panes incorporate integrated monocrystalline photovoltaic cells which are distributed in cloud-like formation to optimise daylight inside.

It is claimed the building will achieve "zero-energy" – the green holy grail seemingly only attained by IBA Emscher buildings. But the triumph is that you wouldn't know it to look at it. There are no awkward arrays of solar panels or protruding air ducts – just glass.

Prized material

The DuPont Benedictus Awards (given for architectural innovation with laminated glass) have mirrored patterns of glass use since their inception in 1991, and the accolade is now seen as the most prestigious of any awarded for specific methods of building. Previous winners include Rafael Viñoly's Tokyo Forum, Herzog and de Meuron's Design Centre Linz and Dominique Perrault's Hotel Industriel Berlier, demonstrating the quality of the entrants. This year's Professional First ▶

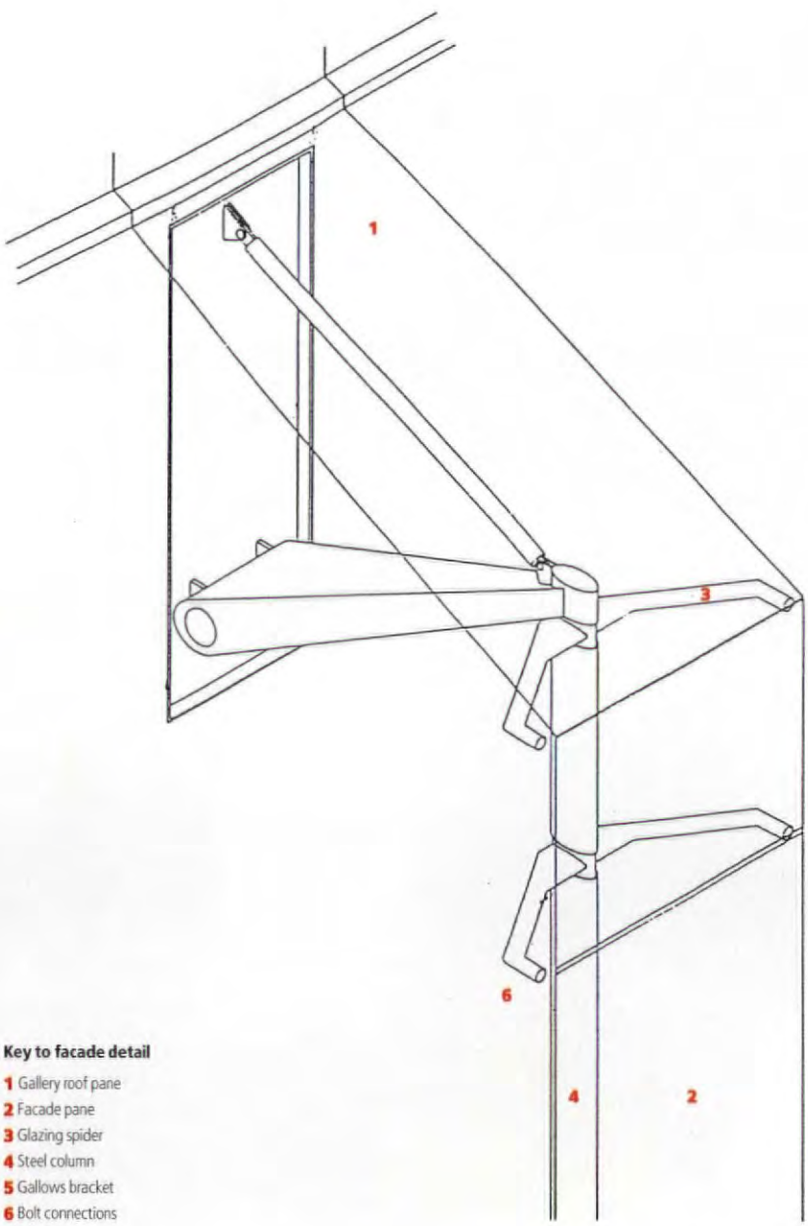
Screen test

London IMAX Cinema, UK. By Avery Associates, 1999

Two issues which dominate discussion of architecture in London are the unpopular design of London's Brutalist South Bank arts complex and the use of money generated from the UK's National Lottery for building. The London IMAX addresses them both.

Avery Associates' glazed rotunda was paid for by the British Film Institute, whose coffers were boosted by one of the first lottery grants in 1995. It sits on Waterloo roundabout, the gateway to the South Bank, announcing a new architectural future for an area earmarked for a major regeneration programme. The building's circular form is a reaction to the site, but it is brimming with cinematic analogies. Project architect Jon Neville-Jones says: "The IMAX is built on one of London's major roundabouts, and is not coaxial on the roads. We wanted the same imagery from all five approaches. The glass wall brackets divide the 'image wall' facade up, suggesting a strip of film. There is also a clear visual allusion to a zoetrope, and, perhaps more tenuously, a carousel."

The architect devised the system in great detail, and tenderers were given sets of working drawings from which to prepare their bids. Austrian cladding packager Bug-Alu Technic's impressive glazed



Key to facade detail

1 Gallery roof pane
2 Facade pane
3 Glazing spider
4 Steel column
5 Gallows bracket
6 Bolt connections

facade is almost entirely bespoke. The six-storey-high steel columns which support the gallery glass are themselves suspended from projecting gallows brackets at the top of the gallery, and braced at mid-level to the structure. They began as hollow sections before being compressed in an industrial former. They were shipped from Austria complete, so the facade was already semi-assembled when it arrived on site.

Twin glazing arms project at 3-metre intervals, ending at points 1.5 metres apart – this creates a 3-metre by 1.5-metre grid of support points for the glass. Neville-Jones continues: "To allow the panels to form a circle on plan, the cast glazing spiders needed to be specially designed to allow for the 4.5 degree offset angle required at each bracket. The spiders are located at the junctions of each panel so that each receives and supports the corners of four glass panels. It's not ridiculously complicated."

The glass panels which make up the faceted external skin to the gallery are typically 3-metre by 1.5-metre sheets of 12-millimetre-thick toughened glass, bolted on to the spiders with flush-finished countersunk stainless steel bolt connections. Positional tolerance is provided by slotted holes to the spiders, and polymer washers at the bolt connector provide electrical isolation from a lightning strike to the exposed bolt head.

An important consideration when specifying this quantity of exterior glass is maintenance; two versatile cleaning gantries can reach all areas of the facade.

The ground floor of the building sits below street level on the roundabout, and is also entirely glazed in curved toughened panes, doors and fixed glazing and openings. The building's other engineering feat is the installation of large springs beneath its concrete foundation slab which protect it from vibrations caused by the Waterloo station metro below. Above that, the entire steel structure is a lightweight construction. "The idea is that the glazing and structure are one beast, and work as a fully integrated system," says the architect.

Richard Holttum

Below: The facade of the London Imax cinema. The image behind the glass is a giant mural by Howard Hodgkin, commissioned by the client, the British Film Institute

▶ Place went to Odile Decq and Benoit Cornette Architectes for its School of Economic Sciences and Law Library at the University of Nantes, France. A striking glass volume links two different buildings, opening up the complex to its scenic surroundings, characterised by giant wooden louvres protecting the interior from the sun – another example of the European trend for tempering the severity of glass with organic elements. A simple suspension system holds toughened panes in place over four floors. The Skywalk – a structural glass bridge by Schultz and Partner for the Hannover 2000 expo, was also commended.

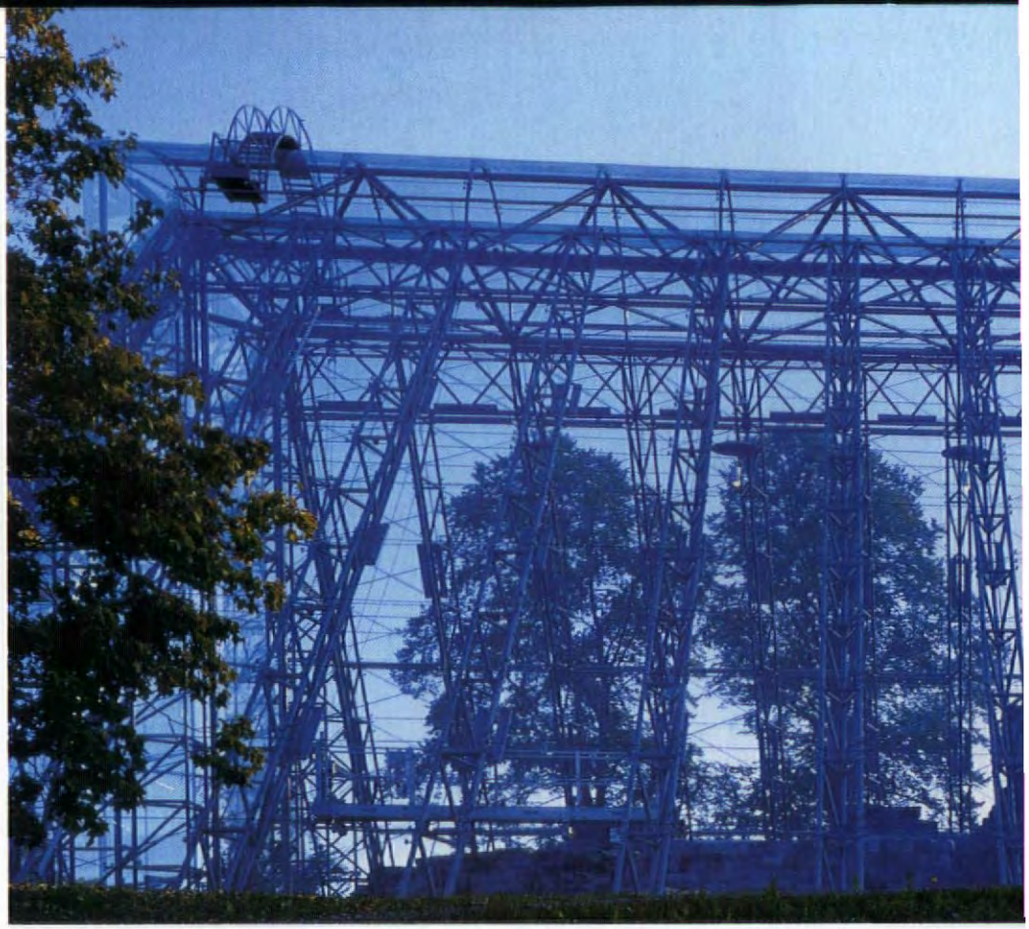
Honourable mention was given to the Reichstag and Inghenhoven Overdiek und Partner's groundbreaking double-skinned RWE Tower. Christoph Ingenhoven is in no doubt about the importance of both glass in architecture and the Dupont awards in 1999.

H.G Esch

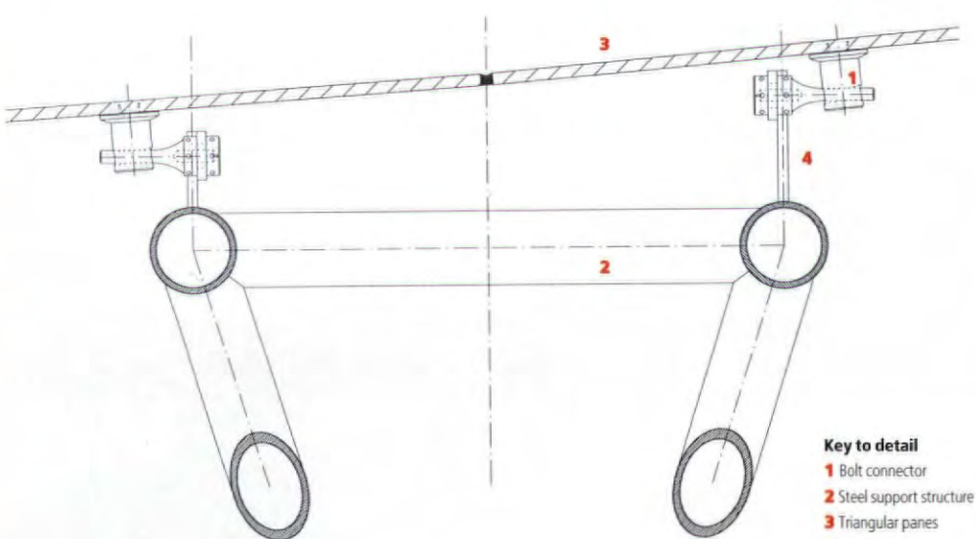
Foster and Partners' Reichstag dome, Berlin, Germany, comprises 3,000 square metres of glass, packaged by Austrian firm Waagner-Biro, each pane controlled by a Velux Windowmaster locking system for climate control

"The technical challenge has been taken up by the glass industry successfully during recent years and glass as a transparent but heat-proofing material has been driven [to new levels]," he says. "Glass has also taken over the function of carrying structures, partly replacing steel, aluminium and wood. The DuPont Benedictus Award is a challenge to push the limits of glass constructions further."

Manufacturers are frantically developing new high-performance glass (see page 100) and glazing structural systems (see case studies, pages 96 and 98) to increase the buildability and inhabitability of the ambitious glazed forms being dreamed up by the world's architectural aristocracy. Glass building technology has been experimental for years: 1999 may well be the year when designers show the world that now you can look at any architectural vision with glazed eyes. WA



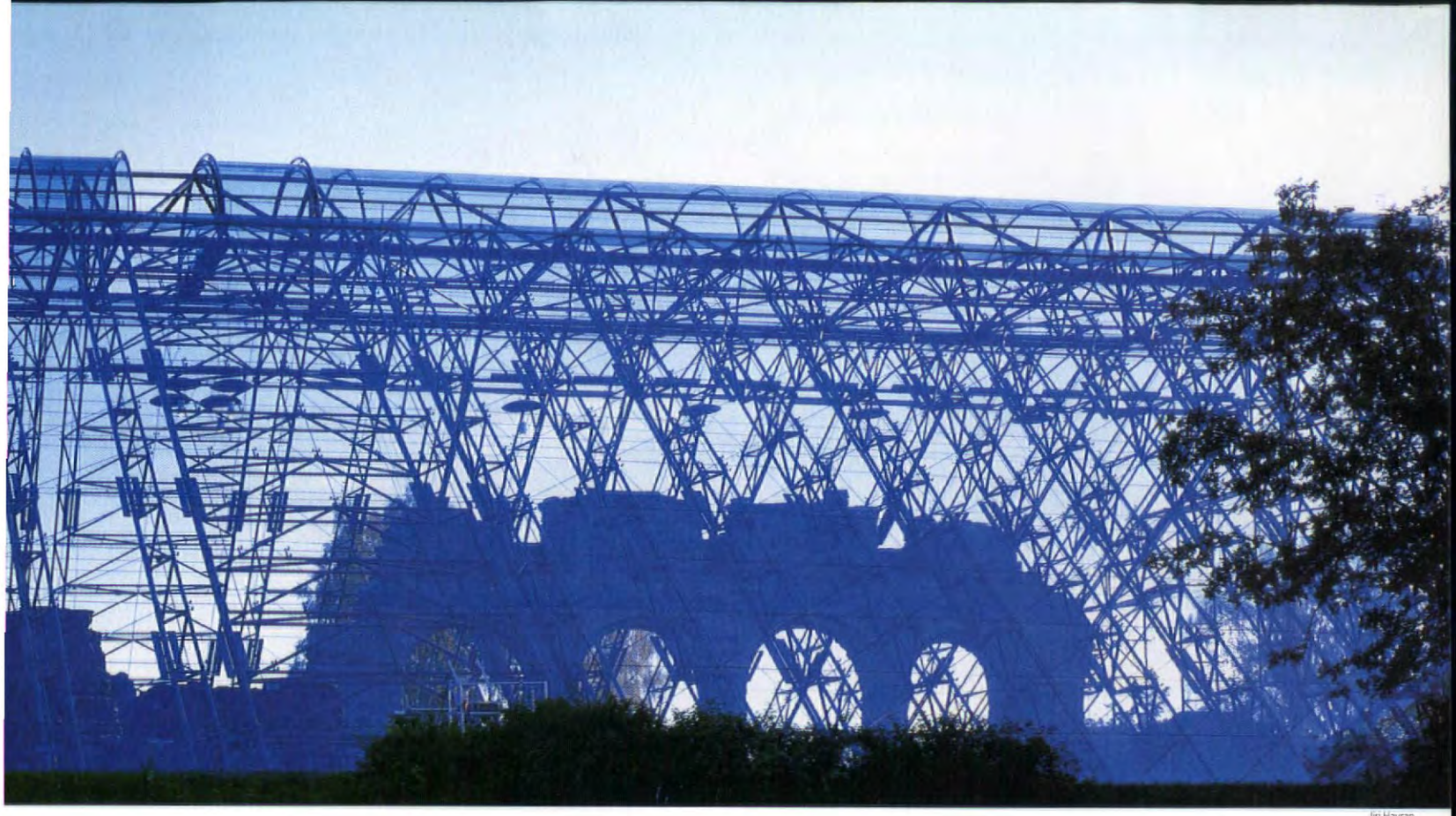
The Hamar Cathederal protective structure – the curved vaulted roof is open in the centre to ventilate the interior.



Key to detail
1 Bolt connector
2 Steel support structure
3 Triangular panes
4 Glazing arm

Jiri Havran

Left: Detail showing the extremely complex bolt connections and structure as seven panes meet in the same place



Jiri Havran

Dreams in ruins

Hamar Cathedral protective structure, Norway. By Lund & Slaatto Architecter, 1999

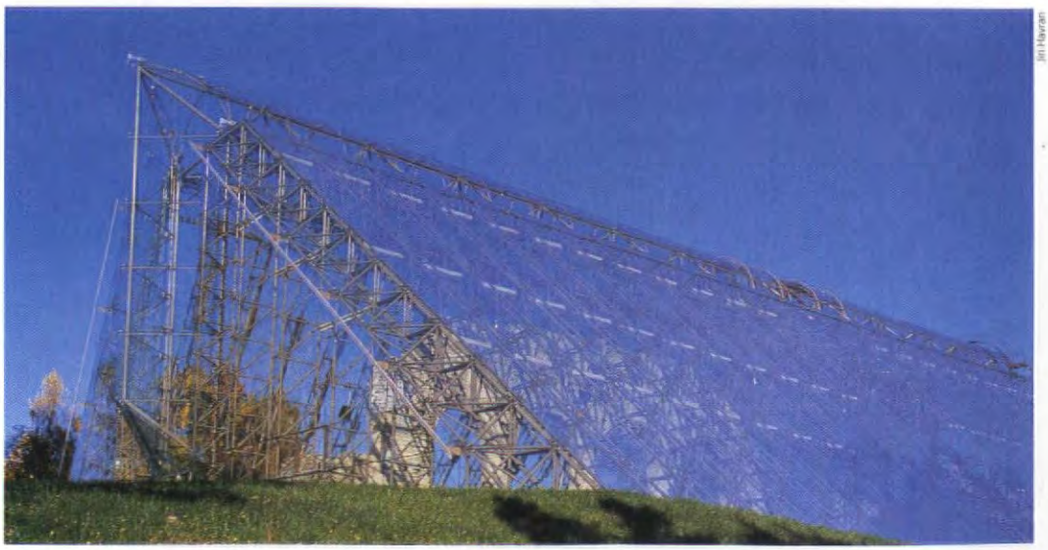
Päl Biörnstad, project architect of Lund and Slaatto's stunning protective case for Hamar's cathedral ruins, is glad the project was delayed for 10 years. "We are very grateful for that. In 1987 it would have been very difficult to erect a glass structure of this complexity. We used advanced data-assisted modeling programs get it right." The mind boggles at the calculations required. There are 1,675 glass panels, 690 of which are unique. For each triangular panel, the bracing holes had to be drilled in different places. Two computer models were used, and Biörnstad boasts: "We didn't make one mistake with our mathematics."

The competition that led to the commission called for a shelter for the ruins from the freezing and polluted rain which was destroying them. The brief was very open, but Lund and Slaatto decided that as long as humidity could be controlled, a closed structure would be the most satisfactory solution. The glazing system is an adaptation of the Pilkington Planar system of countersunk bolt holes and four-point fixing brackets, with silicon-based filler between the narrow joints. The bolts were fastened to stainless steel discs and then fixed to brackets which are designed to accommodate the difference in tolerance between the structure and the glass. The system is adapted in places to deal with the varying geometric and static conditions at different parts of the structure.

Double-glazing, non-reflective and fritted glass were considered, but heat-strengthened float glass was chosen as the best way of achieving the requisite combination of transparency, structural integrity, and economy.

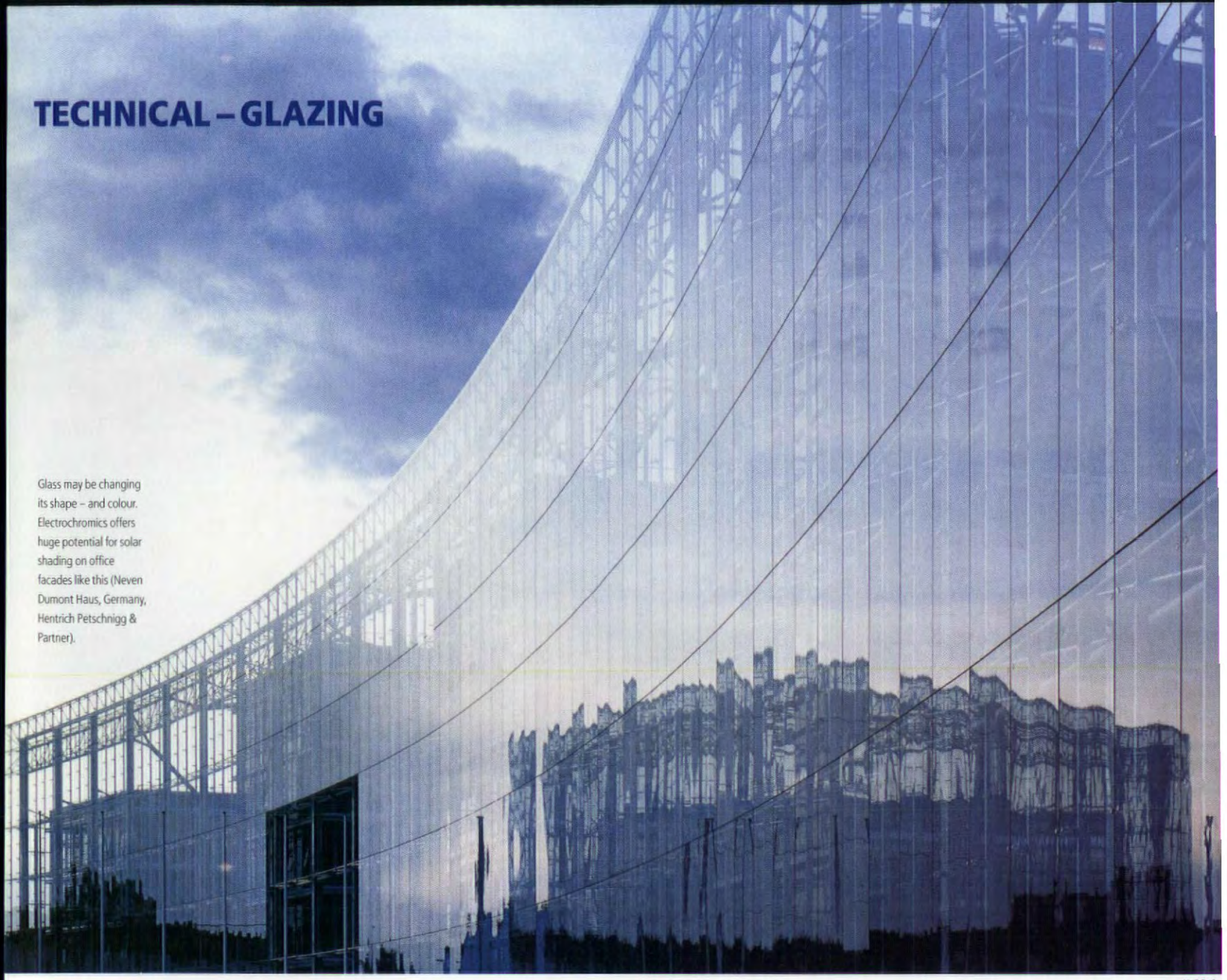
The challenging geometry of the structure responds to the site, which drops off in one corner, and the ruin's walls, which do not run parallel to each other. The result is a hyperbolic paraboloid with a curved, vaulted roof which bears much of the load. The main requirement, keeping the internal air warm in winter, is catered for by the installation of heating elements where the glazed wall meets the ground. Heat is conducted through the panes around the structure which, as well as maintaining a stable environment for the ruins, stops snow build-up on the top of the building.

"It's a technical building for a technical problem," says Bjornstaad. "It was conceived as a shelter, but it is now considered a building in its own right – it is known as the Hamar Dome. Before visitors could not see how the cathederal worked, so we redesigned the floor space and the altar in keeping with the whole concept, so the cathedral is easier to understand. It has created a new identity for the ruins."



Jiri Havran

Above: The entrance facade showing the supporting column for the roof vault, which bears most of the load



Glass may be changing its shape – and colour. Electrochromics offers huge potential for solar shading on office facades like this (Neven Dumont Haus, Germany, Hentrich Petschnigg & Partner).

H. G. Esch

Glazing's big switch

For the last 10 years, the US Department of Energy has been pouring millions of dollars into researching a new type of glazing. Electrochromics, it now asserts, represents the future of energy-efficiency in buildings. The technology can darken windows at the turn of a switch to control a building's natural heating and lighting – and it really works. Dan Fox wonders if it will catch on...

It is estimated that US$20billion worth of energy is lost through the windows of buildings each year in America. Despite recent advances, windows are still an energy liability. The US Department of Energy (DOE) sees the way forward as electrochromic glass, saying that "electrochromic glazing is considered to be the most suitable technology for active energy control in building windows, and it will eventually replace traditional solar control technologies such as static tints, reflective films and shading devices as a method of reducing energy costs for lighting, heating and cooling."

The department is supporting US firms Schott and Donelly in a joint venture to commercially manufacture electrochromic glass. They have succeeded – but at this stage only for use in compasses and car mirrors. As yet, there are very few examples of this technology on the building market, but the larger manufacturers are positioning themselves to exploit demand, boosted by this show of support. Electrochromic glass will undoubtedly add a new variable to the energy-saving potential of architectural designs but, for all its sophistication and functional potential, is it really on the verge of breaking through into the mainstream? Manufacturers think so, but architects appear sceptical.

Electrochromic glass falls into the field of switchable glazing. Some kinds have been around for years – a basic photochromic variety which responds to environmental variables is often found in sunglasses. Today's electrochromics are far more sophisticated, allowing a window to be manually switched from clear to fully darkened, and maintained at any level of tint in between. The windows run on very low voltage and require energy only to change their condition, not to maintain any

particular state. They can even be tuned to absorb only solar infrared rays.

Electrochromic glass consists of a thin, multilayer assembly sandwiched between traditional panes. The two outside layers of the assembly are transparent electronic conductors. Next is a counter-electrode layer and an electrochromic layer, with an ion conductor layer in the middle. When a low voltage is applied across the conductors, ions move from the counter-electrode to the electrochromic layer, tinting the assembly. Reversing the voltage moves ions from the electrochromic layer back to the counter-electrode layer, restoring the pane to its previous clear state.

Size is the problem

The problem with developing a truly applicable electrochromic glazing for buildings is that at the moment, nobody has managed to produce panes larger than 0.5 square metres. The cost of the transformers is high and the drop in the electrical current over a wider area decreases switching speed. However, at the 1998 Glasstec show in Dusseldorf, Pilkington demonstrated its prototype, E-Control, which is now in manufacture, and French firm St Gobain is about to release a version.

Jonathan Sakula is a facade engineer with glass specialist Dewhurst MacFarlane, and has worked with the UK Department of the Environment (as it was called then) on glazing technology. He is aware of the excitement surrounding the technology, but points out that however intelligent the material may be, one has to consider architects' aesthetic demands. "The trend in Europe is really towards clarity in glazing, and unfiltered light. This isn't the 1960s and I'm not sure if they will want a tinted material, whatever its properties."

Sakula acknowledges the success of other types of switchable glazing (St Gobain's Priva-Lite is a basic liquid crystal system designed for interior spaces which can be switched from transparent to opaque, see *WA*54 page 151), but feels that the needs of users must be balanced against energy measures. "Whether users would want such a clear demonstration that their environment is being artificially manipulated I don't know."

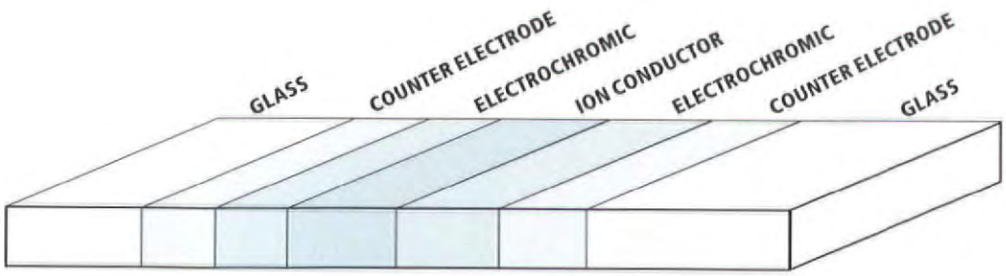
Thermochromic glazing, a third approach to the switchable concept, changes its properties in response to changes in the ambient temperature, going from clear to diffusing as the temperature rises. It also becomes white and reflective, reducing solar transmission. In general, this type of glazing can save significant air conditioning energy by automatically reducing solar load when it's hot outside. Several different technologies are being researched, the most advanced being gel-based coatings.The only commercially available product, Cloud Gel, from US manufacturer Suntek, is a thin plastic film that can be incorporated into almost any glazing assembly.

Spreading the word

Again, the understandable enthusiasm of manufacturers and scientists has not rubbed off on everyone. Simmos Yannas, of London's Architectural Association Graduate School Environment and Energy Studies Programme, feels that simple environmental considerations have been forgotten in the initial excitement about manual and self-tinting glass. "Perhaps I'm a little cynical, but I don't think all the issues are resolved yet," he says. "Once glass is no longer transparent, it becomes reflective. Then your solar energy becomes somebody else's problem. You could have a transparent north facing wall designed for minimal shading, and when somebody erects a switchable facade next door you get the UV rays they reject." He suggests that green design should be more building specific, and broad brush solutions can work against its aims.

However, previous promises by glass manufacturers of new technology which will change the nature of design have been lived up to. Spectrally selective glazing technology has been available for some time – and it is widely accepted that in commercial buildings with large cooling or lighting loads, or high utility rates, it is extremely cost-effective. Warm-edge spacers are becoming increasingly popular for commercial windows, as they are a cheap and effective method of maximising the performance of cavity gas fills, another recent innovation, in particular.

Electrochromics and switchable glazings follow in the footsteps of innovations developed in the name of energy-efficiency. Most are now established architectural currency, but the question of the energy-efficient building remains very much unresolved. Inertia on the part of designers is part of the reason for this – and may well hold back the proliferation of electrochromics. But the universal nature of the energy cost benefits and high-tech feelgood factor suggests that eventually architects will find a reason to accept electrochromics.



Electrochromic glass. The two outside layers of the assembly are electronic conductors. Next is a counter-electrode layer and an electrochromic layer, then an ion conductor layer.

Where we are and how we got there

A chronology of glazing innovation

- 1952 – Alastair Pilkington invents the float process, now the universal production method for flat glass.
- 1960 – First suspended glass wall pioneered by Glasbau Hahn.
- 1982 – Early example of four-point fixing systems on Foster and Partners' Renault Centre, Swindon, UK. Large-scale glass facades becoming cheaper and more widely applicable.
- 1983 – Foster & Partners is a pioneer again, designing photosensitive glass on the Hong Kong and Shanghai Bank – ultimately rejected by the client of cost grounds.
- 1993 – IM Pei's Louvre pyramid heralds a new era for glass as a material of architectural expression. Glass is artistic, anarchic and fashionable.
- 1995 – Low-e and spectrally selective glazing widely available and specified.
- 1997 – St Gobain release Priva-Lite, the first commercially available switchable glazing.
- 1997 – US DOE announces US$20 million research programme into making electrochromic glazing commercially viable.
- 1998 – Double-skin glass facade on show to the world in Ingenhoven Overdiek Kahlen und Parteners RWE Tower, Germany.

Legal and practice

ARCHITECTS SET TO PROSPER IN THE 21ST CENTURY

The "new world economy" could play right into the hands of globally active architects. Kermit Baker, PhD, explains why the future is looking bright. Below, WA tells you how to get a piece of the action.

In March the current expansion of the US economy, the most dominant economy in the world, will enter its ninth year. At this point, it will become the longest-recorded economic expansion in history. As the boom continues, analysts are looking for reasons why it has fared so well.

One explanation is that the US economy has undergone massive changes. Successful businesses today are different from those of the past, when companies strove for market dominance with established products and services. Now, more successful companies are generally smaller and better equipped to adapt more quickly to technological advancement and changing customer preferences.

With the changing way of conducting business, even some of the fundamental relationships in the US economy appear to be changing. For example, when the unemployment rate in the US falls below 5.5 or 6 per cent the economy is thought to have reached full employment. At this point the economy can't increase production without generating an inflationary spiral caused by the higher wages needed to attract new workers into the workforce. However, although the national unemployment rate has dropped from 7.5 per cent in 1992 to under 4.5 per cent at present, the rate of inflation has continued to decline.

Because conventional economic wisdom can't explain much of what has happened in recent years, analysts now talk of a "new economy", in which many of the old relationships governing the US economy have changed. The new driving influences of our economy are globalisation, technological innovation and the deregulation of key sectors of the economy.

• *Globalisation*

Businesses today are influenced, to a much greater extent than ever before, by global competitive pressures. Free trade agreements, such as the European Union and the North American Free Trade Agreement, are opening up markets and forcing businesses to compete across broader areas. Further, the collapse of communism has exposed former command economies to market pressures, and increased competition.

• *Technological innovation*

To take advantage of the benefits of the technological revolution, businesses have dramatically increased their expenditure in this area. In the US alone business investment in hi-tech equipment accounts for approximately 10 per cent of the total economic output, total spending in the entire economy – up from just over 6 per cent at the beginning of the decade. Business spending on information processing equipment alone accounts for 4-5 per cent of total spending in the US, or just about as much as is spent annually on construction of and improvements to all non-residential facilities – commercial, industrial, and institutional. US businesses continue to invest in tech-

SEVEN STAGES TO GOING GLOBAL

Want to find out how to go global? Better consult the experts. Of the 500 largest practices in the world, 183 are American. The US is home to an equally large percentage of the world's global architects. Christopher Mauck reports.

Assess your firms capabilities and reasons for pursuing international opportunities

In the initial stages it is crucial that a firm should evaluate its needs, growth strategies and direction. At the top of the itinerary should be a discussion of the alternatives to international market entry.

It is important to remember that no two firms are the same. Resources that a particular firm brings to the table often hide excellent opportunities for marketing that firm both domestically and internationally.

The firm's mission should be to develop a strategy that has the highest probability of success while reducing its exposure to risk.

Collect market intelligence and project sources

Opportunities exist for US firms to move into new markets through a variety of public and private resources. Publicly funded international projects provide better assurance of being paid on time and in accordance with the signed contract. Two resources for tracking projects with such funding are the US Trade and Development Agency and the Multilateral Agencies.

Multilateral or "worldwide" agencies provide funding for projects that are open to globally active firms. Each multilateral agency's mission and purpose for providing project procurement and technical assistance is different, but common to all are opportunities for architectural, engineering and construction firms.

These funds aim to bring financial advisory services, new infrastructure, power, transportation, telecommunications, and environmental infrastructure to developing countries. Such agencies include the World Bank, International Finance Corporation (IFC), Asian Development Bank (ADB), European Bank for Reconstruction & Development (EBRD), African Development Bank, and Inter-American Development Bank (IDB). Multilateral agencies focus on four geographic regions: Asia Pacific; South Asia/India; Europe/Central Asia/Russia; and Latin America and the Caribbean. Project opportunities can be tracked through all phases of the project development and procurement using various Internet sources and publications.

Nurture relationships with international public/private officials

Participation in and hosting of overseas business and government delegations is one of the most cost-effective ways to develop relationships with key international officials. Delegations from foreign countries frequently visit the US, for example, to make site visits and receive training. The agendas of the visiting delegations can be tracked through the organisations that help plan and subsidise the costs of these missions. Such agencies are:

• The US Trade and Development Agency (TDA). The TDA sponsors business briefings and technical symposia geared to meeting the development needs of foreign countries. Conducted in co-operation with, and co-funded by, industry and other US government agencies, they are intended to familiarise foreign government and industry with US products and services and to encourage US firms to export.

• State Trade Offices. Similar to the TDA, many states have trade offices which sponsor business briefings and technical symposia to familiarise foreign government and industry with their state's products and services and to encourage local firms to develop trade relationships.

Identify project opportunities and gauge project viability

Documents by the US TDA are a great source for assessing a project's viability. The TDA prepares pre-feasi-

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nology with the expectation of increasing the productivity of the workforce, where productivity is defined as output per hour of labour. Over the past three years, productivity gains have increased to approximately 2 per cent per year.

• *Deregulation of business*

A third trend in the way businesses operate is the movement toward industry deregulation. The transportation and energy sectors were pared of major regulatory features in the 1970s, followed in the 1980s by financial services. In the 1990s, telecommunications, health-care, and electric-utility companies have all seen various degrees of deregulation. As with globalisation, industry deregulation has opened up competition and helped contain inflation. It has forced businesses to operate more efficiently.

"As professionals, architects are quick to embrace emerging technologies and integrate them effectively into the services provided to clients."

Implications for architects

Architecture practices are well positioned to take advantage of the ongoing evolution of the world economy. As professionals, architects are quick to embrace emerging technologies and integrate them effectively into the services provided to clients.

Architects have also benefited from the greater efficiencies of these technologies. Overall, while the service sector of US economy has reported average productivity gains of 1.5-2 per cent per year, architecture firms report that productivity gains have averaged in excess of 3 per cent per year in recent years.

Secondly, design professions already reflect the benefits of deregulation. Architecture is an extremely fragmented profession, where no firm has anything approaching market dominance nationally, or even regionally. Architecture firms are used to a competitive environment where profitability depends on the efficient provision of services rather than monopolistic pricing.

Finally, many firms have begun to operate in the global economy. Not only are an increasing number of firms – particularly larger firms – pursuing international opportunities, but firms also are effectively using an international workforce to supplement staffing needs. With the standardisation of CAD software and the ability to access information electronically through the Internet, a design team can collaborate remotely much more easily at present.

With thanks to the AIA (http://www.aiaonline.com)

bility and feasibility studies on infrastructure projects on a wide range of host county high-priority sectors, which assess the economic, financial, and technical viability of potential projects. The TDA requires a host county to hire US firms to undertake detailed studies of the technical and economic feasibility of the proposed projects. Project planning activities funded by the TDA will directly influence the procurement decision related to major infrastructure projects. These plans are required by the financial institutions to assess whether a project should be financed and typically include a wealth of technical, marketing and production specification information. Information prepared by the TDA on a particular project, sector or region can be requested.

Acquire in-country business guidance

The US government has two important agencies affiliated with US embassies abroad that can be helpful: the US Commercial Services and the US Agency for International Development's, which are key sources of overseas contacts and market intelligence.

• The Commercial Service of the US Department of Commerce. Officers of the Commercial Service are present in US embassies in 70 leading export markets. Their job is to help US firms penetrate international markets and win business overseas by collecting information about trends and barriers to trade in the countries that they represent. They also identify trade and investment opportunities. These officials have great insight into the market potential and will gladly recommend market entry strategies.

• US Agency of International Development (USAID). USAID has offices in more than 100 developing countries around the world with the mission to help countries develop their economies so that they can become self-sustaining. USAID has been operating in many developing economies for over 40 years, frequently paving the way for US business partnerships. Some US offices also provide their own infrastructure programmes where US engineers can vie for procurement.

Nurture relationships with overseas public/private officials

Once a firm has targeted a country it must then develop relationships with overseas public and private sector officials who could be future clients or partners. The US Department of Commerce is an excellent source for assisting US firms, establish business relationships abroad. The DOC sponsors Matchmaker Trade Delegations that target major markets in countries with strong sales potential for US goods and services. Commercial specialists who work for the DOC at US embassies and consulates will evaluate the potential for a firm's services, pre-screen business contacts and arrange face-to-face business meetings.

Other agencies such as the National Association of State Development Agencies (NASDA) and the Council of State Governments (CSG) State Environmental Initiative fund grants for special projects for nurturing relationships abroad.

Influence project outcome

US firms face stiff competition from the Japanese and the Europeans who are also pursuing international project opportunities. All the agencies above can assist in promoting US firms in the foreign market. Establishing contacts within these agencies and meeting with members of Congress and foreign ambassadors prior to project award can be beneficial strategies for marketing a firm's services abroad.

The international market offers a new frontier for firms, and with planned and developed strategies, the risks can be very rewarding and profitable.

Christopher W Mauck, is a management consultant in the AEC industry with experience in assisting firms in developing strategies for international market entry.

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What's on RIBANet...

A new discussion group, Quality Management, has been launched with a comprehensive "tool-kit" including topic papers, a guide to key tasks, and sample documents.

It allows architects, particularly those in small practices, to establish quality management systems (satisfying the requirements of ISO 9001) without hiring specialist consultants.

One member asks for advice on "approving" consultants" documents for QA systems – "I regularly refuse to approve but confirm receipt" – action supported by practice director Keith Snook. Another agrees that drawings, for example from another consultant, supplier or specialist designer, should not be "approved', though "we would certainly comment, from a co-ordination point of view'.

In Legal, members have been discussing fee levels for overheads and profit under JCT PCC 98, the latest intelligence on contract adjudication and the legal responsibilities around signage. In Practice Networking the new handbook on small practice networks has been made available for free downloading.

In RIBA: Council are minutes, job vacancies, debates on the MP pairings scheme and the institute's rebranding, and e-mail addresses for architectural press newsdesks. There are competitions and a seminar report on work-based learning in Study of Architecture, and global news in World of Architecture.

The eccentric and eclectic market that is Everything Else offers the following: a flat in Barcelona, a Gae Aulienti lamp, a Renault 19, Covent Garden office space... and some kittens.

Ribanet is free to members – 2,400 are now online. Fax +44 (0)171 307 3786, e-mail: RIBANet@inst.riba.org

Brand of hope and glory

'RIBA' remains a key benefit for members, a new survey reveals

The importance of maintaining and strengthening "RIBA" as a global brand has been underlined by a new attitudes survey.

A key finding of the survey – with responses from nearly 2,200 institute members and over 500 non-members – is that architects continue to see the RIBA as conferring a valuable professional title.

One observation of the membership development department, which commissioned the survey, is that "membership is an intangible product for many, with the letters serving as the key benefit and *RIBA Journal* being the main communication medium... It is of paramount importance that the RIBA manages the letters as a brand and maintains their status in the UK and internationally.'

The "Attitudes Towards the RIBA" survey is conducted annually among architects as part of the "Annual Earnings and Employment" survey to measure views and perceptions of the RIBA.

Member attitudes are most positive in four main areas, consistent with findings in previous years:

- 78 per cent agreed that the RIBA confers a valuable professional title;
- 62 per cent agreed that the RIBA supplies good quality products, literature and services;
- 58 per cent agreed that the RIBA is a useful source of specialist information and advice;
- 51 per cent agreed that the RIBA promotes excellence in architecture.

While more members believe that the institute is helping individuals, fewer believe it is doing a good enough job for the profession as a whole. The most significant increase among 12 attitudes measured was that the RIBA offered "helpful personal development resources", where agreement increased by 16 per cent from last year. The largest decrease in agreement was for the attitude that the RIBA "is an influential voice for the profession", down 6 percentage points.

The survey flagged up some significant differences between member and non-member architects. While nearly 80 per cent of members agreed that the RIBA confers a valuable title, only 47 per cent of non-members canvassed agreed. And although over 60 per cent of those belonging to the institute agreed that it supplied good quality products, literature and services, only 45.4 per cent of non-members agreed.

Attitudes were most similar between members and non-members in three areas: agreeing that the RIBA puts on enjoyable events, enables practices to promote themselves and is an influential voice.

Jennifer Parker, head of membership development, said the results of the attitude survey can be used strategically to influence RIBA communication strategies and activities. "It helps policy-makers decide what attitudes are essential to the RIBA and how the institute, staff and management can work to improve upon them – for example, how do we demonstrate that we are an influential voice for the profession?

"Clearly, we can reinforce brand values by providing excellent member service at every level of the organisation, from the library to the switchboard to the porters. This includes call handling, face to face and all correspondence at HQ and in the regions.

"Each interaction with a member represents of a 'moment of truth' where the RIBA has the opportunity to assist its members."

Take your seats, ladies and gentlemen

An invitation has gone out to nominate candidates for the available seats on RIBA Council for the session beginning in July, 2000.

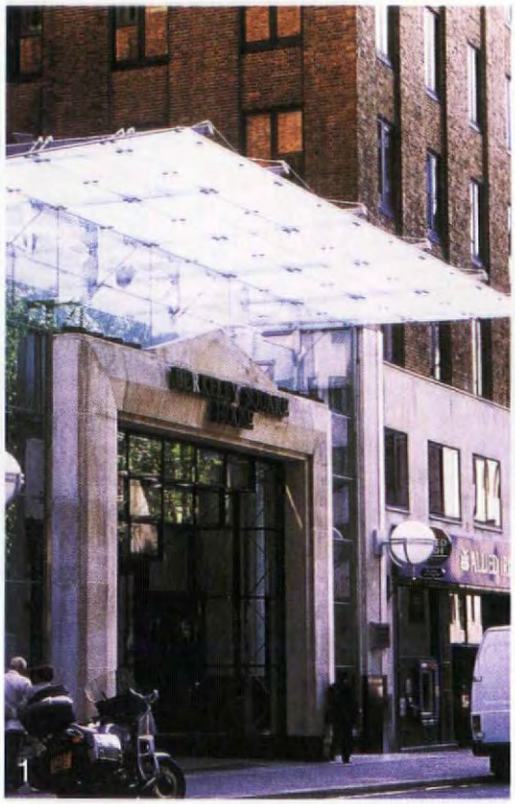
Nomination forms are available from Jane Muir at the RIBA, and can be accepted up to 17.00 Tuesday 30 November 1999. Only current corporate members are eligible to stand for election or nominate a candidate. For a regionally elected seat, both candidate and nominees must have a current address in the region concerned.

Seats for election include the following: national – six seats, for three years; overseas – one seat, for two years (one seat was unfilled in the election for the 1999 session and is now available for the balance of the term); student seat – one seat, for one year.

Candidates for regionally elected seats may now come forward independently. The regional councils have already nominated the following: East Midlands – two seats, for three years (Stuart Hendry, William Smedley); West Midlands – one seat, for two years (one seat was unfilled in the election for the 1999 session and is now available for the balance of the term), Terry Ward); North West – two seats, for three years; Northern – two seats, for three years (Clarence Daly); Yorkshire – two seats, for three years (Gerard Bareham, Professor Peter Smith, Hilary Smyth).

The terms of the following members are unexpired in July 2000 and they will continue to serve: Robert Adam, Marina Adams, Christopher Bicknell, Michael Bradbury, Peter Bradley, Richard Brindley, Russell Brown, Andrew Clague, Elspeth Clements, James Cuthbertson, Jane Darbyshire OBE, Dr Joyce Deans MBE, John (Iain) Dickson, Tim Drewitt, Terry Farrell CBE, Robert Firth, Annette Fisher, Tarsem Flora, Simon Foxell, Brian Godfrey, Marco Goldschmied, Dermot Hanna, Catherine Hennessy, Chris Heuvel, Michael Hickie, Robin Hill, Paul Hyett, Colin James, Professor Bryan Lawson, Anthony Lloyd, Olufemi Majekodunmi, Rick Mather, Frank McCloskey, Richard Murphy, Maureen Kelly Owen, Richard Parnaby, David Rock, Yasmin Shariff, Roger Shrimplin, Roger Stephenson, Phillip Thomas, Guy Thompson, Sam Webb, John Wright, Roger Zogolovitch.

The following members are not eligible for nomination or re-election: Roger Stonehouse, Gordon Anderson, Marc Corbett (student member), George Henderson, Clyde Markwell, David Yorke.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2 Telstar Holding Ltd – 107 Mortlake High St, London SW14. Main contractor: Beaufield Homes Ltd. Architect: Broadway Malyan.
3 Canning Town Station – London. Main contractor: Mowlem Civil Engineering. Architect: John McAslam & Partners.
4 Thames Court – Markborough Properties Ltd. Contract manager: Mace Ltd. Architects: Kohn Pedersen Fox Associates.

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2 Opryland Hotel, Nashville, Tenn., USA
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3 Fubon Banking Center, Taipei, Taiwan
Architect: Artech Inc./Skidmore, Owings & Merrill
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4 Milton & Shire House
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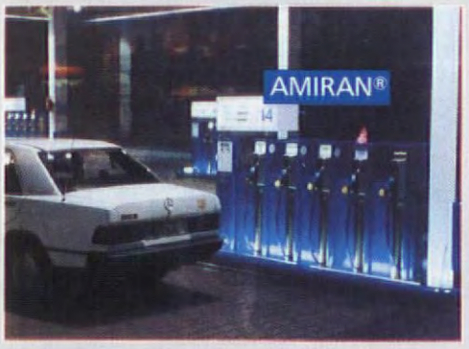

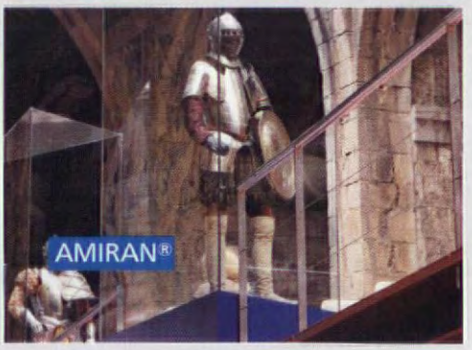

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Polemic

Doubles catch on in Germany

Back in the 1980s an architectural competition in London created deep controversy. The site in question, on Trafalgar Square, was occupied by a large and ornate 19th-century structure called Grand Buildings. There were over 70 entries for the competition; everything from High-Tech to Georgian pastiche. But the winner went even further: it was a replica of Grand Buildings with rafts of high-tech serviced floor-space hidden inside it. Many architects saw this as a threat to authenticity in architecture, and that's how it appeared when the same technique was used for a neo-Georgian riverside office complex at Richmond, and an old Post Office building at Saint Martin's le Grand in the City of London had its four facades propped up while another ration of high-tech serviced floor space was shoehorned in for a Japanese bank.

In the context of 1980s London, these projects seemed to be either cynical attempts to bamboozle the planners, or subtle intellectual ploys to find out what real authenticity was worth. Whichever it was, the projects turned out to be the prelude to a rash of exercises in replication, coupled with invisible changes of use, which broke out all over the world, but especially in Germany.

At Leipzig, in the former DDR, is a vast monument to those who fell in the "Battle of the Nations" that threw Napoleon out of Germany for ever in 1813. Now it has been used for laser shows – not *son et lumiere* about the battle, but weird messages from an American artist beamed onto its 90 metre bulk: "I try to excite myself so I stay crazy", "money creates taste", and "murder has its sexual aspect", for example. Messages, it was said, intended to "subvert the idea of patriotic self-sacrifice" embodied in the monument.

The same technique is big in the US – not artistic messages perhaps, but Las Vegas-style moving advertising signs, video walls and animated light displays which mix information with entertainment, and distraction with deconstruction. Big red hearts on the Empire State, giant footballers above the stadium... All of it engrossing, overwhelming, more real than history.

This year Germany topped them all. Not with a monster, but with an assembly kit replica of the summer house in Weimar where Goethe whiled away his creative hours between 1776 and 1832. This modest-sounding project – funded through Weimar's selection as European Union City of Culture 1999 – was the brainchild of the dean of media studies at the Bauhaus, an establishment once associated with *avant-garde* design but now apparently as interested in the opportunities of replication as any London property developer. Of course times have changed since the 1920s, and the original Bauhaus of Walter Gropius is no more – it was moved from Weimar to Dessau, then to Berlin then to oblivion, before being recreated in Weimar after the Second World War – but nonetheless making a replica of Goethe's house seems an odd piece of curriculum for such an ideological establishment.

The Bauhaus version of Goethe's house is, however, significantly ingenious. Despite its apparent verisimilitude – "Everything is copied exactly, from the threshold to the ridge tiles," boasts its designer Volker Laier – it consists of 73 prefabricated interlocking sub-assemblies that can be dismantled and stowed in containers "so you can take it on tour".

So does the Bauhaus intend to put Goethe houses into production? And if Goethe houses why not Liszt houses or Einstein houses or even Eiffel Towers? Today the answer is no, but it might not always be. In business all replicas turn into originals in the end.

"... the Bauhaus, an establishment once associated with *avant-garde* design but now apparently as interested in the opportunities of replication as any London property developer."

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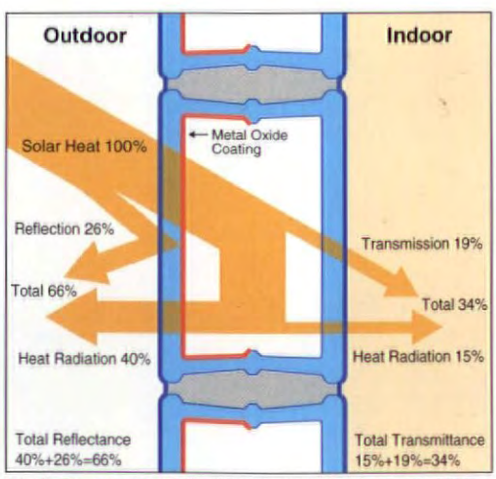

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