Museum International

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Museum architecture

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The Fruit Museum in Yamanashi, Japan; architect, Itsuko Hasegawa.
Photo: © Mitsumasa Fujitsuka

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The giant escalator in the atrium of London's Earth Galleries passes through a 10-metre globe which is part of the *Visions of Earth* exhibition designed by Neal Potter.
Photo: © Pawson Williams

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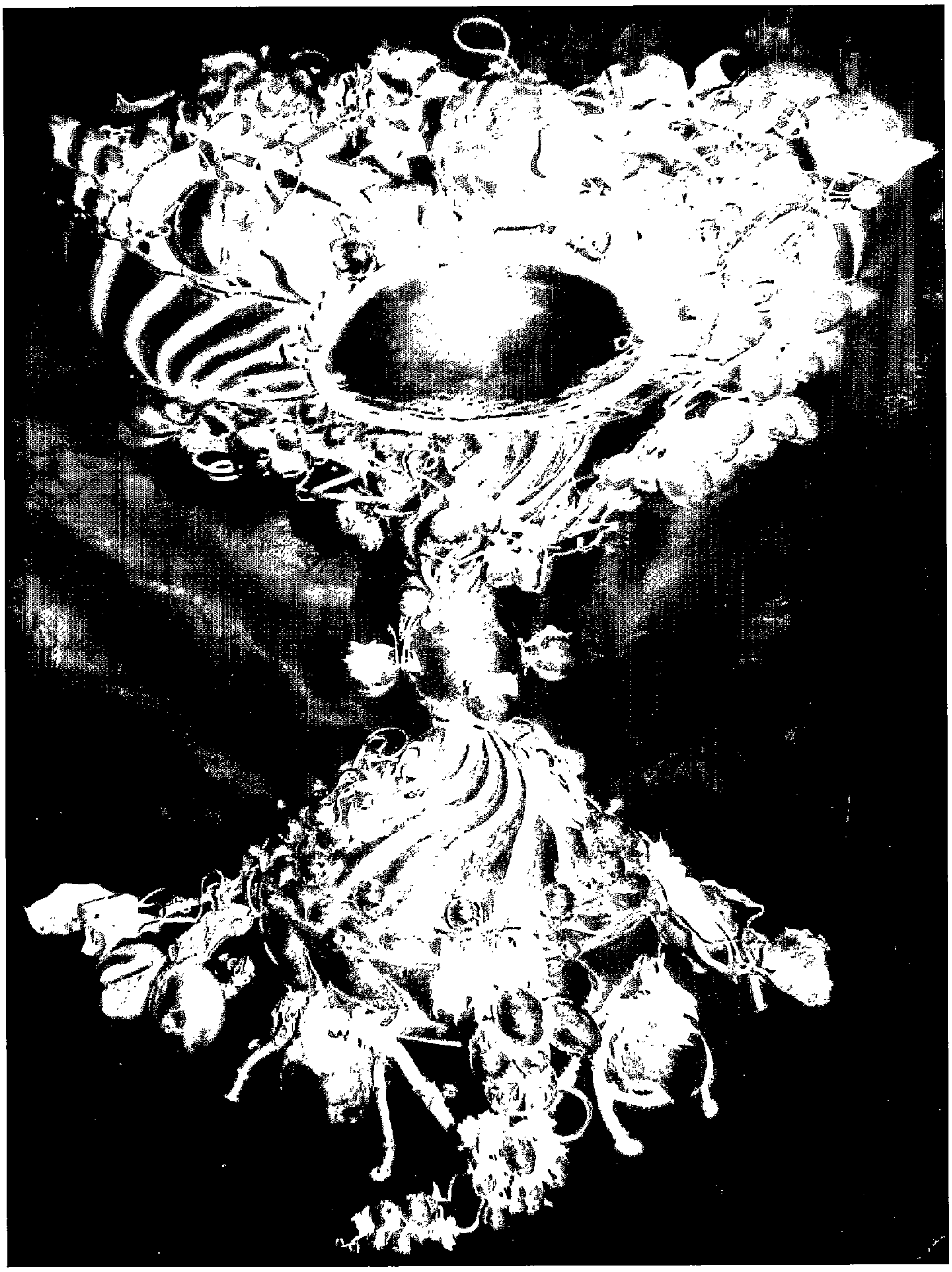

STOLEN

Contemporary silver bowl, highly elaborate with fine chasing and engraving work; decorated with fruit (including apples, pears, grapes and cherries), butterflies, grasshoppers, snails and dragonflies: gentle twisting shape to the base, with a spherical knot in the centre. Height 61 cm, width 36 x 43 cm, weight 12 kg. Estimated value $700,000. Stolen on 4 April 1995 from a college in Riga, Latvia.
(Reference 797/SA/1020/95/A-3, Interpol, Riga.)

Photo by courtesy of the ICPO–Interpol General Secretariat, Lyons (France)

Editorial

In 1977 in a UNESCO publication entitled *Museums for the 1980s – A Survey of World Trends*, author Kenneth Hudson quoted a noted Indian museologist's definition of the dream-museum:

> … it should be easily accessible and not too far from the town centres. A site within a park or garden may be ideal, as it gives a good atmosphere and natural setting, but it should not be located in the far interior of such parks or gardens and should be easily accessible from the main roads. The building should have enough open space around it, giving a good amount of natural light and ventilation … the style of the building should be representative of its age and should be at least contemporary, if not ultra-modern. The interiors of the exhibition galleries as well as other related rooms should be architecturally pleasing, but should not be a centre of attraction and should be subordinate to the purposes in view.[1]

This straightforward formula for a successful museum building was already beginning to look deceptively simple when, in 1989, *Museum* (the predecessor of today's *Museum International*) took a close look at recent developments in museum architecture, inspired in large measure by the unprecedented explosion in museum construction and renovation that was the hallmark of the 1980s. Today, eight years later, the museum boom continues unabated and many of the trends that were beginning to appear in the 1980s are now full-blown phenomena or have undergone unforeseen mutations. What is strikingly clear, however, is that the architect has emerged as a central figure on the museum landscape and the building has become far more than an edifice housing a collection. Designing structures to meet new museum needs and expectations has very often evolved into designing structures that create new needs and expectations, which place the museum institution in the forefront of leisure-time choices and tourist options and which say, loud and clear, 'Look at me. I'm worth a visit in my own right.' As Hugh Pearman, architecture critic for the *Sunday Times* puts it: 'The old argument resurfaces: what is a museum or gallery *for*? To be a relatively modest container for a superb collection, or to be an architectural landmark where the contents, whether superb or lacklustre, are incidental?'[2]

This problem lies at the heart of the museum debate today and its implications are far-reaching. To quote Kenneth Hudson once again: 'What a museum is attempting to achieve has become more important than what it is. This trend, which is unmistakable, makes the definition of a museum increasingly difficult and perhaps increasingly pointless.'[3] Architecture thus appears as the catalyst for a process of profound change whose end results are far from certain. For this reason we are convinced of the need to explore not merely what is new in museum architecture itself – the forms, materials, lighting, display – but the underlying tendencies in late-twentieth-century culture that these structures explicitly or implicitly express. And we wished to do so largely through the eyes of younger architects and critics who are part and parcel of the evolutions – some might say revolutions – now taking place. We therefore tuned to Yves Nacher, chairman of the French section of the International Forum of Young Architects (IFYA), whose encyclopedic knowledge and boundless energy made him a one-man reference work on the architectural challenges confronting museums today. He was our *agent provocateur* in the best sense of the term, setting out a number of striking questions to which our contributors responded with fresh and stimulating commentary. We thank him warmly.

ML

Notes

1. Smita J. Baxi, 'Planning a museum building', in Baxi and Dwivedi (eds.), *Modern Museum: Organisation and Practice in India*, 1973, cited in Kenneth Hudson, *Museums for the 1980s – A Survey of World Trends*, Paris, UNESCO, 1977.

2. Hugh Pearman, 'An Ace Building with a Quite Nice Collection', *Sunday Times* (London), 2 June 1996.

3. Hudson, op. cit.

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From medium to message: museum architecture today

Yves Nacher

'Is this boom of [museum] construction (with the creation of new facilities, renovation and refurbishment) synonymous with architectural merit? Has quantity been accompanied by quality and more importantly, by meaning? Nothing is less certain.' This issue, according to Yves Nacher, lies at the heart of any debate on the question 'Whither museums?' The author is an architect and head of mission at the French Architectural Institute; he is chairman of the French section of the International Forum of Young Architects (IFYA).

The decade which is drawing to a close, like the ten years that went before, has witnessed an unprecedented proliferation of museums – the metastases (controlled or otherwise) of an apparently contagious and planetary pathology typified by a relentless and sometimes indiscriminating thirst for culture at all costs. The best and the worst co-exist. Content and innovation: anything goes! One thing is certain: from the Flemish masters to trouser buttons, from industrial archaeology to social reverie, from design to market gardening, everyone has had a moment of glory in these years of frenzied construction, chasing headlong behind those 'fifteen minutes of fame' that Andy Warhol once promised each of us at some point in our lives.

Despite the occasional regrettable reversion to anachronism, the first victim of this blast of fresh air was the nineteenth-century museum, worthy heir to the revolutionary Louvre with its claim to a universal pedagogical mission. Museums today are having to adjust to a new interpretation of the meaning of the word 'heritage'. They are also restating the question of access to knowledge. No longer are they centres for passive contemplation of a monolithic and definitive culture. Instead, they have become sites for an individual experience, scientific research, experimentation with new techniques for knowledge dissemination and attempts to break down social boundaries.

This change of nature and the transition to a new 'here and now' are having obvious repercussions on museum architecture, which must keep up with (or preferably be one step ahead of) the new needs in terms of space and layout, mastery of light, new teaching or commercial activities (with the emphasis on balancing the books at a time when public culture budgets are shrinking everywhere).

Is this boom of construction (with the creation of new facilities, renovation and refurbishment) synonymous with architectural merit? Has quantity been accompanied by quality and, more importantly, by meaning? Nothing is less certain. The scene is one of contrasts and assessments are full of nuances. Courage and creativity have all too often run up against rampant conservatism, standard recipes for success and stubborn anachronisms. But let us steer clear of over-severe judgements. Architecture, like every product of the mind, has its ups and downs. But it is confronted with broader constraints because, unlike the arts, which are self-sufficient, it is dependent on a utilitarian process: a building must be commissioned. The client's degree of enlightenment conditions, and in a sense predestines, the outcome.

Commissions have in fact changed radically. Alongside major structures, which countries and large capital cities are still erecting, we now find a profusion of small projects all over the world, generated by local initiatives. Then there are an increasing number of private orders placed by large companies which invest their image or capital in collections. This cultural Darwinism is replacing the dinosaurs ill-adapted to the needs of our age by a proliferation of experiments, like so many new species that are being put to the test. It is inducing a different approach to the architectural project and a new way of managing its implementation accompanied by new procedures for the conception and 'production' of museums and new social and urban approaches.

However, interfering factors have crept into this new architectural concept of the museum space and its (physical) relationship with the city and (symbolic) relationship with its age. With the transition from the status of applied art to that of art for its

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own sake – which is more fashionable – in the globalized thinking of the 1980s, architecture was seen as imparting cultural added value to everything with which it became involved. It ceased to be a tool and was instead converted into a message. Nowadays, it is not unusual for museums to seek a strong architectural image with the sole aim of attracting visitors, just as the retail trade tries to attract more customers. In an environment of increasingly keen competition (in culture as in all other fields) where media impact reigns supreme, we see cities fighting for the international stars of the day who produce what is expected of them: namely manifesto buildings that 'sell' well, but are sometimes constructed without a genuine project. The consequences are there for all to see: serried ranks of empty shells, which have nothing to offer other than their outer skin – itself a *tour de force* concealing the cruel conceptual vacuum of their would-be collections. This is a strident expression of the ambiguity, so often criticized, of the relationship between art and architecture: the former, jealous of its stardom, often wants the latter to refrain from seeking to prove its own existence through a visible claim to glory; instead architecture is supposed to be moulded and concealed around the works – rather like a pair of jeans cling to the body.

The recent trends of museography and their consequences for architecture, the changed nature of architectural commissions (or the end of the dinosaurs), architecture as a symbolic value in cultural marketing, new museum programmes spearheaded by what has been termed 'the neighbourhood museum': those are just a few of the many themes dealt with by the panel of architects, journalists, critics and academics whose contributions are published in this issue. In presenting these different viewpoints, our aim is not to highlight theories that are only as irrefutable as they are fragile. We want, on the contrary, to guide the eye and the mind, so as to sharpen up the discernment and critical view which the closing years of this century so badly need in architecture as elsewhere. ■

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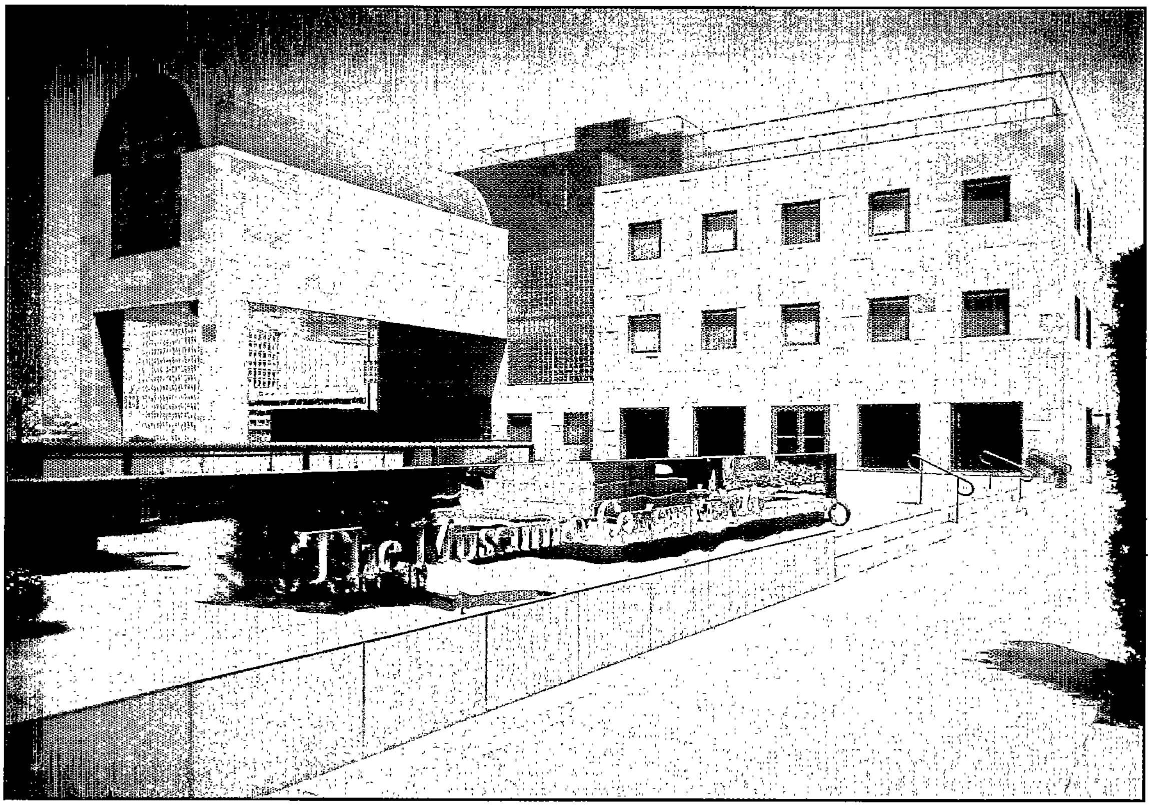
Architecture and the marketing of the museum

Claus Käpplinger

The museum as a commercial product, the shopping mall as a symbol of the museum of the future, the architect as international star – these are the images conjured up by Claus Käpplinger, who describes how contemporary museum architecture has contributed to the dramatic change in the public perception of the museum. The author is a German architect who lives and works in Berlin.

'The industrial age seems to be drawing to a close and we are entering the post-industrial decade. This transition plays a significant role in art. Another factor is the constantly growing demand for art. Nowadays, 100 million guilders may be paid for a painting by Van Gogh and 1.5 million for a Frank Lloyd Wright lamp. If an artist wants to secure his present and future reputation, he must take account of the market mechanisms and arrange a good supply of his works'. Art as a feature of successful cultural marketing: seldom has a museum director described the role of art today more frankly than Frans Haks, whose comments made in his address given in 1991 as the founding director of Groningen Museum Island remain equally valid for museum architecture today.

Groningen Museum was opened in 1995.[1] It may look like a somewhat bizarre bird of paradise among the latest museum buildings, with its variegated collection of low and high, old and contemporary arts, built as it was by four internationally famous designer-architects: Alessandro Mendini, Michele Lucchi, Philippe Starck and Coop Himmelblau. Nevertheless, it is a fine example of a new generation of museums. These are virtuoso worlds, stage sets for experience and happenings which try to appeal to all the senses of the public. Even more than the works of art on display in them, their architecture clamours for attention. Seldom are these buildings satisfied with a secondary role of serving as a backdrop for art: they are themselves the focus of attention. They reflect a playful approach to art works and offer visitors a moment of communicative pleasure,



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The Museum of Contemporary Art (MOCA) in Los Angeles, designed by architect Arata Isozaki in 1986.

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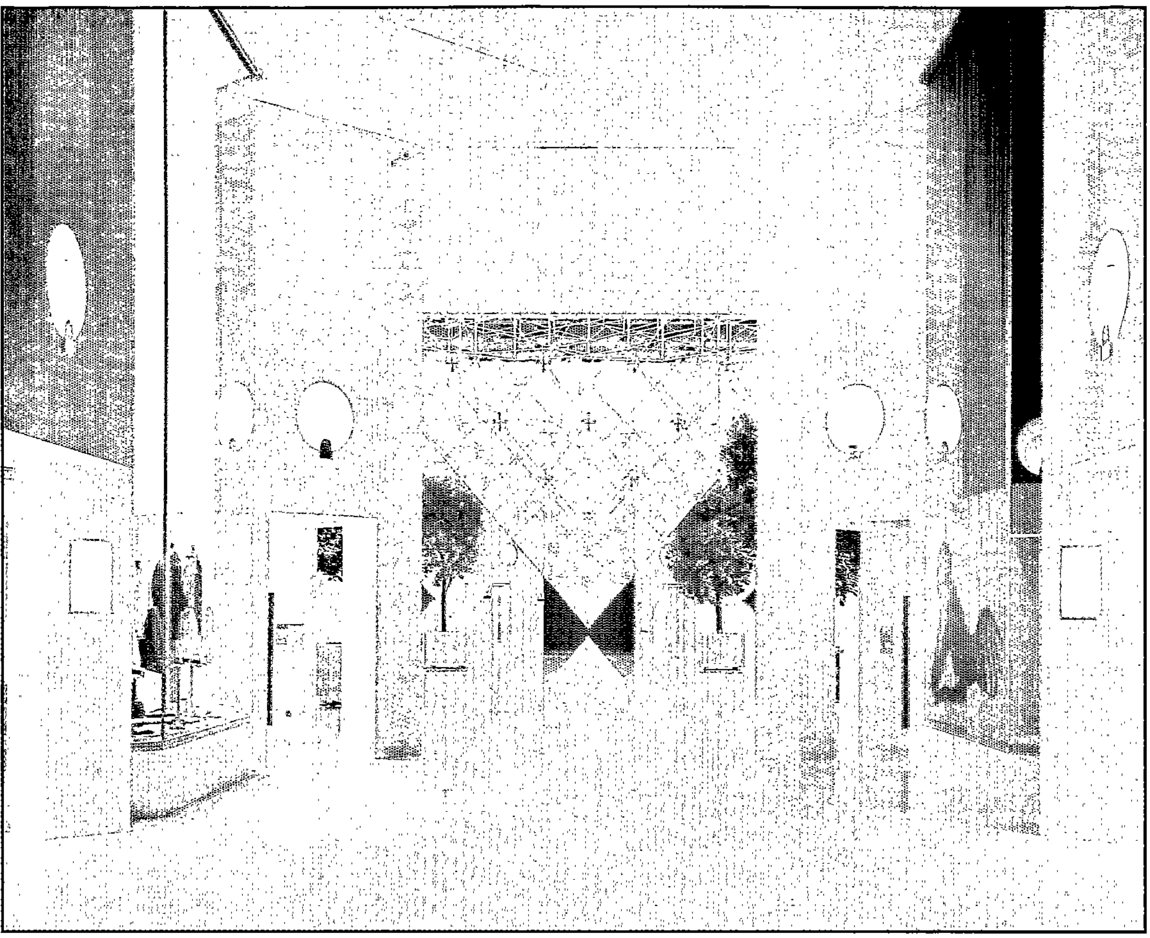

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The Galerie du Carrousel in the Louvre, Paris, designed by architects Pei, Macary and Wilmotte.

whereas in the past architecture tended to be a more reserved and sober frame for silent reflective concentration on the exceptional work of art itself.

The change of emphasis and perception that has occurred is reflected in the diversity and more relaxed attitudes of modern museum visitors, who have lost all their complexes over contact with museums and art. The fact that more and more members of the public today want not only to buy postcards of the art works that they have seen, but of the building itself as a souvenir of their visit, points to a changed concept of the museum. Twenty years ago, few visitors would have considered buying a photograph of the museum building. But in recent decades, museum architecture has become a central symbol, representing the site and the image of the museum. Today, it is not uncommon for the architecture rather than the art collection itself to cause the media and then tourists to travel beyond their national borders, visit cities again and go to museums. These museums with entertaining architecture cry out for personal discovery, even though their architects and architectonic forms are becoming increasingly identical.

So it is less the astonishing and alien unknown than the versatile facets and variations on the famous names which attract the interest of an apparently ever-growing public beyond the confines of any particular continent: Hans Hollein in Salzburg, the Auvergne or Frankfurt; Mario Botta in San Francisco, Basle or Tokyo; Joseph Paul Kleihues in Berlin, Hamburg or Chicago; Richard Meier in Barcelona, Frankfurt or Beverly Hills; José Rafael Moneo in Madrid, Stockholm or Wellesley College, Massachusetts; Ioh Ming Pei in Paris, Washington or Berlin; Arata Isozaki in La Coruña, Kraków or New York. This list of names and places could easily be lengthened, even though it would be unlikely to take in more than a dozen architects who build or extend the 'great' museums of the world. This is a small and exclusive band that guarantees quality and international renown. The importance attached to national or local ties is steadily diminishing. A work by Richard Meier under a Californian or Catalonian sun differs only marginally from its older counterparts built under the much cooler sun of the American mid-West or Central Europe. It is the architect and his work that promise calculable individuality and an international reputation; scarcely any museum director today is prepared to forgo that asset in the global competition between museums. The vehement rejection of the award-winning but ultimately unsuccessful project of Giorgio Grassi for the Berlin Museum Island is therefore hardly surprising. Instead of its sober character, the Berlin Museum representatives preferred the exciting reptile forms of Frank O. Gehry, which have already attracted hundreds of thousands of visitors to the Vitra Museum at Weil am Rhein, a small south German town.

After all, the expectations of the public have to be met, and the public can only be attracted back to the collections by the big names of famous architects; the self-same collections were previously visited by only small numbers of art lovers. New architecture not infrequently performs the same function as the big travelling exhibitions and retrospectives of great artists which bring a museum or a town into the limelight as worldwide media events. The widely publicized controversy over the commissioning of the American architect Ioh Ming Pei to rebuild the Paris Louvre was an exception in the 1980s. But the overwhelming public success of the newly opened and extended Louvre in the end confirmed the justification of awarding the contract to an architect who already enjoyed international fame.

The commercialization of museums

However, the Paris Louvre is also an example of the enormous commercialization of museums which has grown in recent decades. The construction of an underground mall, the Carrousel du Louvre, with its fast-food, souvenir and other shops leading to the Métro stations, the expansion of the museum shop space, the merchandising of art works through all kinds of copies and even the imprint of its name or the glass pyramid on paper, fabric and ceramics must be seen against this background as the all too readily understandable consequences of a development which increasingly regards the museum as a marketable asset. The fact that the 'chief curator' was forced into second place by the 'administrator' of the Louvre in 1992, that is, by a graduate of one of the great management schools, reflects the far-reaching transformation of museum management into a service company.

The museum café and shop were the first step. But it was the idea of promoting comfort and souvenirs of the visit to the museum which in the 1960s gradually led to timid new uses of space and allowed small areas to be regenerated in remote corners. Today, on the other hand, the quality and success of a museum are often measured by the additional sales, extensions and potential of what previously were considered secondary functions. So is the mall a symbol of the museum of the future? The quality of the permanent collection is no longer sufficient today to attract the masses to museums. Like a shopping mall, museums are seeking to attract a broad range of visitors who stay for as long as possible and are less interested in originality or in art itself than in the additional opportunities for consumption and interaction.

For the intellectual and symbolic appropriation of the cultural space, the museum today must guide its public – which is seldom familiar with the background and character of all that it has seen because it lacks the necessary cultural knowledge – towards art through a disparate range of other services. Over and above the con-

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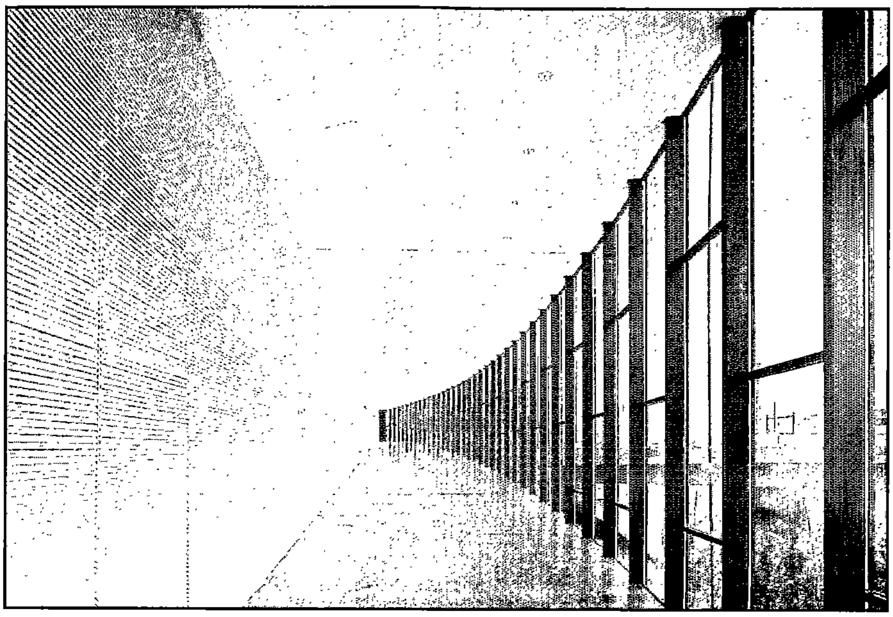

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The Jan Tinguely Museum in Basle, Switzerland, designed by architect Mario Botta.

ventional educational lectures, museums are increasingly providing space for bookstalls, pop concerts, multimedia shows and representative areas used by sponsors for receptions or product-launch events. A prestigious architect and attractive virtuoso architecture able to hide and conceal conflicting needs play an increasingly central role here. And success seems to justify their concepts. The fact is, for instance, that the number of visitors to museums in Germany following the avalanche of new building projects rose from 14 million in 1969 to 69 million in 1995.

Measured against these impressive figures, the museum has long since become an integral part of the market circuit. Although a free-market budgetary management of the kind followed by the Metropolitan Museum on the edge of Central Park in New York may still seem a remote prospect for many European museums, it is the American model that points the way to future developments. More than 25 per cent of its revenue is earned from card sales and merchandising. Quite apart from the museum's own shops, its consumer services include eighteen sales outlets in the United States, twenty-four others worldwide and a mail-order store. Something that began in the late 1960s with the opening of museums and culture to society at large – typified by the Pompidou Centre in Paris representing equality of opportunities and the transition from a purely receptive, bourgeois concept of art to a wider notion of culture – was imperceptibly transformed into a market factor which today attempts to combine maximum entertainment value with cultural representation, mass culture and élite high culture.

As an integral component of the network of a globalized economy, the major museum today has an impact on the market value of a city comparable to the quality of its airports, trade-fair centres, headquarters, shopping centres or gentrified districts. There are now a whole range of scenarios in which not just culture and the economy, but also cultural practices and patterns of consumption of the service-provider class are explicitly interwoven with the financial investments of a globalized economy. As a representative investment and cultural spectacle, a new museum building or the extension of an existing institution is an opportunity to attract international and media attention. This enormously enhances the market value of a town, and the phenomenon is not just confined to the adjacent districts but extends to the whole of the city. The flood of new museum buildings in recent decades provides ample confirmation of this fact. The number of museums built since the early 1980s must surely be greater than in any other period. Today, the museum embodies more than ever before the life-style of our own age, typified by spending power, spectacular events and demonstrative enjoyment of life. However, there are clear limits to the individuality and differentiation of museums. The limits are those of a market which has triumphed over art and architecture which are regarded as having no values in their own right. ■

Note

1. See Gitte Brugman, 'A Break with Tradition: The Groningen Museum', *Museum International*, No. 186 (Vol. 47, No. 2, 1995) – Ed.

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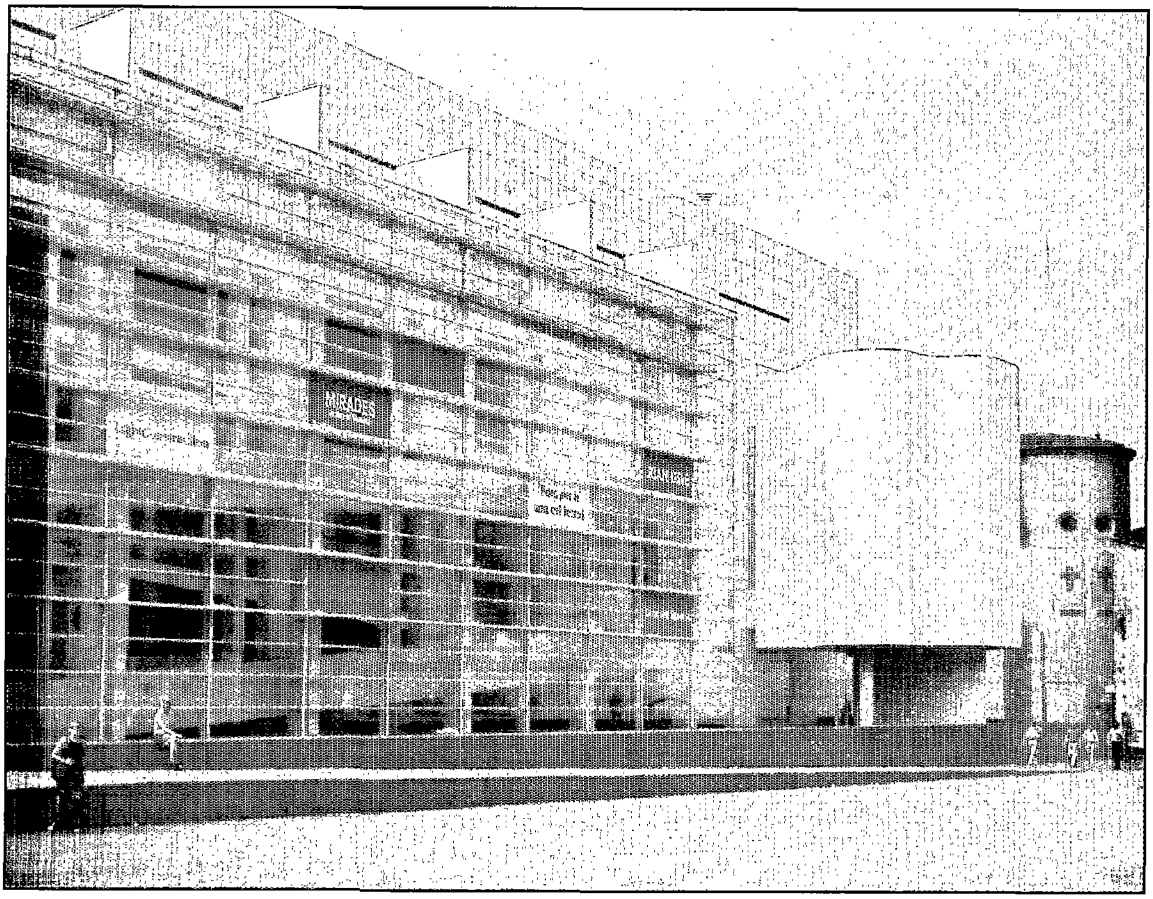
Filtered light: the Contemporary Art Museum of Barcelona

Mihail Moldoveanu

The decision of the local authorities of the city of Barcelona to engage world-famous architect Richard Meier to design a museum for which no collection existed was – and still is – controversial. However, the building itself has already helped transform the urban fabric of the city and has attracted an unprecedented number of visitors. Mihail Moldoveanu, a freelance photographer and writer based in Paris, recounts the story of how architecture was used to glorify the concept of the museum and spark the renewal of a neighbourhood.

The design of the Museu d'Art Contemporani of Barcelona (MACBA) illustrates convincingly the changes that have come about in our acceptance of the museum concept and the place that the institution we call a museum occupies in Western culture. These changes – which really came into their own around the 1980s – stemmed from a desire to incorporate the 'classical' museum structure into a design allowing for easier access and, operationally speaking, greater flexibility; one that was more 'consumer-friendly' to meet the needs of mass tourism, but at the same time more in tune with the new communication technologies.

The worldwide success of the Georges Pompidou Centre in Paris secured acceptance – as far back as the 1970s – for the idea of a large-scale 'culture machine' encompassing a museum, a library, large-format temporary exhibitions and cinemas. The building that houses this 'big machine' is very interesting in its own right, a tourist attraction designed to receive a large number of visitors. On a more modest scale, this model was emulated by many municipalities in Europe in the following decade, while in North America the practice of 'culture machines' was already well established at that time. The most striking example of this policy was to be found in Frankfurt in Germany, where in



The museum's broad plate-glass frontage looks out on the Plaça dels Angels.

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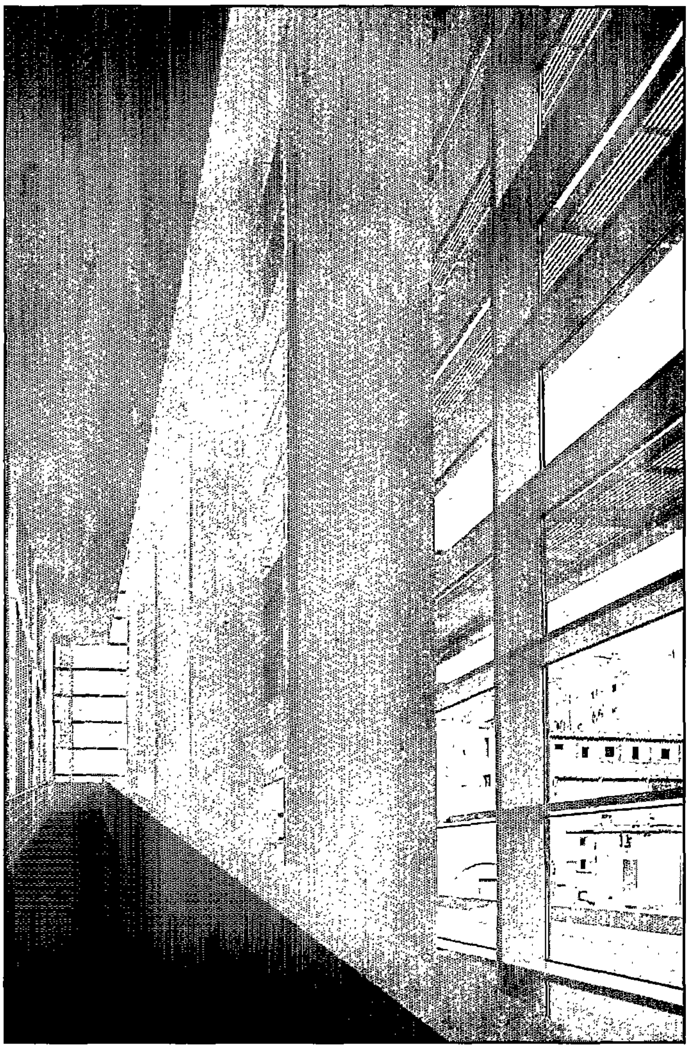
the 1980s an impressive number of museums were built, designed by leading architects like Richard Meier, Oswald Mathias Ungers, Günther Benisch, Gustav Peichl and Hans Hollein.

The Museu d'Art Contemporani of Barcelona is clearly carrying on this tradition. However, perhaps because of the very special circumstances prevailing at the time, this museum was the focus of bitter controversy even before its construction.

The point is that Barcelona already had a modern art museum in Ciutadella Park and the large Centre for Contemporary Culture (CCCB), which was completed in 1993 and is very well equipped for temporary exhibitions, is of considerable architectural interest (Piñon and Viaplana, architects) and is situated literally on the doorstep of the new MACBA, which is adjacent to it. What is more, the Joan Miró Foundation, which is located on the hill of Montjuic, was specially designed (by the architect José Luis Sert) as the future Modern Art Museum of Barcelona, as Miró had wished it to be and for which purpose the painter had donated important works from his own collection. It is rather hazardous to embark on any discussion of the future of modern art galleries in Barcelona without bearing all those considerations in mind. It is even more difficult to think of setting up a new museum in those circumstances without having a single collection to show, and yet that was precisely MACBA's position in 1990 when the project was launched. At the inauguration in 1995, the beginnings of a permanent collection could be perceived and by the end of 1996 the number of works had grown, but it is still only an embryonic collection, a fact that has continued to raise doubts as to the future of the enterprise.



The Plaça dels Angels seen from the interior of the museum.

This is well illustrated by the view expressed by Jean Clair, director of the Picasso Museum in Paris and one of the organizers of the last Venice Biennale. Interviewed (in July 1996) on the development of the arts centre in recent years, he unhesitatingly came back with the sharp reply: 'People have tried to reproduce the Paris model in other large cities, set up arts centres and "museums without collections" in the expectation of an audience that never came. This has caused quite a few problems, several resignations and questions about whether people are really interested in so-called "avant-garde art" and what it has all cost. Spain should give this matter a little more thought; perhaps it could benefit from the French experience'.[1] Here, Jean Clair was referring implicitly to MACBA, as was the architect Oscar Tusquets, a leading figure

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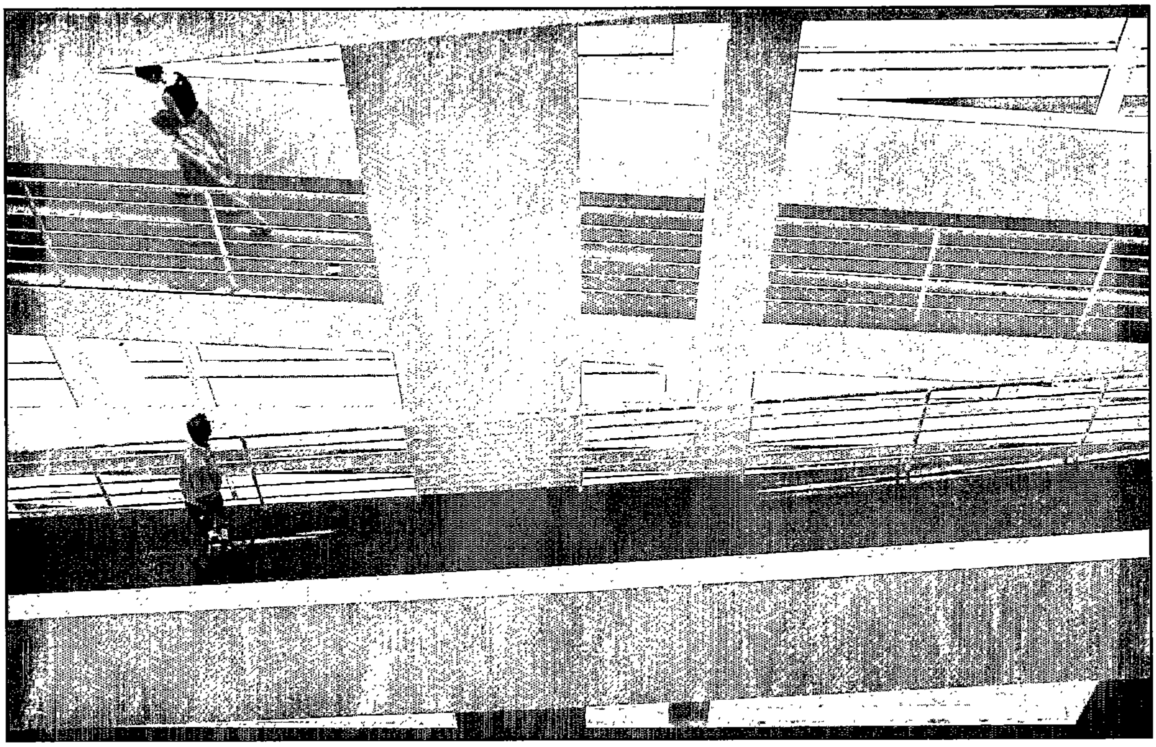

'The predominant feature of the hall is a broad ramp that punctuates and structures this volume.'

in Barcelona's cultural life, when he denounced the politically motivated imposition of 'museums that are more educational, more massive, more didactic and especially more patriotic'.[2]

Lastly, the picture of the general context in which MACBA came into being would not be complete without mentioning the major building campaign that the city had undertaken some time before, for the 1992 Barcelona Olympic Games. 'Barcelona Olimpica' covered a whole range of large-scale works – infrastructure, facilities, housing, etc. – some of which were designed by architects of world renown, including Arata Isozaki, Norman Foster, Santiago Calatrava and Alvaro Siza. The success of these projects strengthened the confidence of the local authorities in the capacity of architecture to resolve a fair number of the city's problems.

Glorifying 'the museum'

And so the idea of a high-prestige cultural amenity that could upgrade and infuse new life into an area in the old medieval city, the Ciutat Vella, was born. It was to be a modern art museum without any link with existing collections, a museum designed above all as a glorification of the 'museum' concept *per se*, opening the way to the future, exploring contemporary art and presenting key aspects of the history of modern art.

There is nothing surprising about the choice of Richard Meier as the museum's architect. Despite his excellent reputation, he was not among the 'stars' of 'Barcelona Olimpica', and this gave the city the opportunity to make up for it with a programme which seemed specially conceived for him. The work of Meier, who lives in the United States, has in fact a very special place in the history of twentieth-century architecture. It cannot be said to be part of any of the contemporary stylistic trends, but aims at refining the heritage of the historical avant-garde movements (Breuer, Gropius, Oud, Reitveld, etc.). Added to the elegance and sobriety of his buildings there is – with just a few exceptions – the visual impact caused by their whiteness, conveying an impression of spirituality. It is also an architecture that imparts images that are easy to grasp and recognize, qualities that have been put to the test time and again in his work.

Meier's project for Barcelona is in fact very much in keeping with what was intended by those who commissioned it, that is, the Ayuntamento (City Council) and the MACBA Foundation representing the enterprises that helped fund it and the artists (initially there was also the Generalitat, the Catalan Autonomous Government, but it withdrew to simplify the handling of the often complex problems involved in setting up the museum).

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The site – bounded by the Plaça dels Angels, Montalegre Street and the old Hospital de Caritat – induced Meier to orient his building entirely towards the square (due south), with a broad expanse of plate-glass frontage in that side, this fine perspective heralded and offset by the clearly sculpted lines of an opaque white structure facing Montalegre Street. All the façades betray a composition of the utmost refinement, using the spare architectural vocabulary which is Meier's unique hallmark: his ever-renewed creative interpretation of the legacy of the pioneers of modern architecture (gravitating around the International Style, Purism, De Stijl and other movements).

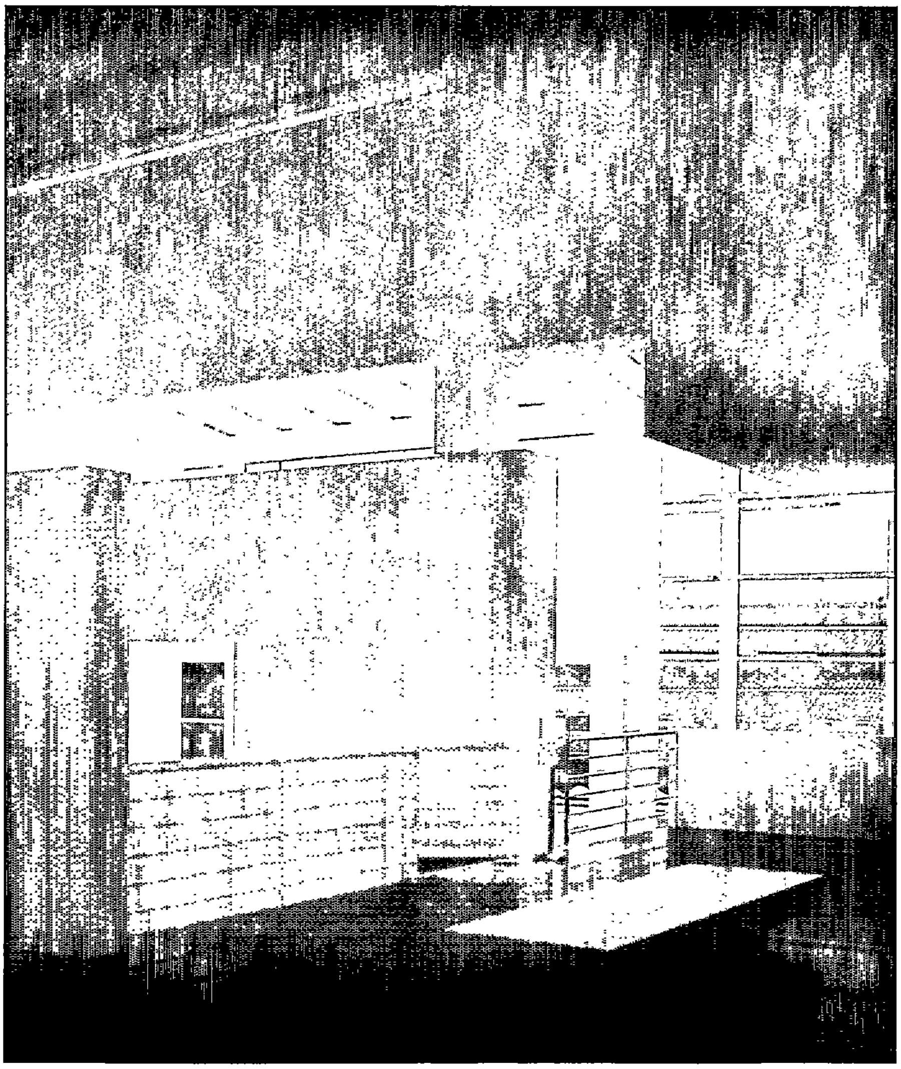
The interior is divided lengthwise into two distinct areas: a very luminous ceiling-height hall that affords a striking 'first impression', and a block divided into three levels housing the exhibition area proper and most of the means of vertical transportation; it is darker than the lobby area but never cut off from it. The predominant feature of the hall is a broad ramp that punctuates and structures this volume and provides an added note of interest to the Plaça dels Angels through the glass façade. Certain art works are to be displayed here temporarily. Between this area and the exhibition area proper the spatial relationship is fluid, with no opaque separation. Between the hall's glass façade and the exhibition area there are several 'filters' to soften the natural light, which is supplemented by electric lighting.

A 'beacon' of culture

Richard Meier's MACBA is beyond doubt the sophisticated structure that the local authorities had in mind. Detractors have mainly criticized the idea of a glass museum (but as there is no collection anyway, this is not too much of a problem!) and the stark contrast between the dazzling whiteness of the building and the characteristically ochre tones of the surrounding neighbourhood. The excess of light is not really an issue, since it is adequately filtered. And people have more or less come to terms with the contrast created by this great white mass, accepting its symbolic significance as a 'beacon' of culture.

In this corner of the Ciutat Vella – known as El Ravall – the presence of MACBA ▶

'The spare architectural vocabulary which is Meier's unique hallmark.'



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(open since 1995), together with that of the Centre for Contemporary Culture (opened in 1993), has made a substantial difference to life in what was previously a rather run-down neighbourhood. These two very lively centres have given a large number of art galleries the incentive to set up here; the area is now better maintained and is very popular with tourists, which is good for business in general. Some ten years earlier, an abortive attempt had been made to launch another art gallery district, the Born. It is easy enough to see in retrospect that among the reasons for the failure of this scheme was the absence of cultural facilities of the calibre of MACBA or CCCB.

As to what MACBA has to offer the public, the main attraction is Meier's work, the building itself. It is difficult to predict how long this can be expected to last, but for the time being the public is interested in the architecture. Focused though it is on the celebration of its own existence, MACBA is also involved in the debate on the future of museums in general, through exhibitions like *Diffuse Spaces: Future Trends for Museums*, or again *Looking* [at museums]. The holdings for the future collection are also shown, while as part of its programme for 1996/97, apart from presenting works by outstanding contemporary artists, the museum has scheduled major exhibitions on 'classical' modern art museum themes like *Vassily Kandinsky: The Revolution in Pictorial Language* (with the Georges Pompidou Centre in Paris), *The Situationists* or *The Nature of American Culture, 1975–1995* (with the Whitney Museum in New York).

Quite by chance, the Congress of the International Union of Architects, which was held in Barcelona in July 1996, created a situation that highlighted MACBA's true mission. Attendance at the congress exceeded all expectations, to such an extent that some of the discussions could not be held where they had been planned because of the lack of space. An ad hoc forum had to be set up on the Plaça dels Angels, just in front of the museum. Thousands of people from all over the world gathered in the square to see and hear such eminent figures as Norman Foster, Peter Eisenmann and Kenneth Frampton against the backdrop of this splendid façade. The museum and its surroundings were transformed into a magnificent living *agora*, epitomizing the art of urban living. ■

Notes

1. *La Vanguardia*, 31 July 1996, p. 34.

2. Ibid., p. 35.

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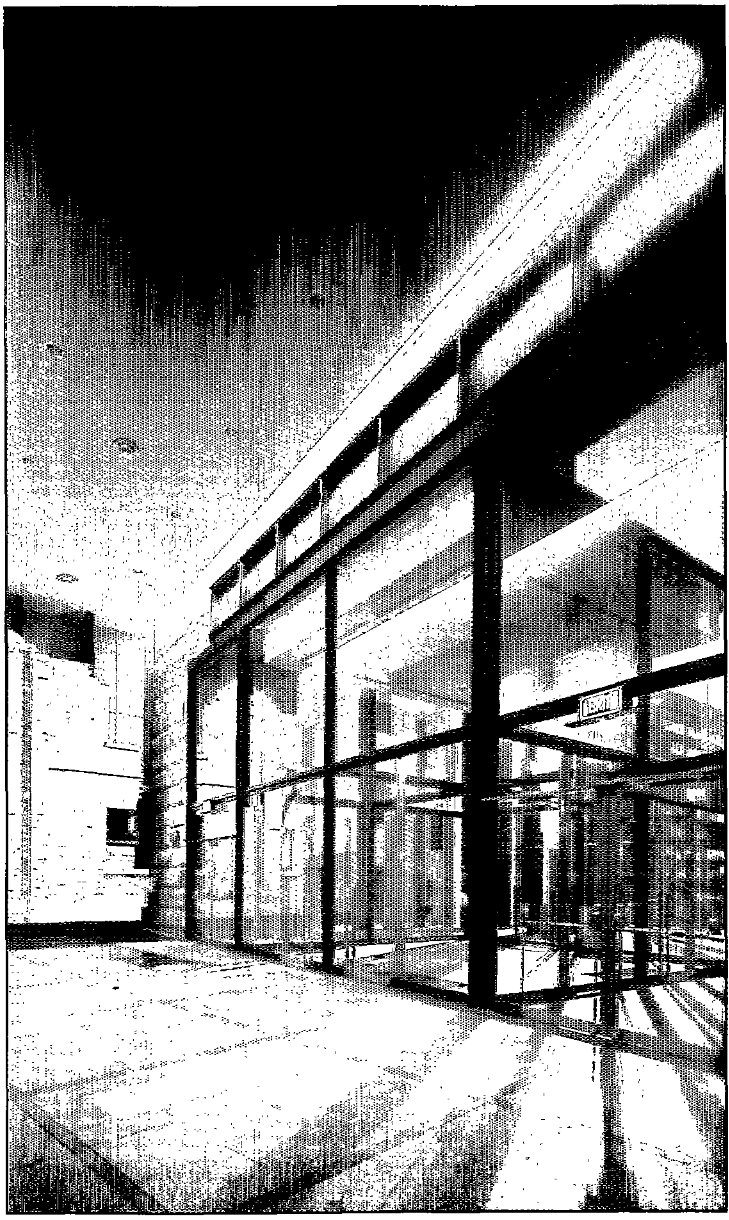
Curating cultural difference: the Museum of Sydney

Peter Zellner

In Sydney, Australia, the conversion of a historical site into a museum was not merely an architectural feat but a cultural one as well. Peter Zellner describes how the architect's imagination sought to reveal a multilayered story still in the making. The author is an architect, educator and critic currently based in Melbourne, Australia. His architectural projects have been published in Japan and the United Kingdom, and he has lectured internationally about his interest in the space between virtual and architectural space. He is a lecturer in design at the Faculty of Environmental Design and Construction, RMIT University, Melbourne.

In January 1788, Captain Arthur Phillip sailed his First Fleet into the harbour that Captain Cook had named Port Jackson eighteen years previously. Phillip arrived in Australia with some 1,200 exiles – 759 convicts, 400 sailors and four companies of marines. Great Britain had decided to colonize Australia because of the North American War of Independence. With its prisons becoming rapidly more overcrowded and the country no longer able to transport its social and political undesirables to North America, the need for a new penal colony was mounting. In 1779, Joseph Banks, one of the leaders of Captain Cook's scientific parties, suggested Australia as a suitably



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The entry lobby at the Museum of Sydney with a full-scale reconstruction of part of the façade of the original First Government House by heritage architect Clive Lucas.

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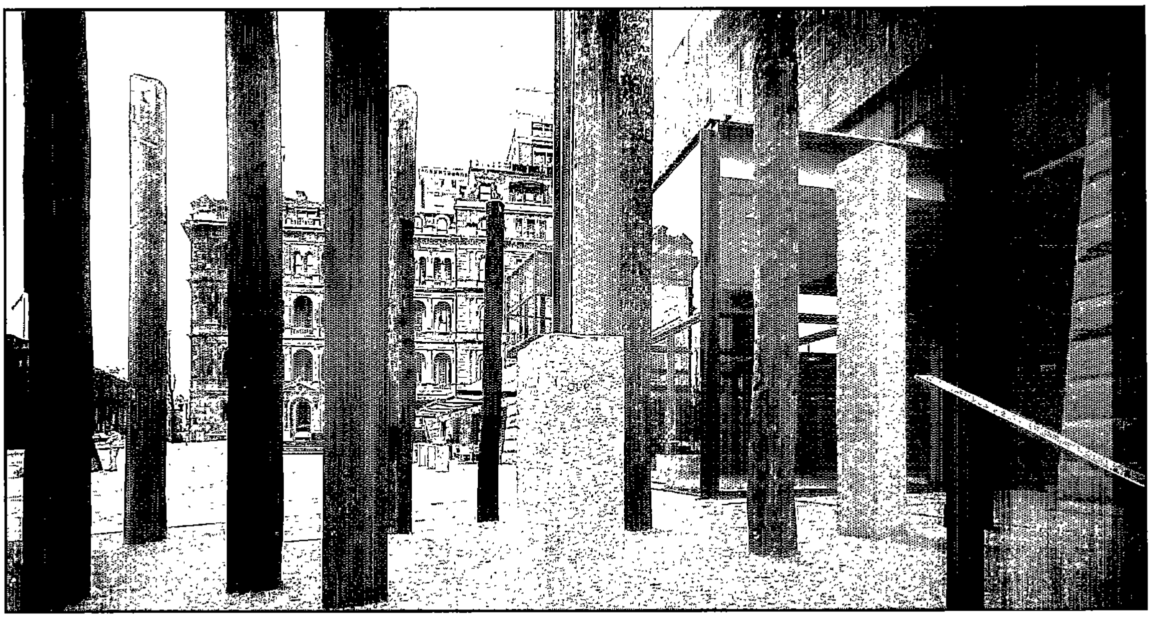

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View of First Government Plaza through The Edge of the Trees, *a sculptural installation by artists Fiona Foley and Janet Laurence.*

distant site for a colony of thieves and political misfits. By 1791, with the arrival of the Second and Third Fleets, the penal colony's population had grown to nearly 4,000 individuals. For the Aborigines who had inhabited the coves and inlets around the new colony of New South Wales, Great Britain's solution to its penal problems was disastrous. Unable to muster a military response to the colonial invaders because of the egalitarian and family-based political structure of their society, the area's indigenous people were driven out by force. In the early years of the colony's existence, many Aborigines died. Hundreds were slaughtered in a series of skirmishes with Phillip's marines while numerous others succumbed to a variety of exotic diseases.

Laying out the foundations of what was to become the First Government House in Australia, the newly appointed Governor Phillip named the place Sydney after the then Secretary of State for the Home Department. In doing so, Phillip erased the memory and name of the area's indigenous, Aboriginal people – the Eora – for nearly two centuries. Until 1845, nine governors of the colony of New South Wales would live in the modest brick-and-mortar house that Phillip had built over the former land of 1,000 Eora people.

By the middle of the nineteenth century, Sydney had become a busy colonial port, trading with the Americas, China and India. In 1845 First Government House was demolished and the Governor moved to a more prestigious residence on nearby Bennelong Point. That house still stands today in Sydney's Royal Botanic Gardens. The site on the corner of Bridge and Phillip Streets was largely disused during the rest of the nineteenth century. In 1912 it was occupied by a corrugated-iron building which served as the temporary office of the government architect. This building stood until 1968, when it was demolished to make way for a parking lot. By the early 1980s, the site was earmarked for commercial development. When this news reached Sydney's public, the area became the subject of a long-lasting and heated debate about its fate. The descendants of James Bloodworth, one of the convict bricklayers who helped build the First Governor's House, lobbied politicians and maintained a long letter-writing campaign – delaying the builder's bulldozers until further research could be conducted into the area's background.

In late 1981, an archaeological excavation was staged to determine the site's true history. The archaeologists involved in those explorations positively revealed that the footings found on the site were the very same foundations built by Governor Phillip at the turn of the nineteenth century. The archaeological team determined that the former parking lot was indeed the site of the First Government House. They argued successfully that the site had great historical significance for Australians – it was in their words, a national treasure. The original structure on the site was the nation's first stone and brick building. It had housed the country's first printing press and was the first centre of British colonial administration. However, as the Aboriginal Land

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Council of New South Wales soon pointed out, the site was also the exact spot where Australia's Aboriginal people were first driven out and later dispossessed of their traditional lands. Here, under the foundations of a nation, were the bones and relics of another older nation resident in Australia for at least 40,000 years (recent research suggests Australia's Aboriginal people may have inhabited the continent for up to 120,000 years). The site had become an ideologically charged and morally contested ground.

Marking/making a museum

A public competition was staged to decide on a use for the former parking lot. The competition yielded 'disappointing entries'. In the end, the site was enveloped by a larger scheme for the redesign of the entire city block and the job was given to competition finalists Denton Corker Marshall, the award-winning, Melbourne-based, multinational designers of Australia's embassies in Tokyo and Beijing. Their design work resulted in the construction of two office towers, named after Governors Phillip and Macquarie, and to their north a smaller sandstone building – the Museum of Sydney. Today, the ruins of the First Government House are partially occupied by the recently opened museum. Set in the heart of Sydney's bustling central business district, this small museum is a stone's throw away from the famous Sydney Harbour and a little further from the equally famous Opera House and the Sydney Harbour Bridge. Some 200 years after first settlement, this museum is attempting through its bold and non-traditional curatorial programme to recover the lost voice of Sydney's original inhabitants while simultaneously mapping out Sydney's colonial history between 1788 and 1850.

The small-scale museum was conceived of by the architects as an architectural palimpsest: a new script traced over the ruins of the original Government House and the subsequent archaeological dig that uncovered its foundations. Below the fifty-five-storey Governor Phillip office tower, two heavy sandstone walls geometrically and symbolically reference the ghost or phantom walls of the original house as well as Sydney's urban grid. These walls, heavily rusticated at the base and diamond cut at the top, abut on to the main plaza now called First Government House Place. Over the plaza, the grid of the archaeological dig and ghost foundations of the original building on the site are traced out in light and dark granite pavers. These pavers can be lifted to reveal the remains of the house below and in one spot the remains of the house are visible through a raised glass viewing box. The traced grid and ghost plan run back to the sandstone walls and then into the lobby of the Museum of Sydney itself.

Internally, steel and glass display and circulation structures mediate the museum's exhibits on the ground floor. Here, the architects have employed a crisp steel and glass detailing, successfully pitting modern architecture against real and phantom historical constructions. In the lobby, a full-scale reconstruction of part of the façade of the original house by heritage architect Clive Lucas stands next to the imposing glazed steel entry hall. Playing new and new-old against the backdrop of an impressive central circulation structure – a scaffold-like steel staircase – the architects have created an interior which effectively depicts their interest in tracing out a new architectural script over the remains of the First Government House. The staircase leads visitors to a long and uncluttered exhibition hall that abuts on to the Focus Gallery, a space for travelling and temporary exhibitions. The Focus Gallery is in

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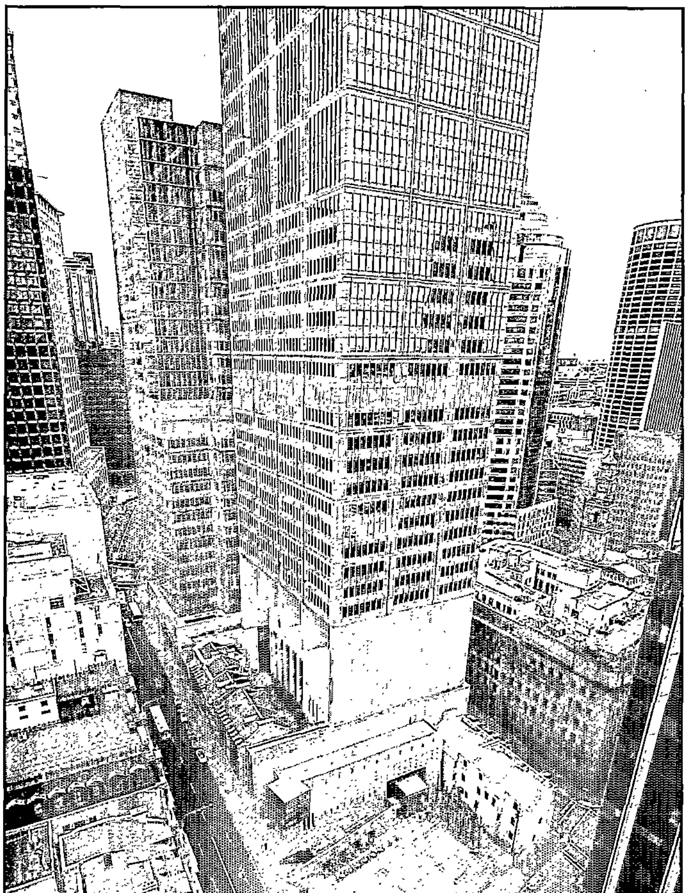
turn adjoined at either end by two viewing platforms – one real and one virtual – a steel-and-glass viewing cube that provides a spectacular glimpse of the harbour at the east end of the gallery and a multimedia 'theatrette' that provides a dramatic glimpse of Sydney's past at the west end of the gallery. Structured by the architects as a transitory circulation space inhabited by several transparent glass-and-steel containers and exhibition spaces, the Museum of Sydney provides an interesting example of a confident and pastiche-free response to a historically and urbanistically sensitive site.



Aerial view of Governor Phillip Tower complex by architects Denton Corker Marshall, showing the Museum of Sydney in the foreground and the paving pattern marking out the foundations of the First Government House.

© John Gollings

Under the direction of senior curator Peter Emmett, the Museum of Sydney has pursued a direction that might best be described as post-modern in its scope and intent. Rather than attempt to succinctly narrate a singular history for Sydney and its people, Emmett has crafted a curatorial programme that presents history as a tableau of disparate and sometimes competing voices. Like other post-modern museums – the Museum of Africa in South Africa for instance – the Museum of Sydney seeks to give presence to many voices and not only the authorial history of a governmental or colonial culture. Unlike the model provided by the traditional nineteenth-century museum, the curatorial policy at the Museum of Sydney has actively attempted to blur and smudge boundaries between disciplines and categories. Emmett's curatorial interests combine ethnography with archaeology, townscape and history with political interpretation and factual historiography with artistic commentary. 'There are many histories hovering here,' Emmett says, 'stories that cross and groove and make this place we call Sydney.'

The Museum of Sydney undertakes the documentation of eight themes – Colonial Contact, Aboriginality, Environment, Trade, Authority, Law, Conflict and Community – to provide a framework for what Emmett terms a 'metaphorical journey through this place'. He envisioned the museum as a cultural map of Sydney, a choreography of people in a spatial web of historical relations that shift and unfold through the free composition in the museum. He tells us: 'The Museum of Sydney is not a shell of architecture with exhibits and art works tastefully arranged on its walls. It is a composition of conflicting histories and methodologies of retrieval and classification. It is

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like the city of Sydney itself – continuously changing and shifting, but always forming an organic whole.'

Gathering curators, writers, industrial designers, historians, artists, archaeologists, digital media designers, film-makers and graphic designers, Emmett has engendered a museum as 'medium' – spatial history as spatial experience. The museum engages the city of Sydney through its programme of installations, exhibits and events which chronicle the first sixty years of European and Aboriginal contact in Australia. Emmett presents history not as a time-line, but as a circuit or a Moebius strip that folds back on itself like the freely arranged space of the museum itself.

Reclaiming history

Emmett's curatorial programme subverts and often undermines the intentions of the architects' imperial grid and by extension the trace of Governor Phillip's colonizing presence by seeking out other (especially Aboriginal) memories of the site. Instead of the giant bronze statue of Governor Phillip envisioned by the architects for the forecourt plaza, Emmett commissioned contemporary Australian artists Janet Laurence and Fiona Foley to create a sculptural installation called *The Edge of the Trees*. This installation is an impressive mini-forest of wood totems that sit on a soft patch of red earth – a clearing in the architect's granite plaza that evokes the memory of the Eora people's lost land. The posts themselves incorporate wood, corten steel, bones, sandstone, resin, wax, feathers, shells and seeds. Some of the columns contain concealed speakers that emit recordings of Eora voices and one column lists the names of the many different indigenous language groups that inhabited Sydney. Another column contains the names of some of the convicts who arrived as part of the First Fleet in keeping with the museum's spirit of reconciliation.

In the main entry area of the museum, Emmett has placed the belongings of the original European settlers – pictures, diaries, 150 newspapers, tools, and a jib crane stand opposite the artefacts of the Eora people – hunting weapons, ceremonial art pieces, casks and religious items. The relationship enacted between Aboriginal and European artefacts mocks Victorian, quasi-ethnographic attitudes towards displaying case-histories and suggests an obvious valency between the two cultures. On the steel staircase a sliding environmental video-wall turns the architects' austere circulation device into a theatrical scaffold. Emmett commissioned film-maker and photographer Michael Riley and Aboriginal studies curator David Prosser to produce a three-screen video for the wall which re-creates the everyday practices of the Eora set anachronistically in contemporary Australia. In 1998, the video wall will be linked to the Internet, connecting the free and unfolding historical loop that Emmett has created in the museum with a larger unfolding virtual ring.

The Museum of Sydney curates fragments: history, nature, culture, city and memory in a free, unstructured non-traditional exhibition space. It expresses the divisions that currently constitute the make up of a new world city like Sydney and the national debate in Australia: Aboriginal versus European, and colony versus republic. As Peter Emmett notes, 'A modern museum is a meeting place, not a mausoleum. It's a meeting place for conversations across time and place. Isn't this a good metaphor for a city – a place called Sydney?' Perhaps this is the key to this museum. ■

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Museum design in Los Angeles: the beginning or the end of the 'dinosaurs'?

Frances Anderton

It is frequently said that we have come to the end of an era of costly and monumental public building projects and that dwindling budgets have forced a major shift in architectural emphasis to small-scale, modest initiatives. Not so, says Frances Anderton, who describes the museum building boom in Los Angeles where West Coast innovation in content, technology and sheer creativity flourishes side by side with more traditional East Coast architectural conceptions. The author is an architect, freelance journalist and radio producer. She was assistant editor of The Architectural Review *(London) and former editor-in-chief of* LA Architect.

The Robert O. Anderson Building at the Los Angeles County Museum of Art.

On entering the Holocaust Section of the Museum of Tolerance[1] we are each invited to extract from a dispenser a 'photo passport card' of a child. The black-and-white photo, reproduced on a slick piece of plastic, is hazy and crackled with age; the subject is staring shyly, eagerly, curiously into the camera. Underneath the photo is the name and age of the person and a description of his or her family and circumstances. This photo is real; it is a record of a real person whose life became enmeshed in the events of the Holocaust.

We then progress through a series of re-creations of situations – a café in pre-war Berlin where the air is thick with talk of the emerging Nazis, a dramatization of the Wannsee Conference, a replica of a gas chamber – that chart the rise and fall of the Third Reich and the massacre of the Jews. At the end of the tour, we slip our card into another machine and a computer print out reveals to us the actual, and often terrible, fate of the child whose image we have adopted for the course of our journey through the museum.

This museum, opened in 1993 in Los Angeles, set an extraordinary precedent for what a museum could be. It is, said a critic at the time, 'the first centre devoted to the display of human nature, rather than its artefacts'. It is also, said the same critic, 'the most technologically advanced institution of its kind'. Created by the Simon Wiesenthal Center in Los Angeles, it is a museum that challenges its visitors to confront bigotry and racism. Using a combination of stage-craft, theming, archival material and state-of-the-art digital and video technology, it takes the visitor on a carefully constructed, and long (two-and-a-half hours), journey – starting in the Tolerancenter, progressing through the Holocaust Section and finishing in the Multimedia Center – designed to force us to confront our own prejudices.

In the Tolerancenter hands-on exhibits highlight the intolerance in our daily life – from the Los Angeles riots, projected in layered images on video screens, to racism in 'The Other America', a computer interactive map charting hate groups currently active in the United States. The Multimedia Center contains thirty workstations with access to Holocaust archival material as well as temporary exhibits devoted to contemporary displays of human intolerance. At present the subject is Rwanda.

While not very interesting architecturally – it is housed in a sombre corporate-looking building – the Museum of Tolerance is an inspiring and significant example of a new trend in museum design: it is an 'experiential' museum. 'Experiential' museums aim to convey their message through total immersion – the sight, sound, smell, feel,

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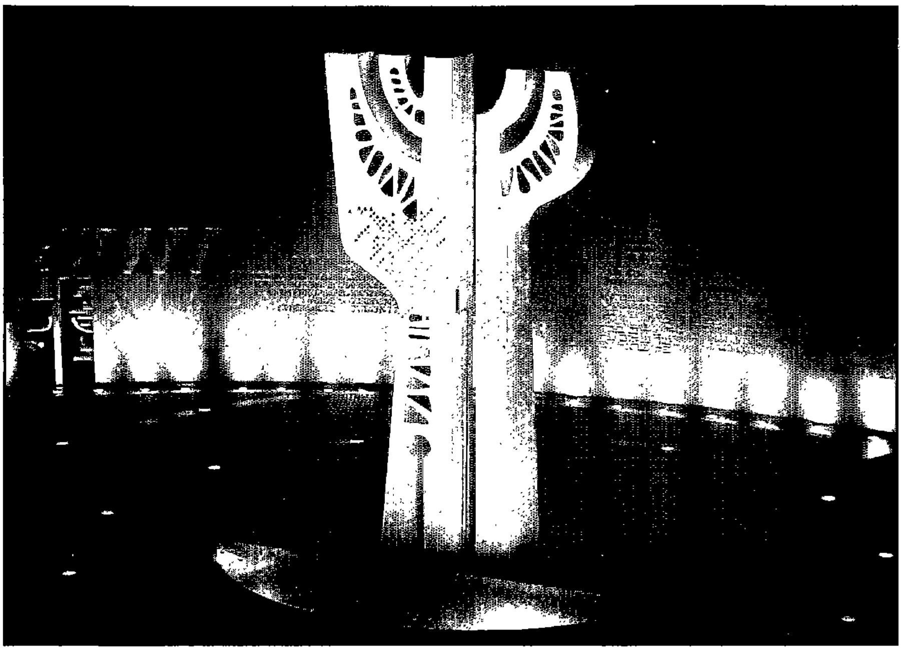

© Jim Mendenhall, 1993, Simon Wiesenthal Center

Memorial Plaza, Museum of Tolerance.

even taste – in the subject rather than a cold display of artefacts on walls or in glass cases. Experiential museums are a relatively new concept that, in taking their cues from theme-park design, have their roots in Los Angeles and the work of Walt Disney.

Since the launch of Disneyland twenty-six years ago, themed entertainment has become a dominant force in our culture. Such is its appeal that theming has spread from enclosed leisure resorts into mainstream culture, with such a boom in the 1990s that theming and fantasy are being applied to everything from casinos through retail shops to resorts, to some areas of medical and dental fields, and now to museums.

Educational institutions (museums, learning centres, schools, etc.) have recognized the emotional impact of themed environments, and the need to compete with them for the attention of children and adults. As a result, themed educational environments (the buzzword circulating in Los Angeles for this concept is 'edutainment') are starting to proliferate. The owners of the Discovery cable television channel (devoted to science and nature) are planning a Discovery theme park; in the Kansas City Museum, the proposed Science City is intended to 'combine the visitor interaction of a science centre, the immersion of theme parks and the emotional engagement of theatre'; back in Los Angeles the California Science Center (a combination of the former California Museum of Science and Industry and Aerospace Museum) will reopen this year as a fully fledged themed experience. The Museum of Tolerance is one of the most intellectually and morally rigorous examples of this trend.

While the Museum of Tolerance is the most conceptually advanced museum in Los Angeles, the most physically prominent is the Getty Center, opened in 1997. This centre is a huge complex housing the many different branches of the J. Paul Getty Trust (hitherto scattered across the city in different buildings) – the Getty Information Institute, the J. Paul Getty Trust, the Getty Conservation Institute, the Getty Education Institute for the Arts, the Getty Grant Program, the J. Paul Getty Museum, the Getty Research Center Institute for the History of Art and the Humanities. It occupies 79,000 m^2 on the crest of a mountain overlooking the entire city and is costing about $1 billion to build. Vast volumes emerge defiantly from the fragile earthquake terrain.

Clad entirely in travertine marble blocks cut from a quarry near Tivoli, Italy, the Getty Center is a veritable citadel to high culture of the old (i.e. Eurocentric) sort. It

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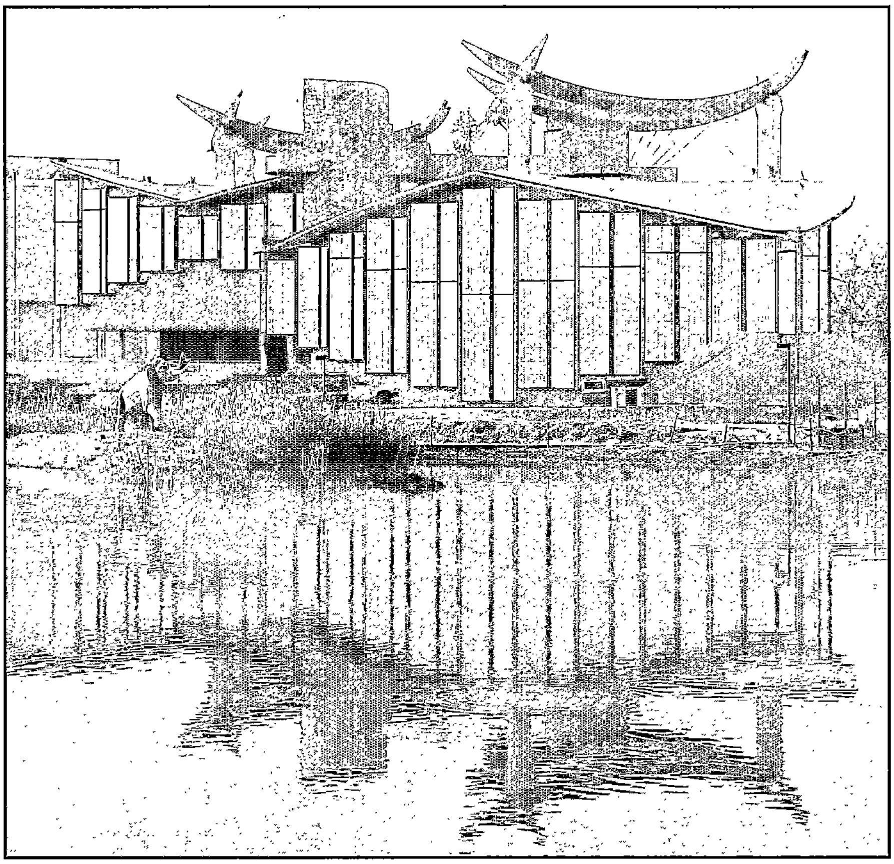

Photo by courtesy of the author

The Japanese pavilion at the Los Angeles County Museum of Art.

has been in planning for twelve years and marks the culmination of Los Angeles' emergence in the last three decades as a serious city with serious arts institutions.

Looking east

Los Angeles is a diffuse, multi-centred, pan-national city whose most authentic and lively visual expression is arguably in the vivid advertising billboards that line the famous Sunset Strip. It is a place where one might assume to have seen the end of what Yves Nacher terms, 'the dinosaurs', the costly and major public museums, and where one might expect to see emerging a different type of smaller, more imaginative, locally based museum. Equally, one might expect museums in Los Angeles, a world centre of artistic and technological experimentation, to have evolved accordingly. Frank Gehry, who is based in Los Angeles, is designer of many cultural institutions: his Guggenheim Museum in Bilbao, Spain, is currently under construction; he is designing a vertical art museum for Samsung in Seoul, Republic of Korea; and in Los Angeles he is sensitively remodelling the privately owned Norton Simon Museum. He points out that art museum design faces the perpetual problem of how to accommodate art that changes in scale and scope faster than museums can keep up, as well as creating an environment that is 'responsive to the public and makes the art look good as well'. The answer, he jokes, is 'to eliminate them for ever'!

In fact, while small, privately funded, and occasionally spatially imaginative, initiatives are occurring to be sure (and one must remember that here most institutions are funded privately, not by the state), Los Angeles is in a period of monumental museum-building, with the Getty Center being the *Tyrannosaurus Rex* of the 'dinosaurs'.

Being a relatively young city, Los Angeles has suffered for many years from a cultural inferiority complex in relation to New York and Europe. In a bid to establish itself, this century has seen a museum building spree, which came to a head in the 1980s with the addition of two new buildings to the venerable Los Angeles County Museum of Art (LACMA), and the creation of the Museum of Contemporary Art (MOCA), designed by Japanese architect Arata Isozaki, and its sibling, the Geffen Temporary, created by Frank Gehry. Hot on their heels in the 1990s came special-interest museums. Signalled by a monster pickup truck perched above the street, is the Peterson Automotive Museum, a themed museum celebrating the automobile and its relationship with Los Angeles. It opened in 1994. Last year, the Skirball Cultural Center, devoted to Jewish history and achievement and designed by prominent Israeli architect Moshe Safdie, was completed; in Beverly Hills, the Museum of Television and Radio also opened last year. Designed by Richard

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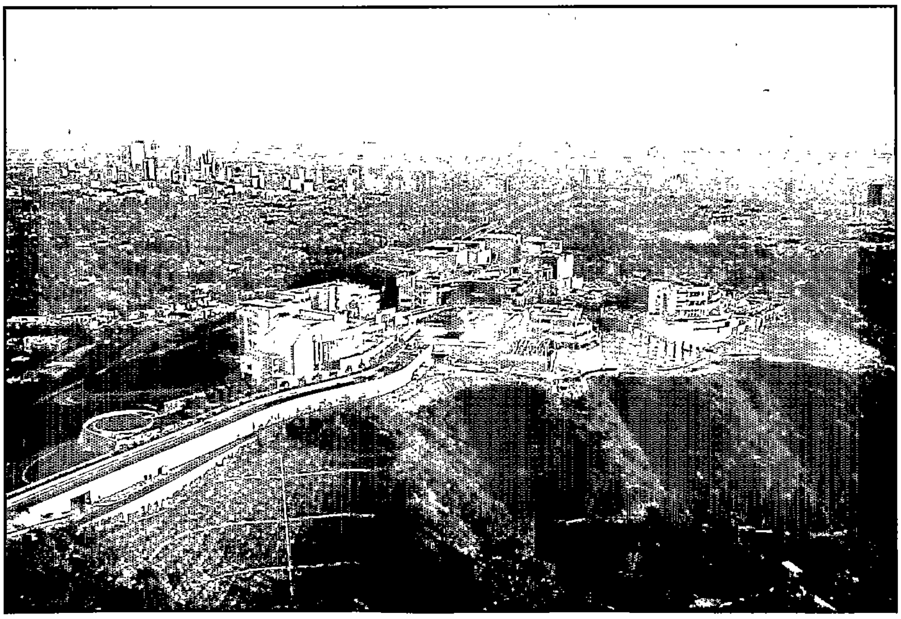
Meier, the architect of the Getty Center, it opened its doors with an exhibit of *Star Trek* costumes, but the visitors are more attracted to its substantial and accessible archives of *I Love Lucy* television shows and other radio and TV broadcasts going back over decades.

As just illustrated, museums in Los Angeles are sometimes quirky in content, they invariably employ cutting-edge technology and, curatorially, are attempting more and more to embrace the unique creative output of this hybrid city. Architecturally, however, they overlook the horizontal, suburban, shifting nature of this place, and tend to try and ape the monumental and urban character of their East Coast and European counterparts. With few exceptions, such as Frank Gehry's Geffen Contemporary, a brilliant conversion of a warehouse which successfully captured the gritty feel of a downtown artist's studio and served as an ideal environment for displaying large-scale contemporary art, or perhaps the Pavilion for Japanese Art at LACMA, designed by organic architect Bruce Goff, museums here – the Museum of TV and Radio, MOCA and the Skirball Center among them – have been designed by East Coast or foreign architects and exude old-world sobriety.

The most extreme example of this is the new Getty Center, a private institution with seemingly bottomless resources which has created for itself a campus-like collection of pavilion buildings following the ridge of a mountain in Los Angeles' affluent Brentwood neighbourhood. The design by Meier features glass and steel cladding panels, treble-height, day-lit white spaces, clerestories and generous rooms. Interconnecting balconies and corridors slip from inside to outside, with observation decks offering breathtaking views of the great outdoors. In this way, it evokes the spirit of light, sunny California architecture as well as Meier's own previous designs. Situated around open plazas and courtyards, it also offers the visitor the novel opportunity of slipping back and forth from interior art galleries to exterior landscaped open spaces.



© Warren Aerial

View of the Getty Center, looking south-east towards downtown Los Angeles.

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However, on the other hand, the designer and the client have opted for a strategy that evokes the hefty structures of old Europe. With exteriors clad mostly in marble, the interiors are vast and heavy, with huge doorways and high ceilings, reminiscent not of the light, horizontal, impermanent buildings that fit so well in Los Angeles, but of Baroque palaces designed for posterity. This impression is reinforced by the use, in the decorative arts section of the museum, of deep, autumnal finishes.

Ironically, the Getty, despite its aspirations to high-culture status, has adopted some of the 'experiential' strategies used to such effect in the Museum of Tolerance. Having hired Meier for his brand of chilly, grand, designer institution, museum director John Walsh decided the decorative art galleries needed to be, well, decorative. So he hired flamboyant interior decorator Thierry Despont who has lined the walls with brocades, added cornices, medallions, dado rails and skirtings, and has overseen the re-creations of French drawing rooms (using original panelling taken from historic buildings in Paris) to act as a credible backdrop for the French eighteenth-century furniture.

In its own way, the Getty is attempting to accomplish the same goals as the Museum of Tolerance. It is trying to transcend class and race and bring people together to its spectacular location in a shared appreciation of the arts and humanities. The Museum of Tolerance has found a captive audience because it deals with themes at the forefront of this city's consciousness. The test is whether, in a city dominated by a popular culture of billboards and basketball and TV and theme parks, a largely Eurocentric museum such as the Getty will have a loud and active voice, or whether it will in fact prove to be the largest, and the last, of the dinosaurs.

Note

1. See Terence Duffy, 'The Holocaust Museum Concept', *Museum International*, No. 193, (Vol. 49, No. 1, 1997) – Ed.

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From schoolhouse to interactive science museum

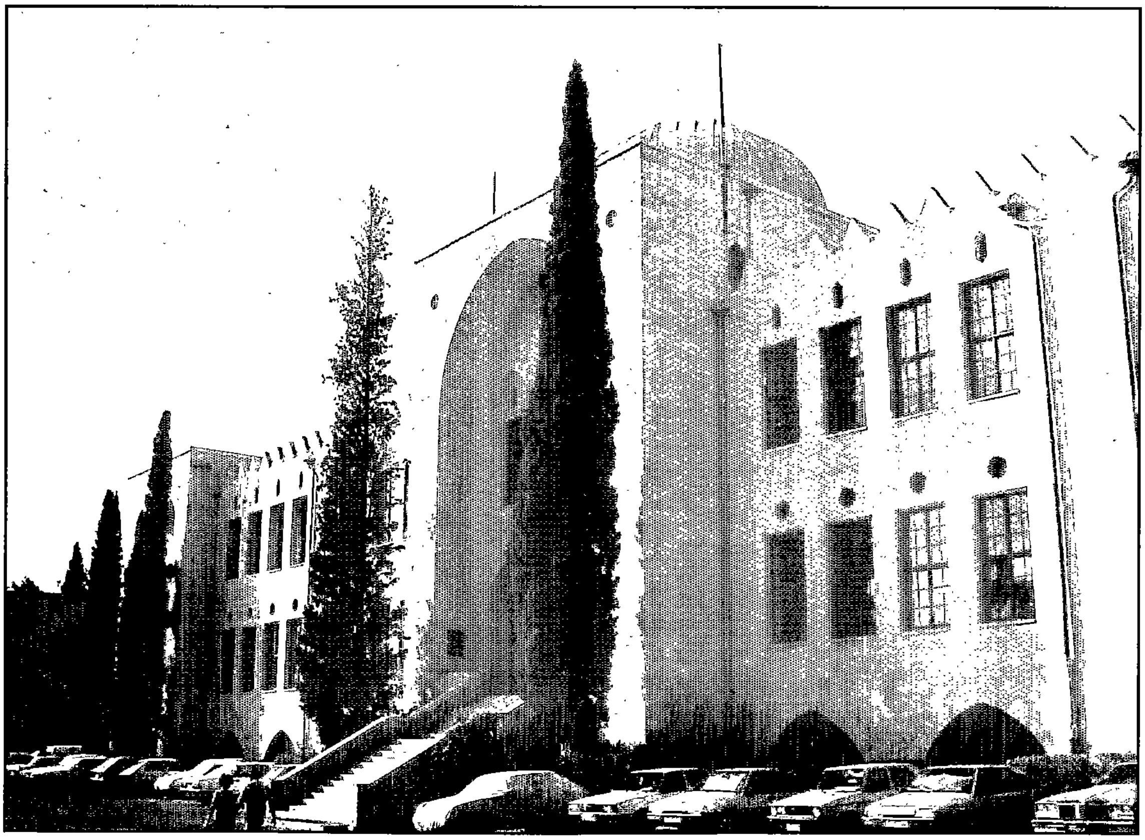
Rifca Hashimshony

The architecture of everyday life may be as complex and difficult to transform as an age-old castle. Such was the challenge confronting the authorities in Haifa when they decided to install the Israel National Museum of Science in a landmark school complex that symbolized the beginning of higher education in the country. The author is the architect and designer of the museum and has been a member of the staff of the Faculty of Architecture and Town Planning in the Technion since 1968 She was a visiting staff member in Delft, Netherlands, and at Harvard University in the United States.

In 1901, a German Jews' Aid Society was established to defend the rights of Jews in Germany and to support cultural and educational activities in Jewish communities abroad. Paul Nathan, the guiding spirit of the organization, visited Palestine for the first time in 1907, and upon his return to Germany proposed that the group set up a technical high school and a 'Technikum' (later called Technion – Israel Institute of Technology) there. The sloping hills of the city of Haifa were chosen as the site for the new school.

The design of the building was commissioned to Alexander Baerwald, a Jewish architect living in Germany. After visiting the site in 1909, he thought it appropriate to integrate local architectural elements into his design. Thus the final plans clearly represent his European architectural background, interwoven with Middle Eastern architectural flavour: external walls made of local sandstone; various ornamental elements, such as domes and arches, and long open corridors to connect the halls, assuming (wrongly) that this was needed to improve ventilation in hot climates.

The Technion building, according to Baerwald's design, was part of an urban plan which included an open axis running from the building in a northerly direction, keeping a panoramic view of the sea. His plan called for the construction of additional monumental buildings on both sides of this axis. Of these, only one was built, and is still standing: the Reali High School, also designed by Baerwald. The cornerstone for the Technion building was laid in 1912. It was ➧



The main façade of the historic Technion building.

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Sawing away the intermediate floors.

not completed until 1923 (construction being interrupted during the First World War), and was inaugurated as the first technological university in Palestine in 1924.

In 1951, when the building became too small to house the growing number of departments of the Technion, the Israeli Government decided to move the institute to a new campus on Mount Carmel. The various faculties were moved gradually to the new site until the building was completely vacated in 1985.

The beautiful building symbolizes, perhaps more than anything else, the beginning of higher education in Israel, and is also an important example of early Eclectic architecture in Palestine. For these reasons the Board of Governors of the Technion decided that this historic landmark should be preserved and become the permanent home of the National Museum of Science. Many were sceptical about the possibility of converting a building designed as a school into a modern, innovative science museum. The strong architectural presence of the building and the fact that it lacked the infrastructure needed for a modern museum were seen as major obstacles. Today, after ten years of operation, the museum's enormous success is a response to the pessimists.

A museum is born

In 1982, a group of professors from the faculty of chemistry at the Technion decided to found the first science museum in Israel. The original idea was to follow the model of the Exploratorium in San Francisco, where scientific principles are explained through interactive exhibits. They renovated an abandoned warehouse of approximately 200 m^2, located near the historic Technion building, and the new 'science museum' opened its doors to the public in February 1983. It operated in this location until it moved to its permanent home in June 1986.

During this period, the mandate of the new museum was formulated: to demonstrate to the public in general, and to youth in particular, various principles of science and technology that constitute an inseparable part of Israeli culture, in a manner that is simple to understand, interesting and enjoyable; to present the impressive achievements of the state of Israel in the fields of science and technology to the general public; to serve as an innovative science education centre whose purpose is to arouse the interest of Israeli youth in science and technology.

The museum took upon itself to restore and renovate the building. Two opposing approaches were considered: either to renovate the building and its surroundings according to the original design, introducing only the minimal changes needed to adapt the building to its new function, or to

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renew and adapt the building to its new needs through major architectural intervention, as can be seen, for example, in Scarpa's work in Verona. After much deliberation, the first option was adopted.

This decision influenced not only the architectural aspect of the restoration and renovation works, but also the method of exhibiting in the museum. The given shape of the exhibition halls, their relative small size (about 100 m²), as well as the location and size of the doors and the windows, imposed severe constraints on the structure and appearance of exhibits and exhibitions.

'First aid' for a historic building

When the museum took over the building, it was in very poor condition. It had suffered from little or no maintenance for many years: it stone walls were blackened, the marble tiling of the entrance was falling apart, water was seeping through the external walls, the roofs and the domes. In addition, many changes had been made in the building over time: rooms were added on the balconies and roofs, the high-ceilinged classrooms were divided by intermediate floors, original doors and windows were blocked, various partitions were added, and electricity and telephone lines installed with no respect for the architecture of the building.

In June 1986, the historic building was officially inaugurated as the permanent home of the Israel National Museum of Science with an exhibition entitled *Leonardo da Vinci – the Inventor*. Until then, there had been time only for cleaning and 'first aid' maintenance works and painting. After the official opening, the main restoration and renovation process began and is still in progress; it will continue for several years.

We first took care of the building's exterior and the problem of water seepage: all the external additions were removed, the sandstone walls cleaned and then sealed. This was done by sandblasting only after we had made a long series of experiments regarding the pressure of the sand, the distance of the nozzle from the walls and the size of its aperture. Roofs and domes were repaired and covered with appropriate waterproofing materials. ➧

The main corridor after restoration.

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The process of renovating the interior of the building was done by closing halls, renovating them and then opening them to the public with a new exhibition. The first stage was the removal of the intermediate floors by sawing (in order not to shake the foundations of the building) and withdrawing the pieces through the windows. We then eliminated the original plaster, which was of very poor quality, with an average thickness of 9 cm. While uncovering the original stone walls, many openings that had been closed at some point were discovered and most were reopened. Electricity, fire alarms, paging systems, etc., were integrated prior to covering the walls and floors. Various types of lamps were tested for illuminating the halls, from cold industrial lamps to warmer domestic models. Blue halogen lamps, designed by Floss, were chosen as the most appropriate, giving a warmer atmosphere to the high, cold spaces of the rooms. Glass globes were hung along the corridors, one at the centre of each arch, as originally designed by Baerwald. In order to allow for greater flexibility in exhibit display, a large number of wall outlets, as well as protected, covered floor outlets, were prepared in each hall and along the corridors.

The bare walls were then covered with cement plaster. The concrete tiling of the floors was removed, and the two main floors were paved with Carrara marble tiles, as in the entrance hall (it is said that this was Baerwald's original intention, which did not materialize through lack of funds). At the same time, all the original windows and doors, which were made from high-quality materials and had thus remained in relatively good shape, were removed, cleaned, painted and put back in place. New frames, when needed, were manufactured by the museum's carpentry shop according to the original design.

The most difficult problem we faced was the introduction of an air-conditioning system. The architecture of the building (i.e. high sandstone arches in the corridors and high windows in the rooms) ruled out the possibility of using concealed ducts or double ceilings. The introduction of open coloured ducts did not suit our restoration philosophy. We decided to thicken the external walls from the inside, by gypsum panels, without changing the size of the windows, to provide space for the pipes of the fan-and-coil cooling and heating system. This was done in such a way that even people familiar with the building cannot detect any change in the appearance of the halls.

Another major problem was closing the open arched corridors connecting the halls, not only to facilitate the air conditioning but also for security reasons. This affected the rear façade of the building and required much thought. Using a complete panel of glass for each arch would have probably been the most elegant solution, but since the weather in Israel allows us to use natural ventilation for several months of the year, this idea was ruled out. We chose a solution which we thought both functional and harmonious with the entire façade: very simple iron frames, with anti-sun glazing.

Offering 'added value'

By 1996 we had finished the restoration of the two main floors of the building. We had also installed a lift for the disabled at the end of a corridor; it is invisible from the outside and does not disturb internal circulation. We are now in the process of renovating the lower level which, for unknown reasons, was partly filled with soil. After clearing the area, we discovered a beautiful space with stone walls and arches.

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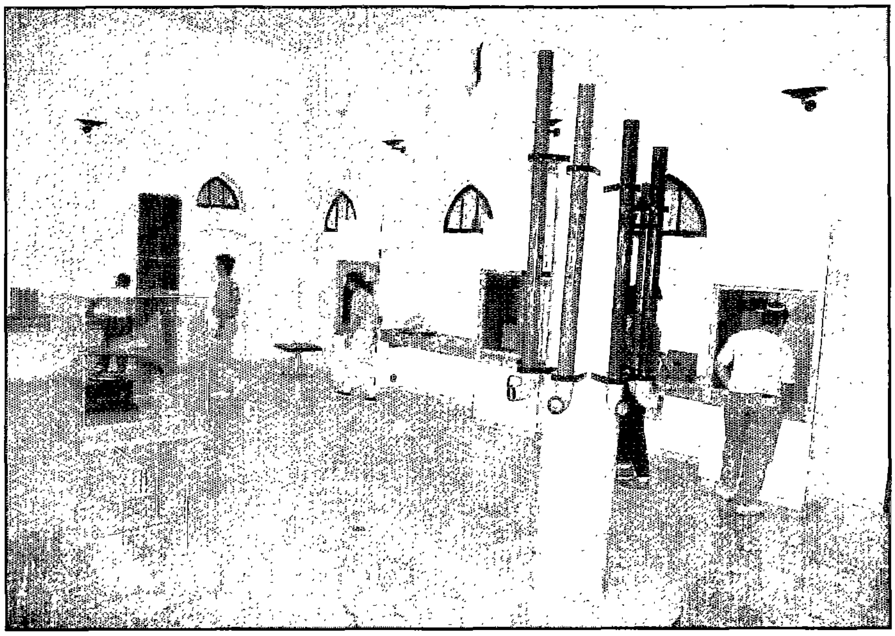
Since it had not been used, the stone walls remain intact and can be left bare. This area will house special activities, such as a museum shop, cafeteria, temporary exhibitions and exhibits for very young visitors. Since we intend to allow access to this area also when the museum is closed, we are trying to create here a warmer atmosphere by using ceramic tiling and leaving many unplastered stone walls. In this space, the architecture of the building is much more imposing, thus requiring more thought on exhibit design.

The museum campus includes, in addition to the historical Technion building, the Workshops building, also designed by Baerwald, and a large open space of about 4,000 m^2 between the two buildings. This open space will become a scientific park with large exhibits, water exhibits, gathering places, etc. The initial planning has already been done and we hope to start developing it in the near future. The Workshops building, which houses the museum's Youth Wing on the top floor, is a very special iron construction with external stone walls. We are now beginning to renovate the whole façade and intend to turn part of it into a modern telecommunications centre.

The conversion of an existing building, which was designed as a university at the turn of the century, into a modern, active and functional science museum, without drastically changing either its exterior or interior, represents our approach to the preservation of historic buildings of national importance. We can say that our case is a good example of the problem that has currently become an important issue of urban design: the reuse and recycling of existing buildings. We believe that in spite of the fact that architects are faced with major problems, which usually find simple solutions in buildings designed for a specific use, the effort is worth while. Because the building elements, for example, the shape of the halls, their size, the location of windows and doors, the connecting corridors, etc., are prescribed by the original design, we need to look for unconventional solutions. But this type of building enables us to offer our visitors an added value in the form of a special experience related to aesthetics and architecture. The fact that most of the imposing architectural elements are located in the entrance hall and along the corridors and the circulation areas, while the main halls are of simple appearance, makes a good combination of plain exhibition areas in an impressing edifice. The designer, in this case, has to take into account not only the building itself, but also its new furnishings and functions, and come up with solutions that will not create a conflict between the old and the new, but rather make them complement each other. Although similar examples are common in many countries with a long architectural history and tradition, unfortunately they are very rare in Israel. It is true that such projects demand great financial investment, both for the initial works and for the maintenance, but we see in it a major contribution to the education of the next generation, which is our main goal. ■



All photos by courtesy of the author

A renovated gallery.

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An artist and an architect: the Espace Rebeyrolle at Eymoutiers

Mathilde Bellaigue

It is rare that an architect and an artist are able to come together to design a museum that will enshrine the artist's works for posterity. More than a simple showcase, the museum thus becomes an extension of the artist's genius as reflected in the architect's own vision and talent. Such a partnership resulted in the creation of a unique setting for the paintings of Paul Rebeyrolle, one of the most prominent living French artists, in his home town in central France. Mathilde Bellaigue is responsible for scientific appreciation at the Laboratoire de Recherche des Musées de France and is editor-in-chief of the periodical Techne.

To enter the Espace Rebeyrolle is to enter a world in which feelings are paramount. This sensitive approach to the visual work of art is what is most important, for it is this primal contact with the object, with its material essence, which constitutes the beginning of the relationship that any type of display should promote: the emotion before the idea. This is perhaps the most difficult and rare achievement in exhibitions and museums where there are traditionally too many messages on offer, too much documentary wealth and too much prestige accorded to the museum as a temple of knowledge, repository of 'heritage', and cultural academy. All this creates a distance between the visitor and the exhibit which is invested with a sacred quality. This present state of affairs is more or less deliberately cultivated by many project designers and architects and, much too often, results in the container taking precedence over the content, crushing it with its importance (and great cost), and becoming itself the work to be admired.

The building is – to borrow Rebeyrolle's own term – a 'bastion' which symbolizes both the artist's desire to refine his or her work in private and in secret, and to put it over as faithfully as possible, and the architect's inspiration to reject showiness in favour of contemplation, and to create a snare for light. It symbolizes bonding with a landscape of small mountains, the Limousin region of granite, meadows, woods and ferns which, despite so much luminous greenery, form an austere and rather serious setting. And, lastly, it is akin to a bastion of resistance to cultural tourism, in keeping with Rebeyrolle's wish. The Limousin region already boasts a number of contemporary art sites (such as Vassivières, Meymac and Rochechouart).

Rebeyrolle's wish exercised a determining influence on the work of the architect, Olivier Chaslin, who built an enclosed blind and neutral quadrilateral. Recent in origin, it seems already to be well established in time – aged. Better still, it seems to have sprung up from the ground with its walls of greenish light-gold planks of larchwood which are at one with the environment and green humidity of Limousin. Human beings live off nature, and nature lives in Paul Rebeyrolle's paintings through the incorporation in his work of natural materials (sand, pebbles, mosses, mushrooms, feathers, horsehair, etc.), and, in a more pronounced way, through what the paintings depict of human nature in all its aspects and the authentic rendering they always give of human misery and aspirations. There is thus a kind of visible congeniality between the work and nature, a common bond of sensuality, vigour and generosity.

It is not often that a museum is created around an artist's work during his or her lifetime. In itself, such a creation might be construed as showing a wish to secure publicity, fame and advantage for the town concerned. Such does not seem to be the case here, however. Rebeyrolle, a son of the soil, now lives in retirement in Burgundy. His reputation is already long established and one of the soundest, a number of major British and French galleries having selected him very early on. So, Rebeyrolle simply has to continue painting ever more intensely, far from all distraction, in the retreat he has chosen for himself.

The municipality, in the person of the mayor, has succeeded in paying its painter the homage which his talent deserved. It was, indeed, the mayor who took the initiative in 1990 to create a Rebeyrolle museum at Eymoutiers, the artist's home town. At first, there was hesitation about its site. The idea of rehabilitating a factory in

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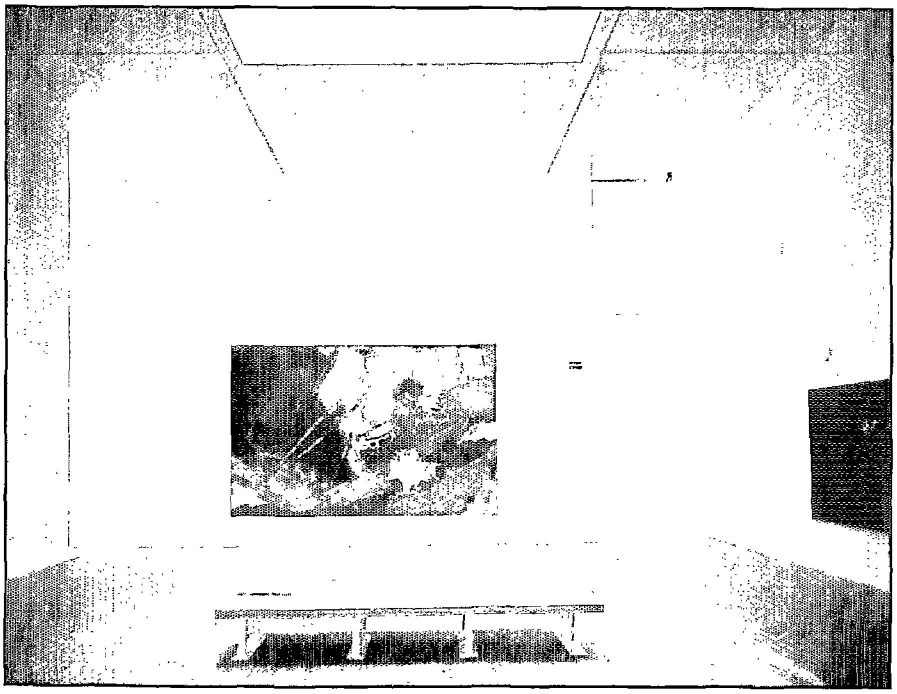
a small industrial zone was abandoned for economic reasons, the factory was demolished, and a decision was taken to erect a purpose-built structure. The painter then conceived the idea of entrusting the project to the architect Olivier Chaslin: 'He knows my work well, he will know what to do'; intuition, confidence of the older man in the young architect. The envisaged expenditure fell from 35 million to 15 million francs and then to a total of 10 million (that is, a construction cost of 6,400 francs per square metre which was half the usual expenditure for a museum!). This was borne partly by the state (3 million), the region (3 million), the department (2 million), the commune (1 million, which included the land, demolition costs and development of the site's approaches), and the European Fund (1 million). The shared motivation of all these political protagonists led the project to completion, and the Espace Paul Rebeyrolle was opened in June 1995. The entire exercise was exemplary.

An association called Les Amis de Paul Rebeyrolle (Friends of Paul Rebeyrolle) is in charge of the museum, which is not administered by the Direction des Musées de France. Its being called an *espace* rather than a museum indicates this. The collections comprise donations by the artist and purchases by the association. They all become the property of the town and are inalienable. There are also the loans made by individuals and galleries. Forty-three paintings are on permanent display, and some fifteen in the reserve collections. The titles of the series to which they belong (from 1962 to date) point to a man enamoured of freedom and independence as well as of the causes he defends and opposes: *Guerilleros, Coexistences, Les prisonniers, Faillite de la science bourgeoise* (The Failure of Bourgeois Science), *Natures mortes et pouvoir* (Still-life and Power), *Les évasions manquées* (Failed Escapes), *On dit qu'ils ont la rage* (They Say They Have Rabies), *Au royaume des aveugles* (In the Kingdom of the Blind), *Splendeurs de la vérité* (Splendours of Truth), etc. How could it be otherwise in this hard and secret land of resistance so well exemplified in the painting *Le Cyclope, hommage à Georges Guingouin*, one of the greatest French resistance fighters? The impressive itinerary of Rebeyrolle's work offers tranquillity only in the two immense and admirable *Paysages* (Landscapes) painted in 1978, of sand and running water.

Force . . . and silence

It is understandable that works characterized by shouting, violence and an awareness of the miseries and disasters of reality required forceful architecture (the 'bastion'), but also that the great humanity, generosity and compassion that went into their expression called for architecture of a ➧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The main room, flooded with natural light from a large square opening, and the 1972 painting Au delá du grillage, *which measures 300 x 466 cm.*

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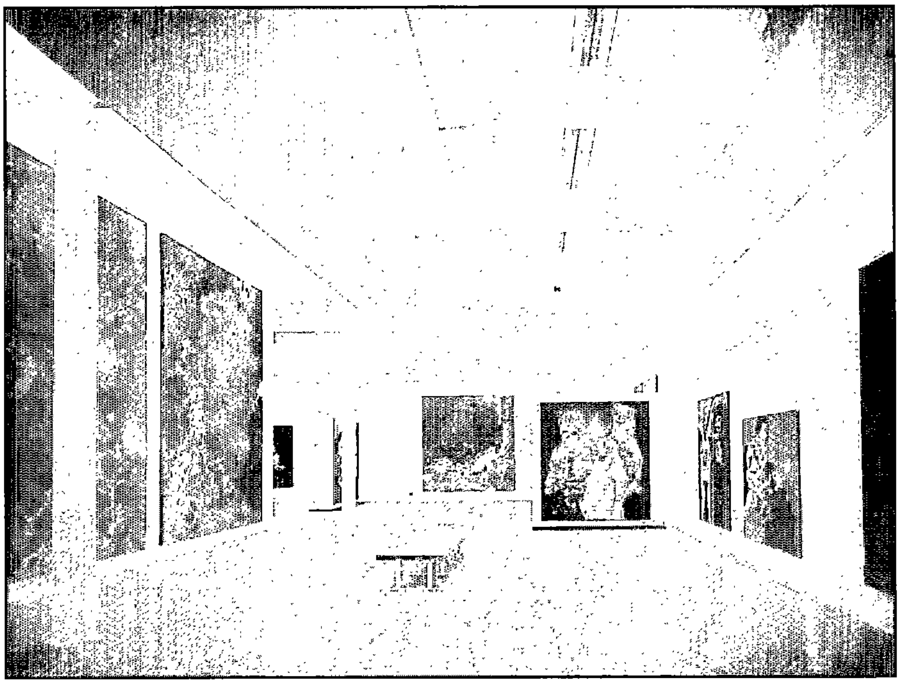

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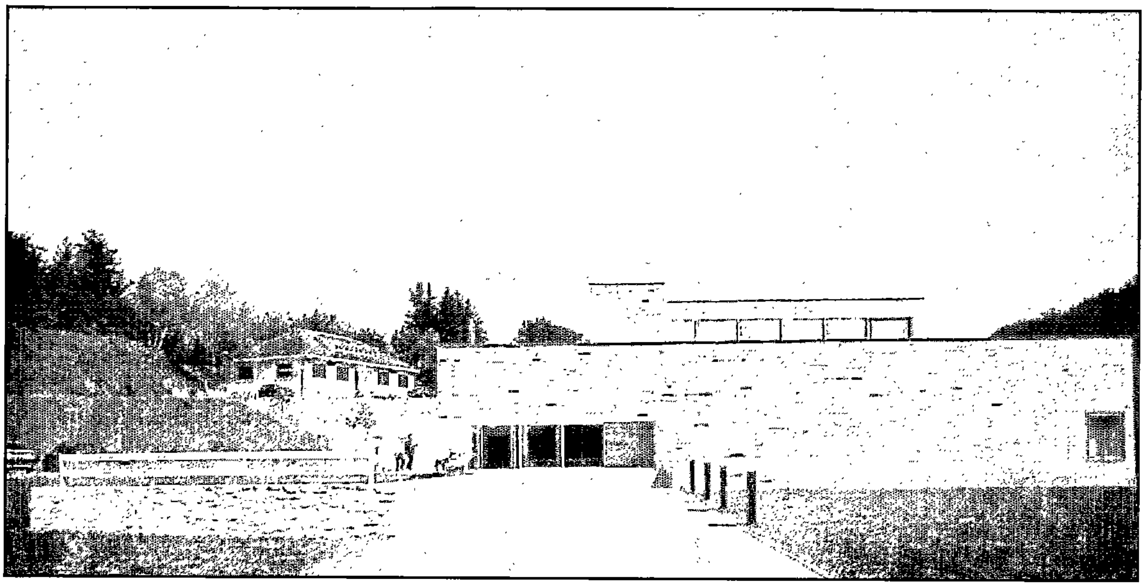
An outlying room with its double system of natural light, featuring the two immense Paysages *on the left.*

silent, almost monastic character. This was deeply felt and simply expressed by Olivier Chaslin. Strength is shown by the austere mass of the block of wood that constitutes the building (with a wooden structure) and the imposing interior dimensions (from a height of 4.8 m in its periphery to 7.2 m in the main hall), and silence by the captive light of this interior which has only one opening to the outside.

Another constraint for the work of the architect was the large size of the paintings. There are no small canvasses and no drawings, and the visitor is immediately confronted with the monumental nature of the painted surfaces. Thus, the entrance hall of the Espace was planned to accommodate *Planchemouton* (4.2 x 14.3 m, 1959), named after the river flowing below and on whose banks Rebeyrolle painted it, in a barn which was then his studio. It was not only necessary to create sufficient wall space for *Planchemouton*, but also to avoid having the view obstructed by any of the supporting columns of the mezzanine which partially covers the entry. In this way the visitor first broaches the museum by being projected immediately on entry into the vitality of the painting. The hall also houses the reception area and a small bookstall, but it is the canvas opposite, with its vast dimensions, that promptly captivates the visitor.

The visitor's itinerary is simple: a whole side of the quadrilateral is occupied by services (the reception area, a room for groups, public conveniences, a workshop-storeroom) and, on the mezzanine, a library and an office. And from this discreet and smoothly sinuous mezzanine, opposite the huge wall with *Planchemouton*, visitors can look down into the hall. From there, by following the edges of the quadrilateral, they can walk through the outlying rooms, a kind of *pronaos* around the main room. However, they can also enter the *naos* from each inside angle of the quadrilateral. Natural lighting falls on this central section from the centre of the ceiling (7.2 m) and also enters through the four open angles of this dynamic helix, spreading towards some of the most impressive paintings, including *Le Cyclope.*

It is probably the light that most surprises the visitor, first of all in itself, second, in contrast to the closed external wall (the memory of which makes it all the more unexpected to find oneself bathed in this sudden brightness), and, lastly, of course, in its relation to the paintings. The light always comes from the ceiling, either shining along and reflecting off the walls of the outlying rooms or spreading out from the centre towards the walls. One realizes how crucial it is for the architect, who explains: 'Natural lighting which is variable and alive is also, in the particular case of Rebeyrolle, a soothing feature. It helps create the calm quality of the space which we sought together, Rebeyrolle and I, for these violent and tormented but so vital paintings. The contrast with the exterior was to be all the greater, the better to enter a world which was serenely calm'. One realizes that the light is well and truly the main protagonist, the indispensable medium between the painter and the viewer, creating a propitious setting and making the meeting possible. 'Artificial



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The austere mass of the block of wood that constitutes the building.

lighting', Olivier Chaslin further explained, 'pushes the painting against the wall and, in a way, dramatizes it. Natural lighting, despite its variable character and thanks to it, bathes both the visitor and the work in one and the same light. I think that this shared space of light is needed to create a close personal relationship with a given work.' Indeed, in most cases electric lighting is unnecessary. The changing light of the passing day and the movement of clouds dramatize the work in different ways.

It should perhaps also be emphasized that another rich partnership was involved in hanging the paintings, that of Rebeyrolle and Jacques Kerchache, a close friend of the artist and a major collector of the so-called 'primitive' works of art to which Rebeyrolle's work may be said to be related. The temporary exhibition[1] of summer 1996 in which Kerchache put on display, amidst the paintings, around thirty wooden sculptures from Benin called *botchios* and originating from the eighteenth to the twentieth century, bears witness to this. As he said: 'Bringing the *botchios* and Paul Rebeyrolle's work together excludes any feeling of primitivism and exoticism. It is a poetic encounter which accentuates the sacred, spiritual and emotional character of the relationship that a major contemporary artist like Rebeyrolle and major African artists (unknown to us) maintain between humankind and nature.' All along the rooms, the tall and elongated silhouettes rose, as it were, like souls at last freed from the heavy tormented bodies painted by the artist.

Any physical exhibition space is an enclosure within which a relationship between the individual and the object is, or is not, established; it is set in motion by feelings, by emotion. The worth of architecture lies in its capacity to create the favourable setting for this to happen. What is observed at Eymoutiers is the possibility of creating a place to house a living artist's work that does not resemble a mausoleum, evoking an atmosphere of discovery, and bringing visitors with no prior cultural knowledge into close personal contact with art without imposing fatiguing demands on them. And all this at less cost. This might lead us to wonder if this miracle of sorts is not due to the absence of an intermediary in the project's execution which involved only a great artist and a young architect working together, and as friends. Such is the pleasure and the lesson in optimism that the visitor gains from a visit to the Espace Paul Rebeyrolle. ■

Note

[1] Temporary exhibitions are envisaged, on a regular basis, either in the main hall or in an extension of the Espace which may be specially created for them.

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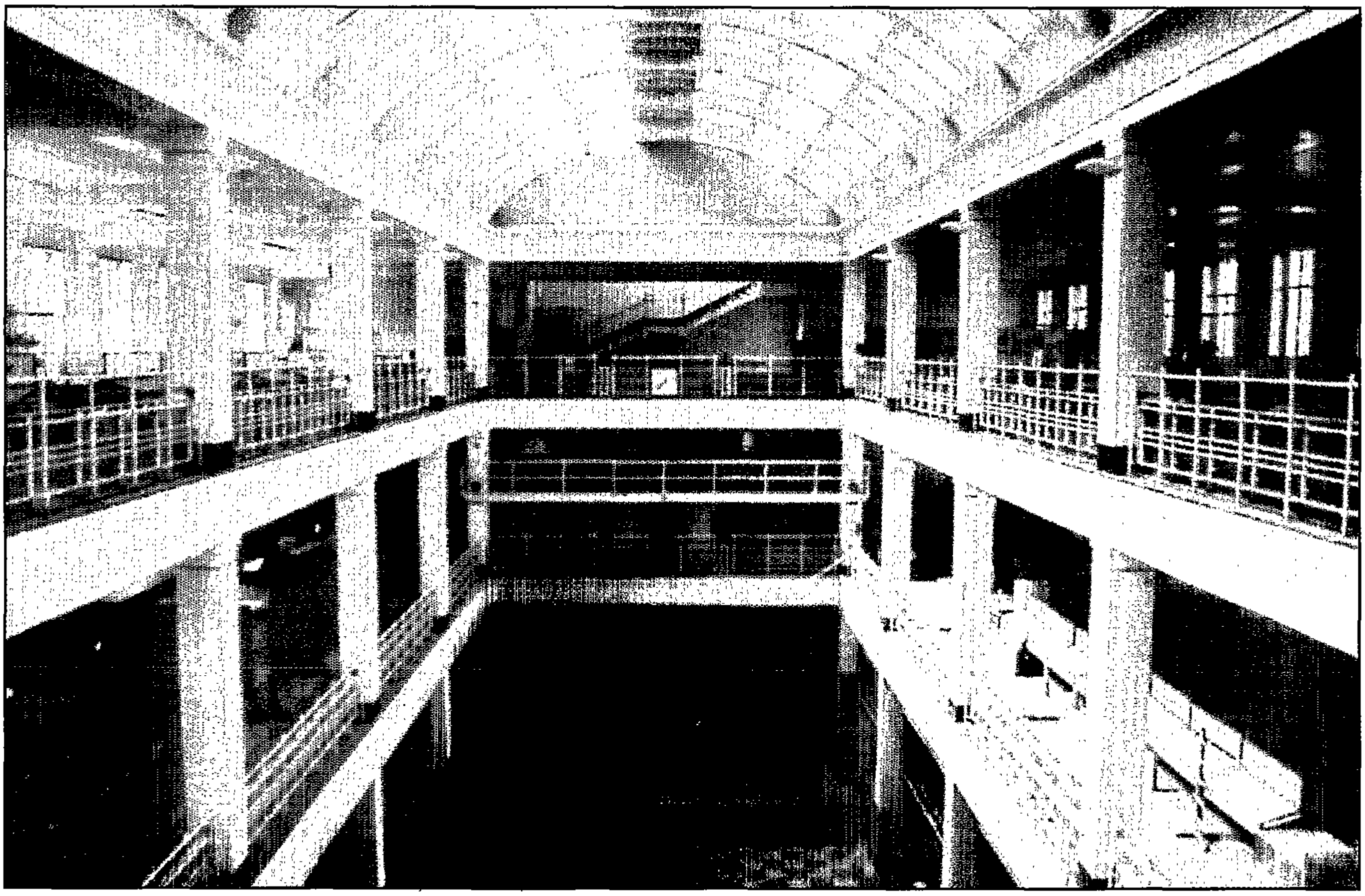
The Earth Galleries in London: a total transformation

A Museum International *report*

With the opening of the Earth Galleries in July 1996, London marked the inauguration of the largest new museum of the year. Now part of the Natural History Museum, the Galleries are housed in the former Geology Museum, a neo-classical building dating from 1935 whose 6,300 m^2 interior was completely metamorphosed. The technical challenges presented by such a large and complex project were considerable. The initial dilemma was how best to juxtapose the major alterations required with the existing 1930s architecture so as to revamp it for the present and for the next century.

Although the existing museum has a grand neo-classical exterior, the interior comes as a surprise: a vast glass roofed atrium 20 metres high and surrounded by open gallery decks on two levels above the principal floor. Constructed from steel and concrete, it has an ambiance more industrial than classical, the only significant architectural detail occurring in the small entrance foyer. The simple rectangular plan, central atrium and long gallery spaces proved the old museum to be eminently adaptable to its radical update.

Architect Keith Williams began by extending the foyer areas and opening them up vertically, thus establishing a new entrance gallery within the gathering hall. From this point visitors ascend some 3 metres above the entrance to the princi-



The atrium before reconstruction.

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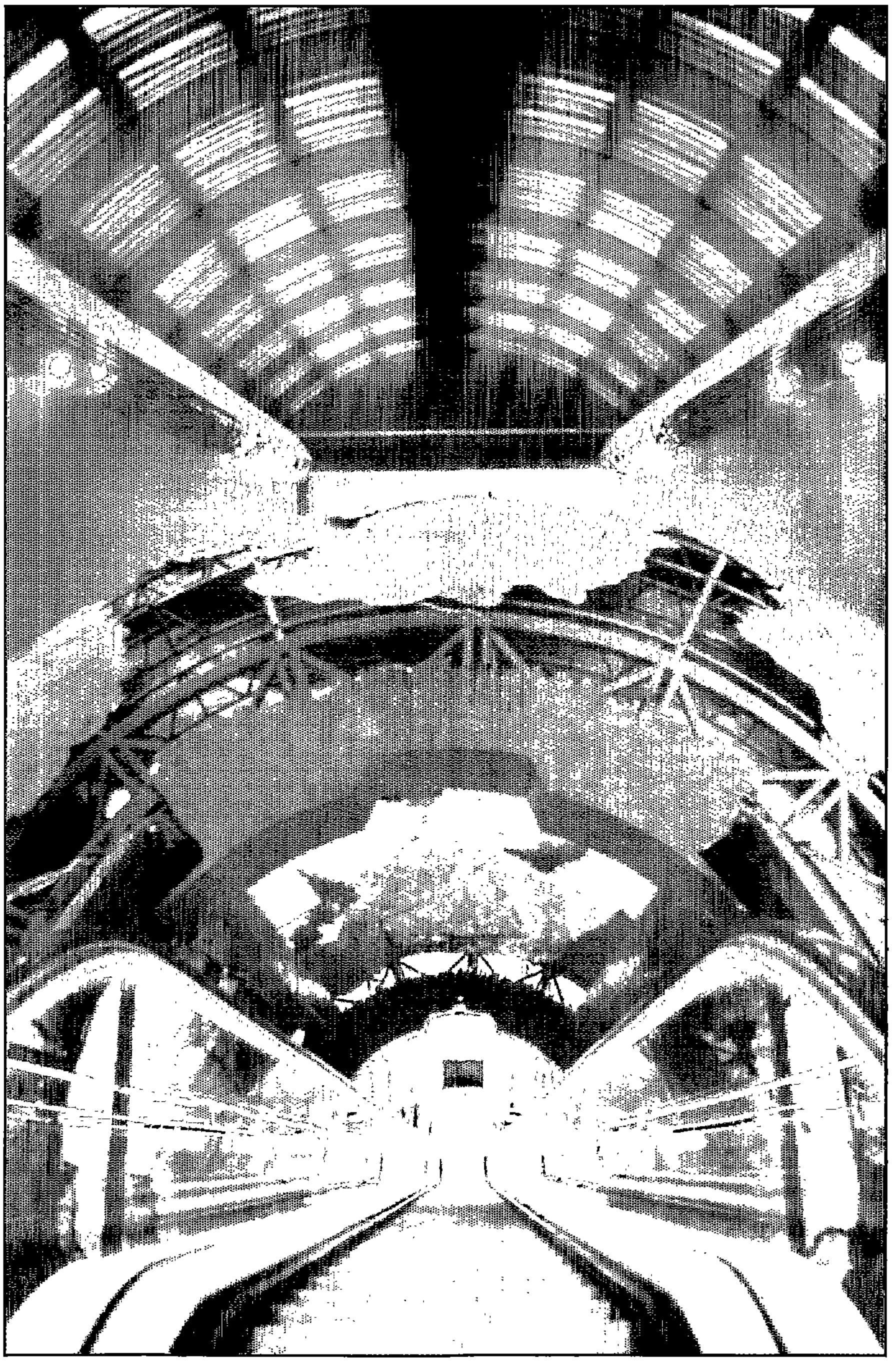
pal level of the museum which forms the base of the 40 x 10 m atrium and of the 65 x 9 m side aisles. The atrium, formerly open to each of the three gallery floor levels, has now been sheathed in black composite slate panels to create a dramatic top-lit space, forming discrete gallery side aisles. From the atrium, which has now been designed as a major exhibition in its own right, an enormous escalator has been introduced to carry visitors directly to the uppermost floors where major exhibitions have been constructed to examine both the earth's surface and the interior of the planet. The escalator itself passes through a 10-metre-diameter steel globe, an allegorical representation of the earth, which slowly rotates as people ascend through it.

Visually isolated from the atrium by the new walls, the gallery aisles become far more flexible, allowing a broad range of display formats, from black-box interactive exhibitions to more object-led displays. A series of architectural containers or 'host' spaces have thus been created into which exhibitions can be inserted much as one might treat a gallery for installation art, in other words, a sort of blank canvas on which others might paint.

A total of £1 million ($1.6 million) has been donated by The RTZ-CRA Group, the largest corporate sponsor, with further sums from the Museums and Galleries Improvement Fund and BTR plc. A grant of £6.058 million from the Heritage Lottery Fund makes the Earth Galleries one of the first major museum schemes to open with the aid of lottery funding. ■

Photos by courtesy of Pawson Williams Architects



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The new atrium seen from the giant escalator.

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The local-community museum: an architectural challenge

Manuel Tardits

Where does the building designed by the architect end and the contribution made by the artists begin? In other words, which of the two, the container or the content, is serving the other? In raising these issues, Manuel Tardits invites us to take a closer look at a recent phenomenon – the so called local-community museum – which calls into question a host of assumptions as to what a museum is and what it does. The author is a prize-winning French architect and guest lecturer at the University of Tsukuba in Japan. He is co-founder of Célavi Associates and Mikan architectural agencies and lives and works in Tokyo.

Has the widespread international enthusiasm for museums, and their proliferation during the 1980s, resulted in the creation of new types of establishments? Do the so-called local-community museums offer new principles of organization? Does their role differ from that of their predecessors?

The answers appear far from clear cut. By and large, four main types of museum collection are to be found, corresponding to categories that were first defined at the time of the French Revolution: art, history, the natural sciences and technology. To these must be added local ethnography, which is presented in sites – the ancestors of today's ecomuseums – that first came into being in northern Europe towards the end of the nineteenth century. It would seem that the original categories to which the individual collection, itself the very core of the museum, corresponds, have hardly changed. Thus the differences, which are frequently substantial, occur *a priori* more in the semantic shift affecting the terms that denote these categories and in the methods of presentation than in any real change in the nature of the museum's function. For example, the concept of art evolves with time. The essence of the art museum, as this was understood in the nineteenth century, differs considerably in scope from that of the modern art museum that emerged in the 1920s. Whereas the former was created in order to glorify recognized artists, and totally neglected the most innovatory contemporary creators – as, for example, the Impressionists at the end of the nineteenth century – the latter on the contrary focuses on new talents, even to the extent of sometimes performing a promotional role.

As regards the methods of presentation, the ever-increasing numbers of temporary exhibitions and the more frequent rotation in the display of permanent collections make it necessary to reconsider the relationship between display and storage areas. The spatial arrangement of the newer museums has thus increased in complexity as the various technical services have become diversified, to say nothing of the emergence of ancillary commercial functions.

To return to the more particular case of local-interest or local-community museums, do such institutions have a specific nature that differentiates them from other museums? Do they provide novel solutions to the problem of the evolving relationship to the collection? The very term 'local-community museum' (in French, *musée de proximité*) would appear to possess two distinct connotations. One is spatial, not to say topological, in its scope. The other connotation reflects a concern to ensure greater public access. The aim is to bring the museum closer to people, in every sense of the term. To be sure, this concern is by no means new: in France, the Chaptal decree of 1811, which made it obligatory to share out among provincial museums the collections captured by Napoleon's armies in the course of their conquests, constitutes a veritable birth certificate for local-community museums.

The terms 'local' or 'community' or 'neighbourhood' were used for the first time in the modern town-planning context to refer to the different cultural and leisure facilities that serve to raise the quality of life in the centres of the new outer suburbs. Galloping urbanization has been matched by a dispersal of cultural and sports amenities, which are distributed throughout the urban fabric, or spread out over the entire country, and are no longer confined to the main towns and the existing centres. Likewise, we speak of local or neighbourhood shopping areas as opposed to the hypermarkets, usually

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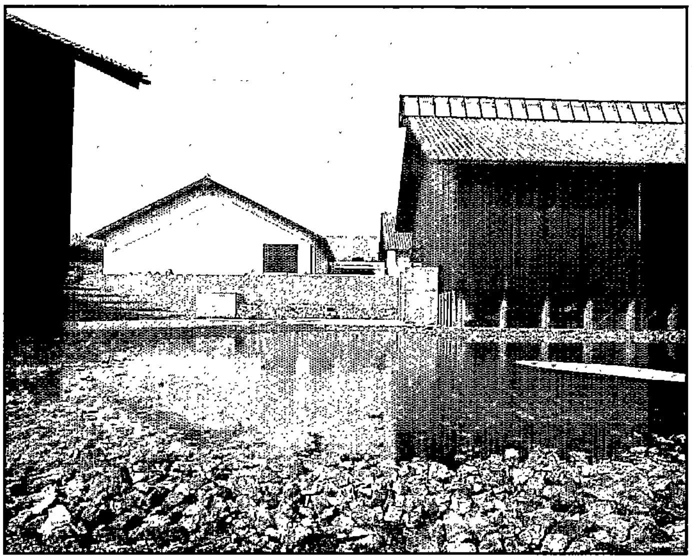
located far from residential areas. The second concept, that of public access, emerged during the Enlightenment. By the end of the eighteenth century, a number of establishments were opened to the general public throughout Europe, for acknowledged educational and didactic purposes. The founding, as early as 1683, of the Ashmolean Museum in Oxford, and the opening of the British Museum to the public in 1759 are landmark dates.

The notion of the local community is in fact no real innovation, but rather an old idea that has been taken up and developed in relation to decentralization policies and those pursued by regions, cities and even countries to assert their own authority. This is frequently the case in many European countries. Over a period of twenty years, more than 500 establishments have been set up in western Germany. In France, a sort of frenzy to be represented, triggered off by the decentralization movement and fuelled by a period of easy money, has prompted a number of medium-sized towns to acquire their own museums, many of them built by prominent architects. In Japan, a similar process has been carried to ridiculous extremes, with buildings that are sometimes extremely finely designed housing collections that can only be described as gimcrack. A profusion of spatial effects seeks to make up for this lack of substance in the collections.

The old dilemma, dating as far back as the controversy that surrounded the building of the Munich Glyptothek in 1830, as to whether a museum should be a neutral shell or container, designed to be self-effacing and so better serve the works displayed or, on the contrary, should also be a work of art in its own right, has in a curious way been rendered obsolete. The only work of quality then remains the building, the collections being little more than an excuse to show off the architectonic space. However, the relationship between container and content having disappeared, the building forfeits all significance, and its very quality, so dearly paid for, is compromised.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The Museum of the Sea, Shima, Japan, designed by architect Hiroshi Naito.

A question of balance and harmony

In a number of countries (such as the United States and Japan) where the private sector is powerful, foundations and private firms themselves undertake to build museums. In Houston, Texas, the art collector Dominique de Ménil commissioned Renzo Piano, one of the architects of the Georges Pompidou Centre in Paris, to design the foundation that bears her name. The building is simply designed, in a style recalling that of the surrounding clapboard houses, in which the precisely controlled focusing of the light falling directly from above magnifies the objects on display while at the same time protecting them. Any loosening of its links with the community that the institution might suffer as a result of

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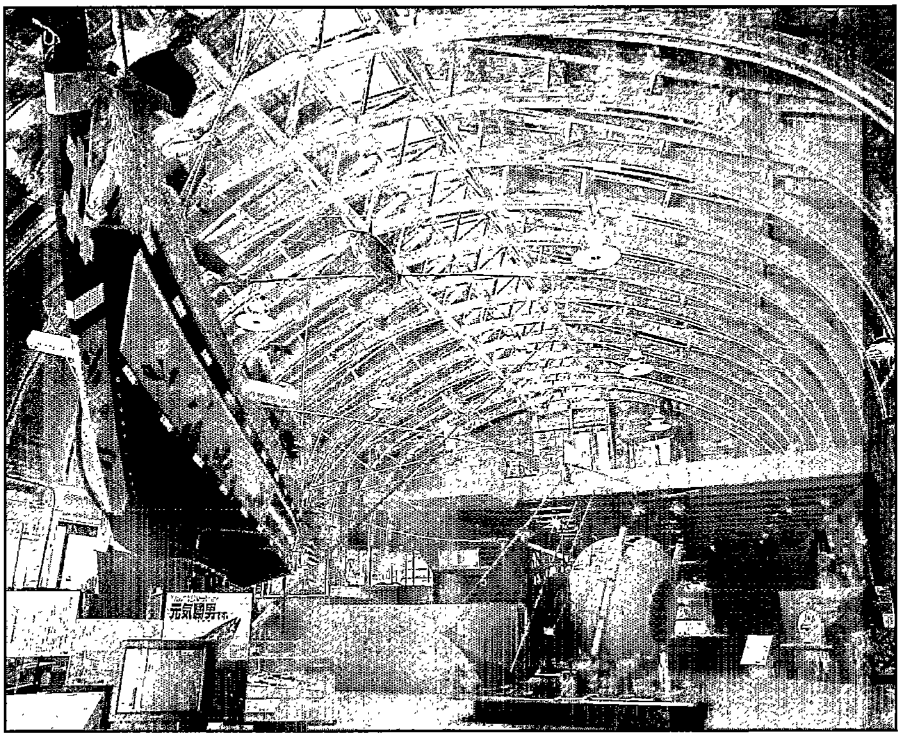
its private status is amply made up for by the judicious choice of volumes on the domestic scale, and by the use of local materials which enable it to blend in with its physical setting.

In Japan, close to Shizuoka, the cosmetics firm Shiseido and, more recently at Toyota, the car manufacturer of the same name have enlisted the services of the architect Yoshio Taniguchi to design and build museums bearing their company names. As in the case of Japanese department stores, which set aside areas for temporary exhibitions, a sometimes subtle mix of partly commercial and partly purely artistic interests is thus created which may at first shock Western visitors and artists. In the case of Toyota, which is virtually the owner of the town itself, the relationship between company spirit, promotional objectives and local culture is posited in even more ambiguous terms.

In other countries, in which museological traditions are more recent, small-scale structures are being developed that are specifically designed to display products or curiosities of local culture other than the region's major cultural complexes, already known to and sought out by tourists. For example, in Bali (Indonesia), two museums endowed by Western painters (now deceased) have been opened to the public in seaside resorts. The two painters in question, who, prompted by Gauguin's example, had settled in this exotic paradise bequeathed part of their own works and of their collections of local art to be exhibited in what were formerly their homes and work-places.

For the local-community museum, success often depends largely if not primarily upon securing a proper adaptation to the site and to what in most cases is a modest budget. Some of these museums are highly



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The interior of the Museum of the Sea captures the essence of the life of the fishermen of Japan's Ise region.

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A greenhouse of the Fruit Museum, Yamanashi, Japan, designed by architect Itsuko Hasegawa.

successful, thanks to the architectural ambitions that inform them, in meeting such requirements of simplicity. In a number of very different countries, similar concerns to achieve this necessary integration have produced minor masterpieces of balance and harmony. Hiroshi Naito's Museum of the Sea, which exhibits the everyday artefacts used by fishermen in the Ise region in Japan, makes a striking impression thanks to the sobriety with which it blends in with the wooded seashore. Large wooden parallelipeds for the exhibition buildings and similar structures of prefabricated concrete for the storage buildings evoke the vernacular building style. The local tiles employed for the roofing and the bitumen-glazed clapboard walls make use of traditional technologies which are economical and also ensure the buildings' durability, a quality frequently lacking in modern architecture.

In Australia, in the small town of Kempsey in New South Wales, the local history museum – which in concept is close to the European eco-museum – designed by the architect Glenn Murcutt, seeks to promote and to preserve the memory of a particular place and community. Here too, the use of

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local materials, such as corrugated iron, and of specific styles of architecture associated with the traditional, humdrum construction of sheds and barns adapted to the local climate, has proved a decisive factor in ensuring the integration of the museum buildings into their environment.

The Hedmark Museum at Hamar in Norway, designed by Sverre Fehn, and the National Museum of Roman Art at Mérida in Spain, by Rafael Moneo, built with limited architectural resources and in different formal styles, are both successful examples of how archaeological fragments may be integrated into new constructions. Thus shown off to its best advantage, the *genius loci* transcends the morbid dimension inherent in historical conservation. Although rooted in local realities, such programmes acquire a universal dimension through the sensitivity of the approach taken.

Rethinking the exhibition

Thanks to their sheer variety, local-community museums are also ideal places for trying out new methods of presentation. In the eco-museum context, attempts are now being made to render more attractive the meticulous but often highly didactic reconstitutions of individual rural communities, technologies or ecosystems. In his Fruit Museum at Yamanashi in Japan, for example, Itsuko Hasegawa has avoided giving an unduly pedantic connotation to his buildings. Two large greenhouses and a number of workshops covered with extensive lattice-work, symbolizing seeds, are scattered haphazardly over craggy, vine-covered hills. The greenhouses, in which mature trees are set out in the sunlight, are themselves set into the hillside and linked by means of underground exhibition galleries, an arrangement designed to bring to mind the ecological cycle of fruit. The architecture takes over from the collections in a living manner, using poetic metaphors to illustrate the theme of natural vitality. Such an osmosis may even prompt the visitor to wonder what purposes these buildings really perform.

It is, however, perhaps in the field of contemporary art that this renewal of the meaning of the exhibition as such is most striking. An artist like the American Donald Judd goes so far as to call into question the very concept of museums and other institutions responsible for promoting culture. At Marfa, a small town in Texas on the edge of the desert, he has set himself up in a number of large disused sheds where he is currently developing a concept of permanent installation. To a particular site there corresponds a specific artist and his or her work, and these cannot, in his view, be the product of random programming any more than they can be dictated by museums' own money-making ambitions. Donald Judd criticizes this dichotomy established between the container, considered to come within the domain of architecture, and the content, supposedly pertaining to the sphere of art. He is accordingly proceeding to install his own works, or those of other admired creative artists, in these spare, stripped down buildings, innocent of all formal architectural intent other than that of achieving optimal economy of means. He has also transformed or adapted certain of the buildings, creating not so much a setting for the objects as a sort of spatial whole which transcends the customary relationship between content and container.

In a similarly austere vein, the Congiunta museum at Giornico designed by the architect Peter Märkli, a rough block of cement isolated high up in the Ticino mountains in

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Switzerland, recalls this bareness, so remote from the usual image of the museum. This 'house of sculptures' was built specifically in order to house the bronzes of the artist Hans Josephsohn. Although it is difficult to attain the conceptual harmony of space achieved by Judd, Märkli succeeds in transfiguring the works displayed through the very sobriety and spareness of the building, a sort of monastic nave in which light, streaming through long fanlights, plays alternately upon the flat surfaces of the concrete walls and upon the expressionist high reliefs of the sculptures.

Another unusual experiment is being conducted at the Nagi Museum of Contemporary Art in Japan, designed jointly by architect Arata Isozaki and three artists Shusaku Arakawa, Aiko Miyawaki and Kazuo Okazaki. The interplay between the works, which form a permanent exhibition, and their 'receptacle' has here produced a genuine exercise in style. Where does the building designed by the architect end and the contribution made by the artists begin? The bravura feature of the complex, which embodies this ambivalence most successfully, is a tilted hollow cylinder into which the visitor enters. In this space without up or down, top or bottom, in which Arakawa has recreated Ryoanji's Zen garden in Kyoto, it is impossible for visitors to dissociate the container from the content. The very notion loses all meaning, so striking is the impression of continuity created in this *trompe-l'œil* space. In the West, certain spaces designed at the time of the Italian Renaissance in accordance with a false perspective can yield similar effects. In such instances, which of the two, the architecture or the sculpture, is serving the other?

Whether they are civic amenities, intended for the citizen, the tourist or the consumer, or élitist, enclosed in their ivory towers, critical of today's all-pervading commercialism, or vulgar, prosaic or frankly exhibitionistic, or discreetly and sensitively integrated into the urban or natural environment, local-community museums, transcending the somewhat vague criteria used to define them, crystallize through their sheer variety a whole range of uncertainties regarding the role and the very definition of culture in our present-day societies. ■

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Moscow exhibits 'The Treasures of Troy'

Lyudmila Akimova

In 1993 the Pushkin Museum in Moscow made a startling announcement: the long-lost treasure of 'Trojan gold' which had disappeared from Berlin during the chaos of the Second World War had been lying intact in the museum's stores since 1945 and would shortly go on display. The story of discovery and rediscovery is told by Lyudmila Akimova, who heads the ancient art and archaeology department of the Pushkin Museum of Fine Arts in Moscow. She has written three books and some fifty articles on ancient art and has been working on the Trojan treasures since 1993.

One hundred and twenty-four years ago, on the hot summer's day of 17 June 1873, Heinrich Schliemann, who had been excavating in Turkey, recorded in his diary an exceptional find of treasure. Digging into the mound of Hisarlik in north-western Asia Minor, he was looking for vestiges of the life of Homeric Troy. He believed that they must be at the lowest level of the mound, for at that time anything older than Priam's Troy was hard to imagine. And then his luck served him. At between eight and nine o'clock that morning, Heinrich Schliemann and his young Greek wife, Sophia, noticed something glinting in the earth. Heinrich shouted 'Stop!' and brought the excavation to a halt. The workers were given their day's pay, with the explanation that it was the Effendi's birthday. Heinrich and Sophia then started slowly to extract a variety of things from the huge layer of charred ruins, the city having indeed been clearly destroyed in the great Trojan War.

Apart from bronze and silver ingots there was a large bronze shield-like object and a two-handled silver vessel containing three gold diadems (two with pendants). Other finds included neck pendants folded for compactness, gold bracelets and amazingly finely wrought basket-earrings with pendants, together with similar but larger and more massive temple bands. In addition, a silver vessel had for many centuries held a few thousand gold beads and pendants from necklaces broken back in antiquity. Schliemann estimated the total number of objects in that vessel to be between 9,500 and 10,000. It was a really remarkable and unprecedented hoard, which had been hidden in the earth 4,500 years before. The ancient settlement in which it was found, Troy II, was dated to 2600–2450 B.C.

No great enthusiasm, however, greeted the discovery of such a magnificent hoard, called by Schliemann 'Priam's Treasure'. The professionals were put off by Schliemann's amateur approach to such a serious matter as the excavation of 'sacred Troy', described by Homer in the *Iliad.* They simply did not believe that the millionaire businessman fresh from Russia, having done only a short course on archaeology at the Sorbonne, could rush in and make such a great discovery. His barbaric working methods, with all the upper strata of the site being removed in the process of digging a huge trench, were also frowned upon and indeed Schliemann himself later suffered pangs of remorse over it.

Schliemann's passionate and fiery nature was known to many. He tried in every possible way to interest the general public in the excavation of the Homeric city and was not adverse to self-advertisement in advancing his interests. Therefore, when news of the treasure find spread throughout Europe, many just shrugged their shoulders: Schliemann could have quite easily passed off as a complete set a variety of items taken from different strata or simply bought at the bazaar in Istanbul. He was not greatly trusted, particularly after being caught out in one little piece of deceit: Sophia could not in fact have been present when the treasure was discovered since she had been called to Athens to her father's deathbed. Which means that Heinrich was the only witness of the find. Why did he append his wife's name when drawing up such an important document? Schliemann provided no convincing answer to that, his excuse being that he wished to keep up Sophia's enthusiasm for archaeological work. Another detail came to light relatively recently: that the treasure was found not on 17 June but rather on 31 May. Why was there any need to alter dates and juggle with facts?

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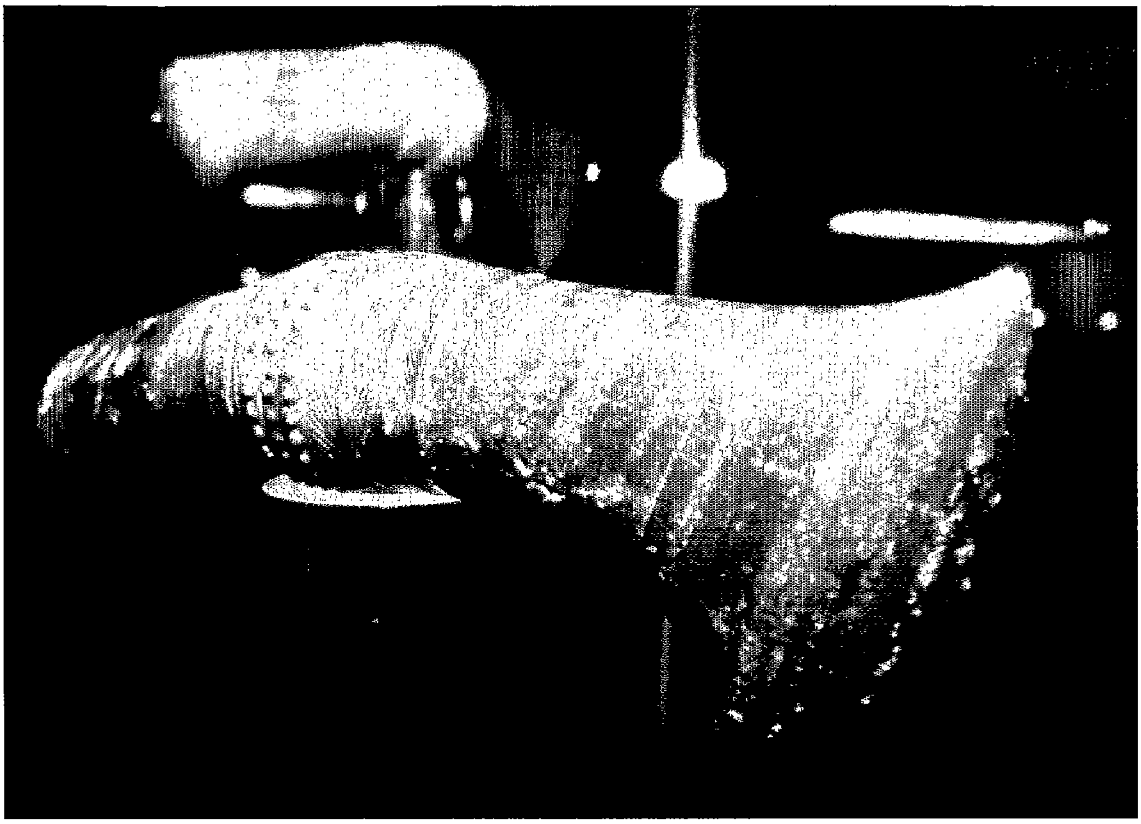

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Ritual hammer-axe in nephrite.

But the saddest part of the story lay elsewhere. According to the excavation firman issued to Schliemann by the Sublime Porte (the official title of the Ottoman Government), half of the finds – or even two-thirds – belonged to Turkey, and accordingly had to be handed over. He not only surrendered nothing to Turkey, but he also omitted to notify anyone of his discovery. On the contrary, with the help of trusted individuals sent by his acquaintance, Frederick Calvet, one of five English brothers long established in the Dardanelles, he smuggled his finds out to Greece. A year later Henrich Schliemann's book *Troy and its Remains* was published in three languages. It was accompanied by a large photographic *Atlas* featuring all the finds. The Turks immediately sued Schliemann in Athens, as a result of which he was fined 10,000 francs (costing him 50,000 francs in all). But even that did not stop him and he returned several times to Troy, where he went on discovering treasures.

Furthermore, in 1890, shortly before his death, Schliemann chanced to discover – still on the same Trojan citadel but in the eastern part – another hoard every bit as magnificent as Priam's Treasure. This was Treasure L (the treasures, of which nineteen were found, are designated by the letters A to S), including four ritual axes of unsurpassed beauty, six rods of rock crystal, mysterious crystal 'chips' and an extremely rare piece of meteorite ore. Seventeen years had gone by since the discovery of Priam's Treasure. Schliemann had gained scientific recognition and a great many outstanding specialists worked with him. He was not afraid of the Sublime Porte but he was again the sole witness of the discovery of Treasure L. He also concealed the objects in that hoard from the Turks and smuggled his finds out to Greece.

Housing the treasures

What happened to the Trojan treasures subsequently is worth recalling. Schliemann dreamt of donating them to his beloved Greece, but Greece declined the offer. He turned to many museums in Europe, including the Louvre, the British Museum and the Hermitage, but met with silence or

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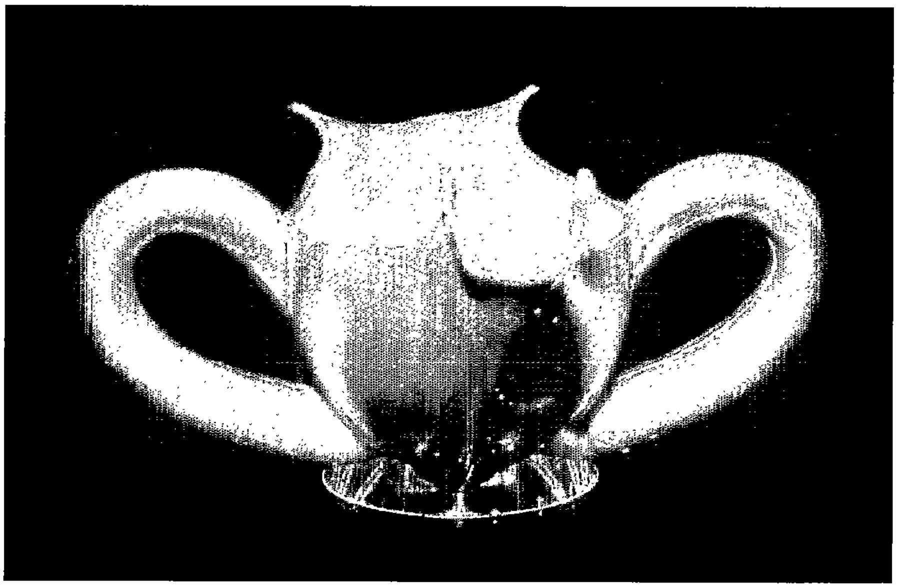
rebuffs. Finally, on the advice of his friend, the eminent German scholar and politician Rudolf Virchow, he donated the Trojan treasures to 'the German nation'. They were to be housed in Berlin in the newly built Museum of Ethnology, but while the building was being prepared for its inauguration, the objects went on display for the first and only time in their former history, at a three-year exhibition in London's South Kensington Museum (now the Victoria and Albert Museum). In 1922 they were transferred to the Berlin Museum of Antiquities and Ancient History, built by Martin Gropius, and stayed there uneventfully until the outbreak of the Second World War. Before the war the rarest and most valuable part of the Trojan antiquities was assigned to the 'irreplaceable' category. These items were packed up for safekeeping in three chests and dispatched first to the strongroom of a bank and subsequently to a bunker beneath the anti-aircraft defence tower in the Tiergarten district. When Berlin was taken by Soviet troops in May 1945, these packed chests were handed over to them as partial reparation for the losses inflicted by the Nazis and sent to Moscow and Leningrad. In Moscow the Pushkin Museum of Fine Arts basically housed the valuable objects and highly artistic jewellery (259 items in all), while Leningrad received 414 items consisting mainly of bronze and clay artefacts. Initially they were accessible to specialists, but in 1949 Stalin clamped down on them and they were lost to science and culture for close on half a century.

Having been almost forgotten by history, Schliemann's 'Trojan gold' unexpectedly sprang to life again when, starting in 1992, the issue of its location became a recurrent theme in the international media. The speculation was that it had been destroyed in the war, had disappeared without trace or had been taken to the United States. In the summer of 1993, however, it was officially announced that the 'Trojan treasures' were intact and that an exhibition was being prepared in Moscow together with an international conference on the subject. A wave of incredulity mingled with delight swept the world, but when the treasures were examined by experts all doubt vanished. The scrutiny was conducted by the most eminent connoisseurs and scholars, including Manfred Korfmann, who had resumed research on Troy in 1986, Machteld Mellink, one of the most scrupulous analysts of Schliemann's treasures, and a number of other specialists. They really were the Trojan treasures, and which had been maintained in excellent condition.

On 16 April 1996 the Trojan antiquities, having survived such a long and eventful history, once more came out of the dark. The exhibition, staged in the ancient originals room of the Pushkin Museum of Fine Arts, was designed by W. M. Shpak and fitted out by the German firm Dütech. In showcases the colour of wet asphalt, against a dark brown backdrop of walls with slightly dimmed lighting, the objects, beautiful in themselves, looked even more

A golden sauceboat decorated with two fruits.



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attractive. In accordance with the accepted scientific classification, they were divided into separate treasures. Of the nineteen Schliemann treasures thirteen went to Moscow. In archaeology the word 'treasure' denotes an assemblage of objects found in close association. Schliemann himself in one of his letters noted that he had found 'one large and two small treasures'. The German archaeologist Hubert Schmidt, who first catalogued the Trojan antiquities, systematized them as distinct treasures, singling out chance finds and indicating all the many 'deviations from the norm'. Some 330 valuable objects are enumerated in his book of 1902. It is clear today that some treasures were assigned by Schmidt conditionally. Treasure B, for example, was found very close to Treasure A, so that they possibly formed a single complex. Treasure O consisted of just two gold dress-pins found about a metre apart. Are they really treasures? Quite a few questions of this sort have been raised and certainly require further specialist consideration.

The inexperienced observer is struck not only by the scant number of objects buried in small treasures, but also by their state of preservation. Alongside beautifully preserved and still intact items, broken and repaired articles are also to be found. Furthermore, in many treasures there are scorched silver objects. Sometimes one can discern in the conglomeration lobular earrings and temple bands, dress-pins and braided wire. The baked matter, covered in silver chloride, was kept in the earth of Troy together with the real treasures. Why? There is as yet no answer to this question, since it remains unclear what the Trojan treasures are and why they were buried in the earth in such quantities. Although life in the city continued after the destruction of Troy II – with short intervals the city existed from the middle of the fourth millennium B.C. to the fifth century A.D. – no one tried to find the Trojan treasures and thus they were preserved in the citadel right up to the time that Schliemann appeared on the scene in Turkey.

A sacrifice to the gods?

It may be conjectured that the treasures represented a sacrifice made to the gods at a critical juncture in Troy's history. The silver objects may have been burnt as part of a ritual preceding burial of the treasures. A curious feature of the treasures, including those exhibited, is that they comprise incomparably more gold than silver items. In a number of ancient cultures, gold is known to have been less highly prized than silver, which may have been due to the dominance in the pantheon of the moon god, as it has long since been established that silver was associated in the minds of the ancients with moonlight and gold with sunlight. But this is just one theory among others.

According to another version, Schliemann's Trojan treasures are a burial complex unrecognized by its discoverer. The ratio of gold to silver items is not peculiar to Troy. It is also a feature of rich royal burials going back as far as the Early Bronze Age and occurring throughout the metal-working province that covered a huge region around the Black Sea.

The Trojan objects are akin both to Anatolian and to Aegean and Balkan items. Troy really appears here as a 'bridge' between East and West. The technique of manufacturing jewellery has affinities with the ancient art of Mesopotamia, particularly Sumerian. Some ornamental motifs, such as the quadruple spiral, are among the oldest in Asia Minor. The exhibition features two bead pendants of this type in

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gold: a miniature and a large one. There was a great vogue in the third millennium B.C. for 'loop-in-loop' chains, apparently originating in Mesopotamia and widely used in Trojan jewellery. Such chains, adorned with pendants, occur in association with earrings and gold diadems.

There was also a great variety of earrings in Troy. The simplest variant was represented by lobular earrings soldered from a number of fine wires – from two to seven – and sometimes decorated on top with rows of tiny cones. More elegant-looking are the voluminous lunate earrings, also consisting of lobules (two as a rule) and rimmed with gold granulation. Many granules are completely worn down – a ready indication of their prolonged use. The most remarkable pieces of Trojan jewellery are the elegant little basket-earrings formed from a number of fine wire strands soldered together and decorated on the outside with gold-rimmed hemispherical rosettes; chains passing through a small plate on the earrings are hung with pendants in the form of idols (stylized figurines of a female deity).

However, nearly all types of Trojan earrings are duplicated by larger and more massive specimens with a blunt needle that would be hard to insert in the ears. Though basically resembling ordinary earrings, they are regarded as temple bands. They were intended as ornaments for headgear or to reinforce curls. Curiously enough, in a museum in Istanbul, there are basket-earrings very similar to those on display in Moscow. They also belonged to the Trojan treasures (presumably Treasure C) but were pilfered during Schliemann's excavations by Turkish labourers, confiscated by the police and passed on to the museum. These earrings have chains with idols 46 cm long! It remains unclear whether they were hung from the ears or also used as ornaments for coiffures.

It is possible that the amazing gold dress-pins from Treasure O also served to brace coiffures or intricate headgear. One of them, with a round rosette, the petals of which may once have been inlaid with stones or paste, was unfortunately reassembled incorrectly in Berlin by soldering the needle to it from the wrong side. The rosette was originally rimmed by two spirals. The other pin looks still finer and more refined, with a broad, flat plate adorned with four rows of double eye-shaped spirals. On top of the slate six minute vessels are set, each soldered from seven separate details. Real examples of the jeweller's art! Remarkably, however, the little vessels have original twisted handles very characteristic of the ceramic vessels of Troy. This means that the pin could have been made *in situ* and not imported, the fact being that most earlier 'Trojan gold' was reckoned to be 'pirates' loot!'

An authenticity recognized

There is another argument in favour of the Trojan provenance of this ornament. From Treasure F comes a wide gold bracelet, also adorned with double eye-shaped spirals. The spirals are of course larger, but the nature of the work and the goldsmith's style are practically identical. The gold rosettes, in two places interrupting spiral friezes, are also Trojan in form; they consist of gold hemispheres set into a carved rim. The objects from the various Trojan treasures therefore fall into a fairly homogeneous group as regards both style and chronology. These important facts allow us to refute the view that Schliemann was guilty of falsification. The objects from the Trojan treasures represent an extremely organic complex. They could not have been artificially gathered from a variety of antiquities found in excavations of different strata or purchased at the bazaar in Istanbul.

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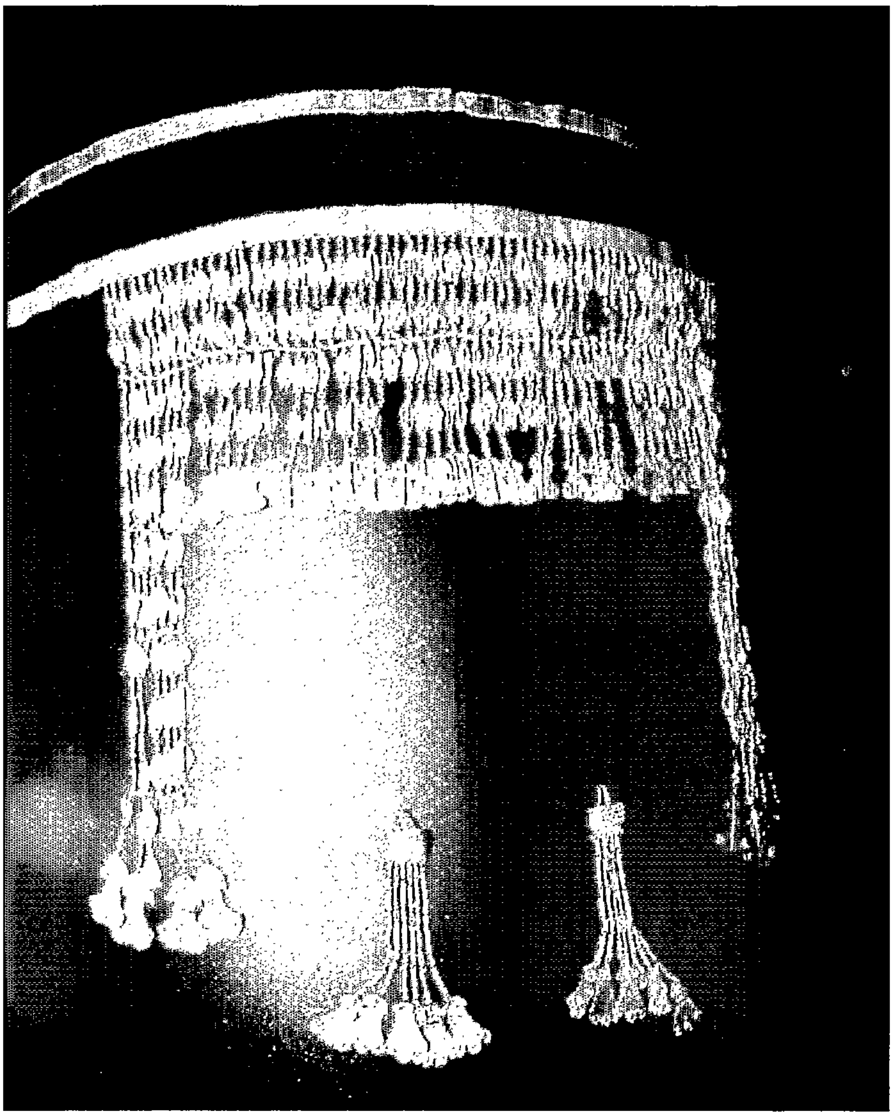
Particularly noteworthy among the ornaments are twenty-four threads with randomly stringed beads from Priam's Treasure. The German restorer Wilhelm Kukenburg attempted to reconstruct from them an ornate pectoral dangling little gold rods with knobs. The piece is uncommonly good but the reconstruction unfortunately remains hypothetical.

The most striking items are undoubtedly the two gold diadems with pendants. They have been called the large and the small diadems, since they are distinguishable by weight, as well as by the colour of the gold and by their design. The small diadem with seventy chain pendants, adorned with little diamond-shaped plates and attached to a gold band, looks diaphanous with its openwork design. And the frontal and temporal figurines framing it are stylized representations of a goddess. The diadem was worn by a living person and not an appendage of a cult statue. Many of the chains have been broken off and idols lost.

The large diadem has a simple chain instead of a frontal band, but its pendants are longer and there are more of them, ninety in all. Suspended from the frontal part, instead of the idol figurines, are little bidentate leaves or plates and its chains are single (in the case of the small diadem they are double). But the main point is that the whole of the obverse side is studded with tiny gold leaves covering the chainlets. On the temporal chains there are 101 to 103 leaves, and on the frontal chains 28 to 30. Did these diadems possibly represent the form of the calendar year, linked to the idea of a sacred tree? The form of the large diadem is indeed clearly vegetal, but the issue is still unclear. However, the difference between the two diadems and the different number of their temporal pendants – the small one has an uneven number, in sevens, and the large, an even number, in eights – suggests that the diadems might have been intended for Troy's ruling couple. The small one may have been worn by the priest-king and the large by the priestess-queen. In any case, the principle of wearing diadems with pendants was long maintained thereafter in the Troad, the region around Troy. In the Byzantine period similar diadems were worn by the emperor and empress, right up to the fall of Constantinople in the fifteenth century. It was the Emperor Constantine's original intention that Constantinople should stand on the site of ancient Troy.

'Trojan gold' also adorns vessels, including an amazing gold ritual bowl in the shape of a boat, with two spouts and typical Trojan



The large golden diadem.

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handles set well apart from the body. A rare form is that of silver anthropomorphic vessels evidently intended for incense or aromatics, with head-shaped covers and bodies fashioned after the body of a deity. They could be sealed by means of a string threaded through lugs on their cover and body. Another amazing item is a spherical gold vessel also intended for incense. Dents on its lower part create a certain play of forms, and the black rhomboid pattern impressed on its surface testifies to the fact that this vessel was hung on the wall of the treasure-house. On its neck is an indistinct, possibly handwritten mark of five-and-a-half zigzags.

But fine as the valuable vessels are, their beauty is eclipsed by the rare objects from Treasure L. Four hammer-axes astonish the observer by the grandeur of their forms, the irreproachable harmony of their proportions and their mirror-like polish. Only one axe, made of lazurite and broken into pieces, in the state that Schliemann found it in, has traces of wear. The other three, of nephrite and jadeite, look absolutely new. The noted archaeologist Carl Blegen, who excavated Troy in 1932–38 and was the first to 'rehabilitate' Schliemann as a scholar, believed that they were battle-axes. But traces of gilding on a number of little decorative cones around the shaft-holes of the lazurite and jadeite axes suggest that these objects were symbols of royal power. The lazurite axe was clearly for ritual use, probably at sacred ceremonies for the killing of sacrificial animals embodying the mortal god-king. The hammer-axes may have served as the attributes of the priestess ruler. In the murals of the Corridor of the Processions at the Palace of Knossos in Crete (mid-second millennium B.C.), there is a representation of a priestess-goddess to whom worshippers are making their way. In both raised arms she holds double-headed axes (labryses).

There are grounds for supposing that Troy was also the provenance of these magnificent objects and masterpieces of world art. Similar axes, smaller but of the same type (head with butt and blade), were found by Schliemann in Troy. There is a notable deposit of jadeite in the Troad. The general standard of Trojan art in the mid-third millennium B.C. was such that the ritual axes as well could undoubtedly have been made in local workshops.

As a whole, the exhibition *The Treasures of Troy from the Collection of Heinrich Schliemann* takes us back to the first steps of 'primitive' archaeology, to one of the most remarkable events of the nineteenth century. Today, however, 124 years later, it opens a new chapter in the understanding of ancient culture. The objects in question are particularly significant in the fact of their originating in Troy, the most renowned ancient city, the mystery of whose might and fall lingers on. ■

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The peace museums of Japan

Terence Duffy

In the past twenty years the peace museum idea has blossomed and the Japanese contribution has been both remarkable and inspirational for other countries. 'Peace cities' like Hiroshima and Nagasaki commemorate the atomic bomb legacy, while a new generation of Japanese peace museums is confronting the past with programming which is refreshingly global. Dr Duffy, who heads the Human Rights Programme at Magee College in Northern Ireland, offers a personal view of 'peace museum' trends in Japan.

Hiroshima and Nagasaki have assumed a symbolic place in the nuclear age, and are renowned for the eternal commitment they pledged to the message of world peace. Today these 'peace cities' each possess a unique museum of peace. The Hiroshima Peace Memorial Museum was established in 1955 to exhibit the reality of the nuclear bombing, and to embrace 'the spirit of Hiroshima' – advocating the abolition of nuclear weapons and eternal world peace. The Memorial Museum has benefited enormously from a major renovation programme in 1990/91 which cost almost $7 million to complete. It now constitutes a modern, multimedia facility with two primary sections: on the history of Hiroshima and on the tragedy of its nuclear destruction. This impressive structure, mounted on raised pillars, is a centre-point for the cluster of peace facilities in the area. The museum cleverly combines physical heritage of the A-bomb with artistic reconstructions, and has an extensive audio-archive recording the voices of A-bomb survivors. It is remarkable that annual visitors currently number close to 2 million. Of particular significance is the way in which the 'renewed' museum has sought to meet the needs of special groups. For instance, there are many learning aids for children, an important consideration since a visit to the peace museum is integral to the curricula of Japanese junior- and high-school pupils. The Memorial Museum possesses more than 300 artefacts which survived the bombing, carefully explained in an impressive audio-translation programme covering over fifteen languages. Importantly, visitors are encouraged to record their own 'peace message' in the lobby area which looks out onto the Atomic Peace Park and Atomic Bomb Dome. The museum is essentially 'single issue' in focus, with a 'standard' posture on Japanese history. It neither provocatively confronts the politics of Japan's past nor indeed challenges the visitor with rhetoric against nuclear weapons. Rather, by careful programming, it seeks to model the dignified desire of this city for global peace.[1]

Nagasaki's new Atomic Bomb Museum offers a radical critique of Japanese and world history. The original International Culture Hall had been founded in 1955 to symbolize Nagasaki's reconstruction in peace. In April 1996 this marvellous facility opened a spectacular new museum under the aegis of the Nagasaki Atomic Bomb Museum. For visitors who recall the earlier structure with its floors of stark photographs, the Atomic Bomb Museum constitutes a remarkable metamorphosis into one of the most dynamic galleries in Japan. Whereas the International Culture Hall offered a conventional photographic record of the destruction of Nagasaki, the new museum is highly innovative and challenges traditional Japanese thinking. Particularly interesting from a political perspective are the sections, 'The Road to the Atomic Bombing', 'The War between China and Japan and the Pacific War' and 'Towards a World Without Nuclear Weapons'. Here the experience of militarism in Japan and the demands of war are juxtaposed with arguments for an end to nuclear weapons. A series of panels, 'Events leading up to the Nagasaki Atomic Bombing' isolates historical facts from contemporary prejudice, while an audiovisual compilation, 'The Appeals of A-Bomb Survivors' makes a powerful case for worldwide disarmament.

The museum is especially anxious to encourage thinking about issues relating to war and nuclear weapons, and the Video Room with its 'question-and-answer corner' encourages independent study. All these efforts are geared to help locate the tragedy that befell Nagasaki in the context of other historical, environmental and political disasters. In this respect, albeit ▶

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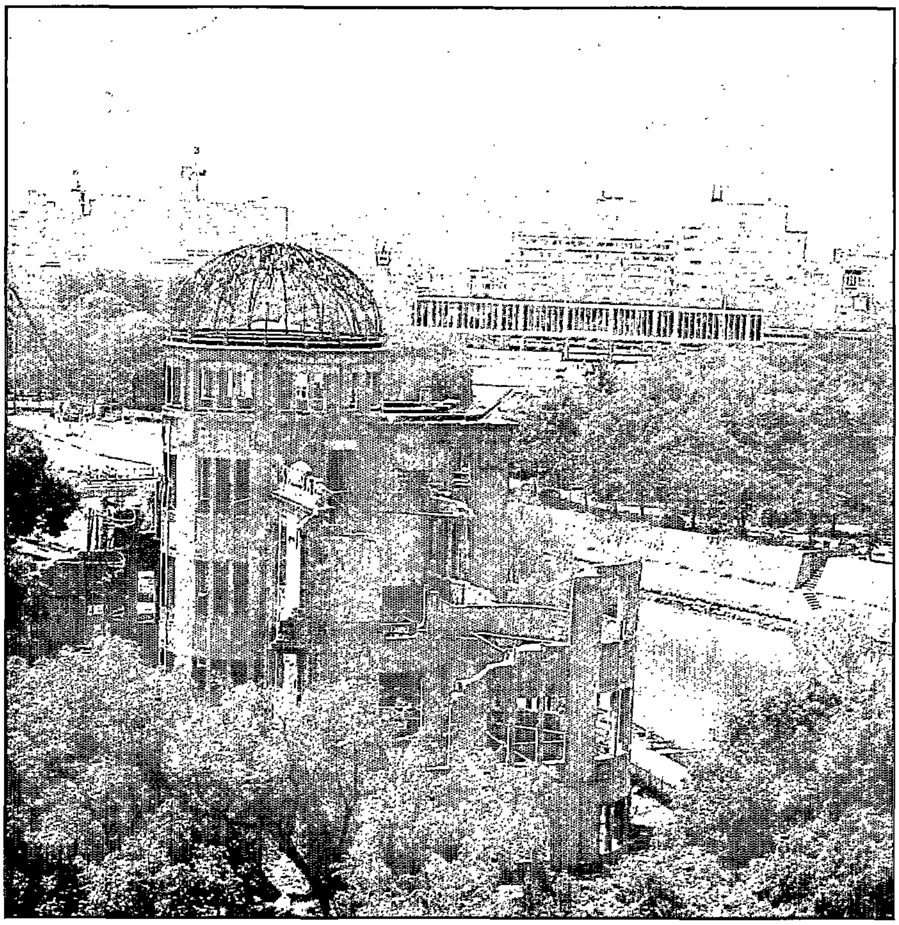

© Hiroshima Peace Memorial Museum

A view of the Hiroshima Peace Memorial Museum with the ruined Industrial Promotion Hall in the foreground.

also a 'single issue' museum, this facility goes much further than the Hiroshima Peace Memorial Museum in relating Nagasaki's experiences to the wider fabric of twentieth-century historical events. This is much more self-consciously an 'anti-war' museum and it elucidates Japan's role in the war in an exciting and iconoclastic way.

The glass entrance canopy to the new Nagasaki museum is one of the novel features that define this architecturally interesting museum. The architecture is a little futuristic, precisely what one would expect from a museum whose concern is with the nuclear age. Much use is made of natural light and the floors are spacious. The visitor first encounters Hiroshi Matsuzoe's pain-evoking depictions of Nagasaki under the atomic bomb, *The Ruins at Dusk* and *The Ruins at Dawn*. This gives a solid focus to the idea of the A-bomb as a historical event. The subsequent galleries document the tragedy of Nagasaki through a striking combination of salvaged objects and modern audiovisuals. Approximately 200 items of physical heritage are displayed and the sections of the museum dealing with twentieth-century history reflect an important departure-point in museum programming. The display cases and accompanying annotations are deftly entwined with reproductions of shattered buildings and the voices of panic-stricken residents. There is also an excellent reconstruction of the famous Urakami Cathedral.

This museum decisively challenges the imperialist ambitions of the wartime Japanese Government and exposes aspects of the brutality of the Japanese army in Manchuria and elsewhere. It locates the experience of the atomic bomb in the context of the tragedy of war and implicitly castigates Japan's role. It is not surprising that the museum has been targeted by sections of the Japanese 'right wing' who are unhappy with the apparent 'shame' it inflicts on imperial Japan. Such right-wing elements mounted a campaign which included loud-hailer protests at the museum entrance. However, the planners of the Atomic Bomb Museum were committed to a radical re-interpretation of this most sensitive period of Japanese and world history. The new Atomic Bomb Museum in Nagasaki represents one of the most important developments in Japanese thinking about peace museums in recent years. It implicitly turns traditional Japanese history on its head and articulately expresses the clamours of late-twentieth-century Japan to embrace the global community.[2]

A national phenomenon

It was perhaps inevitable that Hiroshima and Nagasaki would become a focus for the efforts of peace citizenship in postwar Japan. What is no less outstanding is the growth of peace museums in other parts of Japan. For example, as early as 1967 the Maruki Gallery for the Hiroshima Panels was founded in Saitama Prefecture. The gallery preserves Iri and Toshi Maruki's sombre paintings of atomic bomb scenes. It is significant that it deftly contrasts these

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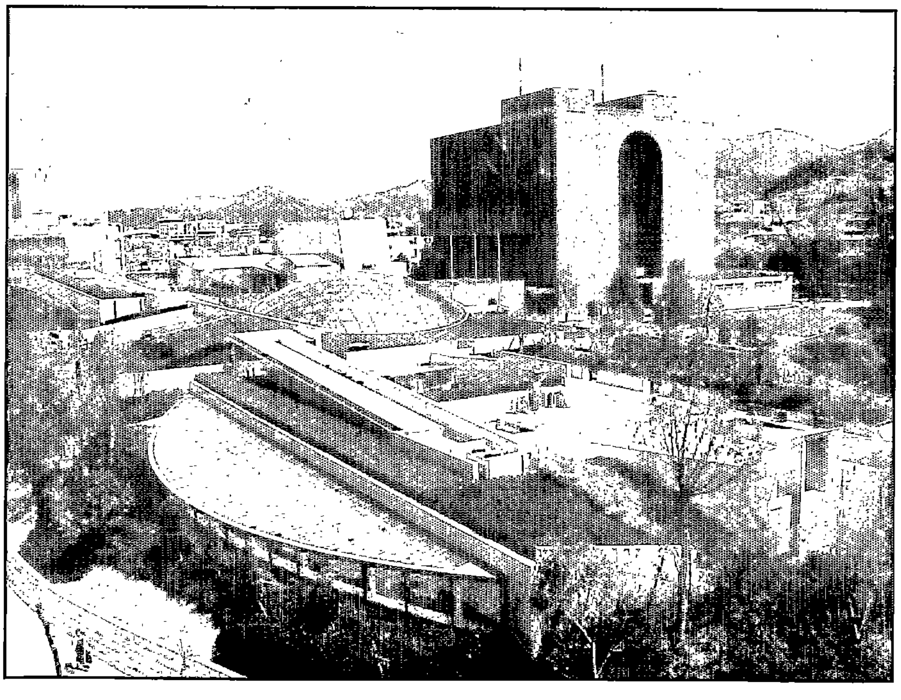
with collections relating to Auschwitz, Nanjing and other war-related themes. Interestingly, it also explores the fate of the thousands of victims of mercury poisoning caused by industrial waste in the seas off the Japanese coastal town of Minamata. The atomic bomb is thus juxtaposed with images from the Holocaust and from other examples of war and environmental destruction. This reflects the growing concern with finding a comparative dimension for the horrors of nuclear destruction.

A further interesting example of the development of 'peace thinking' is Tokyo's Museum of the Fifth Lucky Dragon. In 1976 the Peace Society for the Fifth Fukurumaru founded this interesting small museum which exhibits the Fifth Lucky Dragon – the vessel that was exposed to the American hydrogen bomb test at Bikini Atoll in March 1954. The museum addresses the fundamental issue of achieving a world without nuclear weapons and vigorously opposes continued testing. Concerned also to preserve the memory of those it honours as the '*Hibakusha* in the Pacific Ocean', this museum is a powerful voice against the annihilation of humanity by nuclear weapons. It makes it clear that the survivors of Bikini Atoll and so many other places have the right to be considered as *Hibakusha* and it thus draws clear parallels between the Japanese experience and the more recent fate of the Pacific islanders.

A strong popular-based campaign underlines the Japan Peace Museum Project in Tokyo which started work in 1983. This was the initiative of a 'committee of Japanese citizens' who began by disseminating information about the atomic bombing. An early task of the project was to distribute the powerful photo record, *Hiroshima-Nagasaki: A Pictorial Record of the Atomic Destruction*. They also launched a fund-raising effort called the Peace Tile Campaign through which individuals were asked to contribute to the cost of the Peace Museum, and received in return a token ceramic tile. Featured in the proposed museum building will be an impressive mixture of exhibitions, photographs, films and other educational tools. The project currently occupies offices close to Tokyo Tower, but the construction of a major peace museum for Tokyo still seems a long way off. Indeed in contrast to the idea of a peace museum for Tokyo, right-wing elements in that city have been pressing for a museum 'to glorify the Japanese war dead'. Sadly, it seems unlikely that either the political will from local government, or indeed appropriate funding, will emerge in the short term for the construction of a sizeable peace museum in Tokyo. This underlines the importance of considerations such as finance at the prefectural level in deciding the fate of such projects. It is more likely that any new peace museum in Tokyo will be the product of continued voluntary effort. ➧

The new glass-domed Nagasaki Atomic Bomb Museum with the Nagasaki International Culture Hall on the left.



© Nagasaki Atomic Bomb Museum

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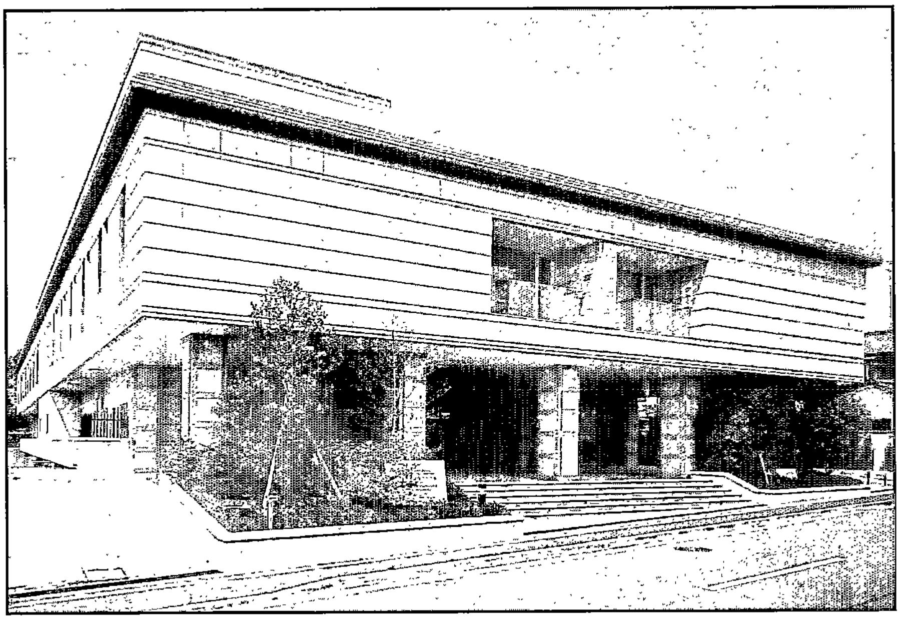
In 1989 the Osaka International Peace Foundation established its Peace Centre on a magnificent site bordering the grounds of Osaka Castle. A good deal of the museum deals with the effects of the Second World War on Osaka, but the perspective is international. There are several examples, notably among materials on the Pacific War, where criticism is directed at imperial Japan. The museum's planners did their best to eschew traditional assumptions and to challenge conventional Japanese versions of history. It is therefore fitting that the modern, multimedia exhibitions include galleries on the 'fifteen years' war', and modern Japan's 'aspiration for peace'. In the latter case, its depiction of the famous Clark Institute Doomsday Clock, which tracks the risks of nuclear war, is particularly captivating. This is a most exciting museum and its exterior plainness and white-cement structure throw into relief the interesting peace sculptures that adorn the museum grounds. 'Peace Osaka' has already contributed to a re-evaluation of Japanese views on peace and to encouraging global perspectives in the peace museums of Japan. Surprisingly, for a museum with such an excellent location, its visitors are mainly Japanese school groups.

It is significant regarding the momentum for growth that Okinawa's Himeyuri Peace Museum also opened in 1989. It explores the poignant theme of the Himeyuri Student Corps who were literally 'mowed down' in their failed defensive at the Battle of Okinawa. The futility of their death is employed as a metaphor for peace education. This is no small statement as Japanese society is still sensitive on the issue of war deaths, but the Himeyuri Museum makes an important contribution to portraying the emptiness of war and the grief that is experienced on all sides.

The entrance to the Kyoto Museum for World Peace of Ritsumeikan University.



© Kyoto Museum for World Peace

An excellent example of the increasing concern with international issues in Japan is the Grassroots House Peace Museum founded in 1989 in Kochi City. The museum focuses on peace and the environment, and directors Sigeo Nishimori and Kazuyo Yamane point to new ways in which the concept of peace can be realized at local level. Grassroots House also offers a radical reinterpretation of the Second World War so that the tragedy of the atomic bomb is contrasted with imperial Japan's militaristic adventuring. These topics are deeply unpopular with Japanese right-wing elements. The museum exchanges exhibitions with galleries and individuals across the world, sending colourful origami cranes as symbols of peace. It organizes a peace trip to study the Japanese invasion of China – a significant gesture for a Japanese museum, even in the late 1990s. Grassroots House exudes an innovative blend of opposing world conflict and environmental degradation. This museum challenges past history with a main exhibition on the aggressive wars of Japan in which the modern Japanese constitution,

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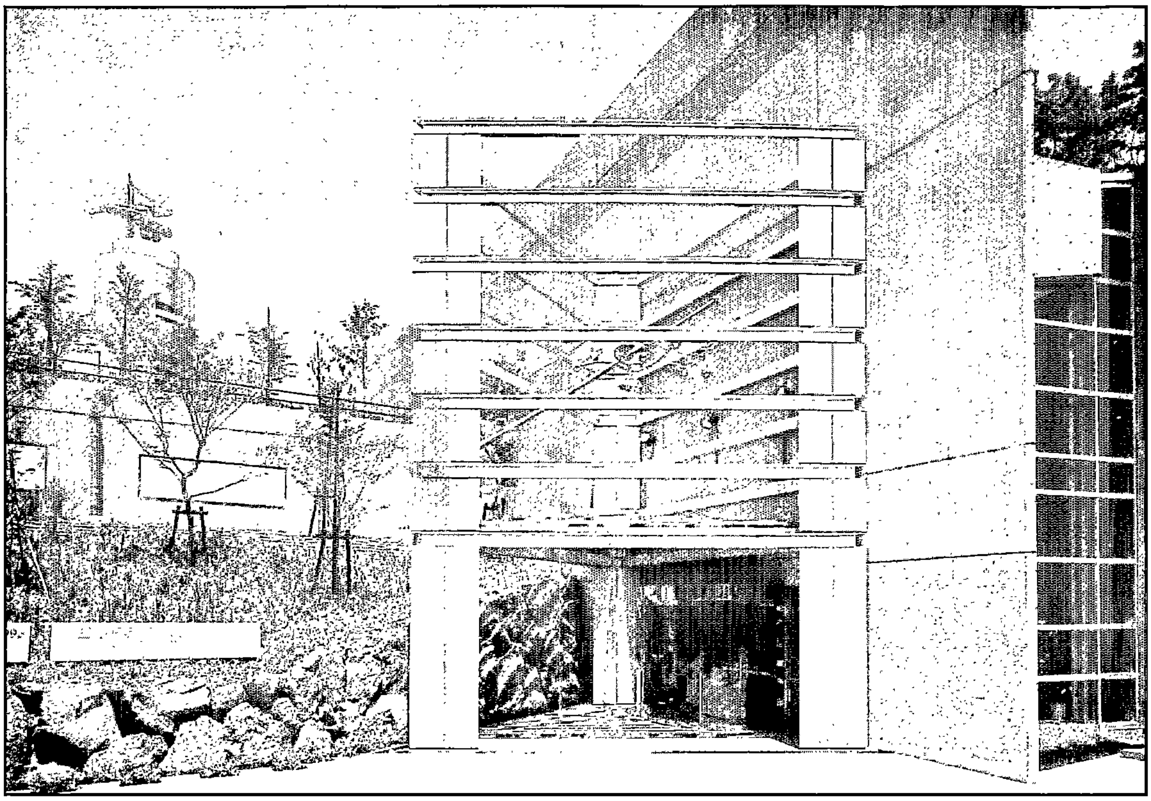

© Peace Museum of Saitama

The elegant entrance section of the Peace Museum of Saitama.

with its renunciation of war, is seen as representing hope for the future. The museum lacks the financial resources to do this with high-tech methods, but the conventional display cases are well selected and there is much to interest every age-group. In the late nineteenth century Kochi spawned Japan's Freedom and People's Rights Movement, which was ultimately responsible for establishing a democratic parliament. Grassroots House elucidates these themes, and they are extensively developed by Kochi's Liberty and People's Rights Museum. Both museums offer a unique perspective on world peace in this historic city where modern Japanese democracy has its origins.

Taking a global view

In 1992, two important new Japanese peace museums opened their doors – the Kyoto Museum for World Peace and the Kawasaki Peace Museum. The former, the responsibility of Ritsumeikan University, and directed by Ikuro Anzai, elucidates the growth of postwar peacemaking. Many of the Kyoto Museum's most interesting collections deal with the period since 1945, and arguably the key section is that on 'War and Peace Since 1945'. The museum has also sponsored special activities on such global topics as 'War and Children', 'War and Literature' and 'War and Education'. The Kawasaki Museum, administered by the local authority, has also been planned with an emphasis on world issues and it is noteworthy that its exhibitions have included subjects as diverse as genocide in Cambodia and the rights of indigenous peoples, as well as nuclear and environmental pollution.

New museum projects continue to develop in many parts of Japan. In 1993 the Peace Museum of Saitama was founded to promote the concern for peace through an exploration of the region from the Showa era. This is a 'local' museum but with a 'global focus'. Japanese history is set against the panorama of international events. Another worthy museum which combines the local and the global is the Sakima Art Gallery, which opened in Okinawa in 1994. The gallery devotes itself to the ambitious task of 'human protest against what destroys the human being'. Through its many paintings, such as those of Kathe Kollwitz, Makoto Ueno and Iri and Toshi Maruki, this museum makes a significant contribution both to healing the pain of war, and to the development of anti-war thought.

A new Prefectural Peace Museum is planned to open in Okinawa in the late 1990s. This ambitious project is scheduled to replace the Peace Memorial Museum founded in 1975 as a memorial to those killed in the

➧

battle of Okinawa. The new museum will also convey the neglected history of the Ryukyuans and related issues concerning the rights of the island communities. It will be set in a Peace Park which will include a Cornerstone of Peace monument displaying the names of those who died in 1945. Meanwhile, planned for 1997 in Yokohama City, is the remarkable Plaza for Global Citizenship of the Kanagawa Prefectural Government. This futuristic project is intended to contribute to 'the realization of world peace through local efforts'. It hopes to organize exhibitions and activities to promote tolerance and mutual trust among peoples of different countries. Given these encouraging reports, it is clear that in recent years there has been a healthy growth in the number and types of peace museums in Japan. Sadly, peace museums in many other parts of the world still face problems in gaining 'credibility'. By contrast, a new generation of Japanese peace museums is confronting the legacy of the atomic bomb. That is not to say that this process has been without dispute. We have already indicated the discontent expressed by the Japanese right. Moreover, various controversies in 1995 in Japan and the United States concerning the Smithsonian Institution's planned *Enola Gay* exhibition, are symbolic of continuing sensitivities on peace issues. However, Japan has set a wonderful international example in the support for peace museums which is expressed in the generous policies of so many of the prefectural governments.

The development of Japanese peace museums undoubtedly fosters UNESCO's concern for a 'culture of peace'. This commitment to fashioning a new 'peace culture' beyond the late-twentieth-century world is refreshing. So, from the tragic experiences of Hiroshima and Nagasaki, has come the inspiration for flourishing peace museums throughout Japan. Through peace museums and networking organizations, such as the World Conference of Mayors for Peace, Japan has done much to place these issues on the international agenda. Japanese peace foundations such as the Hiroshima Peace Culture Foundation and the Nagasaki Foundation for the Promotion of Peace have also been driving forces in this process. Several new Japanese peace museum projects are at the planning stage and others are near completion. Even the most 'local' conceive of peace as an issue for 'global' action. One suspects that it will not be long before there is a peace museum in every major Japanese city. This a wonderful expression of commitment to such museums in the public arena. ■

Notes

1. See Yoshitaka Kawamoto, 'The Spirit of Hiroshima', *Museum International*, No. 177, (Vol. 45, No. 1, 1993).

2. Readers might wish to consult the following works:
The Records of the Atomic Bombing in Nagasaki, Nagasaki, Nagasaki Foundation for the Promotion of Peace, 1996.
Robert Jungk, *Children of the Ashes: The People of Hiroshima After the Bomb*, London, Paladin Books, 1985.
Hiroshima Peace Reader, Hiroshima, Hiroshima Peace Culture Foundation, 1994.

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Natural history museums and the biodiversity crisis: the case for a global taxonomic facility

Malcolm J. Scoble

In its dossier on Natural History Museums and the Environment *(No. 190, April–June 1996),* Museum International *focused on the challenges facing these museums in a new epoch of acute environmental awareness and called attention to the pressing problem of biodiversity preservation. The crucial role that museums can play in fostering and underpinning vital scientific research in this field is described by Malcolm J. Scoble, head of the Biodiversity Division in the Department of Entomology at the Natural History Museum, London, and formerly assistant curator/acting curator of the Hope Entomological Collections of the University Museum, Oxford University. He has also worked as a senior professional officer in entomology at the Transvaal Museum, Pretoria, South Africa, and is the author of a book on Lepidoptera published by Oxford University Press, as well as a number of scientific and popular articles, mainly on taxonomy of Lepidoptera.*

The author would like to thank his colleagues at the Natural History Museum, London, for their co-operation.

Much of the research carried out in natural history museums deals with taxonomy, the classification and naming of living or fossil organisms. Taxonomy is concerned with studying pattern rather than process in nature and to some extent it has fallen out of favour when compared with research fields dealing with environmental dynamics. While taxonomists have always argued that their subject is fundamental to whole-organism biology, only in the last few years has the field received a high-profile boost. This renewal of interest has been due largely to the role taxonomists can play in attempts to reduce the rate of loss of global 'biodiversity' – a term that has become conspicuous in the political arena since the 'Earth Summit' (the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992).

Hence, the threat of biodiversity has provided natural history museums with a ready-made, albeit depressing, social role. Indeed, classifying life's diversity has been for several years part of the sales pitch of managers in natural history museums, and many museum taxonomists have welcomed the immediacy of the need for taxonomic data. But, to have real value, a sense of purpose needs to be followed by action: taxonomists must meet the demanding practicalities of actually providing information in an accessible form to users. The provision of appropriate products is the most effective way of responding constructively to those commentators who have been critical of what they perceive to be a slow or uncoordinated response by the taxonomic community to an immediate or short-term requirement.[1]

Since natural history museums typically house specialist taxonomists and large holdings of specimens, they are ideally placed to play a central role in cataloguing life on earth. Broadly speaking, there are two kinds of basic taxonomic information to be derived from collections in such institutions. One of these involves details associated with specimens or samples, particularly locality data. The other kind, of which a particular example is central to this article, is the generation of lists of species (life-lists) and associated information.

Modern computer software enables both specimen- and species-data to be included within the same database or Internet Web-site. However, a conceptual distinction between the two kinds of information can be helpful because they serve different functions: specimen data enable collections to be searched for records from particular localities or larger areas, while species data provide a contemporary statement of the taxonomy of the target group of organisms. The information usually collated in species databases varies, but tends to be of the kind found in taxonomic catalogues and includes a species name, name of describer, date of description, reference, and taxonomic status.

Creating a species database

To put principles into practice, my colleagues and I in the Department of Entomology at the Natural History Museum, London, are close to completing a species database for a large group of insects. We prefer to think of the database as a Global Taxonomic Facility (GTF) because it includes fundamental taxonomic information on a world basis and acts as a tool for collections management and research. Moreover, given the flexibility of modern relational databases, it has the capacity for expansion with the addition of images and specimen records.

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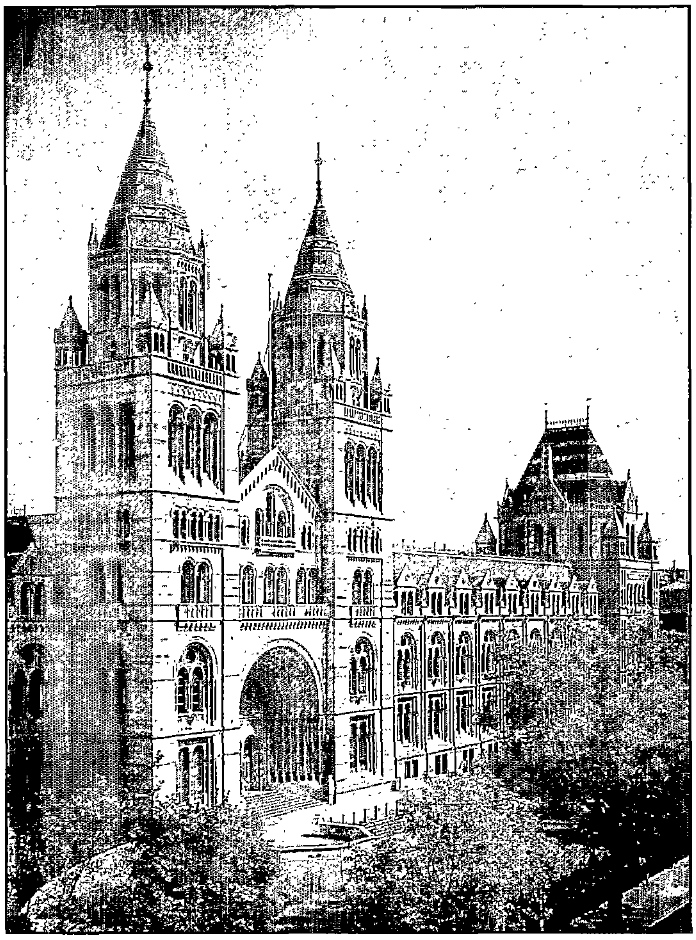

The Natural History Museum, London.

The target group for the GTF is a family of moths called the Geometridae – the moths with 'looper' caterpillars. These insects occur in all biogeographical areas of the world and more than 20,000 species have been described. Since their caterpillars eat large quantities of green plants, they have a significant, albeit unmeasured, ecological impact. Although much work remains to be carried out on their classification, the taxonomy of geometer moths is in a state that allows a reasonable chance of identifying a specimen from anywhere in the world, provided that access exists to a suitable reference collection or adequate literature.

Over three-quarters of all described species of living organisms are insects so it seemed appropriate to select a group that is both species-rich and ecologically important. Yet, however appropriate a group of organisms may be for taxonomic treatment on biological grounds, there are also practical aspects to consider. Geometer moths were chosen for reasons all of which are based on the existence of museum resources.

First, there is a large collection of these insects in the Natural History Museum, London, where the project is based. The holdings consist of approximately 1 million specimens, representing a high proportion of all species described across the globe. A wealth of material was accumulated in the nineteenth century or early in the twentieth century, and this has been enhanced significantly by more recent acquisitions.

Second, the level of curation of this collection is extremely high with the main body of material arranged taxonomically on a world basis and incorporating much updated nomenclature. Associated with the collection is a card index to all geometer moth names. This also is ordered taxonomically.

Third, the coverage of taxonomic literature in the library of the institute is unequalled. Original descriptions are the primary source of taxonomic information for species, so access to the whole chronological range of publications is invaluable.

Fourth, a great deal of unpublished revisionary work has been incorporated in the collection and card index in London during the history of its long curation, much of it by previous curators. The unpublished information has been included in the GTF and will, with modification, be published for the first time in the catalogue.

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Finally, the results of research on geometer moth taxonomy over the past few years within the Entomology Department have enabled us to make many further additions and changes to the classification, particularly on species from tropical America and South-East Asia.

A major purpose of the GTF is to enable data to be extracted for the construction of a published taxonomic catalogue to the names of geometer species, subspecies and genera of the world. While a collection acts as a physical database in its own right,[2] the unpublished information contained within it effectively is available only to those with direct access.

As an aid to research, and when used for collections management of the national collection of Geometridae at the museum, access to a given genus or species via the GTF is much easier than thumbing through the extensive card index. Furthermore, a computerized database eases the search for information in data fields other than those by taxonomic name, for example, for a particular author, journal or locality. Besides ease of access, a database facilitates interrogation about numbers of species described, their year of description and so on.

To give some idea of its size and scope, the GTF includes records for approximately 35,000 names. These include not only the names of all putatively valid species and subspecies, but also those many superfluous names, called synonyms, where species have been described more than once. Most data represent basic taxonomic information, but, for some species, larval foodplant records are incorporated.

Logistics: the importance of teamwork

At the present time, science tends increasingly to be based on grants, typically for three years' duration. Whatever the desirability of this situation, it has nevertheless become a reality. Furthermore, grant awarding bodies expect, not unreasonably, results close to the end of the grant. Even if institutional funding is available, the need to produce results within a specific time is

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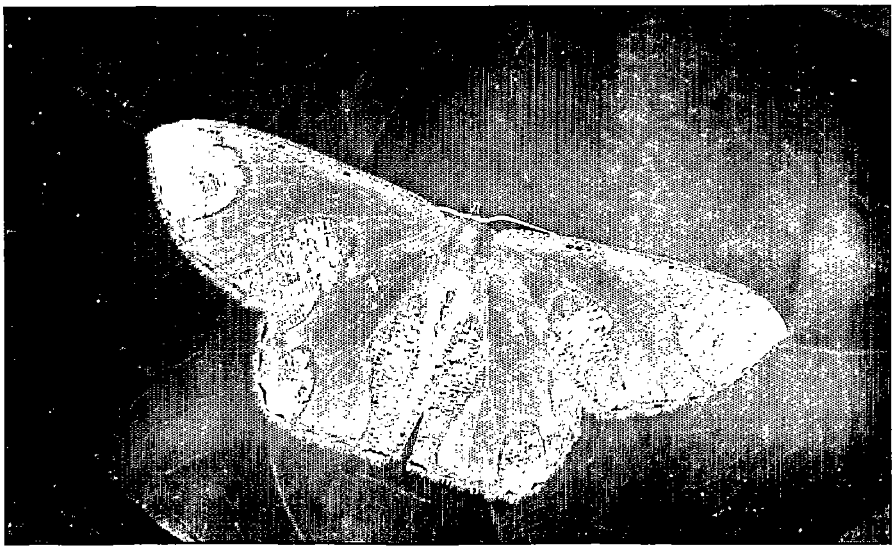
Photographs by courtesy of the author



Dospila ruptimacusa, *a geometer moth from Costa Rica.*

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expected. As it happens, the demand for taxonomic data in the biodiversity field requires that its collation be achieved expeditiously.

The GTF for geometer moths was supported financially for three years by the Leverhulme Trust, a major British charity for research and education. Although the grant enabled the employment of a full-time research assistant, the project has been a team effort. All the in-house geometer-moth researchers have been closely involved, mainly in matters of taxonomic interpretation and nomenclature, and have contributed by providing original information based on their revisionary work. Throughout the project we have received invaluable support from those collections managers in the museum with special expertise on moths. Again, this has chiefly been in the form of taxonomic interpretation. The Systems and Data section helped with setting up the original structure of the database and translating the final data set into a publishable format. We have received much assistance from colleagues in other collections-based institutions in gaining access to unpublished information. They form part of a network of contacts developed over several years. We should remember also that revisionary taxonomy tends to be more gradual and long-term in its development instead of being punctuated by revolutionary change: the efforts of previous curators and researchers have had a profound influence on the work of the current team.

The project started with an existing, but much more restricted, database which had been constructed for a study of patterns of species richness in the Geometridae. This first database took about eight months to compile. During the three-year study funded by the Leverhulme Trust, addition and interpretation of the extra data and fields took a further twenty months. The remaining sixteen months were allocated to checking details of the database and resolving as many outstanding queries as possible. This period was extremely precious for detailed checking of the data, particularly the original taxonomic descriptions. Since the time available did not permit re-evaluation of every piece of information, prioritization was necessary.

Besides constraints of time, the other most important factor limiting the accuracy of the database was the state of geometer taxonomy. However, as explained above, at least the information in the card index and collection at the Natural History Museum is at a level of interpretation exceeding considerably that which has been published to date. Moreover, publication of the data means that they will be available in a unified form instead of being scattered widely across the taxonomic literature. A further point about accuracy is that with a database involving a great deal of transcription from index cards, many of which are handwritten and difficult to read and interpret, errors are inevitable, particularly with the pressure of time.

Messages for natural history museums

Several general messages can be obtained about the role of natural history museums in contributing to biodiversity studies of the kind outlined above. Prominent among them is that these institutions are uniquely placed to carry out this kind of work. The material resources required, notaby curated collections and associated indexes and libraries, are of the very kind kept in such museums. As for human resources, staff capable of interpreting taxonomic data are essential for selecting, gathering and collating the relevant information. Electronic

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scanning of index cards into a computer database can be useful as can the employment of a typist to keyboard information. But such an approach would have fallen well short of the requirements needed for the production of the geometer moth facility. The team involved in this project has been of a kind special to natural history museums.

Another message is that taxonomists must learn to live with imperfection if they are to produce, in a timely way, information to assist efforts to alleviate declining biological diversity. Unquestionably, the more accurate the data the more valuable they become. But expeditious provision of large-scale taxonomic works means that at least a base of knowledge on which we can build becomes available. The geometer moth project has demonstrated that a database with a large body of basic information associated with each species name, really can be constructed within three years, a typical period of an academic grant. The validity of this point depends, of course, upon the accessibility and quality of the information held by any given museum. And certainly, such resources are found more extensively in the larger museums. But with modern means of transport providing an increased ease of access to collections, and above all through more collaboration and networking, limitations on resources in any given museums are not insurmountable, provided taxonomists have the will to undertake projects of this kind.

Finally, if ever there is a way of fulfilling a core function of a natural history museum, with its unique combination of collections and associated data, library facilities and knowledgeable staff, then surely the documentation of life on earth provides that means. While we all are properly anxious about future support for our subject, museum taxonomists should feel more encouraged than ever that they are engaged in a mission that is so constructive and socially worthwhile and for which they are so well equipped. ■

Notes

1. P. Alberch, 'Museums, Collections and Biodiversity Inventories', *Trends in Ecology and Evolution*, Vol. 8, 1993, pp. 372–5; K. J. Gaston and R. M. May, 'Taxonomy of taxonomists', *Nature*, Vol. 356, 1992, pp. 281–2; L. A. Mound and K. J. Gaston, 'Conservation and Systematics – The Agony and the Ecstasy', in K. J. Gaston, T. R. New and M. J. Samways (eds), *Perspectives on Insect Conservation*, pp. 185–95, Andover, Intercept, 1993.

2. J. G. West and E. S. Nielsen, 'Management and Accessibility of Biological Collections', *Australian Biologist*, Vol. 5, 1992, pp. 68–75.

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Books

Care of Collections, edited by
Simon Knell.
(Leicester Readers in Museum Studies,
London/New York, Routledge, 1994,
281 pp.)

A colleague recently asked me to suggest some articles on collection care. I simply advised her to buy this book, which is a collection of some of the most worthwhile comments and instructions on the subject that have appeared during the last twenty years.

Most people working within the museum and conservation industries will be familiar with some of the articles, as they first appeared in various professional journals. Indeed, if there is any criticism of this book it is that it reproduces what most well-stocked museum libraries hold anyway, and that it tells us nothing new. But it does not intend to, and few of us are able to subscribe, or even have access to, the five journals that are the main contributors, let alone the various printed booklets, newspapers and magazines that are also represented here. Even if we could, it is very helpful to have all the relevant pieces in one easily manageable volume, rather than twenty years' worth of periodical back issues.

Each article is treated as a separate chapter, and there are thirty-one in total ranging from two to twenty-three pages in length. The first few, like Jonathan Ashley Smith's 'Ethics of Conservation', Susan Bradley's 'Do Objects Have a Finite Lifetime?' and Peter Canon-Brookes' 'The Role of the Scholar Curator in Conservation' give a balanced insight into current ethical debates, whilst Michael Daley's 'Solvent Abuse', written for a British news magazine, uses a more journalistic but very hard-hitting approach to question the uses and abuses of picture restoration.

These set the tone for later articles, many of which are practical instructions in modern methods of collection preservation. Suzanne Keene's 'Audits of Care . . .' is the longest piece to be included, but also one of the most practically applicable, for those institutions that require basic guidance to collection surveying techniques. Nathan Stolow's piece on the conditioning and regeneration of silica gel and other related RH buffering materials is almost the standard instruction manual, as is 'Light and Environmental Measurement and Control in National Trust Houses', by Sarah Staniforth, and 'Rules for Handling Works of Art' by E. B. Rowlison.

There are a number of interesting and instructive articles on pests, their control and the dangers of using chemical pesticides, whilst the last four chapters discuss in detail disaster preparedness and planning, including Barclay G. Jones's 'Experiencing Loss', which is a terrifying survey of recent disasters, and 'Emergency Treatment of Materials' by Upton and Pearson, which is a digestible introduction to the action that might be taken during and after a disaster. An investment in this article alone could help to save a collection, should the unthinkable occur.

The preface to the series promises another five volumes, covering other significant aspects of museum studies. Let us hope that they are as interesting and useful as this little book, which is a good example of where the sum of the whole is greater than the constituent parts, no matter how good those parts are. For institutions lacking the luxury of access to long runs of journals it is a must, though it is hardly less valuable for those who, like myself, can never find the right article when it is needed.

Book reviewed by Graeme Gardiner, founder of the European Art Conservation Trust and professional conservator based in London.

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Technology update

The publishers of multimedia cultural tools are shifting their policy emphasis. Doing what the other media did at the outset, they are now concentrating their activities on the production of encyclopedias until such time as a *raison d'être* is found for multimedia writing. This change in multimedia production is motivated by a desire to make products that will satisfy a wider public and lead to lasting demand. Encyclopedic compilation is thus able to serve a variety of purposes, and heritage data banks are being used to fulfil its various objectives. On-line and CD-ROM databases are the tools for the intelligent dissemination of heritage information to satisfy the needs of professionals, researchers and the general public.

CD-ROM

Data compilation is considered to constitute creative work over which the author enjoys copyright. Given that the quality of the research engine can be either detrimental or useful to the data being processed, it becomes obvious that one should encourage those people whose intelligence gives meaning to what would otherwise be a mere juxtaposing of ideas. The problem of tracking down and gathering information in support of a thesis is one with which researchers are familiar. The work is considerably more difficult without a research engine to locate such information. With it the user can start out with a specific research subject and widen its scope in the light of the questions hinted at by the responses to his or her queries.

Such an instrument has already been created by the authors of the *Multimedia Dictionary of Modern and Contemporary Art.*[1] This research engine, created by IDP, provides access to more than 2,500 texts written by specialists. The texts in question concern nothing less than the entirety of the modern and contemporary art world, including artists, groups and movements, and principal magazines, publications and exhibitions. This CD-ROM is excellent not so much because of its actual content, whose value is to the credit of its individual authors, but because of the possibilities for consultation which it offers. Over and above the alphabetical consultation of the texts and their accompanying plates, users can make hypertext queries in full text. Selecting a term from the database, they can access a list showing where and when it is used. If users key in a word of their own choosing, they can state in their query whether they want it to relate to the title or description of the work. They can also make a formal record of their research by saving the required texts in a personal file. The texts can also be sorted and classified under different headings for future reference. In this way, cultural heritage is made available to the general public for effective use based on its requirement.

The Web

This type of illustrated debate is also available on-line, through the Internet for example. The specific features of the Minitel have given France long experience in the dissemination of culture using computerized databases. The demand for such a service, which includes access to the Joconde (fine arts and decorative arts) and Mérimée (historic monuments) databases, came initially from universities and curators. But the Direction des Musées de France very quickly came to realize that 50 per cent of users were individuals. Anxious to provide facilities that

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were better suited to consultation via the Web and to join in similar efforts being made by its European counterparts, it participated in the project to create a network of information servers called 'Aquarelle'. This project, which is supported by the European Commission, promotes multilingualism, encourages international relations within the framework of the G7 and also enables digitalization projects established throughout Europe to be put to practical use. Such a service is of unquestionable value to users who, wherever they may be, can bring together works disseminated in different museums with but a few mouse clicks. The on-line *Guide de l'Internet Culture* (Guide to the Cultural Internet)[2] provides, *inter alia*, access to the major research engines and intelligent agents available on the network. It also provides thematic access to the main Internet sites with cultural content. This availability of access poses problems with regard to reproduction rights, with some people thinking it should remain cost-free, and that the dissemination of the works reduces the risks of plundering and makes them better known. Be that as it may, the quality of the copies that can be made on the Web is not up to the standards required for professional use.

Professional networks

To satisfy this type of demand, Museums On Line[3] is setting up an international network for the dissemination of digital images from public and private collections, with a European consortium of museums, societies of authors, multimedia publishers and innovative firms. The project will serve as a continuation of the RAMA pilot project which lasted from 1992 to 1995 within the framework of the RACE II programme, and which was aimed at opening up museums to telecommunications. The new project, called MENHIR (Multimedia European Network of High Quality Image Registration), has two objectives: to increase the number of digital image data banks and to commercialize the images in different products and sectors. The publishing sector is the natural main target and MENHIR's partners will cater for the needs of both conventional and multimedia publishers as well as those of advertising agencies and all other business concerns desirous of acquiring educational data or other contents for publishing. Three types of service are envisaged to commercialize the images: educational, cultural and general public. To make them available, the project will provide software and a complete range of material for the digitization, identification and dissemination of digital images over the worldwide Internet network, in keeping with both international ISO standards and harmonized European regulations governing intellectual property rights. Purchases will be made using secured bank cards and a service for the assignment of rights will accompany the sale of the images. The software will provide access to 230,000 high-quality digital images and a considerable volume of reproduction-rights sales.

Notes

1. *Dictionnaire multimédia de l'art moderne et contemporain*, Paris, Hazan/Vidéomuséum/RMN/Akal, 1996.

2. Internet address: http/www.culture.fr/culture/autserv/autserv.htm

3. Museums On Line – E-mail address: ddelouis easynet.fr

Report by Marine Olsson, chief of multimedia projects for a Paris company specializing in business communication, and former technician at the National Centre for Study and Research in Advanced Technologies, Dijon, France.

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Letters

In *Museum International*, No. 192 (Vol. 48, No. 4, 1997) a photograph of an icon, which was stolen on 2 December 1991 from a museum in Minsk, Belarus, is published on the second page. I would like to thank *Museum International* for informing readers of such cases of illicit traffic. However, some errors in the commentary should be pointed out.

First, the island of Crete is Greek. The 'Crete School' consists of well-known painters who worked during the post-Byzantine period of Greek post-medieval history, the most famous representative being Theophanes the Cretan (sixteenth century). Italy had no connection with Byzantine and post-Byzantine icon and wall painting other than the fact that many painters and mosaic artists who worked in Italy contributed great masterpieces to the history of art, such as those in Cefalù (Sicily), dating from the twelfth century, in Ravenna (SS Appolinarius and Vitalius) from the sixth century, etc.

Second, there are four inscriptions on the surface of the icon. Three of them can be seen in the background and one on the edge of the veil. They are written in Greek and, of course, in Greek characters. On the upper part of the icon are four letters, two on the left and two on the right, which are abbreviations of two Greek words meaning 'The Mother of God'. Near Christ's shoulder, on the left, are four other letters which are abbreviations of the two Greek words for Jesus Christ. The main inscription of the icon is painted behind Mary's head, on the left, a Greek word that means 'The Mother of God, who always takes pity on us, mankind'. It is not possible to read the entire inscription on the veil, but the characters are Greek.

It should be noted that the so-called Cyrillic alphabet was created by two monks named Cyril and Methodius who were Greek brothers from Thessaloniki; they are thought to be the missionaries and civilizers of the Slavonic peoples. Their alphabet consists mainly of the characters of the Greek alphabet with some new characters which were necessary for the pronunciation of the Slavonic languages.

In conclusion, the icon is a typical example of the Greek Orthodox post-Byzantine painting tradition, illustrating how the Greek, and the Orthodox cultural and religious tradition in general, expressed the people's and artists' love and faith in 'Panagia', the Saint of Saints, the Mother of God.

Olga Dassiou
Archaeologist and teacher at the Greek Lyceum
Thessaloniki, Greece

Editor's comment: All information contained in the 'Stolen' feature is provided by Interpol on the basis of data received from national authorities.

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