Museum

No 154 (Vol XXXIX, n° 2, 1987)

Permanent exhibitions

museum

Museum is published by the United Nations Educational, Scientific and Cultural Organization in Paris. An international forum (quarterly) of information and reflection on museums of all kinds.

No. 154, 1987

Editor: Marie Josée Thiel
Editorial Assistant: Christine Wilkinson
Design: Georges Servat, George Ducret

Printed in the Netherlands
Smeets Offset (NBI) bv, 's-Hertogenbosch

Editorial correspondence:
The Editor, Museum,
Unesco, 7 place de Fontenoy,
75700 Paris, France

Subscriptions:
Commercial Services Division,
Office of the Unesco Press,
Unesco, 7 place de Fontenoy,
Paris, France
Courier and Periodicals
Division Unesco
1 rue Miollis,
75015 Paris, France

Each issue: 48 F. Subscription rates (4 issues or corresponding double issues per year): 156 F

Erratum
An error found its way into the biographical note on Ian Christie Clark which accompanied his article, 'Illicit Traffic in Cultural Property: Canada Seeks a Bilateral Agreement with the United States', *Museum*, No. 151. McGill University is in Montreal (not Toronto), and indeed it has been there since the end of the eighteenth century.

Permanent exhibitions

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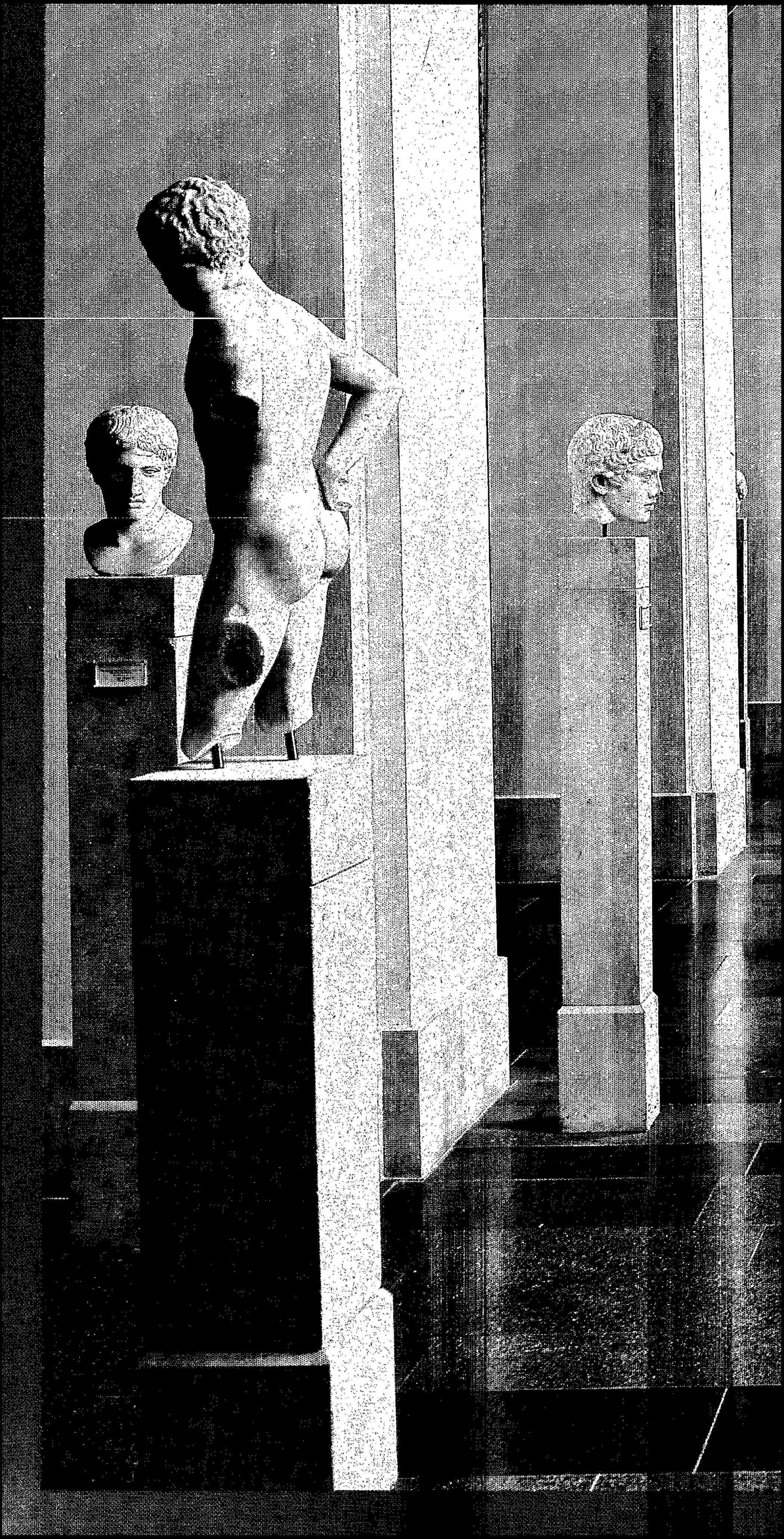
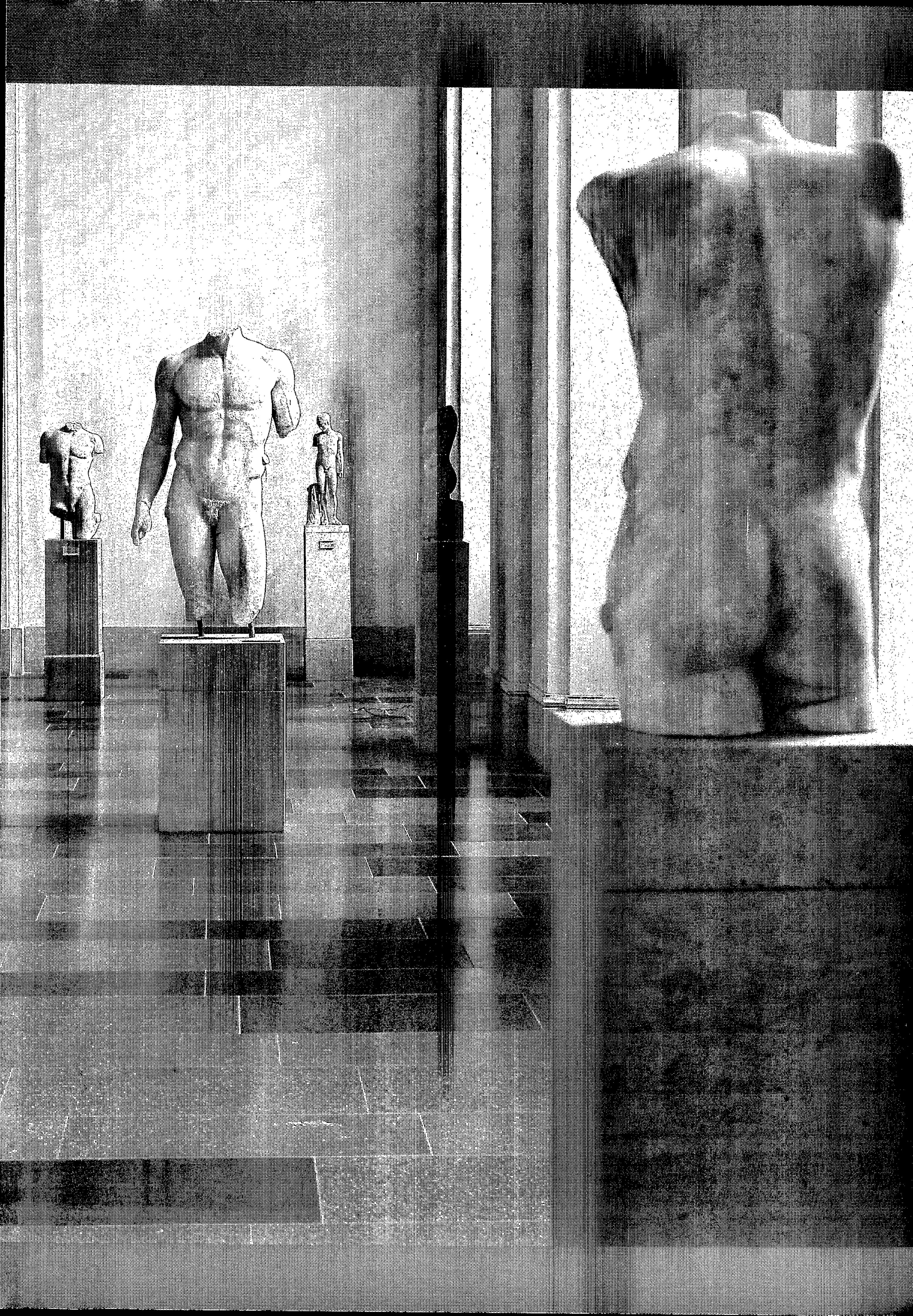
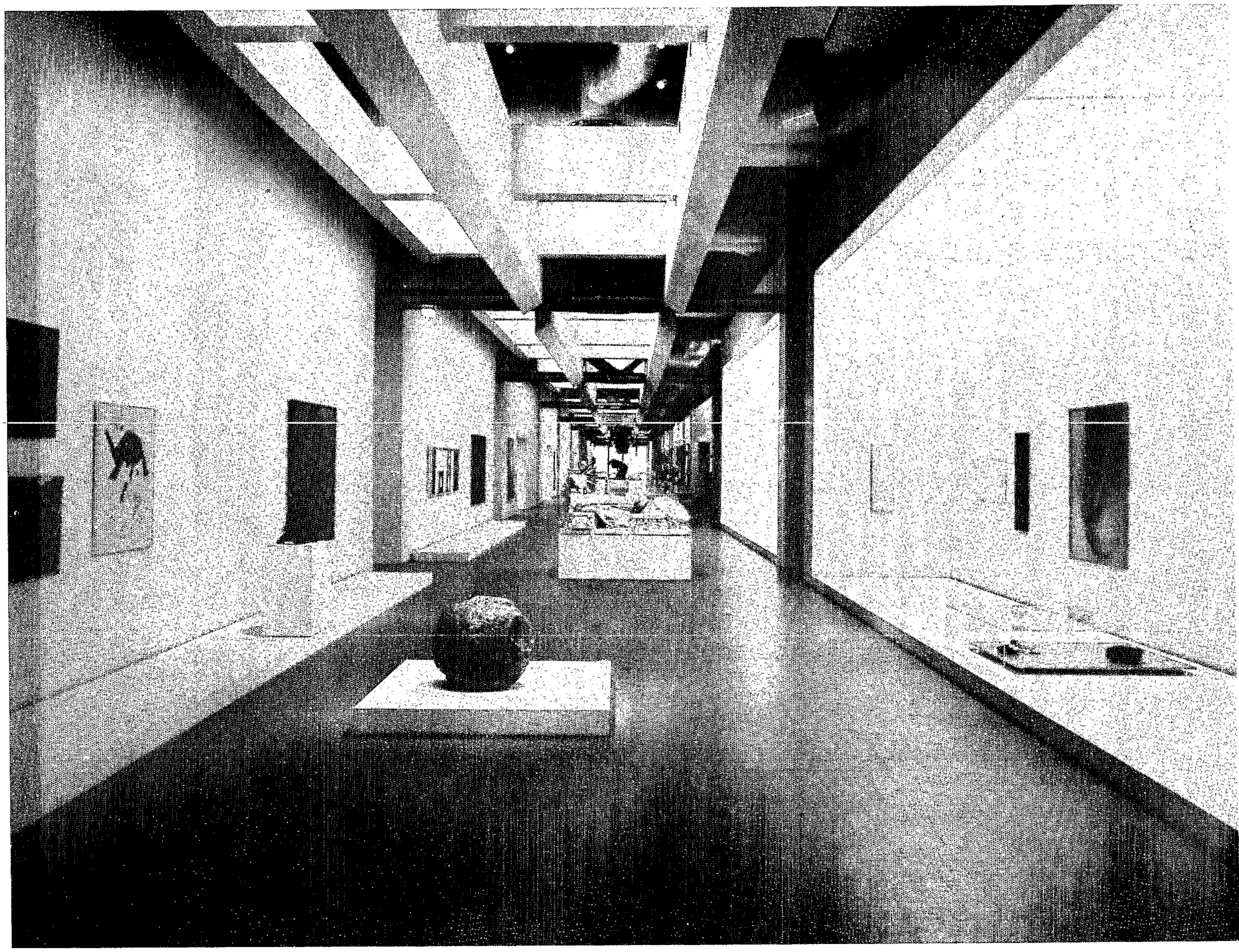
ISSN 0027-3996, *Museum* (Unesco, Paris)
No. 154 (Vol. XXXIX, No. 2, 1987)







Semiotic reading of a museum

Manar Hammad

A space as complex as the one remodelled by Gae Aulenti at the National Museum of Modern Art in Paris cannot be fully analysed semiotically in a few pages. This article, therefore, will not be an attempt to develop a systematic demonstration of the kind one might find in a university context.

First we should say what we mean by 'reading' a space. It is an operation carried out by the visitor in an attempt to take in his or her surroundings. Rather than passive perception it is a dynamic process in which the elements present are compared both to each other and to others which are not present except in the memory of the observer. Without going into the question of whether this process is conscious or unconscious, which is a matter of psychology and does not govern the reading activity of the senses, we may say that this sensing takes place in particular ways.

The first question to arise is the following: does this space communicate a sense of wholeness? Without any hesitation we can say yes; it contrasts with the previous lay-out as a simple organization contrasts with an undivided fabric of wide-ranging elements. The dominant feature of this new design is the 'street' running north and south between the façades of the galleries on one side and a series of diversified spaces on the other, which consist, from the south end, of a rest area, followed by the entrance and services area, the sculpture terrace, the rooms of 'contemporary' art, and a duplex space. The north and south terraces lead to the outside, and have the effect both of ending the street and dispelling the corridor effect it would otherwise have. The overall dimensions contribute to a general sense of wholeness (Fig. 2).

The façade along the east side of the street gives a remarkable effect of visual unity, consisting of a single plane broken at certain intervals by rectangular bays leading to other areas. Behind this vertical plane, crowd circulation patterns are determined by three units: a central area accessible from several points of the street and two end spaces of unequal dimensions which are culs-de-sac, each accessible from one point only. They are the graphic arts room and the northern area situated beyond the fire wall. The latter, rather than being obtrusive, provides a clean break for the exhibition areas.

This brief description perhaps seems rather commonplace but this is inevitable if one attempts to identify the main components and define them in everyday language. The process of making it, however, followed a carefully developed methodology in which the analysis is based on observing the behaviour of the visitors and the various choices at their disposal in terms both of vision and of movement, which are the two factors which determine the cognitive apprehension of space.

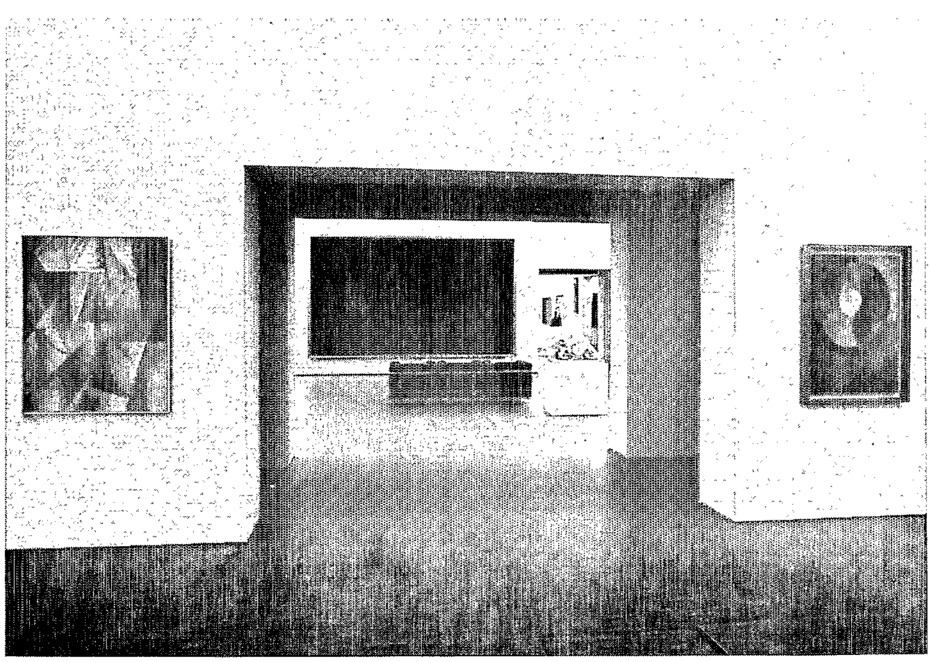
At this point it may be useful to distinguish between the different kinds of visitors, because reading a space and the representation of it which remains in the memory depends on how it is taken in. A visitor who spends only 20 minutes in such a complex space can only take it in as a place by paying attention to the environment rather than the works attached to the walls. Conversely, someone who spends 2 hours moving from picture to picture without taking much notice of the surrounding spaces leaves with no precise idea of the place. The apprehension of space depends on what one does in it, that is, the implicit or explicit reading activities one carries out there. This differences increase as the space becomes more extensive or complex. In our reading we will adopt the viewpoint of a visitor who has come to the museum at least twice and has tried to establish reference points, either so as to find particular paintings or to resume an interrupted visit.

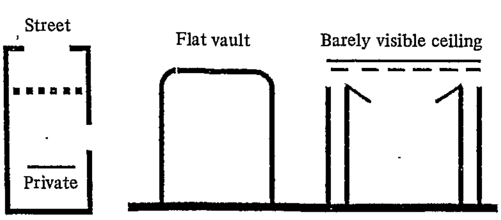
The space described here is that of the fourth floor. The part of the museum situated on the third floor is quite separate, almost as much so as the rest of the building. Indeed, one of the major effects of the new lay-out is that it makes a break between the Pompidou Centre and the National Museum of Modern Art. Unlike the other parts of the centre, this museum has a separate identity, both visually, in terms of lighting, fittings and floorspace and in terms of noise level and crowdedness. The place is also characterized by a certain level of stability, further setting it apart from the variability of the temporary exhibitions.

It is interesting to note that this stability of the collection is reflected by the architecture itself. The walls are thick, continous and almost massive, in some ways reminiscent of traditional architecture. Even the transversal corridors, almost necessitated by the unsupported beams,

2
National Museum of Modern Art, Paris. The 'street' running north and south between the façades of the rooms on one side and a series of varied spaces on the other.

3
Fourth floor north, the Sonia Delaunay Room to the right, seen from the Paris School Room.





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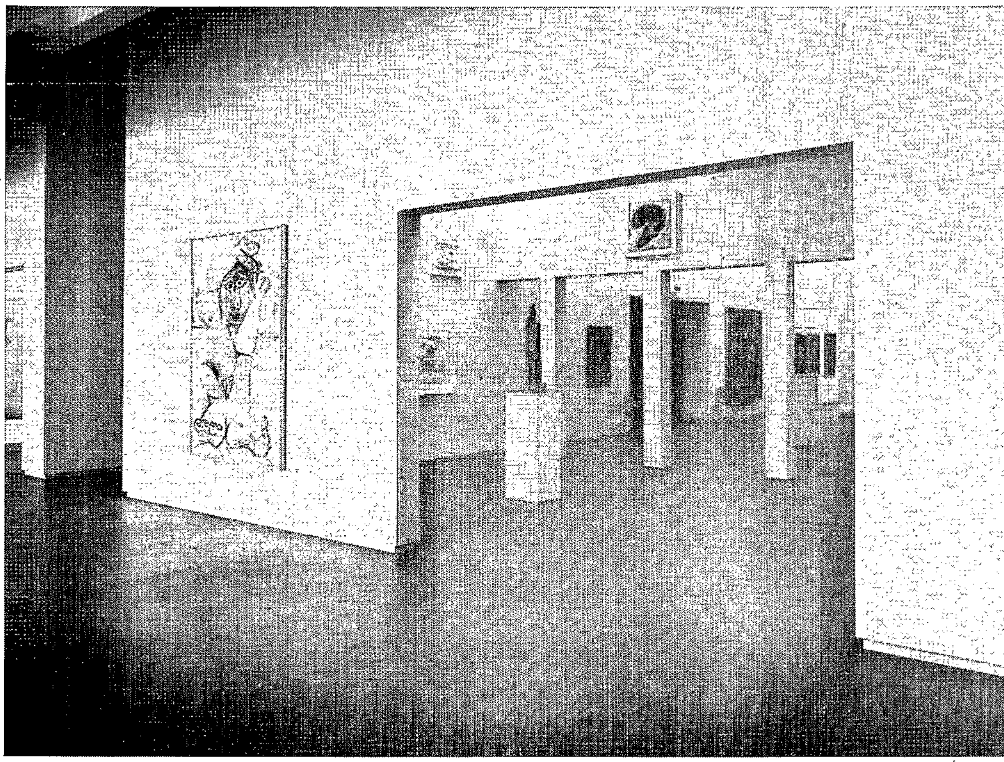
have the appearance of the passages cut into thick walls one might find in ancient buildings (Fig. 3).

The rooms designed for hanging pictures have the proportions of large dwelling spaces which have been converted into museum rooms, of the kind one sees all over Europe where palaces and stately homes are used to exhibit art collections. Even the juncture of walls and ceilings is reminiscent of the flattened vaulting that came in with Renaissance residential architecture. In this case there is no flat part, but the lighting is such that what would normally be visible at this opening is left in shadow and is thus as set apart as the rest of the Pompidou Centre (Fig. 4).

ble from the street (Fig. 5). The overall effect of the set of rooms at the southern end: they are bipolar, arranged between a public façade opening on the west side onto the street but to the east consisting of closed spaces with no windows and no direct acress to the exterior. In the daytime the contrast is particularly striking because the western façade in glass panelled, letting in a flood of natural light (Fig. 6).

What happens to the works of art in such a setting? They undergo certain changes induced by the change of environment. With earlier hanging systems the display panel was narrow and visibly attached to the ceiling. This gave an im-



5
Gallery and entrance to the Duchamp, Villon and Picasso cubism rooms.

Not only the proportions of each room but their arrangement, with one commanding the other, is based on the ancient Palatine system. Rooms adjoin each other as they did in the days before corridors were used; one room is entered only by going through another. This has a double effect. On the one hand it emphasizes the Renaissance palace effect and on the other it adds to the importance of the central throughway of the museum. As we have seen, this is not a passage but more akin to a street, with public access to a series of private spaces; then the further one goes inside these rooms, the further away the street becomes, and one comes to 'private' spaces that are smaller, and quite invisi-

pression of lightness which implied that the exhibition was a temporary matter, and indeed it was a system devised to facilitate an ongoing adaptation of the space to changing needs. Today, although new hanging panels are still attached to ceiling, their relative breadth and massive appearance creates the illusion that they are supported from beneath. Visitors never investigate, to see if this decor is made of wood or concrete. The proportions of the walls, their plainly visible sections and their matt finish have a combined effect of stability and permanence. The visitors thus 'read' that they have come into a museum rather than to a transitory exhibition.

Furthermore, the rooms have the proportions of traditional museum rooms, so that the combinations of panels which make them up reinforce each other in stating that together they constitute a museum, that is, a setting which consecrates the objects placed within it. By a process of spatial rather than verbal expression, then, the statement is made that these objects have the status of valid and recognized works of art. Their value is thus enhanced, and the visitor unschooled in modern art sees them differently for having to take into account the esteem in which they are manifestly held by those who placed them in this way. Semiotically, we may speak of this as a proposed contract between those who communicate by manipulating space and those who do so by visiting it. The visitor is told: this is a value; please see it as such. At least we can say that the new lay-out makes this statement with more emphatic conviction than its predecessor.

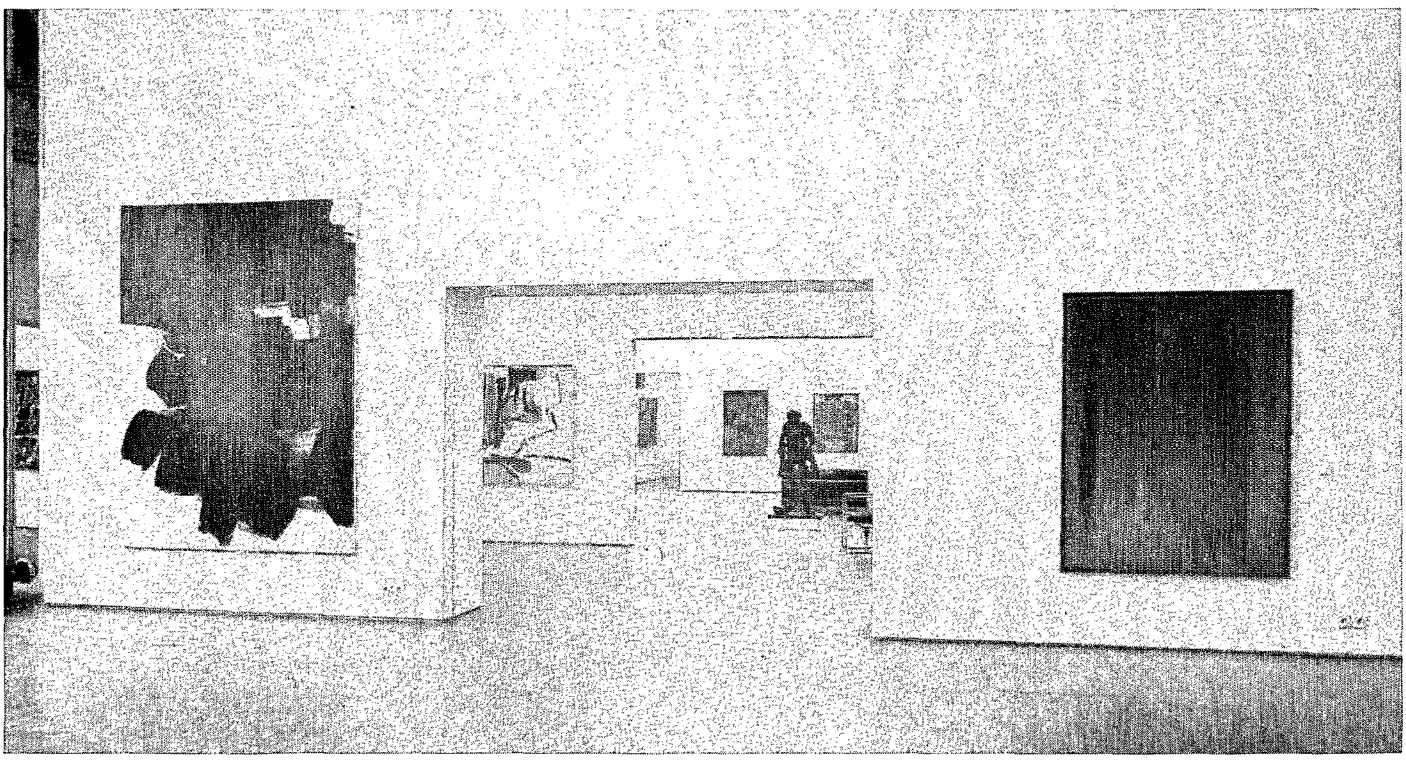
The placement of works of art in space does not end with the configuration of the walls. The relatively self-contained spaces produced by the new walls make it possible to organize the hanging 'by room', which was not easy to achieve in the previous setting. In this museum, like many others, one now finds rooms devoted to a particular artist or movement in art. In some cases the wealth of material has made it possible to place works by the same artists in two rooms each with different dominant colours.

These arrangements have nothing extraordinary about them in themselves because they are commonly used in other places. It is precisely because they bring this museum closer to others that they are mentioned here: they show that the National Museum of Modern Art is no longer set apart from other museums. However, it is not enough to state that arrangements of this kind are well known; we also need to see what effect they have on the works of art themselves.

The setting of a work of art influences it, and thus determines to some extent the way in which it is appreciated. In particular, the grouping of paintings or sculptures by the same artist invites the visitor to see a representative collection of this artist's work, in which each item is placed in a homogeneous context. This enhances one's idea of the personality and development of the artist, but at the expense of an overall view of a given historical period, which was the kind of reading offered by the original lay-out. Without realizing it, the visitor sees according to choices that have been made on his or her behalf by the conservators.

We should also draw attention here to the sense effect produced by the lighting. The new indirect system provides remarkably consistent, restful and pleasant light, eliminating virtually all the reflections which so often bother art lovers. This consistency produces a sense of objectivity: all the works are on an equal footing, and none of them is privileged with a theatrical presentation (unlike the Louvre, for instance, whose Grand Staircase was designed as a setting for the Victory of Samothrace).

Such 'objectivity' is by no means ingenuous. It represents a rationally formed opinion and invites the visitor to adopt the same point of view. Today one sees more and more examples in museums displaying objects from the past of the use of contrasts, highlighting certain objects, or parts of them, and leaving the rest in obscurity. What is looked at or ignored is thus determined by the lighting.



6
Access to a series of rooms from the 'street'.

At best this presents the objects in a hierarchy according to their importance, and at all events aims at emotional effects such as admiration, surprise, a sense of mystery, or fear. These is nothing of this kind in the National Museum of Modern Art. All the rooms are bathed in the same white light, and the variations of colour temperature from room to room may be evident to the expert eye without being noticed by the general visitor who is affected without realizing it by the changing warmth or coolness of the light. The passages are left contrastingly in penumbra, and the northern space with its double height is lighted differently to emphasize the change of scale.

The mechanisms we have chosen here for our 'reading' are all a function of the relations between three terms: the museum itself as an abstract entity expressed by the organization of space; the objects on display; and the visitor who receives these messages and either reinterprets them or simply accepts them as they are. In its use of these mechanisms, the museum is seen as an active, manipulative entity, placing the visitors in a situation in which a particular reading is presented. They are cut off from the rest of the building, the internal architecture encourages them to find the place 'normal' and 'ordinary' for a museum, notwithstanding the 'high tech' machine style of the architecture outside it, and the objects they see in it thus gain in status and value. The way in which works are grouped invites one to consider them as the production of certain artists rather than just as isolated objects, and the homogeneous lighting invites one to adopt a rational, reflective and comparative attitude.

Thus in these operations the status of each factor involved is manipulated: the museum, which becomes more of a museum than ever; the objects on display, whose institutional value is enhanced; and the visitor, who is invited to be a volitional and cognitive subject, to respond rationally rather than just emotionally.

Naturally, the visitor can resist. One simply needs to be energetic, and have a reference model and a universe of values of one's own in order to read and judge for oneself. In other words, all that is called for is competence and self-assurance. This option is reflected, for example, by dissatisfied visitors.

We are not concerned here to offer a value judgement or to recommend that everyone should be made as happy as possible. Within the limits of the reading developed in these few pages, we are concerned only with the mechanisms that come into play.

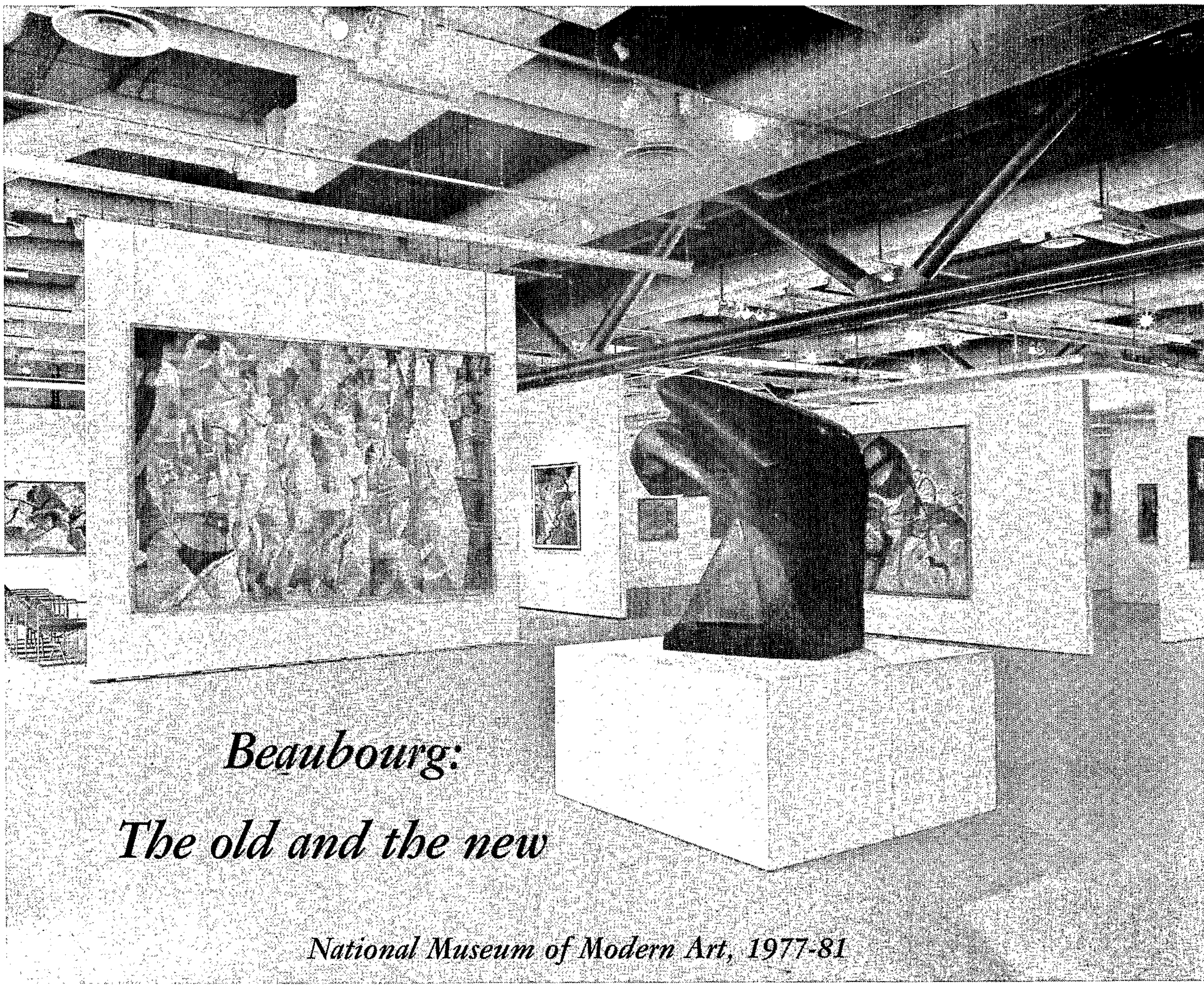
In abstract terms, the tripartite relationship we have identified is analogous to a contract. The museum plays the role of a supplier offering an object of value (modern art) to a customer (the visitor). The substance and the arrangement of this offer expresses a certain idea of what a museum is, what modern art is and what modern art lovers are. If the visitor is receptive he or she can accept this contract, that is to say, this conception of the three terms and the relations between them, in which case it is positively validated. However, if the visitor is not receptive, this suggests that he or she has a different universe of values and uses a different supplier, which in this case we may refer to as the anti-supplier, and the contract is turned down. This may be done by rejecting the status of the objects presented as works of art or by objecting to the museum itself for mistreating these objects.

Irrespective of how it is negotiated, our main point is that the proposal of a contract does not necessitate verbal discourse: museum architecture itself can formulate such a proposal.

Before ending this article, we should mention a particular effect of the phenomena we have been discussing: some visitors evidently came more to see the new lay-out than to look at the works of art. We ourselves were among them, for it must be said that this architecture within an architecture was something to behold as such, while also playing the roles assigned to it by the directors of the Museum. For this particular public, which is well versed semiotically in these matters, the interior architecture is comparable to an instrumentalist or an opera singer: the listener knows the music and the words but listens in each performance to the way in which they are presented. Pleasure in this case results from acceptance of the performer's universe of values, and displeasure from the rejection of it. If it must be made known, we personally appreciate the performances of Gae Aulenti, but there is no substitute for doing your own reading. ■

[*Translated from French*]

7
Third floor, South 1977, Place D: alternating open spaces and closed rooms lined with vellum. The white hanging panel serves here as a frame. Bases and panels break up the hanging pattern, which is designed as a juxtaposition of discrete units. Duchamp-Villon, Delaunay, Kandinsky.



Beaubourg: The old and the new

National Museum of Modern Art, 1977-81

Hélène Lassalle

Curator at the Direction des Musées de France, where she works in the Cultural Action Division. She is also the Secretary General of the International Association of Art Critics (IAAC).

The programme: decompartmentalization as the essence of modernity

In January 1977, a year before the inauguration of the George Pompidou Centre (at that time still called 'Beaubourg'), Pontus Hulten, Director of the National Museum of Modern Art, outlined the principles on which the project for the Centre had been based.

We know today that *strict compartmentalization of art, literature, science and life is an idea which does not belong to our future world,* and that the older institutions are not always able to change ...

Museums will no longer simply be places for preserving items which have lost their individual, social, religious of public function in church, salon or palace, but places where artists come in contact with the public and where the public itself can play a creative role. Where one is closest to creative sensitivity and intention is where it is possible for each individual to participate in the living reality.[1]

The museum is a place of interaction. Not only does it make the different arts communicate but it inverts the respective positions of creation and reception. All the works, past or present, bear the same message of creative stimulus. The public will be an active public. Its approach will be affective and emotional rather than intellectual.

In its design and architecture, Beaubourg is a unique and original attempt to combine the different aspects of modern culture and to make them accessible in one and the same place ... The memory of a visit to Beaubourg will include not only the impression left by certain works, such as a painting or a book or an exhibition, but also the interplay of reflections between experiences, contradictions and flashes of inspiration as one moves from recent works which sometimes shock or are difficult to understand, to older and better known works.[2]

The initial programme of the whole cultural centre building, of which the museum — designed to house and exhibit a permanent collection of works of art in only a part — had versatility,

1. Pontus Hulten, *Toutes les Muses*, booklet published by the Département des Arts Plastiques de Beaubourg, Paris, 1975, reproduced in *Beaubourg et le musée de demain*, L'ARC, No. 63, 4th quarter 1975.
2. Ibid.

permeability, mobility and transition as its keynotes. The emphasis was on the public. The private areas, offices, storerooms and workshops of the museum were given relatively little space. 'The museum must be *opened up*.'

Open spaces

Open spaces for an open culture — this is indeed the meaning of the architectural 'message'. Externally, the building opens on to the city, via a piazza on the one side and a street on the other. Its accessibility is deliberately emphasized, with glass façades in which some panels are mobile, with no special indication that they are doors. The piazza and the inner forum intercommunicate. Similarly, inside the centre, the entrance to the museum on the third floor had nothing to distinguish it from the entrances to other sectors, whether public and open or administrative and closed. The only indication was one sign among others. What a contrast to the reverential overtones of the monumental 'Temple Esplanade' in I. M. Pei's East Wing of the National Gallery of Art in Washington! At Beaubourg, hierarchy and value are not to be created by setting things apart. On the contrary, the value emphasized is the very absence of hierarchy. Everything is freely accessible, including the shelves of the Bibliothèque Publique d'Information (BPI, the Public Information Library). Each sector of the centre is like a microcosm of the whole, in which the same criteria of accessibility and familiarity prevail.

Flowing space

In the museum itself, non-differentiation was the main feature. The screens for displaying the paintings were suspended low under the ceiling. The floor and ceiling stretched out as continuous surfaces running the whole length of the building, with no intermediate pillars and walls and apparently supported only at each corner. This architectural 'text' described the concept of 'flowing space' developed by Frank Lloyd Wright and then by Louis Kahn. In terms of expression, there were no semantics to distinguish public areas from museum areas, or connecting areas from exhibition areas. The syntax was composed of lightweight, temporary elements made of thin, mobile, easily handled panels between which one might catch glimpses of other spaces and openings. The internal architecture was an apparently easily adjustable adjunct, fitting into the shell designed by Richard Rogers and Renzo Piano, which remains visible. Floors, ceilings and lighting were identical to those in the other parts of the Centre, using the same means and materials. On the floor, easily removable tiles, giving access to the electrical circuits beneath, were covered with grey carpeting like the rest of the Centre. (Unfortunately they were too thin, and did not stand up to the moving of heavy exhibits.)

The museum was illuminated mainly by daylight which naturally varied according to the time of day and the season. Towards the centre of the floor where the picture screens tended to obscure the light, spotlights were placed at regular intervals in the ceiling. In the museum, as in other parts of the Centre, the light was diffuse, general, and directed from above. In fact, the lighting was designed for the building as a whole and the museum, which came later, used the same system. Along the whole ceiling ran coloured pipes and chromium girders, a feature which was repeated throughout the Centre. It echoed the metaphor of the building as a whole which, through an intermingling of languages, made use of the technical vocabulary of the factory — commonly regarded as having no cultural value — and transformed it into a symbol of modern aesthetics. Through the choice of the 'high tech' style, the architecture of Rogers and Piano gave shape and expression to the cultural ideology of the designers of the Pompidou Centre. Corresponding to the prime value of a non-hierarchical system, there is a reversal of aesthetic codes. At a time when works of art were being exhibited in factories, industrial design became a part of culture by providing a setting for the museum's works of art.[3] But traditionally, the framework is of secondary importance in relation to the object displayed within it, whereas in Beaubourg the deliberate emphasis on the graphic and symbolic qualities of the setting (this industrial 'flowing space') dominated the particular and individual effect of the museum exhibit. In Beaubourg, what gave the impression of a museum was the interplay of the white panels behind the works of art, arranged so as to indicate the route to be taken by the visitor.

A non-hierarchical display

The museum visit began on the third

3. The same ideal of daily contact and familiarity with the arts, of bringing art into daily life, led to the creation of the cultural centres in the 1960s with their very characteristic architecture (André Wogensky, Maison de la Culture de Grenoble, 1966-1968).

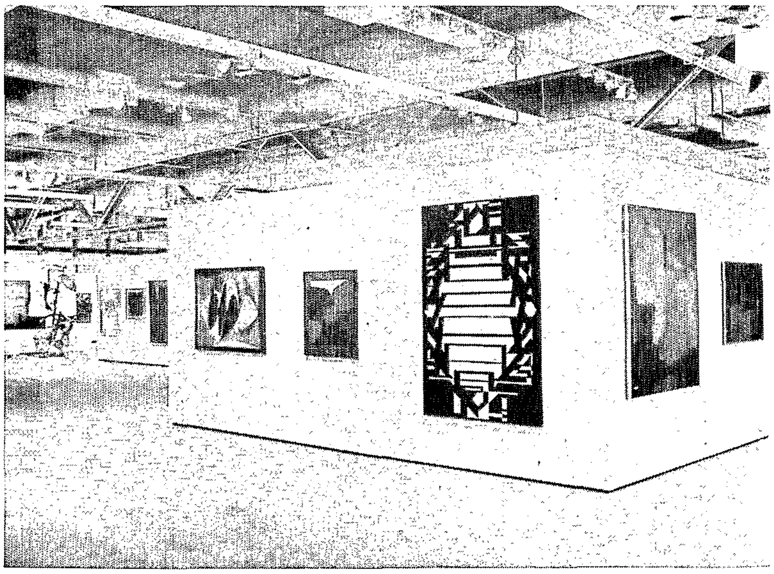
floor, of which it occupied half the surface area, the other half being set aside for the BPI. The museum entrance was a neutral area bordered on the left by the 'wall' of the Graphic Art Room and at the back by the Kandinsky Room. Access to the collection was through a side door on the right, beside the museum bookstand. There was no particular inducement to go in and no special sign. Visitors had to follow a winding path, as if they were going through a maze. The special character of the place, with its unusual setting and the view over the city, was outstanding, and an attraction in itself. The works could only be apprehended in their architectural setting. Each object was seen as part of a series of related objects. Similarly, each work could only be properly presented as a point in the whole series of exhibits. The museum offered a new way of looking at things. The former National Museum of Modern Art, in the Palais de Tokyo, like most other museums in the world, was divided into periods, schools and great masters followed by disciples or lesser-known artists, placing emphasis on the masterpieces. This 'classical' scansion proceeds according to categories of 'style' and 'influence'. It highlights contrasts and analogies, divisions and associations. It provides the visitor with a hierarchy, and a ready-made system of appreciation.

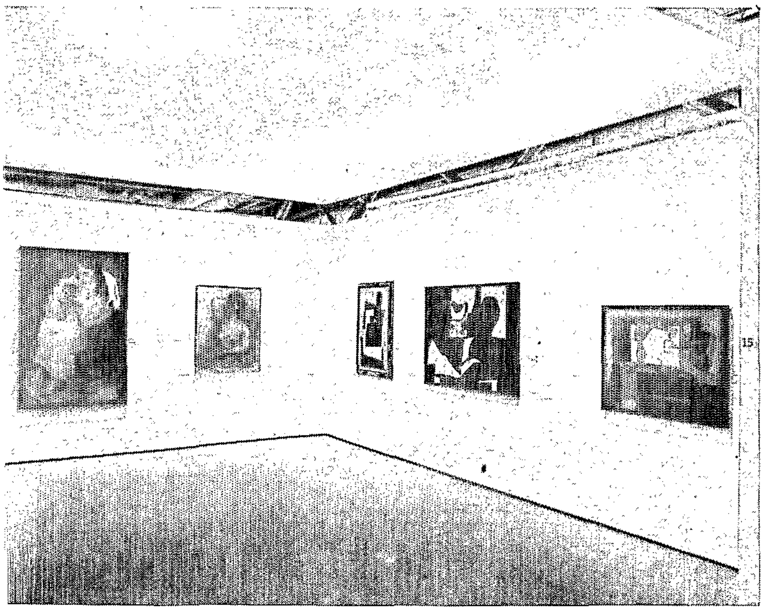
Pontus Hulten's approach to hanging was aimed at breaking up this system. The works were arranged according to date of production. Picasso's works were scattered over two floors, a little-known Hungarian artist was placed beside Derain or Marquet. Visitors selected what they wanted to see, and as in the annual 'Salons', styles, genres and personalities intermingled. It was an expression of creativity in its day-to-day exuberance. Originally the exhibits were displayed in strict chronological order, year by year, so that the work of an artist regarded as secondrate or atypical might be prominently exhibited, whereas before, in the traditional presentation, such works would always have been relegated to the fringe or stacked away in the storerooms. The art of the past was to be grasped in the same way as living art is wrestled with, without being previously labelled or marked. Art was presented as a continuum, like space and time, like freedom. Visitors could select what they liked without having to consider established names or values, and they could have the pleasure of making new discoveries. As regards the works displayed, familiarity was emphasized more than respect. Art was an expression of a period with all its diversity and conflicts, and not the concern of isolated and extraordinary personalities, labelled by art critics or historians. A collective view of art was offered, evoking the tone of a period, rather than an individualized view, dwelling on the work of a particular person.

Linear and fragmented patterns

The chronology unwound like a thread through the pathways of a maze, passing through a series of interconnected squares, often giving onto the glass façades. How could a linear scheme be fitted into a fragmented area? The task was made more difficult by the constraints imposed by donations and the need for a certain amount of visual harmony or clarity in a display which would otherwise have been too chaotic, and this called for a number of rearrangements (Fig. 7). Thus another feature of the circuit was a series of almost enclosed areas covered by a light canopy (Figs. 8-9), each containing the works of one artist. These included the complete works of Henri

8
The role of velum is to cover, enclose and insulate. Velum brings back the theme of segmentation in the space continuum of the labyrinth. The 'cubes' arranged like this have the effect of grouping and drawing items together. They make it possible to present sets of items. Exterior view: Fourth floor, North: Paris in the 1950s, geometrical abstract art, Vasarély and Poliakoff; in the background, the American Stankiewitz.





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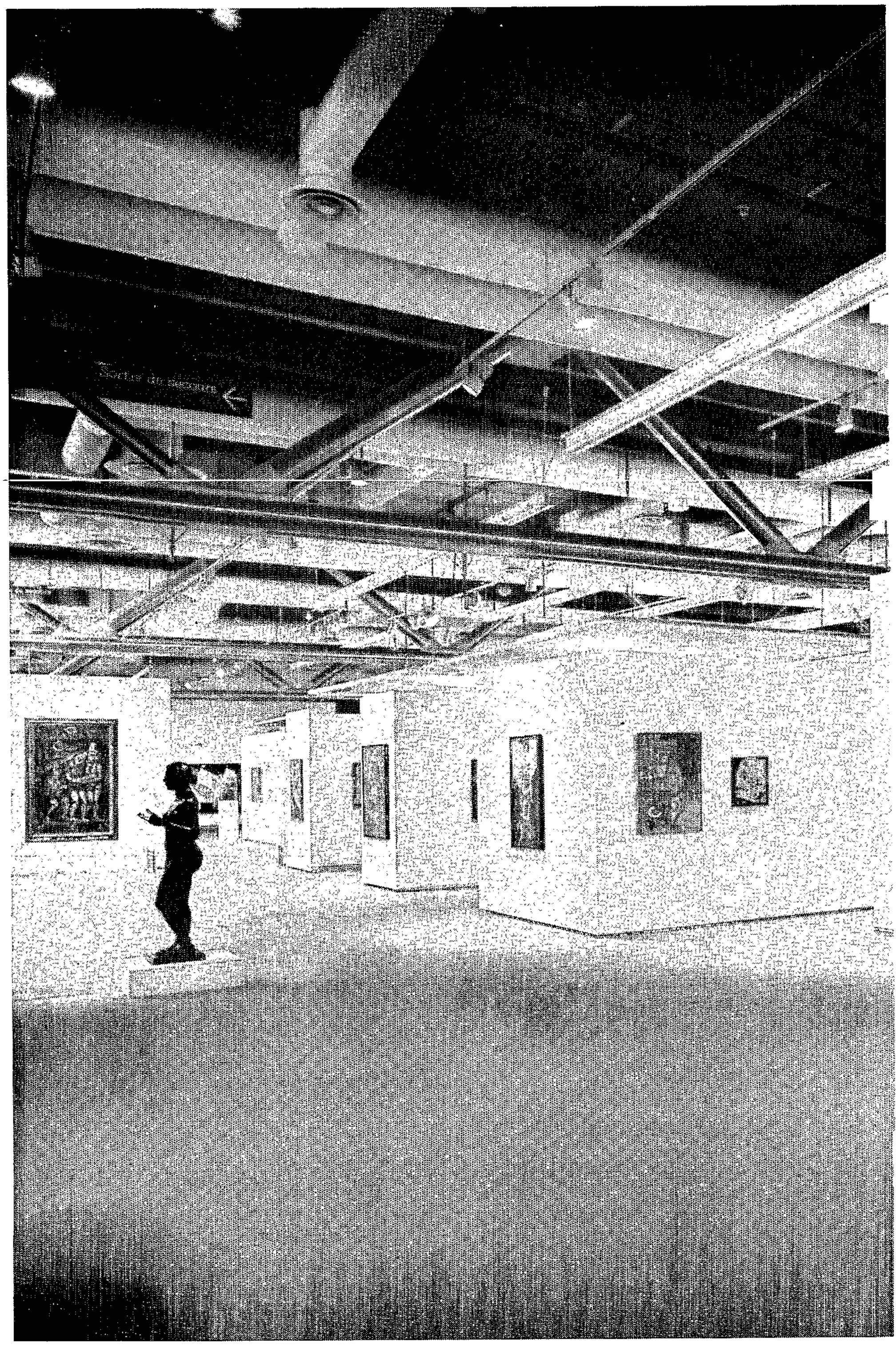
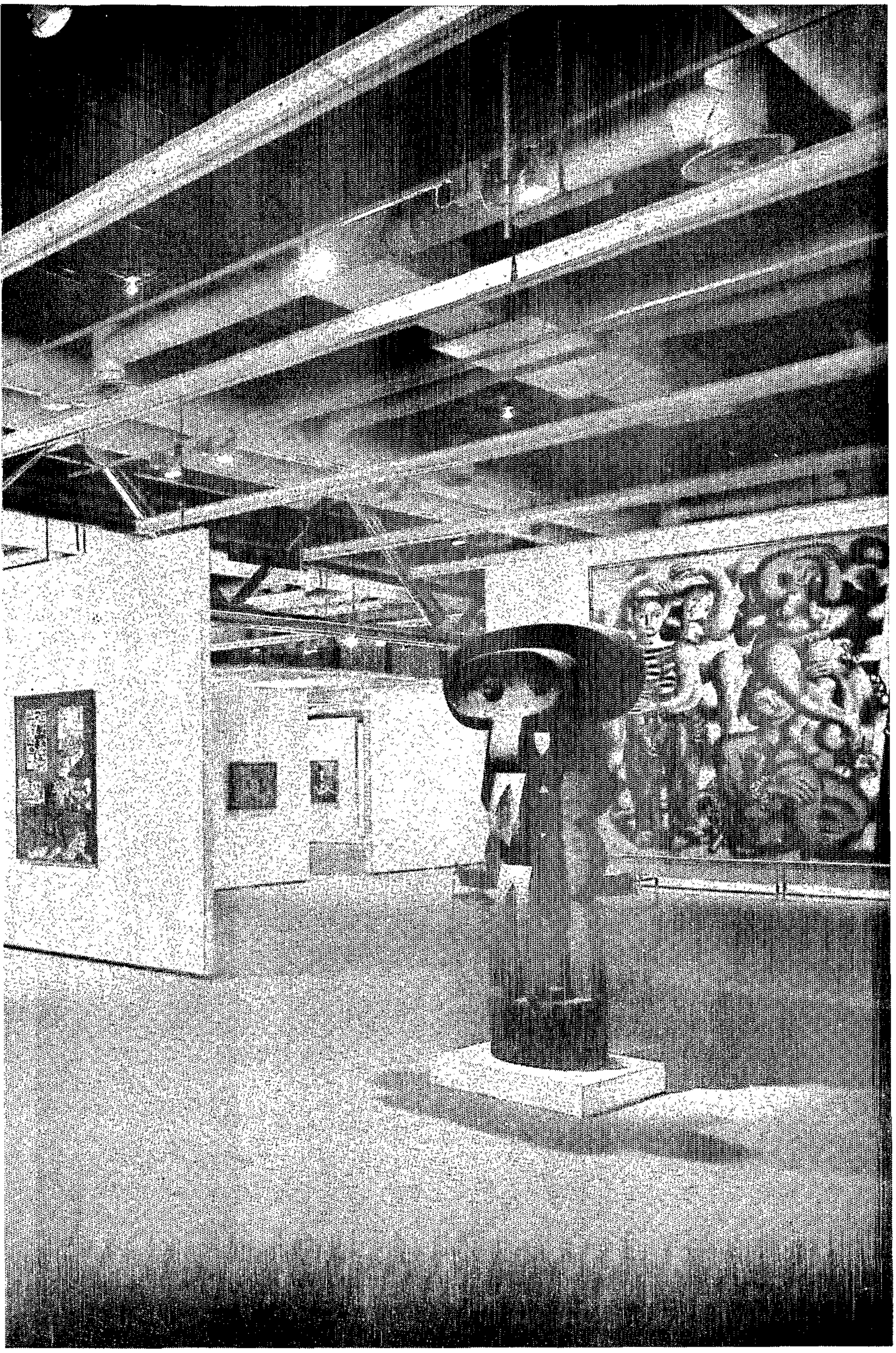
Interior view: Fourth floor, South, Room 15, Picasso.



Gaudier-Brzeska, 1891-1915, works by Robert and Sonia Delaunay and Frantizek Kupka on the third floor, the 'lyrical' works, up to 1921, of Kandinsky on the third floor, geometric works, dating from 1922 and his arrival at the Bauhaus, on the fourth floor; Pevsner, Kemeny and Gonzalez were also featured on the fourth floor. Elsewhere, related works were exhibited, as in the case of German Expressionism, of which there were few examples in the collections. Small paintings of this school were displayed, to counter-balance the French 'Fauves', in a side room at the beginning of the third-floor circuit, parallel to a similar area exhibiting small canvases by Manguin, Marquet, Matisse and Derain. This formed a kind of detour which the visitor could avoid if he or she wanted to, and pass on directly from the leading Fauves to the Cubists in the principal display area. On the south side of the fourth floor, the Constructivists, Dadaists and Surrealists also had their own sections, slightly upsetting the chronological order, which could not be maintained absolutely.

In addition, the size of the works had to be taken into account. The large canvases were each hung on separate panels. The white surface around the painting isolated it, like a frame cut out of space. This arrangement re-introduced an element of theatrical monumentality, removing the painting from the rhythm of a strictly historical sequence. The same applied to a number of large sculptures, such as *The Shepherd of the Clouds* by Hans Arp, which stood out against a background of sky and rooftops beyond the south terrace. The object stood in its own space, with its own context. Architectural requirements intervened, however, diminishing this autonomy. On the third floor, for instance, the *Tribute to Blériot* by Robert Delaunay was indeed displayed on a separate screen, alone at the foot of the escalator leading to the fourth floor, at some distance from the Delaunay Room, and visitors going down to the exit on the third floor ought to have had a spectacular plunging view of the work. But if they stepped back from it at any point, their view was partially obscured by a perpendicular screen at the side of the escalator to the third floor, so that although it was monumental in its setting, the canvas could only be viewed from close up, in a fragmented way, as the visitor moved past it.

The linear pattern became more and more irregular as numerous and frequent loans to outside exhibitions were made. In order to replace the paintings out on loan with others from the reserve stock, it was soon decided to establish a chronological progression by areas rather than a linear sequence, and by periods of about a decade rather than a year, thus extending the system by which several years had already been grouped together in the small side rooms. Was it possible at this stage for the ordinary visitor to grasp the way in which the paintings were hung (Fig. 10)? They were arranged roughly by period, stylistic affinity or groups of artists, isolating a few personalities here and there, less for their importance in history than for circumstantial reasons. These reasons were not necessarily known by the public, being related simply to such factors as the number of works



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Fourth floor, South: Rationalization of space, velum-covered rooms giving onto an avenue. Sketch of segmentation by periods and artists. On the left: Maillol, Rouault; on the right, Lipchitz, Léger and the Matisse paintings.

available by one artist, or a long-term loan by Nina Kandinsky, or by Dorothea Tanning for Max Ernst, or a donation of the kind made by Gaudier-Brzeska which laid down specific conditions of exhibition. Meanwhile neither Fernand Léger nor Picasso nor Braque were treated in the same way, and Laurens was almost absent, because the whole donation of his works had remained at the Palais de Tokyo. Gaps and restrictions were a serious hindrance to maintaining historical objectivity and upholding the principle of the Salon, which was everything for everyone.

Exploded art

It was in recent years that the need to devise a new way of exhibiting works became most pressing. With increasingly rapid changes in the art scene and the constantly growing number of new acquisitions, the rotation of works speeded up much more than in the other parts of the musem. In addition, the presentation had become deliberately more disordered, to reflect the wide variety of modes of expression and techniques used by contemporary artists. Many of the formats used were non-standard. The double height of the last bay, arranged as a mezzanine, had been designed for these works but inspired some visitors on the fifth floor to acts of vandalim, such as leaning over the 'well' and dropping things down it, which damaged a number of works. In this area particularly, contemporary sculpture with its composite forms and materials was undecipherable. It clashed with the too highly coloured, over-obtrusive pipes and tubes and with the view of the city through the framework of the façade; it dissolved in the complicated surrounding forms. It was impossible, for example, to exhibit any of Calder's works here. The spindly figures of Giacommetti needed to be set against a white background to be seen properly. It was impossible to walk round the works.

The redesigning of the north side of the fourth floor

The new lay-out of the north side of the fourth floor was opened to the public in April 1980. In essence it had remained unchanged. There was free circulation across the whole floor from north to south, with a dividing line formed by the firebreak in the building, which coincided with the historical division made by the Second World War. This structure was modified, however, by a new syntax. Over the years a change had taken place. The area of freedom, which had been so highly valued initially, was now seen as a problem, as it competed with the works of art and distracted the attention of the visitor. Right from the start concessions had had to be made to historical periods, and the canopies and closed-off side rooms were makeshift ways of introducing segmentation and counteracting the holistic effect by isolating small restricted areas within the general 'flowing space'.

On the north side of the fourth floor, the new syntax maintained the flowing space. There were no walls or canopies but the screens on which the paintings were hung were massive, reaching almost to the roof and preventing the eye from straying beyond them. The works of art stood out against a blank white surface which tended to counteract the complexity of the architecture above (Figs. 11-12). The division into small sections was abandoned in favour of vast open areas. A low white dais at ground level separated the small Giacomettis from the grey carpeting. Each work was given its own space so that it could be seen at the right distance. An entire aisle was set aside to allow *Shining forth* by Barnett Newman to have its full effect. The side panels of the same aisle were devoted exclusively to American Abstract Expressionism, with pieces by Tobey, Rothko, Pollock and Sam Francis. For the recent periods, works were grouped according to trends. The work of art was thus reinstated with its full value, through the space allocated to it, and through its placement according to aesthetic or historical criteria such as the 'family' it belongs to, the influences it shows its formal relationships, its place of creation or its treatment of certain themes.

Furthermore, the new syntax was aimed at establishing order. It provided visual separations and links between periods or groups in large, clearly delimited spaces which enhanced the concentration and understanding of the visitor. The visitor's cognitive capacity was reasserted, at the expense of the playful wandering originally encouraged, when the Centre was founded. This ability, which is appealed to here in the same way as it is in traditional museums, has to be acquired by the visitor after the mind and the senses are conditioned by the internal spatial arrangement. The redesigning of the north side of the fourth floor reflected in material terms a shift of values from recreational to cognitive activity, and from the architectural setting to the work of art itself.

The general structure was, however, preserved; no space was really closed in, the architectural shell was still clearly visible, and the spatial unity was maintained. Part of the last section rises vertically through two floors, making use of the fifth floor mezzanine. Although some of the windows were obscured by the display screens, part of the glass walls remained open, looking out over the city. This section was devoted to living art. As value judgements were not yet established by time or retroactive reconstruction of relationships, presentation here was wisely confined to providing information rather than bestowing recognition. The works were intermingled, and here again the idea of familiarity is linked to the permeability of spaces and external-internal interactions. The lesson from the past was incorporated in Gae Aulenti's new design. Dominique Bozo and the curators chose to leave the most modern section free, retaining the mobile display screens. Two types of museography are

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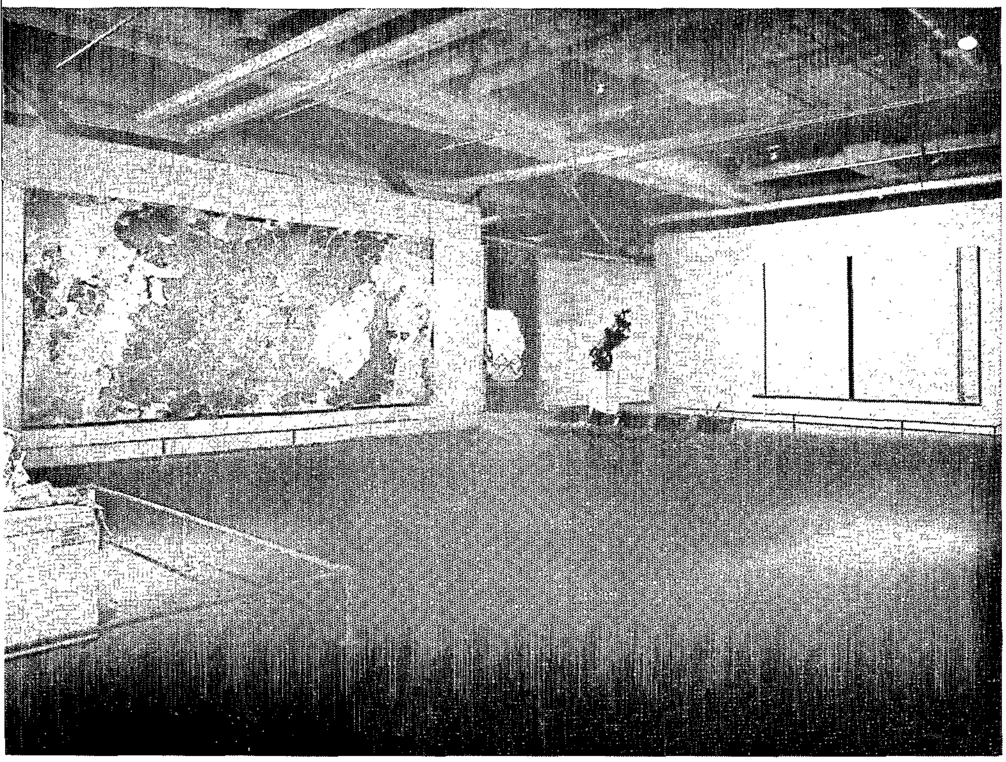
Fourth floor, North, 1977, Place S. Broken up space, diffused and focused lighting. The technical structure of the building is clearly visible. Sam Francis, Stankiewitz. In the background: Dewasme.



12
Fourth floor, North, the new installation of 1981. The panels hide the beams, the space has been closed to form an American unit and light is reinforced, focusing on each work of art. The segmentation is both geographical and aesthetic and the visitor's attention is not diverted to other spaces and objects. Oldenberg at far left, Sam Francis, Stankiewitz, Barnette Newman.

therefore to be found side by side in the Museum of Modern Art at the Pompidou Centre, namely, the transformed fourth floor, now reserved entirely for the 'historical' collection up to the end of the 1960s, and the free, 'fluid' museography inherited from the previous installation, which occupies the third floor, half of which is set aside for the works of young artists. The entrance has changed floors and is now on the upper floor, at the 'historical' level.

Baroque and classical

According to the original plan, the building by Rogers and Piano was designed inside and out on the same principles. The effect produced was one of wholeness, whether we look at the Rue du Renard façade with its endless repetition of pipes, or at the piazza side, organized theatrically around a single motif, the escalator. The principle of unity is one of the fundamental concepts laid down by Wölfflin to characterize baroque art,[4] and consists of a general movement within which each component part is governed by the organization of the whole. In the Pompidou Centre, one single movement creates unity among the different parts of the building, a single inspiration links the different levels, inside and out, and there is the same interplay of complex forms. The same principle of globality governs the internal spatial arrangement of the museum, with the 'flowing space' we have described.

Wölfflin's other concepts would be just as valid. His idea of '*picturalité*' for instance, is prominent both externally in the east façade (Rue du Renard) and internally, so much so that it competes with the works of art. *Picturalité* was also seen in the contrasts of natural lights and shades, which varied with the time of day and season of the year, reflecting a whole range of colours, and the streaks of light from the slatted blinds like one picture superimposed on another, and the variations of artificial wall and ceiling lights arranged in different ways depending on the position of the picture screens. There were so many variations to confuse and intrigue the visitor.

Depth was also applied to the façades, where the overhanging sections on the sides and back of the building created areas of shadow between the pipes, and to the inside of the museum, whose original design made constant use of concealments and disclosures. The *open form* principle of this transparant building, suspended only by its four corners and wide open to the surrounding city, was also reflected inside the museum, as originally arranged, by the free association of spaces, some vast, some restricted, which were created by the variable modulations of the mobile screens. The glass front 'absorbed' the city and the optical effects made the surrounding rooftops merge with the works of art. The relative *obscurity*, the last in this series of Wölfflin's concepts, is also seen in illegibility to be found in parts of the building. The works it houses are discovered, as though by chance, by surprise, as the visitors follow their winding itinerary.

Beaubourg is so baroque that it even borrows from other contexts, annexing non-cultural symbols, such as industrial forms, and resymbolizing them with monumental and theatrical panache, right in the heart of Paris.

In contrast to this, if we sustain the baroque analogy, Gae Aulenti's new design reflects some opposites to Wölfflin's concepts: it is linear as opposed to pictorial, it uses explicit and clearly identifiable plants, it presents closed forms with bright and consistent lighting, it is a juxtaposition of parts clearly differentiated in their multiplicity, each conserving its autonomy. Indeed, Gae Aulenti's re-compartmentalization is reminiscent of classical art, which is in keeping with his belief that 'Strong architecture must be counterbalanced by strong contrast', it is the opposite extreme. Thus we find the classical within the baroque, and move towards a new type of museum, another concept of art and culture. ■

[*Translated from French*]

4. Heinrich Wölfflin, *Principles of Art History, the Problem of Development of Style in Later Art*, 1929 (English translation: London, G. Bell & Sons, 1932).

A new art museum at Schaffhausen

Christel Sauer-Raussmüller

Born in Hagen, Federal Republic of Germany, and lives in Zürich and Schaffhausen, Switzerland. She was educated in Düsseldorf and studied the history of art at the Universities of Heidelberg, Bonn and Paris. She has worked in collaboration with the Swiss artist Urs Raussmüller since 1977 on setting up the INK Zürich and, since 1983, the Hallen für Neue Kunst. Among her publications on contemporary art are *Werke aus der Sammlung Crex*, Zürich, 1978-80; *Die Sammlung FER*, Kohl, 1983; *Internationale Neue Kunst aus der Sammlung MGB*, Zürich, 1984. Member of ICOM since 1979.

The name *Hallen für Neue Kunst* (contemporary art workshop) clearly sets out the new museum's programme: the workshops of a disused textile factory have been converted to meet the special needs of a new form of artistic expression. The aim was to create a balanced relationship between the works of art and the space surrounding them that would enable them to be shown to the best effect. The idea was not to create a receptacle into which one could cram as much as possible, but to use a given architectural context to present a specific artistic movement in concentrated form. The Hallen für Neue Kunst were officially opened in May 1984. In the permanent exhibition of a group of international works of art from the 1960s and 1970s, occupying a surface area of 5,000 m², the following artists are represented: Carl Andre, Joseph Beuys, Donald Judd, Yannis Kounellis, Sol LeWitt, Richard Long, Robert Mangold, Mario Merz, Bruce Nauman, Robert Rymann and Lawrence Weiner. Here, the museum and the art works it contains form a whole, and any discussion of the Hallen für Neue Kunst necessarily refers essentially to this unity. We have deliberately chosen to begin with the art component.

During the 1960s, art underwent a fundamental change both in Europe and in the United States. Although painting and sculpture of a traditional type continued, a movement emerged alongside them which made a clean sweep of all conventions. Art became three-dimensional without being classifiable as sculpture; it was pictorial without being painting or an illusory representation. Artists such as Judd, LeWitt, Andre, Beuys, Kounellis and Merz 'constructed' their works from everyday materials which in most cases had no previous association with art, installed them (without pedestals or frames, as these elements confer aura and distance) on a level with the spectator, and gave them a spiritual and physical dimension that could only be appreciated by viewers who were prepared to take time. For the first time in the history of art, the work of art achieved the neutrality of a real situation, but without calling art as such into question. On the contrary, it was the firm belief in the importance of art in contemporary society that inspired the radical attempts to renew it by transcending conventional forms of perception. The term 'installation', which is still widely used today to designate these works, is significant and indicative of the reception given to this new art form. More commercial labels were rapidly found, however, for the different styles: minimal art, arte povera, material art, serial art, etc.

It soon becomes clear, however, that whatever the approach, this renewal of art is based on fundamental principles: for European artists, who see art as not just a component but a reflection of life and — to quote Beuys — as a way of achieving the liberation that leads to individuality, these are the basic conditions governing the existence of the individual and society, whereas for American and particularly New York artists they are the basic attributes of the work of art itself. The result of this concern with basic principles was in both cases a realization that the function of a work of art was to initiate a process in the spectator. This basic insight implied the lifting of all restrictions on art in order to allow its complete freedom to fulfil its aesthetic and spiritual potential. A work of art could now take any form whatsever, be created from any kind of material, not necessarily by the artist alone, and was no longer obliged to justify its existence by reference to particular stylistic or thematic criteria. All that counted was the intensity and quality of the idea con-

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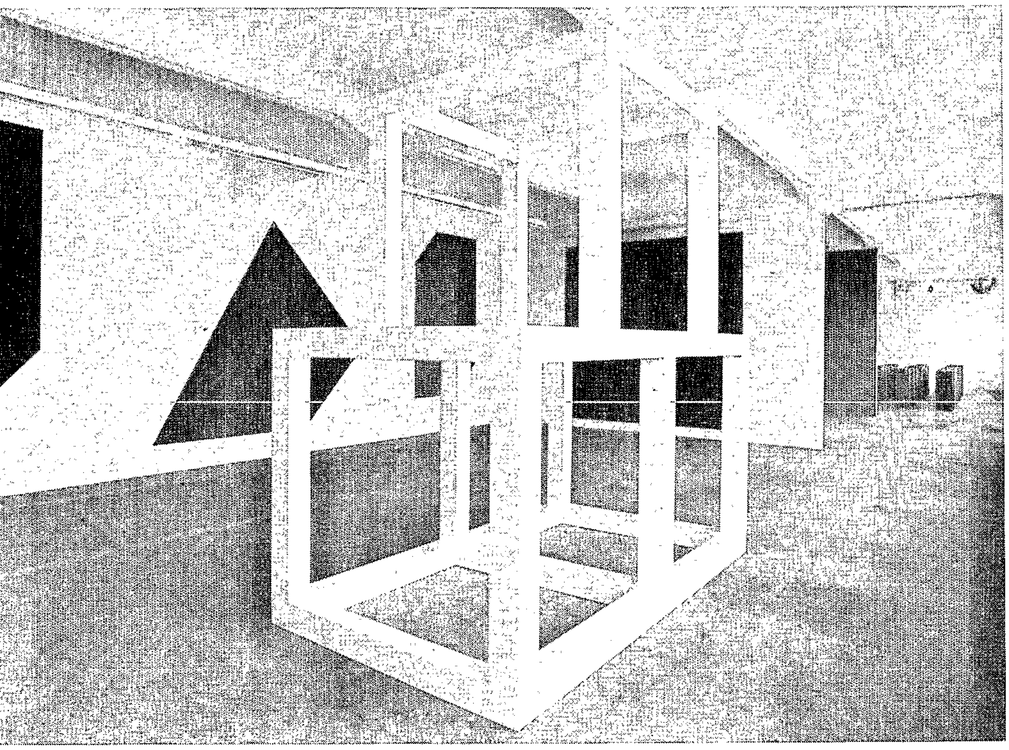
37 pieces of work, Carl André, 1969.

veyed by the work. It had to be able to affect human consciousness through the intermediary of sensual perception.

Unfortunately, in the beginning there were very few who were able to appreciate the complexity of this expansion of the artistic concept, because there were so few opportunities to grasp what lay behind the works through direct contact with them. The art of the 1960s was admittedly greeted as a new phenomenon in the evolution of the history of art, but discussion of its different forms of expression essentially remained theoretical and abstract. It thus rapidly lost its vital impetus and was unjustly referred to as an 'intellectual' kind of art. The following generation of artists concentrated further on its formal aspects, which triggered off a salutary recovery of the emotional dimension by an anti-intellectual 'visceral art' in reaction. The considerable amount of space required by these works, which seem dry and unapproachable, is to a large extent to blame for the fact that the traditional establishments felt that they were no longer in a position to display them. For want of a better solution, temporary exhibitions make it possible to project the material and spiritual dimension of these works — but even here technical difficulties can pose insuperable problems. These are compounded by the fact that many artists tend to create their installations for a specific location, i.e. to consider their work as an integral part of its environment; the preservation of the installation is then regarded as being of secondary importance. As there were (and still are) few 'takers' for these works, because neither museums nor private collectors have sufficient room (or interest) to set up facilities specially to house them, and furthermore the artists are in no position to store their voluminous works themselves, the majority of them have disappeared. Frequently they are only known through photographs which provide documentary evidence of the different installations.

In order to have its effect art must be seen. But the physical presence of this type of art, whose essence lies not in its thematic approach to an object but in the work as a complex object itself, is particularly important, for it must reach its viewer's consciousness through its impact on the senses. Reproductions cannot achieve this, and a temporary exhibition can only do so to a limited extent, because these works must be viewed several times in order to be appreciated. It is for this reason that the primary conditions required for art to realize its potential are both space and time. In Schaffhausen we have attempted to satisfy both of these conditions in accordance with the needs of this type of art, whose claim to the right to representation deserves a particularly sympathetic response at the present time. The Hallen für Neue Kunst are the fruit of these efforts. They have been designed to exert influence in the long term and serve as a manifesto: the significance of the post-1965 artistic movement for the future was to be made quite clear. The design of the Hallen implied that the museum would focus on artists who were particularly representative of these changes in artistic perception, and on those of their works that best expressed their attitude (the limited number of artists being offset by the volume and spectacular nature of the works displayed). In other words, the selection of artists and works had to comply with quality criteria that have always been valid, but only rarely applied to contemporary art. The result was a convincing demonstration of the power of this art and its aesthetic diversity, which defies all description of a purely theoretical nature. The restriction placed on the number of works proved to be a positive factor, in that it brought out, over and above certain common features, the striking contrasts between contemporary forms of expression which are to be expected of an art form which reflects absolute positions.

Offering a concentrated sample which is the result of careful weighting rather than a broad panorama that eschews value judgements, the Hallen für Neue Kunst may be considered as providing a critical alternative to the traditional approach of many museums. With few exceptions, the latter continue to collect works of art on the basis of conventional criteria (division into subgroups such as painting, sculpture, drawing; the acquisition of works by as many artists as possible), even for a new art form that explodes such categories. Furthermore, the generally limited space and financial resources at their disposal more often than not rule out the acquisition of large-scale and genuinely representative works. The result is a frustrating and often



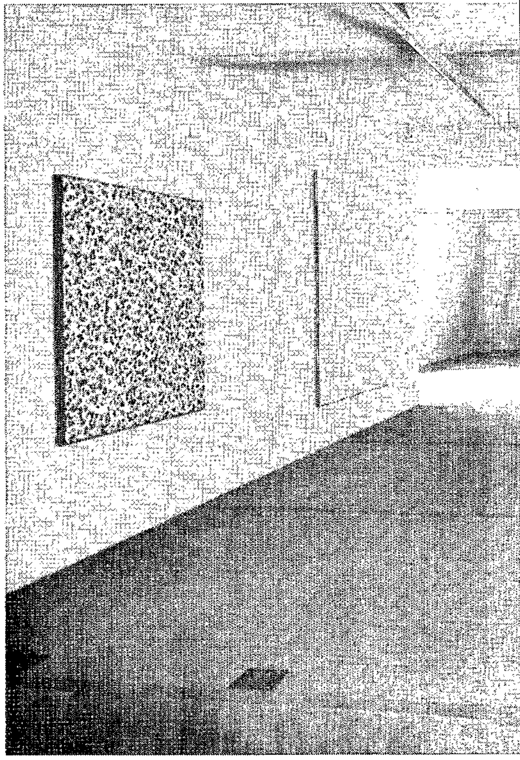
14
Modular cubes, 3 sections (sculpture), 1970 and *Isometric Figures* (mural), 1981, Sol LeWitt. Hallen für neue Kunst, Schaffhausen.

mediocre set of specimens with nothing to attract the visitor's attention. This situation is increasingly being remedied by means of special exhibitions. These make it possible to kill two birds with one stone, in that they keep the public abreast of new developments and movements (which the permanent collections do not really do), and on the other hand attract large numbers of visitors to the museum, thus enhancing its reputation. However followers of this new trend often lose sight of the museum's responsibility both towards the artist, whose works are brushed aside at the end of the exhibition, and towards the public, to whom art is presented as if it were some kind of variety programme.

It is thus important to create places that encourage art, focal points such as the Hallen für neue Kunst in Schaffhausen, where the transmitter-receiver relationship between the artist and the public is allowed to come into operation. By choosing to concentrate on spatial art, the Hallen für neue Kunst have opted for only one variant, albeit a highly desirable one, of a model that could serve for other forms of artistic expression. A variety of such centres of artistic activity could do much to deepen the public's awareness of art. Provided art is not being used to justify the museum's existence as an institution but that the museum (or whatever else it might be called) is working to promote the interests of art, such an idea would be entirely feasible. If existing museums are no longer capable of meeting art's needs, others must be created which will be more in tune with new developments.

This is where the Hallen für Neue Kunst come in. They owe their existence not only to enthusiastic commitment but to a very fortunate coincidence: on the one hand, the existence of the vast Crex collection, a private Swiss collection specializing in works of art from the 1960s and 1970s, and on the other hand the acquisition by the municipality of Schaffhausen of a disused textile factory for which it had no immediate use. These vast, functional industrial premises built in 1913 are ideally suited to the display of large-scale spatial works. A surface area of 5,000 m² was sufficient to install representative compositions of 11 artists (for the time being), in such a way that each of them could interrelate with the surrounding space and with the other works in its own way.

The space was divided into storeys which ran the whole length of the building, being broken only by pillars, and the architectural alterations dictated by artistic display requirements took advantage of the building's strong points and emphasized them. The light coming through the glass roof is now reflected onto the walls. This is ideal for Ryman's white paintings, which need light to bring them to life. In order to provide the 8 metre-high wall required for Beuys's voluminous installation *Das Kapital*, part of one floor level had to be removed, which not only served the cause of art but



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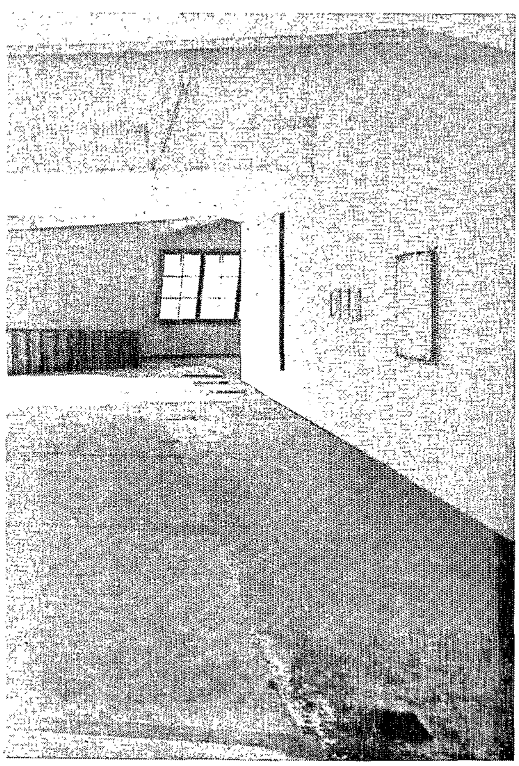
Installation, Robert Ryman.

relieved the monotony of the building's strictly layered structure. The number of partitions decreases from the top to the bottom floor for reasons of exhibition layout and lighting, and this factor, like the works of art themselves, helps to give each floor its own character. It is important that these points should be stressed, to make it clear that there was never at any time an attempt to recreate the pretentious architectural style of a museum. The only concern was to find spatial solutions for specifically artistic problems. It was fortunate that artistic and architectural responsibility were entrusted to one and the same person, Urs Raussmüller, as this was the only way of guaranteeing unity of design with a minimum of problems and expense.



This unity of art and architecture, as it is perceived by the visitors at the Hallen, creates an atmosphere that increases their receptiveness to the works of art. The artists' obvious seriousness is underlined by the simplicity of the interior design, which in many museums competes with the works of art for visitors' attention. The artists themselves reacted very positively to these surroundings which suited their purposes so well, and this is reflected in the remarkable density of their works. As the majority of them came to Schaffhausen in person in order to assemble their works, we can say that for all practical purposes the exhibition is as the artists wished it to be. Their commitment to the undertaking is made particularly clear by their offers, in order to present a 'rounded' picture of their work in all its complexity, to supplement the Crex collection by personal loans of other work. Thus it is clear that the artists themselves never saw the Hallen für Neue Kunst as a 'Crex Museum', as it is sometimes called, but more generally as a centre of artistic creation. This corresponds exactly to the spirit of the Hallen, which we never meant to serve as a showcase for a particular collection.

More than anyone else, Robert Ryman has helped to give the Hallen für Neue Kunst a unique reputation world-wide for its presentation of his work (Fig. 13). His fifty canvasses, covering a period of nearly 30 years, confirm his position as one of the major painters of this century. Only a general view of the whole of his work, with its own internal logic, will give any idea of its amazing breadth, consisting as it does of individual items which are so restricted in their formal presentation (rectangular pictures in white). Direct contact with the 'living' work is essential in order to avoid interpreting the process of reduction which is involved as no more than the application of a theoretical principle and to understand it as concentration on the act of painting itself and on everything that goes to make up a painting. Robert Ryman and Robert Mangold are the only 'painters' represented in the Hallen für Neue Kunst and they both go a great deal further than the traditional idea of painting. Their canvasses are also 'objects' that extend beyond the edge of the picture, relying on skilful use of the wall as foil for their maximum effect.

The example of LeWitt, like that of Ryman, shows how theories can lead to misunderstandings when propounded by someone who has not been able to see the works themselves (Fig. 14). The fame of his 'Paragraphs' and 'Sentences on conceptual art' is such that he, even more than the other artists of his generation, has been seen exlusively as a theoretician of art whose works were considered first and foremost as demostrations of his theories. The considerable diversity of the works exhibited in Schaffhausen

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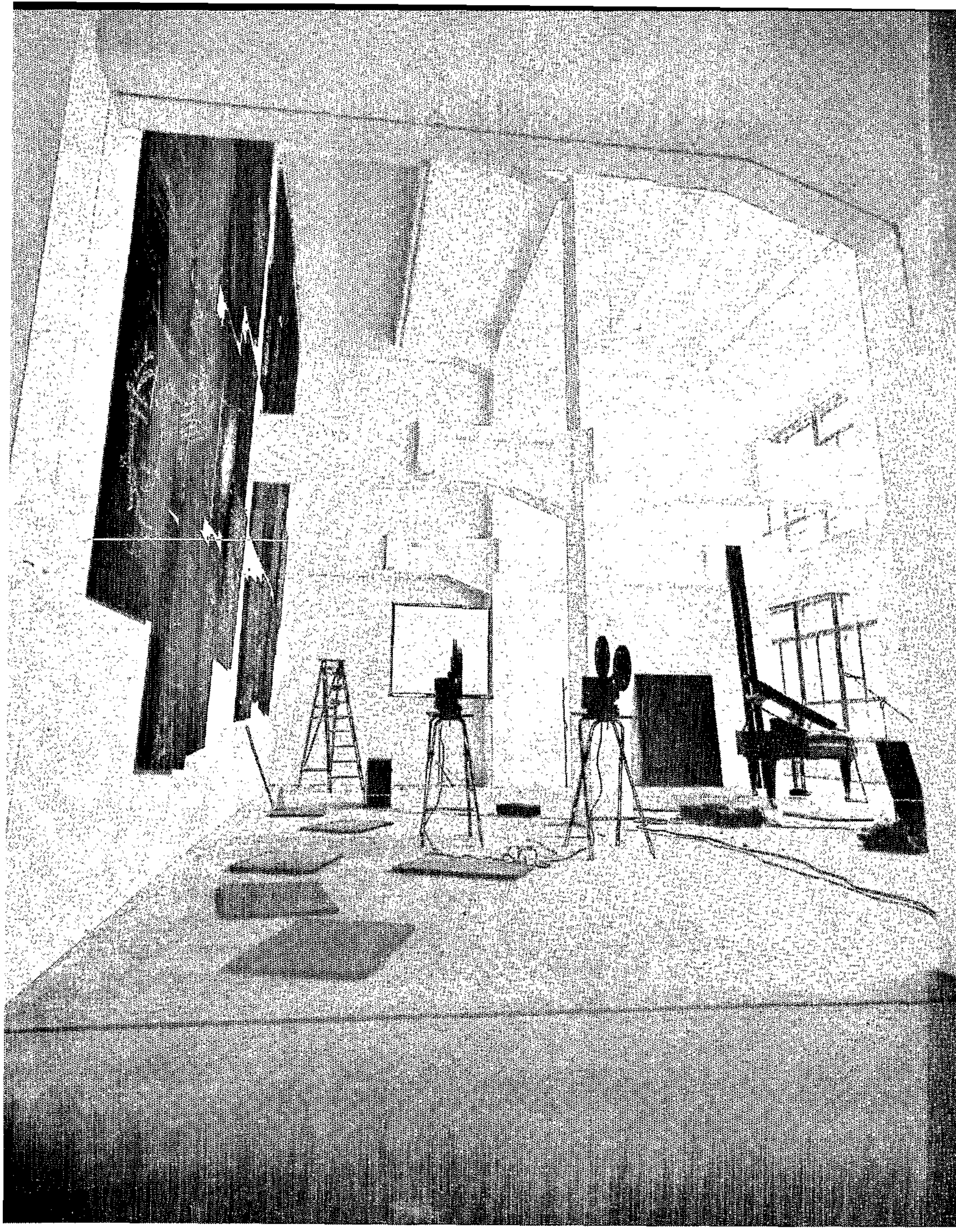
Installation Hallen für Neue Kunst, 1984, Bruce Newman, Schaffhausen.



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Das Kapital, 1970-77, Joseph Bengs.

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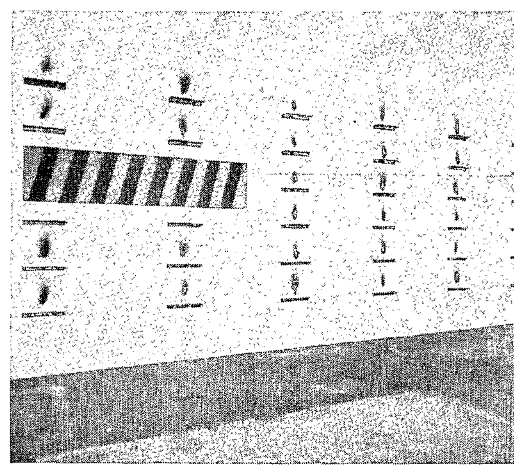
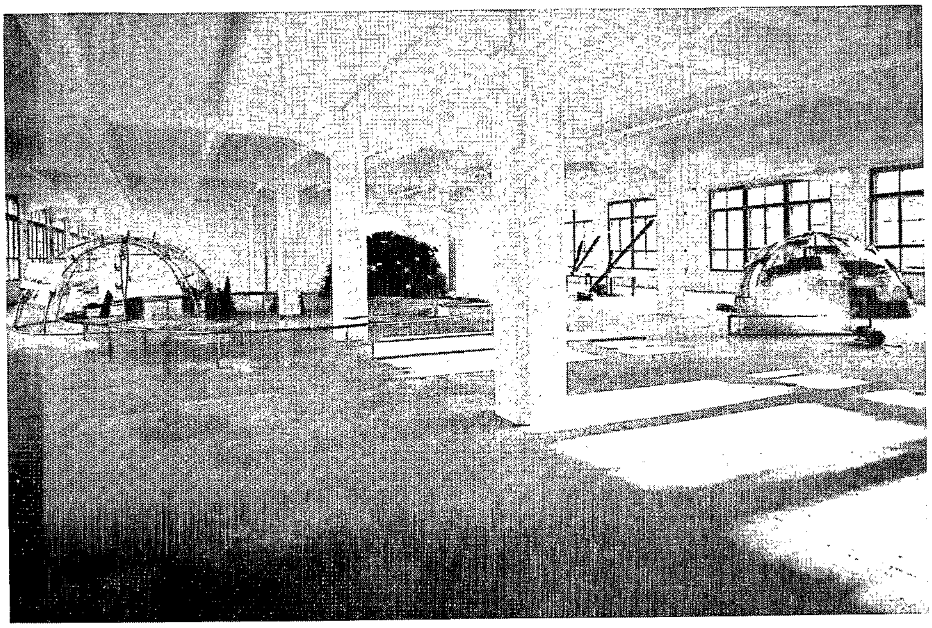
Metamorfosi 1958/1984, Yannis Kounellis.



shows how mistaken this view is: each of his works astounds the visitor by its freshness and sensuality, and their logical analysis as a system of serial variations on a formal vocabulary of elementary geometry derived from the cube does nothing to convey their sheer physical force. This also applies to the 'minimal' artists, Judd and Andre. Their very spatially oriented works literally come to life when they are perceived which for Carl Andre, is a process which emphatically transcends the visual (Fig. 15). His sculptures, which one enters as if they were rooms, trigger off a physical experience of art whose immediacy is unprecedented; it is now possible to relive this experience in Schaffhausen thanks to the famous 'Guggenheim Piece' made up of 1,296 metal plates using six different metals.

Bruce Nauman definitely makes art as experience the subject of his work (Fig. 16). Using methods based on the psychology of perception as well as the most varied media and materials, he creates finely judged situations which produce specific sensations and associations. With his conception of art as a means of expanding human consciousness, he stands closest to the European artists, the most substantial and — thanks to his exploitation of all possible means of communication — the most spectacular of whom is Joseph Beuys, who has made it his aim to demonstrate the function of art in determining individual attitudes. Beuys' concentrated and complex installation *Das Kapital*, which is exhibited in the Hallen für neue Kunst, expresses this holistic approach to art with its call for awareness of one's own creative potential in the context of a society in need of change (Fig. 17).

Perhaps the (permanent) exhibition at the Hallen für neue Kunst makes even clearer than before the differences between European and American approaches to art described above. Confronted with the firmly cultural stance of the Europeans, for instance, an artist like Judd reacts by making 'specific objects' with no technical connotations, while Kounellis in particular reacts to the American lack of 'historical background' in an installation based to an extreme degree on geographical and architectural context with a mystical allusion to the dominant cultural tradition (Fig. 18). References to the past in order to throw light on the present (particularly among the Italian artists) take the form of a profusion of extremely imaginative and expressive pictorial variations. The dense, literally energy-laden situation that Mario Merz has created from fundamental cultural structures such as house (igloo), table, light (neon), etc., is full of references to the archaic and to the elemental principles of an order based on nature (Figs. 19, 20). Here the conception of art as the principle underlying all creative action and as symptomatic of a social situation has been made quite obvious.



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Installation, Mario Merz.

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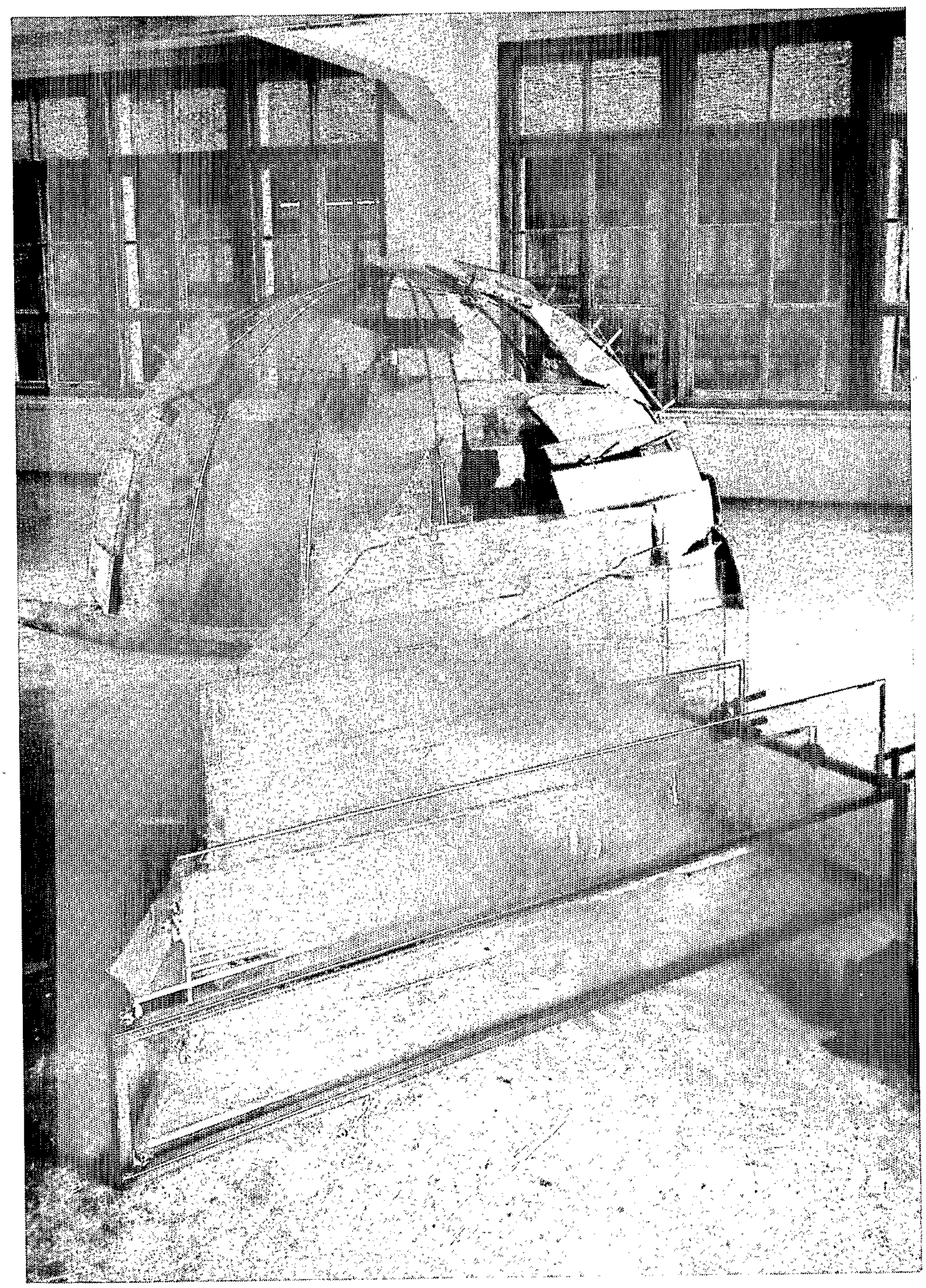
Architettura fondata dal tempo/Architettura sfondata dal tempo, 1977, Mario Merz.



The Hallen für Neue Kunst present a variety of approaches to the question of art and society. The most obvious is that of the artists themselves, for whom the issue of the interdependence between art and society was in the 1960s the point of departure for a new definition of art's function and its renewal as such. However the Hallen also represent the standpoint of the sponsors and supporters to whom this private museum owes its existence. If art is to be able to exert the influence to which it legitimately aspires it must have access to the public, and the Schaffhausen Association of Friends of Contemporary Art has been formed to ensure that such access is available. Its members believe that in the last analysis it is only private initiative that can achieve the broader public awareness of contemporary art which is so greatly to be desired. It is by no means idealistic to believe that art can get things moving, nor is it fanatical to assert that art is one of the most important catalysts of individual awareness. Art has always been a guarantor of freedom of thought and action in a society governed by conventions and our spoonfed society, with its paucity of spiritual values and abundance of leisure time, will always benefit from confrontations with creative behavioural models. ■

The Museum of Cycladic and Ancient Greek Art

Dolly N. Goulandris

Tall oaks from little acorns grow ...

My husband Nikos and I began to collect ancient Greek objects without any precise aim in mind. We never dreamt at the outset they might become so numerous or be thought so important as to end up one day in a museum purposely built to house them — to make our collection accessible to both scholars and the general public.

We began as true amateurs, driven by curiosity and admiration, to which were soon added a mounting enthusiasm and interest in the past of Greece. That was some twenty-five years ago. We were fortunate then to have the advice of a great Greek archaeologist, the late Ioannis Papademitriou. With his guidance, we started buying antiquities in the Athens market, mainly small objects of the classical period. Our modest collection was officially registered, catalogued, and photographed, and in due course we were given a 'private collector' permit by the Archaeological Council of the Ministry of Culture which allowed us, under Greek law, to buy other objects and enlarge the collection.

I am not a museum professional, but remain a collector, though now one who recently founded a museum. As such, I shall try here to tell the story of the transformation of our private collection into a museum, as well as some of the difficulties encountered and the responsibilities involved.

Quite soon we were concentrating on Cycladic figurines and vessels. One by one we came across these strange marble objects, and could not resist their appeal. It seemed that wherever we went we would find them; our journeys, near and far, turned out always to be journeys of discovery and we became increasingly fascinated by our finds.

Thus our collection grew and came into focus. We ourselves were hardly aware of what we were accomplishing or of the uniqueness of such a collection until, in 1978, it was exhibited for the first time to the public at the Benaki Museum in Athens. The following year it was shown, as the Collection of Cycladic Art, at the National Gallery in Washington, D.C., and from there went on to Tokyo in 1980, to Houston in 1981, to Brussels in 1982 (Europalia), and to London (British Museum and Paris (Grand Palais) in 1983. It travelled a great deal, and always with surprising success, till finally, in 1984, it came back to Greece.

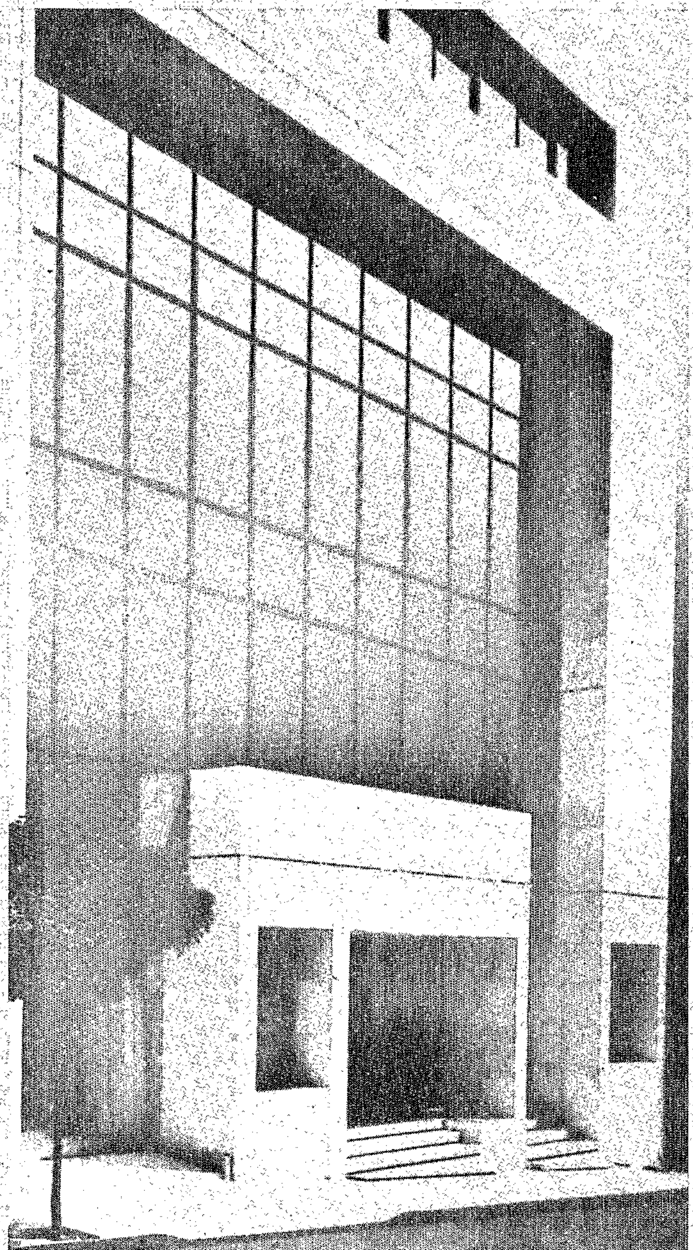
The problem of finding permanent housing for our Collection was a very difficult one. We could of course have donated it to the National Archaeological Museum in Athens, but as any visitor to this great museum knows, there is hardly any space left in which to display its own collections, let alone a new one comprising 790 pieces.

After considering the problem together, my husband and I decided to build a small museum to house this private collection. But it had to be a rather special building: Cycladic art is so simple and abstract it requires a very special treatment.

We asked Yannis Vikelas, a Greek architect whose work we admired, to help us. We wanted the building to be simple and of white marble, in order to remind the visitors of the objects it housed and be in harmony with them (Fig. 21).

Mr. Vikelas gave us the solution we desired. The property we had acquired was not extensive: four hundred and fifty square meters. But Yannis Vikelas translated it into a six-storey building with two underground levels, totalling in all two thousand square meters.

The Museum occupies the basement, the ground floor, and the four subsequent floors. The two top storeys are attractive penthouses which have their own private entrance and no connection with the Museum.



21
Façade of the Museum of Cycladic and Ancient Greek Art.

The display of the objects was governed by three principles: it had to be aesthetically attractive, educational, and scholarly. In order to attract and entertain our young visitors, we organized a children's programme to make the Museum a delightful place to visit and not a classroom, so that in future they — in turn — would take their own children to visit museums.

With this in mind, the entire basement floor was dedicated to children, with educational maps, photographs and diagrams. Every Saturday morning, from 10 a.m. to 1 p.m., an extensive programme is scheduled with games, claymodelling and the like, and with a wonderful puppet show, based on the daily life of the early islanders. This programme has proved very popular, with a two-month waiting list for admission (Fig. 22).

Our main objective, of course, was to display our collection to its best advantage.

We turned to the National Gallery, Washington D.C., which, it was felt, had produced the most dramatic displays of all the travelling exhibitions so far. The gallery recommended the firm of Elroy Quenroe & Gordon Anson of Baltimore, Maryland, who most willingly undertook the task.

In the planning they were fortunate in having from the beginning a very free hand, as there were many details, such as air-conditioning ducts, frames, etc., that had to be corrected. In spite of the language difficulty of having to work with an all-Greek crew, the work went along well, thanks to their unfailing good humour and intelligence.

The equally difficult task of selecting the items, to be displayed in chronological order, and establishing the text of the labels fell on the able shoulders of Professors Christos Doumas of Athens University, and Lila Marangou of Ioannina University. Both worked with great enthusiasm and devotion and spent many hours in putting the objects in the right context.

In order to achieve an air of mystery, which is what the Cycladic collection is all about, the designers chose a dark grey colour for the walls and a dark blue Greek suede for the interior of the cases. This darkness gives one the feeling of entering a crypt. Suspended on panels of plexiglass, the idols seem to be air-borne, gleaming like jewels in a dark room. As there is some controversy over whether they were reclining or standing, we avoided it by having them seemingly floating.

On the second floor, where objects of ancient Greek Art are exhibited, the desired effect is different. The colours are bright peach alternating with dark brown, producing a light and happy atmosphere. These colours complement those of the classical vases and figurines, made of clay and bronze.

The lighting, a decisive factor for the aesthetic appearance of objects, was especially designed by Anson.

On the third floor, for the time being, there is an exhibition of photographs that reveals the influence (conscious or unconscious) of Cycladic Art on Modern Art, using as parallels works by Giacometti, Brancusi, Moore, Picasso, and Turnbull. This exhibition has proved very popular, especially with art students.

On the fourth floor there is a small lecture hall, seating about eighty people, and the administration offices.

In the entrance is a bronze bust of Nicholas P. Goulandris (by the Greek sculptor Memos Makris) in whose memory the museum has been founded, as well as twelve large informative panels introducing Cycladic Art. To give the visitor some idea of what to expect in the galleries, three showcases display works by the Goulandris Master and some representative examples of marble and clay vessels.

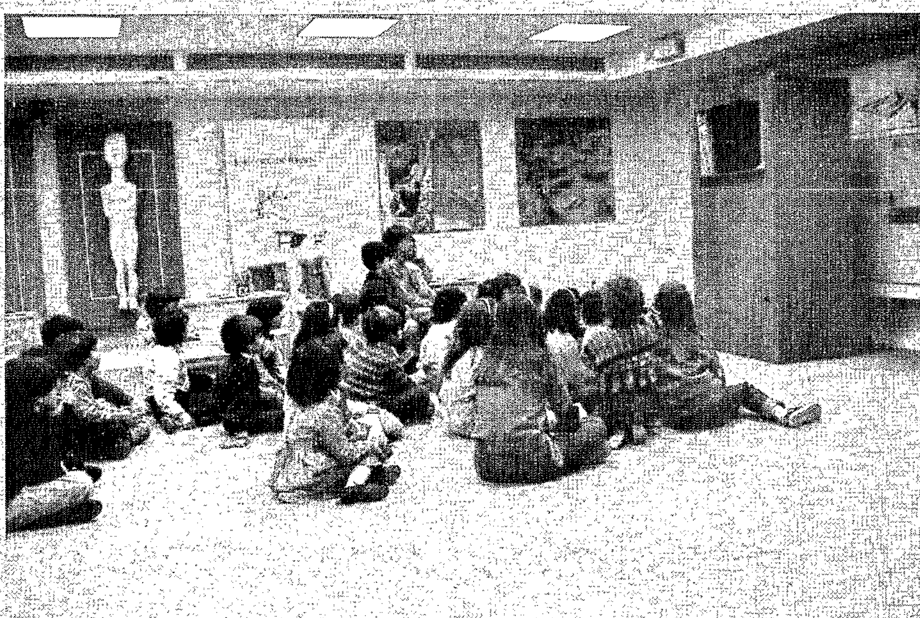
On the entrance floor there is a small Museum Shop with selected reproductions of Cycladic figurines and vases; scarves, jewellery and the like, whose designs are inspired by items in the collection, are also sold in the shop (Fig. 23). This floor opens onto a small patio garden, with olive trees and cypresses, reminiscent of the Cyclades islands, and a fountain with a Cycladic mosaic designed by the artists Zizi Makris.

The construction of the building took four years. The marble used for the façade, stairs and certain other surfaces is white marble from Dionysos on Mount Hymettus in Attica.

All the display cases were made in Greece by the firm of Kokkoris and Milios. Stavros Kassandris of the National Museum installed the objects in the cases. The graphics were done by A & M Katzourakis.

The museum has the most advanced security system and, in addition, is guarded twenty-four hours a day.

The museum was inaugurated on 20 January 1986 by the Greek Minister of Culture, Ms Melina Merkouris. ■



22
Puppet show in the museum basement. This activity for children is very popular.

23
The shop, where the visitor can buy copies of works on display.

Museum of Cycladic and Classical Art

ElRoy Quenroe

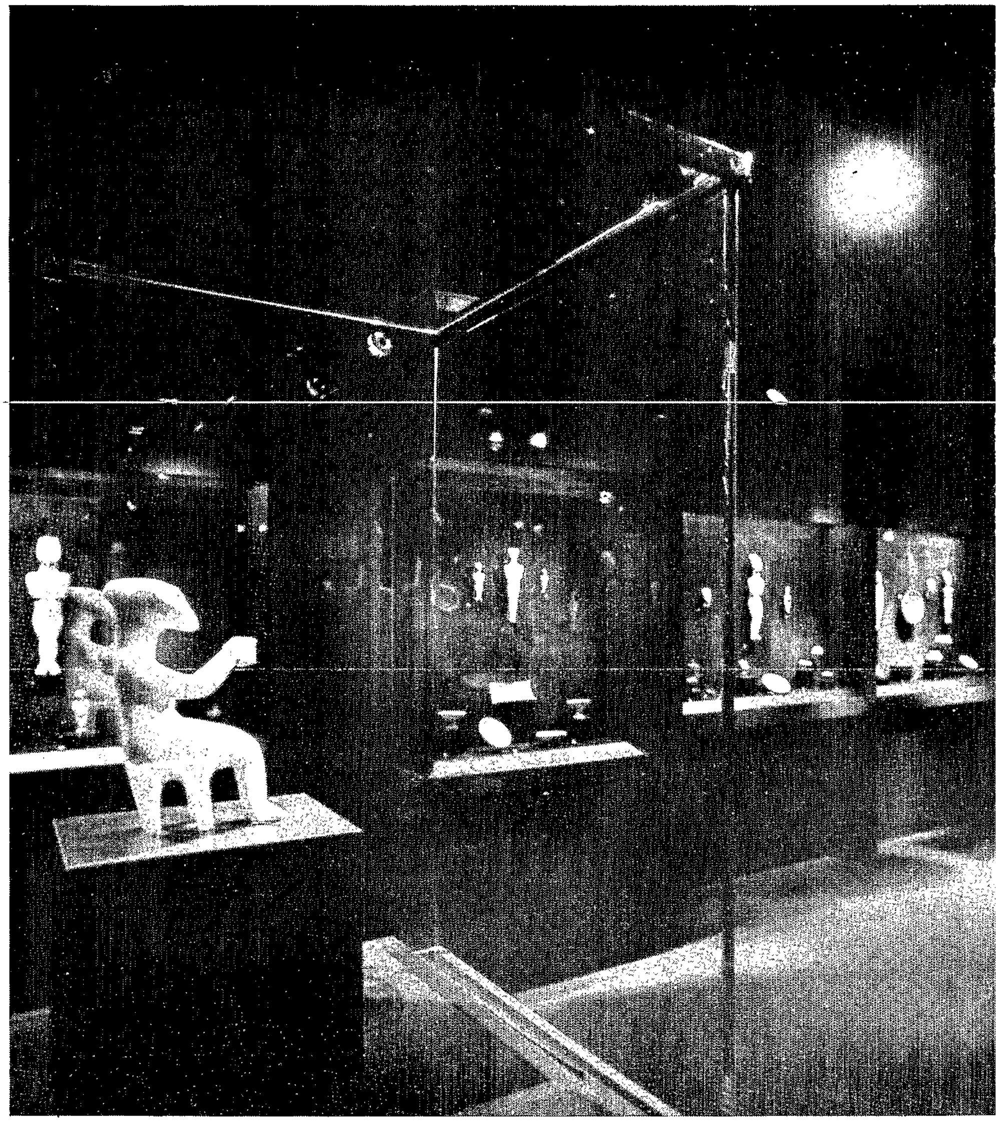
An architect living and working in Baltimore, Maryland, United States. Before establishing his own design firm, Quenroe Design Associates, he was staff exhibition designer for the National Gallery of Art. While there he worked on such exhibitions as 'The Splendour of Dresden', 'The Eye of Thomas Jefferson', 'Rodin Revisited'. Most recently he has completed the exhibition installation of 'Silver Treasure from Early Byzantium', at the Walters Art Gallery in Baltimore. He and his office are presently working on the reinstallation of the permanent collection for the Walters Art Gallery and also the reinstallation of the Chrysler Museum in Norfolk, Virginia.

The commission to design the exhibitions of the new Goulandris Museum of Cycladic and Classical Art in Athens, Greece, was an extraordinary opportunity. The collection itself is perhaps the most renowned collection of its kind and with it came the possibility of working in a beautiful and exciting country. The task at hand was a very large one and for this project, the designer teamed up with Mr Gordon Anson, lighting and exhibition designer for the National Gallery of Art in Washington, D.C. Working conditions were extremely favourable, under the close but amiable supervision of Ms Dolly Goulandris. However, the romantic visions of languid days sketching exhibition plans on the shores of some volanic island in the Aegean soon faded as the complexities of designing and installing a new museum became realities. It became immediately apparent on our very first site visit that there were going to be rigorous challenges ahead.

The first problem faced was the result of an all too familiar sequence in a museum building project — the museum shell was nearly completed before the designers were asked to join the museum design team. An experienced exhibition designer has a wealth of experience about how museums actually work and can provide not only invaluable insights into the economic and practical aspects of the design, but also interpretations of the specific demands a particular collection will make on the building. The primary function of the public areas of a museum is to display, and this requirement can be forgotten or overlooked by architects, who easily become concerned more with the practical and personal aspects of the building design than with presentation aspects of the museums collections. Far too often a new or renovated museum opens with little input from the staff or people who now must work within the space, only to find that the spaces are not suited to display the very objects for which the structure was constructed.

The problems were not so acute for this museum which had been commendably designed by an Athens architect to present a bold, striking façade to the street. Because the museum is situated just off the main thoroughfare between the Benaki and Byzantine Museums, this bold face was a masterful stroke, drawing the visitor up the small street to it and distinguishing the museum from its townhouse neighbours. The design also takes maximum advantage of the small enclosed urban site by providing the maximum number of floors for the building height allowed by the local building codes. Thus, the architect, was able to provide five floors of museum exhibition space and a basement for support services and a parking garage. In addition, two apartments were provided on the upper two floors.

To provide this economical provision of space and to keep the resulting floor areas as free from column as possible, a reinforced concrete slab and beam construction was used. This construction meant, however, that the ceiling height from the concrete floor to the bottom of the beamed ceiling (before the addition of lights, air-conditioning ducts, suspended ceiling, etc.) was 295 cm (9 feet 8 inches). A ceiling height of 10 feet is usually considered the minimum floor-to-ceiling height for a museum space, and 12 feet is preferred for this type of collection. This height allows for the placement of lighting fixtures to provide lighting angles adequate to light in-case objects but still avoid viewer shadows on the case. In addition the greater height allows a cushion of vertical space to help relieve the discomfort people experience when confined to a small space (the museum was expected to draw large crowds). Without examining the problem further we conceded that the ceiling



24
The dark blue and brown fabric brings out the form and colour of the marble figurines and vases.

could work (had to work!) if minimal size light fixtures were used. The process of exhibition organization and layout began with the curators, Professors Christos Duoumas and Lila Marangou, charming and intelligent scholarly friends of the collection.

The initial layouts were completed after a few arduous days and late nights of work in Athens. It was not until then that we had our next design shock. The building engineer had called a meeting to discuss the mechanical systems of the museum. As the system was carefully engineered to supply the acceptable limits of temperature and humidity, he was concerned about the extra load placed on the air-conditioning because of the lighting. At this meeting it was discovered that with the addition of air-conditioning ducts running below the concrete beams and ceiling that the floor to ceiling height was now about eight feet! Subtract an additional 15 to 20 cm for the suspended ceiling and the situation was untenable. To hang light fixtures from this low ceiling would produce areas of 150 watt illumination only a few inches above the viewers' heads.

The question of ducting suddenly became the guiding issue of the exhibit design as we all had to step back and reassess the best steps to take to minimize the negative impact of this necessary mechanism. It was finally determined that with careful rerouting of the ductwork and modifications to the layout, the ducts could be strategically run around the perimeter of the room, where wall cases could be inserted under the lowered duct space, or the ducts placed along the tops of temporary walls. Where the ducts had to pass through an exhibition space or room, the floor plan was modified to provide a lower bulkhead or a doorway at these points.

With this quandary mechanically settled, we were still concerned about the adverse ramifications of the ceiling heights and the relatively small area to

display the objects. When the Cycladic collection had been shown in Washington at the National Gallery of Art, a floor area of approximately 3,000 square feet was utilized. In Houston 4,000 square feet had been used. At the new museum the same collection (with notable additions) had to be housed in a little more than half that area. It was obvious that as open a plan as possible would be necessary, offering see-throughs and long vistas where attainable. The space and the collection, as well as the air-conditioning ducts, dictated that perimeter wall-recessed cases should be used. However, the areas under the cases could be left open, allowing the flooring (carpet) to run under them, expanding the visual, if not usable, floor area.

The Cycladic collection offered possibilities for many layout formats. Exact information about the civilization that had produced the magnificent carved figurines of this collection is still largely elusive. The dating of the objects of the Cycladic period and specifically from this collection, has been by necessity limited to establishing large time periods from several hundred to a thousand years. Even though archeologists are discovering more and more about the Cycladic civilization, the function and symbolism of these objects is still very much a matter of conjecture. Therefore we and the curators decided to treat them as the objects of wonder that they are. A chronological schema was adhered to but as most of the objects come from a single age grouping, a strict chronological placement of the bulk of the collection was not required. The most important aspect of the display should be to emphasize the forms clearly, providing the necessary 'impact' space for each piece to be appreciated individualy, and yet to encourage the comparision of forms from one object to the next.

To facilitate this, the case design was kept very simple, with a minimum of extra detail other than that necessary for the function of the case. Much to everyone's delight, forays to the *agora* of Athens revealed a readily available Greek suede which proved to be the least expensive alternative for case coverings. This material, presented in dark blues and browns, provided a dramatic backdrop for the figurine and marble vessels, allowing the shapes to be read and experienced immediately (Fig. 24). The textured surface of the suede had the additional effect of contrasting with the surface of the object, highlighting the smoothed patina of one, drawing attention to the maker's tool-marks on another. The drama of the scene was reinforced by painting the walls in darker colours to complement the suedes.

Leading the way in museum innovation in many ways, the lighting of the museum utilizes equipment recently introduced to the European market by Concord Lighting Inc., a manufacturer from England. The interiors of the cases were lit by a fluorescent warm white bulb with extremely small low-voltage track fixtures. The low profile of these fixtures, able to fit into a space of 17 cm, was the perfect solution to the problem of interior lighting in cases, the tops of which were already very near to the ceiling line. These fixtures, called 'Lytespan Micro-Optic', are composed of individual lamp housings which share a remote transformer. Powered by attachment to a low-profile track, this system allows total flexibility in the lighting of case interiors similar to the traditional ceiling track systems.

This combination of fluorescent bulb and low-voltage lamp in the track fixture allowed for the overall ambient wash of light for the case and also for the controlled spotlighting of individual figures and objects. Another major advantage of the dual use of fluorescent and low-voltage lamps is the excellent colour rendition with low heat and long lamp life, allowing for overall display continuity with low maintenance. In addition, the new 'Targa' series of low-voltage incandescent ceiling track lighting, also by Concord, was used for surface and accent lighting to aid in the lighting and overall colour rendition.

It is hoped that the overall effect is one of wonder and mystery, that the viewer will not only enjoy these objects of an ancient civilization as art but will also become personally involved in divining the hidden meanings behind these figures. The largest of the idols is approximately 1,4 meters tall, and is placed so as to greet the visitors as they turn a corner of the exhibition. One of the significant additions mentioned previously, this imposing figure was to have its public début at the museum's opening. Evocatively placed in its own crystal 'throne' surrounded by his 'court' of lesser sentinels, one can conjecture a myriad of scenarios about this idol, and about the significance it held for the people who carved it, any one of which could be correct (Fig. 25).

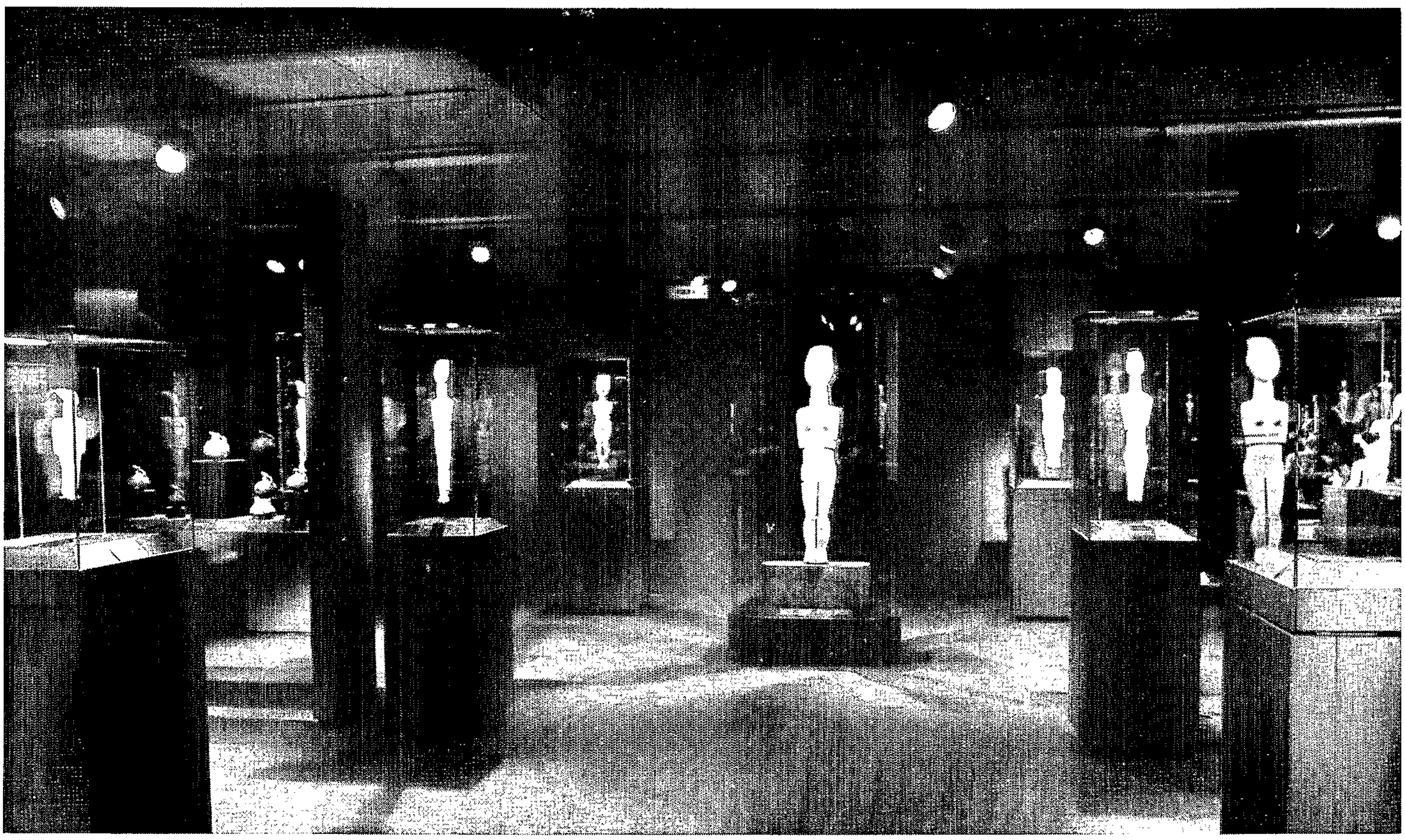
Because of the importance of the Goulandris Cycladic collection, the Classical portion of the collection (comprised primarly of objects and vessels from the sixth to the fourth century B.C.) has taken an undeserved back seat to the Cycladic, for here, too, the collectors have shown remarkable connoisseurship in selecting objects of great beauty and scholarly importance, covering the realm of Greek classical art. The voluminous research done on these periods of Greek civilization and the diligent study and dating by Professor Lila Marangou made it easy to organize this collection into strict chronological and geographic units, and it was indeed the desire of the curator to organize the exhibition likewise. From a designer's viewpoint this can be seen as a problem, the exhibition manifesting itself in the shape of a single, continuous case running around the perimeter of the exhibition room, its contents in painstakingly chronological order! At the cost of new gray hairs and heated discussions over glasses of Ouzo, however, a compromise was reached, and the resulting display incorporates a chronology allowing for the highlighting of certain objects and the grouping and rearrangement of others to produce a lively survey of the classical arts (Fig. 26).

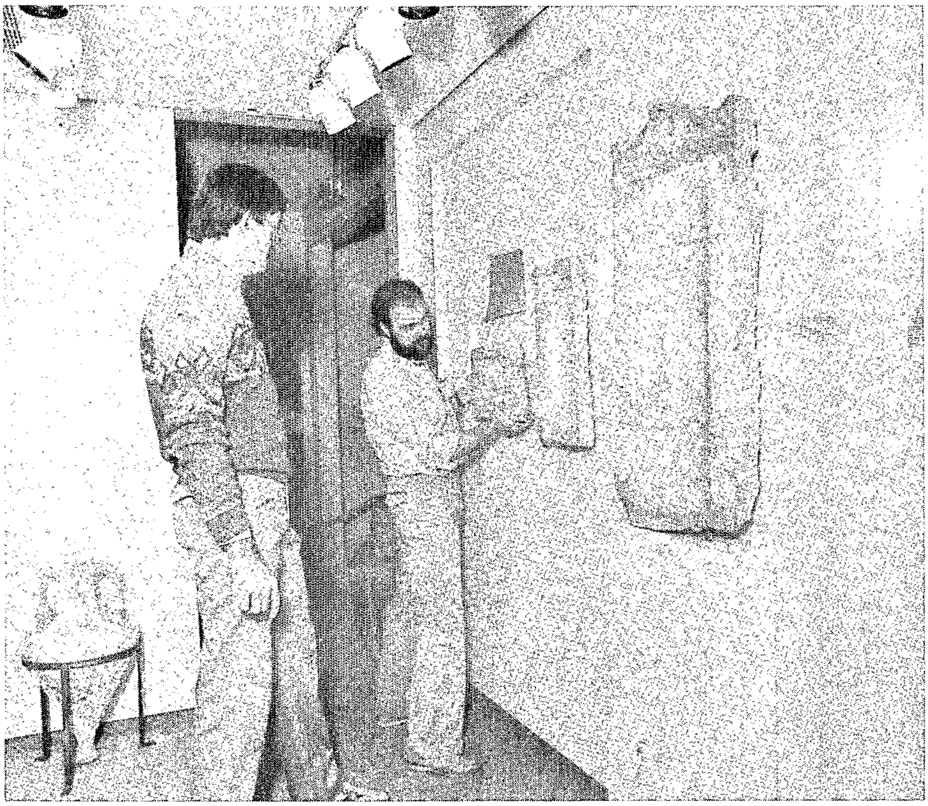
The same case design format was adhered to on this floor to provide a design continuity with the lower Cycladic floor. The physical contraints were the same as the Cycladic floor as well (both exhibition areas are of exactly the same dimensions) and the floor-plan is of necessity very similar. Colours here were kept light, however, in the range of warm earth tones, to complement and contrast with the earthen tones and pointings of the objects. The display of the bronzes is especially effective. This fine grouping of Archaic and Hellenistic bronzes, donated by the private collector Mr Lambros Evtaksias, had acquired a green glow of patina. When contrasted with the warm colours of the walls and fabrics, the depth and drama of each piece was an added bonus for the exhibit.

The lighting system in the Classical floor was similar to that of the Cycladic collection. The overall ambient light levels here were increased, however, through the use of more exterior track lighting using both low-voltage and regular-voltage fixtures.

The presentation of factual information about the objects in this collection was a paramount concern for both designers and curators. The mystery of the Cycladic civilization notwithstanding, a great deal is known about this era and the presentation of this material was essential to the museum's overall goal of educating both the Greek public and the foreign tourist. With the assistance of Katsourakis, an Athens-based graphic design group, a format which incorporated an angled label shelf for each case was established. This label shelf rises from the bottom edge of the case and all essential information is presented on it without allowing the text to interfere with the appreciation of the object itself. Additional and more lengthy texts were also required to establish important archaeological points or to highlight certain groups of objects, and these were rear silkscreened on planes of acrylic attached to the walls. Less likely to be harmed by us and easily changed if necessary, these clear planes allow the colour of the walls to show through, providing architectural continuity while presenting the necessary information.

It was the desire to share and to inform which was the overriding mission behind the establishment of the museum and which had become the mission statement for the exhibition design as well. During the process of acquiring this collection, the Goulandris family maintained the objects on display in their Athens home. Always interested in the furtherance of information about and appreciation of

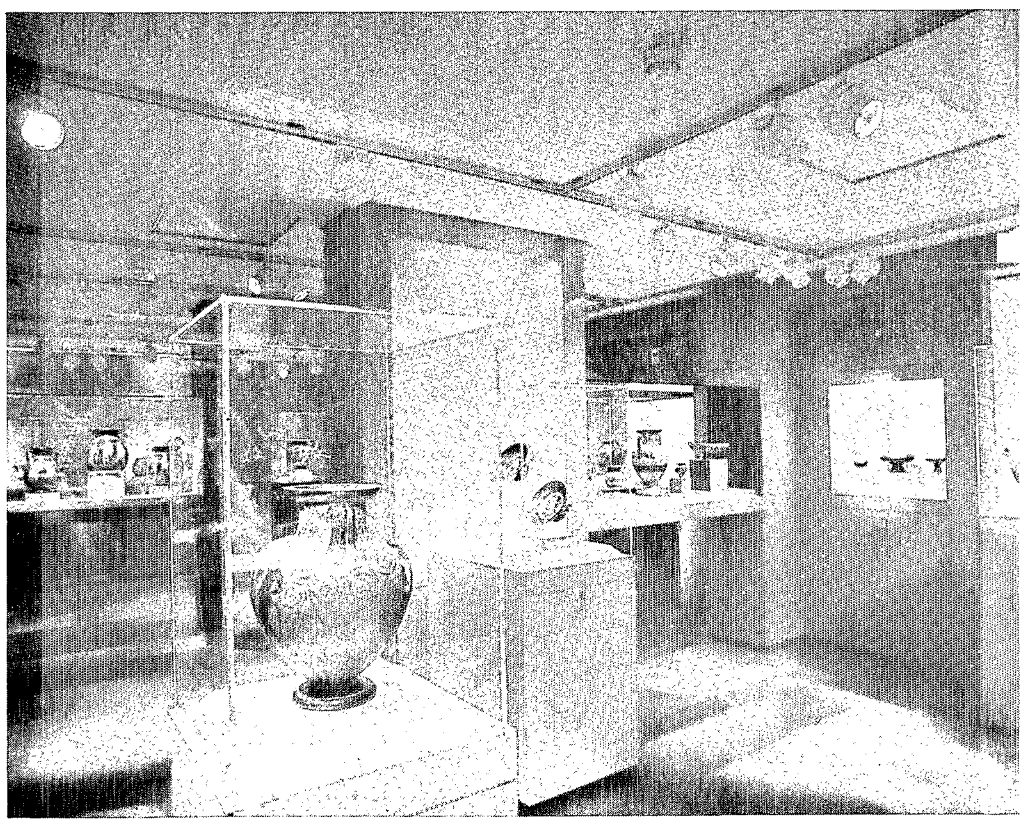




Greek arts, they opened the collection to both the scholar and the interested tourist. It was therefore very important to the family that the public presentation of their collection be scholarly and exciting, interesting and challenging for local Greeks or tourists, adults or children, all of whom have had a special place in the design process from the beginning. An on-going test of presentation was always, 'can the children see it and appreciate its significance?' The exhibition was given the 'test' shortly before the official opening of the museum to the public. A child of the Goulandris family was making the tour, and coming upon the small seated Cycladic figure holding a cup, the child raised his hand in toast. '*Stin Hygeia Sou*', he said solemnly, 'To your very good health'. ■

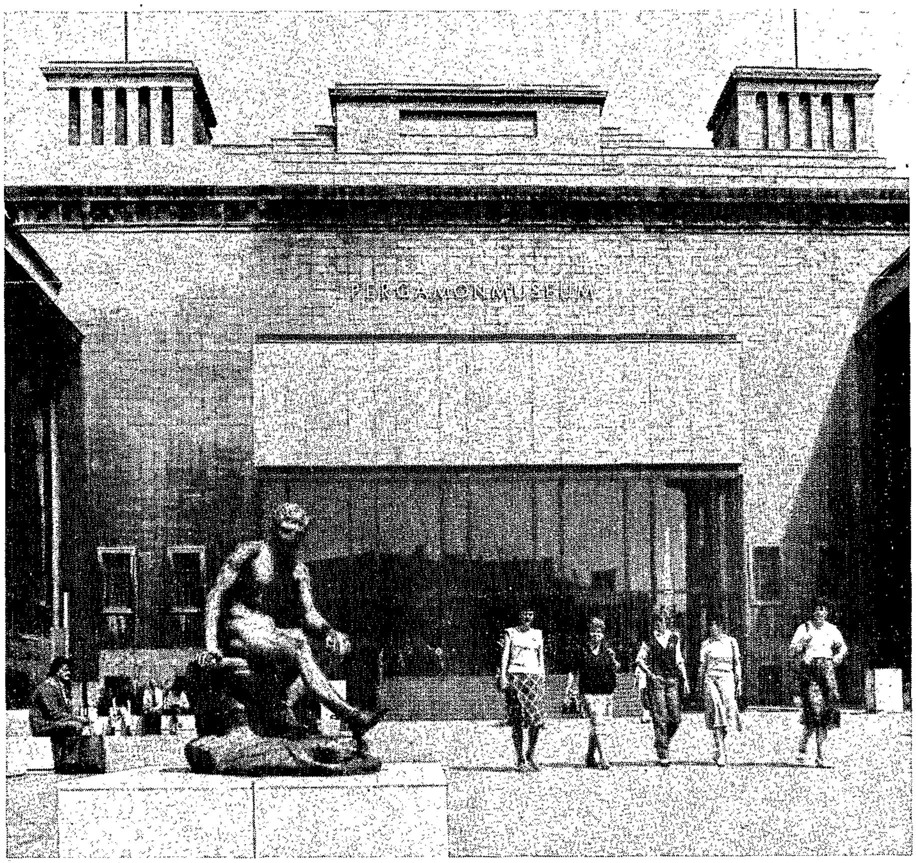
26
ElRoy Quenroe and Gordon Anson study the placing of a funeral stele in the classical art collection.

25
The large figure or 'idol' in its setting.



27
The classical art collection is set off by bright colours against warm browns.

The new layout of the Greek and Roman Antiquity exhibitions in the Pergamon Museum, Berlin



Max Kunze

Born in 1944. Studies in classical archaeology and classical philology in Berlin, 1964-69; Associate Expert in the Numismatology Department of the Staatlichen Museen, Berlin, 1969-71; Director of the Winckelmann Museum, Standal, 1971-82; since 1982, Director of the antiquities collection and the Pergamon Museum; 1978-83, Chairman of ICOM's International Committee for Literature Museums; 1985, Member of the International Committee of History and Archaeology. Editor of a large number of ICOM publications, 1978-82, of the 'Beiträge der Winckelmann-Gesellschaft' from 1974 (13 volumes) and the annual *Mitteilungen der Winckelmann Gesellschaft*.

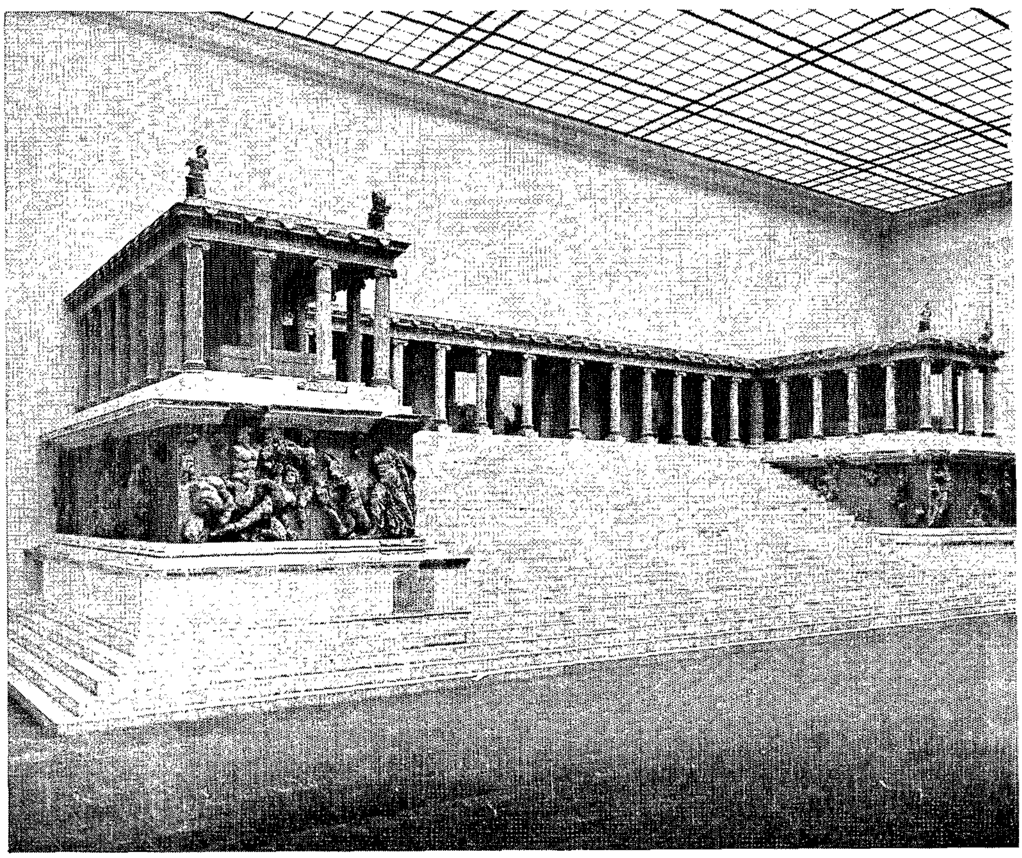
28
Courtyard of the Pergamon Museum in Berlin, with new entrance hall.

Among the many museums in the capital of the German Democratic Republic, the Pergamon Museum has a particularly strong public appeal. In 1985, nearly 3 million visitors from all over the world came to see its five collections. When inaugurated in 1930, the museum was used mainly to house Greek and Roman collections and a collection of Near Eastern and Islamic antiquities. After the Second World War, with the reconstruction of Germany and the return of works of art transported to the Soviet Union for safe keeping, it was extended to include East Asian and folk art collections. The museum's attraction for large numbers of international tourists, as well as visitors from Berlin and other parts of the German Democratic Republic may be attributed to its spacious rooms, some of which have recently been remodelled, and the outstanding works of art on display in them. The pergamon Museum was designed by the architect A. Messel (1853-1909). After many changes of function, it was used for reconstructions of Greek, Roman, Near Eastern and Islamic architecture, which served as a model for later museum projects and still give the Pergamon its reputation as one of the world's leading museums of architecture.

The antiquities collection, housed in the three vast central halls lit from above by natural light, contains partial and complete reconstructions of Greek and Roman architectural works. Great care was taken in these reconstructions to reproduce the original interrelationship of individual architectural elements, enabling the visitor the experience the dimensions and proportions of antique architecture. For example, the hall of Graeco-Hellenistic architecture (height: 17.2 m) contains reconstructions of the two columns from the mighty Temple of Athena at Priene and sections of the monumental altar forming part of the temple. The lower part contains fragments of the original, while the original upper parts (capital and cornice) remain at eye-level for close inspection and are replaced in the reconstruction by casts. This principle was consistantly applied in the partial reconstructions. There are also complete reconstructions such as the almost 17-m high market gate of Miletus (120 A.D.), rebuilt from large numbers of original fragments with marble and reconstituted-marble additions. A further example, housed in the second of the three central halls, is the western end of the altar of Pergamon (180-160 B.C.), with its wide flight of steps and inset frieze of gods and Titans (Fig. 29) The museum offers an almost unequalled opportunity for visitors to study the basic structures of antique architecture, its proportions and its decorative devices, and to form an idea of the original dimensions of the religious and secular edifices of antiquity. Large new information boards, with text, illustrations, cross-sections, ground plans and models of ancient towns such as Pergamon and Miletus, help the visitor to understand the principles of antique architecture. Each building thus forms part of an informative whole. It may be observed that antique architecture, especially when presented in this way and notwithstanding its contrast to modern architecture, is optically particularly accessible to visitors, partly because it gives them a sense of familiarity conveyed by the many architectural ground plans, structural elements and decorative forms based on antique models to be found in European architecture from the Renaissance onwards.

When the newly built museum was opened in 1930, two narrow entrances via the side wings were the only means of access to the exhibits. Since 1982, however, in accordance with the original plan, visitors enter the museum via the redesigned courtyard, passing through a new entrance hall and the two foyers in the central hall containing the Pergamon altar. The entrance hall was necessary not only to provide adequate space for the essential functions of a modern museum but also to provide the information services for visitors and the two lecture rooms used for introducing permanent and temporary exhibitions. The new displays in the two foyers also have an introductory function. Outstanding examples of antique and early Greek architecture are accompanied by information boards with photographs of excavations, drawings and texts that, together with the objects themselves, provide an introduction to the archaeological work carried out by the Berlin museums since 1875 in Olympia, Samos, Pergamon and other Greek cities on the coast of Asia Minor. In addition to the history of the excavations, the visitor is given a brief introduction to the history of the cities of antiquity.

29
Reconstruction of the west side of the Zeus-Athena altar at Pergamon, central hall of Pergamon Museum.



Antique architecture forms only part of the Pergamon Museum's Greek and Roman display, which covers a total area of about 6,000 m². On the main floor of the north wing the collection continues with the antique sculpture rooms opened in 1983. Almost two years were spent on the restructuring of these rooms and the laying of natural stone flooring. Many of the antique sculptures have been placed on new, individually hewn sandstone bases; the sculptures and busts are frequently placed on the detachable upper portion of the display pedestals so that they can be removed for temporary exhibitions.

From the conceptual and organizational point of view, the new layout was based on the principle that sculpture, as one of the main art forms of antiquity, provides perhaps the most striking examples that exist of the originality and evolution of Greek art in general. The Greeks realistic representation of the human form became an essential feature of European — and to some extent non-European — artistic development. In spite of varying and sometimes conflicting artistic trends, it remained a living tradition in twentieth century art and still offers permanent access to a historical period that will stand as a model for all time.

The visitor's contemporary social and educational context was also taken into account. It was assumed that today people are less familiar with the Greek and

30
Greek burial reliefs, Room 3 of the sculpture collection.

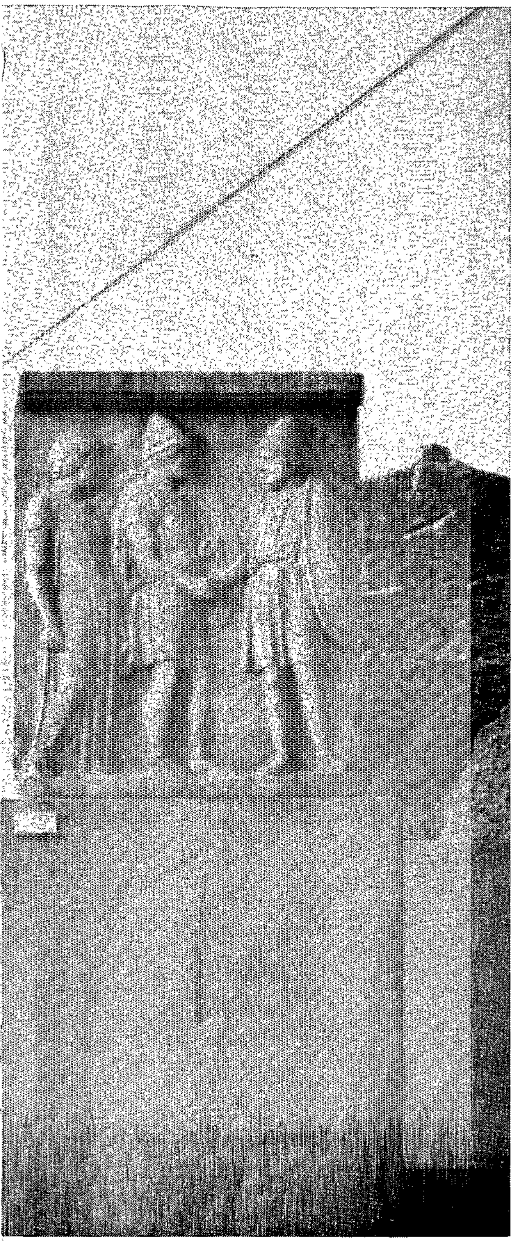
Roman civilizations than they used to be, and that traditional institutions, particularly schools, are less oriented towards imparting classical knowledge than they were in the past. For this very reason, today's museum of antiquities has a new educational function, a new potential and a receptive audience in the younger generation.

The new exhibition of antique sculpture covers almost a thousand years of artistic development and highlights its special impact in terms of the discovery and representation of the human from the Archaic period (seventh and sixth centuries B.C.) to the late Roman period (fourth century A.D.).

It forms a chronological sequence, with each of the main periods in the development of antique art and history presented as a compact whole. Within each period, less emphasis is placed on chronological artistic development (i.e. the dating of items to within a decade through the application of modern techniques to classical archaelogy) than on revealing typical aspects of an era by selecting key themes and thus arousing the visitor's interest.

The bright new exhibition rooms have the added advantage of enhancing the intrinsic artistic properties of each sculpture. The informal, asymmetrical arrangement brings out the characteristic restraint of Archaic sculpture and the lively qualities of pieces from the Hellenistic period.

The exhibition begins with large-scale early works from the sixth century B.C. and a few representative sculptures from the seventh century, to give an idea of the previous stage of development. The first room is dominated by Archaic *kuroi*, statues of young men, and the second by

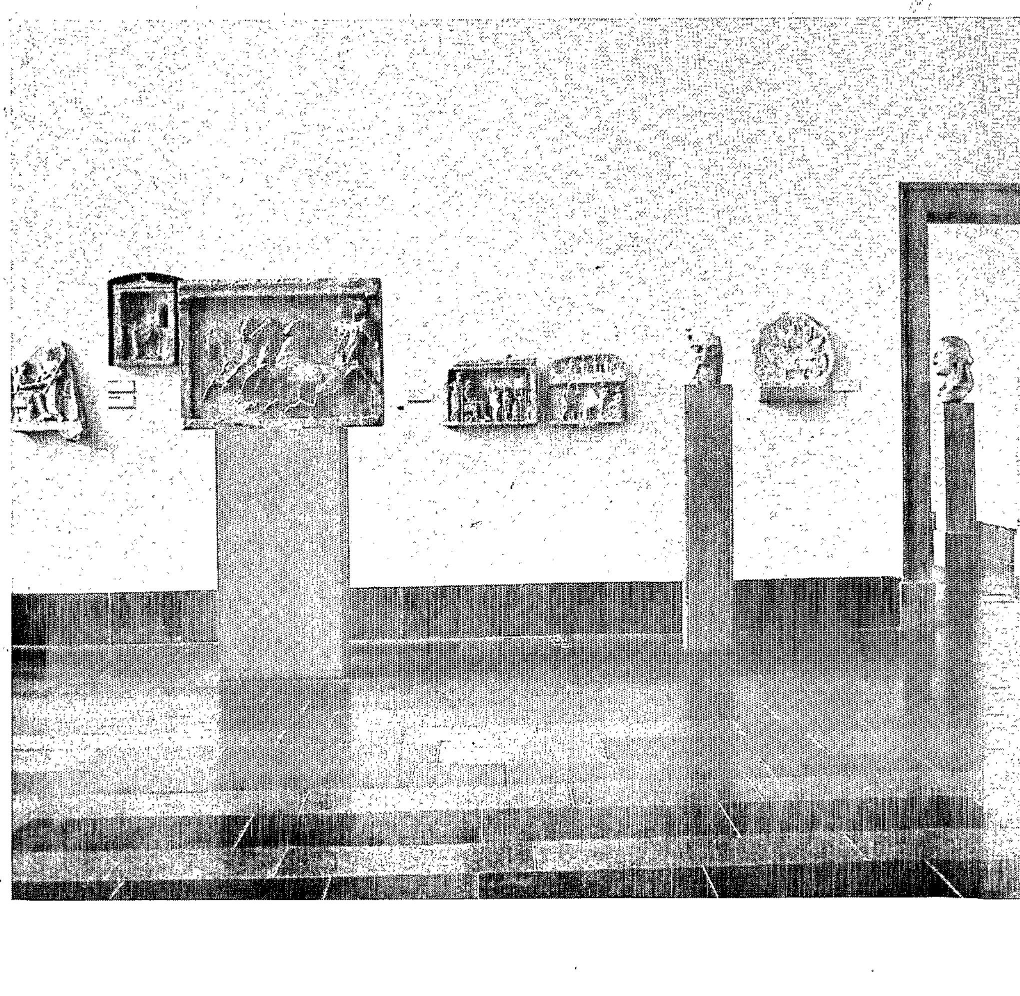


korai, enchanting representations of young girls and women and godlike figures characteristic of the period. The former practice of grouping exhibits on the basis of scientific principles and schools of Archaic art has been abandoned in favour of a thematic approach: directing attention to the function of a piece of sculpture as a gravestone, a votive offering or a memorial statue, and to the extremely wide range of expression of Archaic art, as reflected for instance in smaller works of sculpture.

The Classical and post-Classical periods (fifth and fourth centuries B.C.), with their new approach to the human form during the heyday and subsequent crisis of the Greek city-states, have also been organized along thematic lines, so as to introduce some kind of order into the profusion of statues, busts, friezes, gravestones and votive reliefs. The first series of rooms, for instance, is devoted largely to Greek funerary reliefs (Fig. 30) Pre-archaic works are displayed, and the visitor can follow their artistic development from low relief to the representational, almost free-standing works of the fourth century B.C. The dominant theme, however, is burial rites and the cult of the dead. In the centre, various types of antique relief work have been juxtaposed to give the impression, for example, of a family grave on the burial road in Athens. In other words, the display is modelled on the original configuration dating from ancient times. The various kinds of relief can therefore be clearly related to particular groups in Greek society.

In a few instances other art forms such as vases, terracotta work and bronzes have been added to the display of antique sculpture. For example, the *lecythi* (painted vases with a white background) used in burial rites vividly depict ancient ideas about this life and the hereafter, and add to our knowledge of burial customs. The visitor is thus offered several different levels of reference and can either respond to them all or select particular point of interest. In addition to the artistic and aesthetic impact of individual works, information is provided

31
Greek votive reliefs, Room 4 of the sculpture collection.

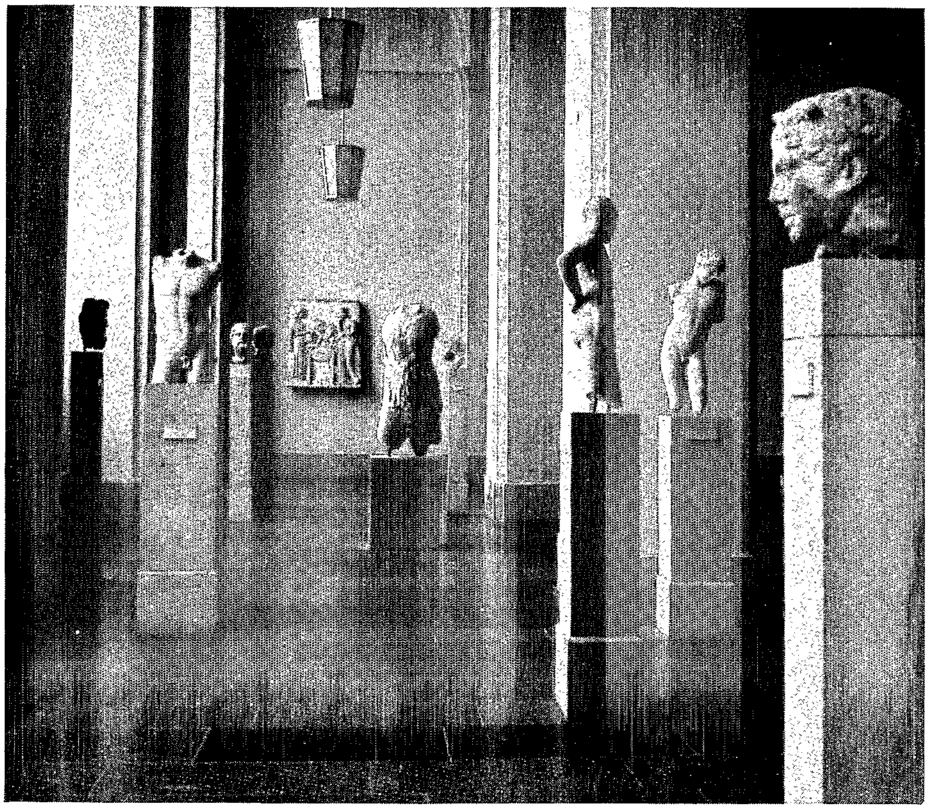


on the ways of life and the prevalent ideas of ancient times, so that only a few explanatory legends and diagrams are necessary. An impression of interrelated images is created by the way in which the works are arranged. Of course, such a self-contained panorama can only be created with a large and varied collection of original Greek burial reliefs such as the one at the Pergamon Museum, ranging from slender Ionic single-figure *stele* to multi-figure reliefs depicting the dead and the bereaved in an atmosphere of poignant yet restrained mourning, and largescale works in high relief whose independent architectural setting is in most cases missing. Little temples such as these are, however, depicted on contemporary vases, so that the original framework can be reconstituted from the vase paintings in the exhibition. Greek votive reliefs also form a separate display. The whole spectrum has deliberately been presented, ranging from the masterpieces of Attic high art to the lowly offerings of minor craftsmen (Fig. 31).

Another large group of rooms contains a collection of masterpieces by prominent artists of antiquity, preserved in the form of Roman reproductions (Figs. 32-34). They are not presented as examples of contemporary Roman taste but, in most cases, as lost masterpieces showing the development of Greek art. This approach had implications for the restoration process: ancient or more recent additions shedding little light on the Greek original (or even obscuring it) were removed. However, in another part of the display of the Berlin collection of antiquities, restoration work reflecting the tastes of the past two centuries is perfectly at home. For example, the rotunda of the Berliner Altes Museum, built by Carl Friedrich Schinkel and opened in 1830, was originally designed as a kind of Pantheon. Since 1980, ancient statues of the gods can again be viewed in a fine setting inspired by Schinkel's original layout. The systematically decorative presentation seeks to adhere as closely as possible to the taste of Schinkel's day, leaving the restoration work intact.

An adjoining display is devoted to Hellenistic art dating from the third to the first centuries B.C. Several large pieces of sculpture reflect the new stylistic trends and modes of expression used to represent the human form in this period, seen in works of art commissioned by the courts of the realms governed by the Diadochoi. Individual themes, such as representations of the ruler, have been singled out as typical of the period. The Prometheus group is assigned to this category, since the figure of Heracles is also a portrait of the ruler, revealing something of the taste for allegory prevalent in this period. References to social issues and representations of poverty and exploitation are also discernible in the Hellenistic sculpture display.

The main itinerary comes to an end in the hall of Roman art (Figs. 35, 36). A selection of exhibits from the extensive collection stored in the Berlin reserves provides some idea of the scope of this period, ranging from official State art to



more popular art movements. In contrast to the exhibition of Greek sculpture, the display of Roman statues wearing armour and togas is based on decorative principles, in line with the approach adopted in ancient Rome itself. By and large, this part of the exhibition focuses to a greater extent on cultural history. It does not seek to reflect the wide diversity of Roman art production or even the imperial structures of the Roman Empire, but it does provide clear references to the phenomenon of art production, with accompanying thematic information, such as small bronze works depicting the most important Roman gods, bronze implements, lamps and decorated bronze, earthenware and glass vessels from Roman villas, with relief works and other objects showing scenes of Roman military life, public games, gladiators and theatres. The burial section contains a collection of sarcophagi, urns, ash caskets and funerary reliefs. A further reason for the stronger emphasis on cultural history in this part of the collection is the fact that on the up-

32
A side-gallery of Room 6 with Roman copies of Greek originals. In the centre, the Doryphoros by Polycletus.

33
Roman copies of Greek originals, Room 6 of the sculpture collection. In the centre a Pergamene copy of the Athena Parthenos in Athens.

34
A side-gallery of Room 6, with Roman copies of Greek originals. In the centre, a torso of Dionysus.

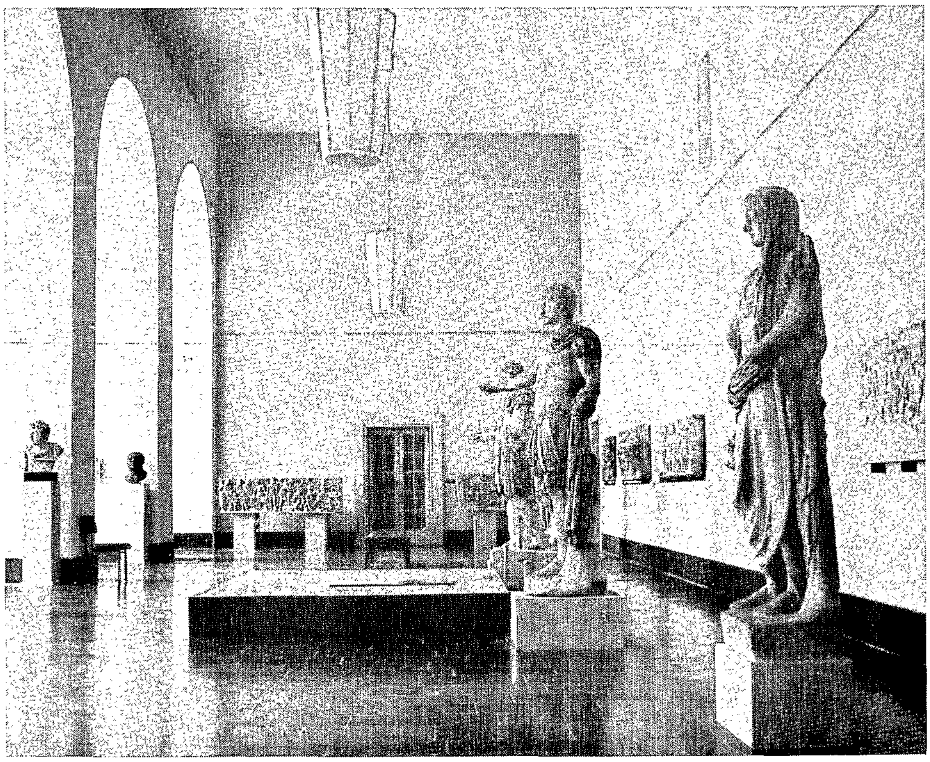
per floor Roman art is represented only by portraits, owing to the limited amount of space available.

The displays in the nine rooms on the upper floor of the same wing of the Pergamon Museum are seen as both a necessary supplement to the sculpture collection and a series of additions to the main exhibition featuring Greek and Roman culture. As already noted, the display of Roman art is completed by a separate room containing about 30 portraits. These represent Roman rulers, officials and citizens, and provide a general introduction to this typical Roman art form. The sculpture display is also expanded by a selection of bronzes and terracottas dating from the tenth to the seventh centuries B.C., which may be regarded as the forerunners of the later monumental works of sculpture. Other practical and artistic examples of early Greek art are also on display in this room.

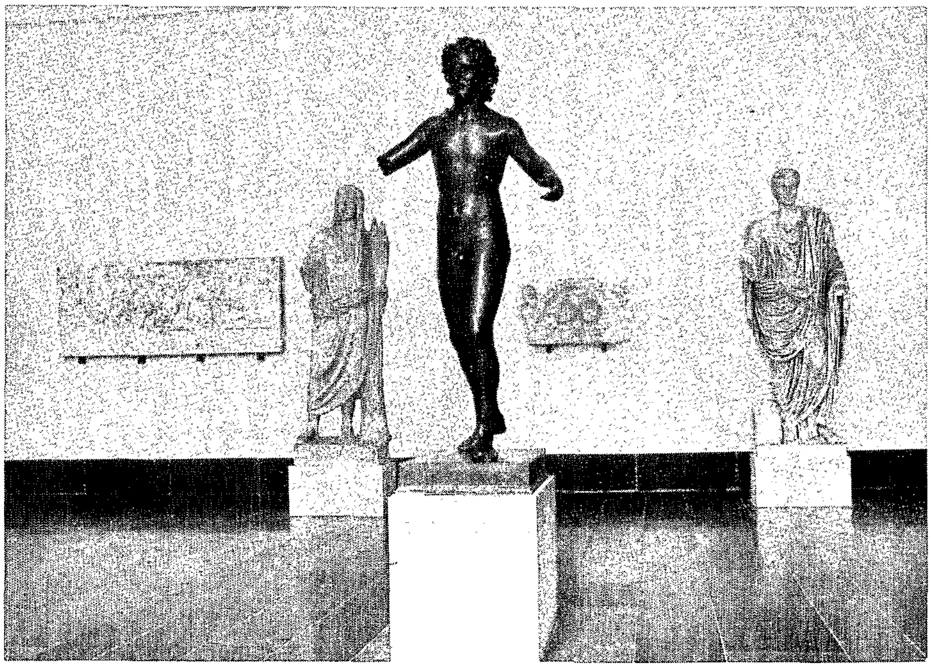
A further aim of the exhibit on the first floor is to present antique art forms other than sculpture, each in a separate room. A comprehensive range of terracotta figurines from Greece, Asia Minor and southern Italy enables the visitor to trace the development of this genre from the seventh to the first centuries B.C. and to differentiate between the centres and regions of art production. A similar general survey is provided in the room devoted to Greek ceramics of the sixth to the fourth centuries B.C. During this period the design and shape of the vases attained a high degree of artistic perfection, especially in Athens. The scenes painted on vessels from this period also serve as an introduction to everyday life in ancient Greece and to ancient religion, mythology, games and drama. Both aspects of the display are highlighted by appropriate arrangements and combinations. Other rooms are devoted to Greek bronzes and Etruscan art.

In spite of its considerable size, the exhibition surface of the Pergamon Musem in Berlin in too small to display the entire cultural range of Greek and Roman art as fully as one might wish. For example, the collections representing early and advanced Mediterranean civilizations are only removed from the reserves for temporary exhibitions. Plans are afoot, however, to include works of Cycladic and Mycenaean art and the art of Asia Minor Anatolia and Cyprus in the permanent display, and to show how the cultural achievements of the peoples concerned were interlinked. ■

[*Translated from German*]



35
Roman statuary, reliefs and mosaics in the hall of Roman art.



36
The so-called Xanthian youth in the hall of Roman art.

Trends in the exhibition of Egyptian art and a project for the State Collection of Egyptian Art in Munich

Eberhard Michael Wimmer

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Every exhibit is understood through a process of optical and mental perception, repeated recognition, interpretation and comparison, and through the esteem in which it is held by others. Every object in a collection has its meaning and its complexity, and the museum's job is to bring this out for each individual item. Each item must at least be set in its historical context, but the museum premises must also be organized so as to ensure its safety as well as its visibility. Conservation is indispensable if the past is to be of use to us, and is the *raison d'être* of today's museum.

A basic pedagogical problem of museum presentation is that rather than adopting a critical or interpretive approach, visitors tend to be primarily impressed by the object's visual appeal. There is nothing wrong with this if the aim is simply to provide pleasure rather than an understanding of the object's complexity and relevance. But museums also seek to draw attention to economic, historical, religious, political, social or technical factors that bring the object to life and make it not only pleasing but instructive. This is the starting-point for museum-based educational activity, which consists in showing the exhibit as part of the living continuity of human action and thus making its meaning accessible.

Anything that is part of human experience can be used as an aid to instruction, but visual charm affects only one of the senses and it is the museum's thematic content that will determine how to use the others through the numerous display possibilities which can be chosen.

In addition to providing specialized information on the objects they display, museums have the responsibility of overcoming mistrust or ignorance with respect to unfamiliar ideas, a mission which is far removed from the images of dust and decay sometimes evoked. For the objects a museum houses were once an integral part of everyday life, and when viewed in this light they can give us an insight into our lives and put the major concerns of our time in a larger perspective.

The museum building itself affects the senses, and in doing so should express the purpose of the museum and evoke relevant themes for reflection.

Great progress has been made in the restoration, conservation and display of the collections in recent years.

In the following pages, we shall attempt to give an overall idea of developments in the Egyptian art displays in the last few years, with particular reference to air-conditioning, lighting and the arrangement of exhibits.

Air conditioning

In the exhibition area, the main requirement for air-conditioning in the vicinity of the objects on display is stability. The problems this involves are easiest to solve in the case of stone sculpture. However, for the Egyptian Collection in the Metropolitan Museum of Art in New York, for example, even the stone reliefs will be displayed in air-conditioned rooms. In the British Museum in London, when the main hall of the Sculpture Gallery was redesigned (a process completed in 1981), the underfloor heating system was maintained, but a ventilation system was added to the lower extension galeries, together with exit air ducts in the skylights, in order ro regulate the temperatures.

Metal, wooden and ivory objects or fabrics present greater difficulties. Where possible, heat and moisture readings should be taken in the place where the object was found, compared with those of its present location and adjusted accordingly. Experts soon opted for self-contained air-conditioning in the case of objects of this kind, since optimum object-related air-conditioning very rarely coincides with the requirements of the room as a whole.

In the Museo Arqueológico Nacional of Madrid, for example, the fairly dry climate is ideal for works of art, and the damp periods coincide with the cold. Unduly high humidity is thus simply reduced by heating and low humidity is offset by humidifiers set at average values (50 to 60 per cent. In damp climates care should be taken not to exceed a relative humidity of 70 per cent.) The temperature in all rooms in the Museo Arqueológico is relatively low, never rising above 24°C. Various regulators designed to maintain a balance between humidity and temperature are being tested, and rooms have been designated for air-conditioning, but in the current phase (which began in 1979) these are still being used as parking and storage space.

The polluted air of industrialized countries obviously finds its way into museum buildings. Not only this but the breath, perspiration and body temperature of staff and visitors also affect the chemical composition of the air and thermo-hygrometric conditions, all of which can bring about changes in surface colour, pigment and patina, and increase craquelure, among other problems.

To guard against air pollution, large-surface activated charcoal filters are commonly fitted into the open base of display cases, and silica gel is used as a humidity buffer. In hermetically sealed dustproof display cases the formation of micro-organisms to which this may give rise is prevented either by means of continuous air circulation, with filtering of the container gas, or by periodic replacement of the protective gas.

In the Collezione Egizia in Milan (the building was converted in 1975), slightly dampened inert gas is used in the cases displaying sarchophagi, to protect them from oxidation, parasites and micro-organisms. Suitable gases are helium, argon and nitrogen, and the temperature should be kept between 5° and 10°. In general, however, objects needing individual air-conditioning for their preservation must be carefully watched if inert gas is being used, since although the absence of oxygen prevents bleaching in some textile colours it accelerates it in others.

The Staatliche Sammlung Aegyptischer Kunst (State Collection of Egyptian Art) in Munich began in 1972 to display reliefs and coffins in a semi-conditioned relatively purified environment behind large frameless plates of glass. Full air-conditioning would be more suitable, however, especially in view of the steady increase in the number of visitors. Since the end of 1983 free-standing display cases with micro-atmospheres specially provided by mobile mixing units have been used successfully in Munich on an experimental basis.

In its first conversion phase (up to 1976) the Metropolitan Museum of Art (MMA) in New York introduced a simple form of display for its Egyptian collection, using frameless glass. It consists of free-standing pieces of various kinds in large, frameless, almost room-high 'walk-in' cases maintained under high pressure with individual humidity, temperature and dust-control. Although this elimination of barriers proved highly effective for display, the cost of the system was so great that in the following phases (up to 1983) sealed and framed display cases had to be introduced. Another disadvantage was that these large cases could not accommodate bronzes and textiles together since the humidity requirements of the former are 30 per cent while the latter require 60 per cent. Also the wind flow of the conditioning outlets has to be specially regulated for textiles and fibres.

Lighting

The importance of extremely pure air is increased by the photochemical activity of light, which can cause damage very quickly, especially if the natural textile fibres come into contact with air containing sulphates at the same time. As iron has a catalytic effect, the use of pins and other such items should be avoided. Light has a corrosive effect on metal exhibits in air containing sulphates.

Depending on its wave-length, light endangers plant fibres and cellulose, such as linen or cotton, and paper or hemp, more than animal fibres, except for silk. It causes changes in the colour and resistance of fibres, and these are accentuated by a damp or overheated atmosphere. The ultraviolet component of daylight is particularly active, and thus risks can be reduced or avoided by using artifical light. There is less ultra-violet in the filtered light of quartz-halogen lamps and fluorescent lamps, still less in the light of pressed glass reflector lamps, very little at all in that of tungsten lamps and a negligible amount in that of high-pressure sodium lamps. The latter provide indirect lighting but their use is confined to storerooms because the light they produce has a golden colour.

In general, the risk of damage to the exhibits can be averted in the following ways: first, by eliminating ultra-violet radiation by means of an absorbent protective coating, or a protective screen in front of windows, or filters in front of lamps; secondly, by reducing the amount of light (lux or lumina per square metre), or excluding light by means of curtains or blinds, with strict control of exposure (lux hours) by darkening the gallery when no visitors are present, or by brief illumination of sensitive exhibits and only in ideal conditions, or simply by not exhibiting particularly sensitive pieces.

In the Museo Arqueólogico of Madrid, the amount of sunlight coming through the east windows was reduced to 25 per cent by placing them at a higher level and fitting them with grey sun-protective glass and diffuser curtains (1975). In this museum artificial lighting is provided by parabolic spotlights and fluorescent lamps. The illuminated hoods of the display cases are fitted with parabolic screens, which direct the light, and parabolic lamps with Plexiglas filters which prevent the photochemical decomposition of colours. Great care was taken not to distort the outline or colour of the objects displayed. The ratio of concentrated lighting (of display cases and individual objects) to diffuse room lighting is about 3 to 1. Superimposed shadows are thus avoided, the relative importance of exhibits is indicated and visual harmony is achieved, to mention only a few of the advantages.

Diffuse downlighting in big showcases in the MMA collection is accomplished by placing opaque or textured glass plates in the hoods. Highlighting is provided by spots hidden inside the showcases.

A further trend is also discernible in the major travelling exhibitions of the past few years, individual pieces and display cases are made to shine as if they were sources of light in the darkened room, while the actual light sources are barely visible. This is an effective technique for achieving temporary excitement over a display, but permanent exhibition areas should aim at a lower average contrast level, to accommodate the adaptation habits of the eyes of visitors and personnel.

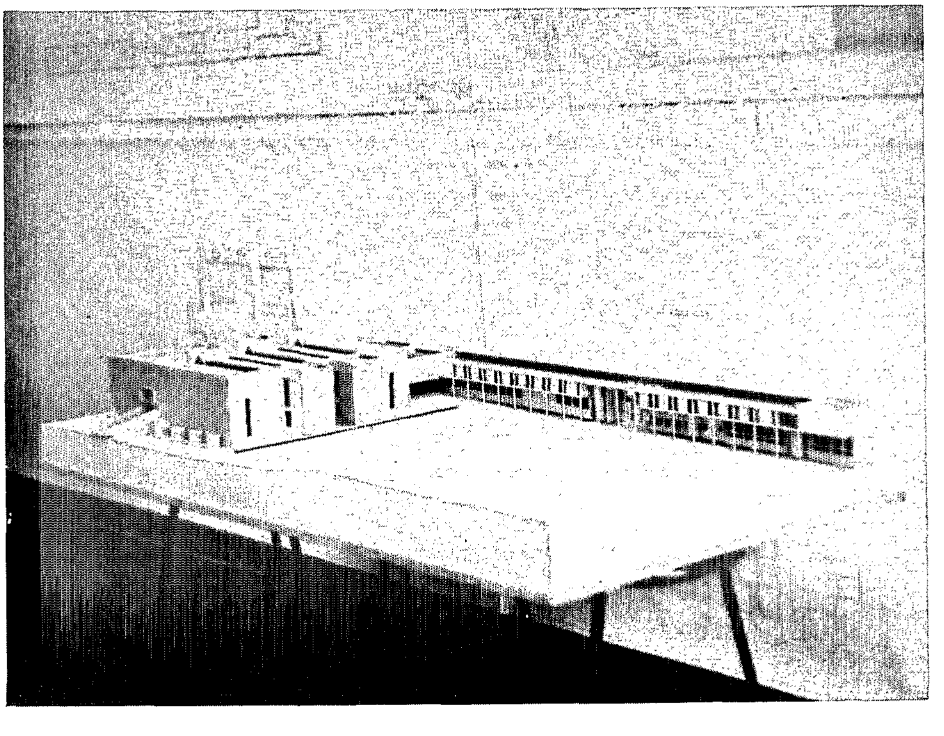
The Egyptian Museum in West Berlin used a rather eccentric approach to display in a recent reinstallation, isolating the object not only by its lighting but by taking it out of its chronological context, and setting up the whole exhibition in two drastically different environments.

The display rooms in the British Museum of London and the Staatliche Sammlung Aegyptischer Kunst of Munich have a historical interest in their own right. Here it was not possible to follow the trend in lighting described above, so an appropriate mix of natural and artificial light was tried. A particular problem (or advantage) in northern regions can be the change of natural light conditions. An average exclusion of natural light from 50 to 75 per cent, when it comes from large lateral windows, seems reasonable in these regions. Light from skylights can be cut down drastically because of its high effectiveness, or used indirectly as reflecting light.

The British Museum conversion plans originally featured external blinds with concave slats for the west windows of the Sculpture Gallery to reflect bright daylight towards the ceiling. In addition, certain sculptures in the main hall are spotlit from high above. Light fixtures with fluorescent and tungsten lamps are placed under the window-sills to illuminate reliefs and charts on the wall. The new side galleries, on the other hand, have been fitted with lateral strip skylights casting a strong vertical beam on inscriptions and reliefs. Fluorescent lamps and tungsten spotlights illuminate free-standing objects.

In 1975, new display principles were put into practice in the new Museum of Luxor (Egypt), which has ideal lighting and atmospheric conditions outside the building. On the east side of the main hall a row of stone sculptures was placed under a narrow strip of light which runs along the whole side of the building, shining down from the ceiling to just above eye level, so that the sculptures stand out in strong light. Artificial lighting was used equally effectively to highlight display cases and individual objects in the otherwise rather softly lit rooms.

With sophisticated lighting techniques distracting reflections can be



37
Model of the project (1 : 100) seen from the south-east, garden façades. Left: museum building. Right: administration, restoration and institute.

avoided. It is also the task of the architect to solve these problems by not making study galleries or show cases too narrow, for example, or placing illuminated information material disadvantageously.

Design and display

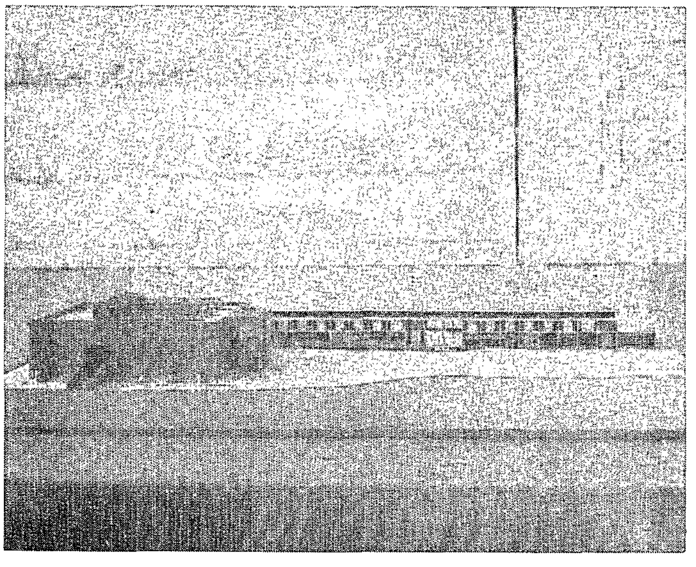
As far as display is concerned, the major innovation has probably been the MMA's decision to prepare all the contents of its storeroom for inclusion in the permanent exhibition. The entire storage area, indeed, became exhibition space, so that there is now hardly any storage and working area. This change in display philosophy is due to the consolidation of the museum's overall stock after about 200 years of excavation, and also reflects the desire to present the collections in as attractive a form as possible. The museum tries to give visitors a more complex picture of Egyptian art, its history and development, and a feeling for the Nile Valley, its climate, etc. During three periods of intensive conversion (beginning in 1972) the stocks were arranged in strict chronological order. Some flexibility has been achieved by displaying part of the collection in study rooms and in temporary exhibitions dealing with specific themes. Smaller display rooms, of the walk-in showcase variety referred to above were introduced, as well as vast rooms filled with carefully selected and arranged exhibits. Limestone was chosen for the background walls, with wood, opaque glass and fabric for the bases. Pink granite was chosen for the floors, with areas of green carpeting to provide visual and tactile 'oases'. A special wing was built for the temple of Dendur, a large glass structure with a pool. This also provides an attractive setting for festive occasions, though it is probably wiser not to use the main exhibition areas of museums for this purpose.

For the temple of Taffah, the inner court of the Rijksmuseum van Oudheden in Leiden was converted and roofed in with glass in 1979, and an outer wall with simple openings was added.

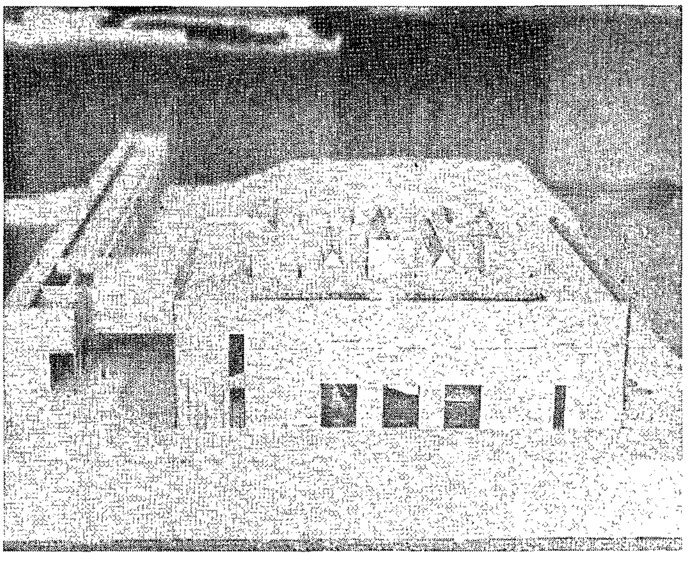
There are many different ways of combining study facilities and main display areas. Initially, the principle of parallel itineraries was derived from the museum's dual function as a place of culture and study, so that both small and large groups of visitors with their different needs could circulate at their own speed. This double function is particularly well catered for in the Civico Museo Archeologico of Milan (1975).

Following a parallel course, the side galleries of the British Museum in London are based on a similar idea, although they are intended primarily as extensions of the exhibition area for smaller objects. Their more intimate atmosphere, derived from their size, lighting, material, and colour scheme adds an extra dimension to the main gallery. Ramps and steps lead to the two galleries, introducing some variation in the floor level of the main gallery. The reorganization also introduced the chronological order beginning at the entrance and the exhibits are now displayed as freely and openly as possible. Warm grey sandblasted concrete was selected for the bases, in addition to the existing Yorkstone floor. The more brightly coloured paintings which had been added to the classical collection were removed, so that the collection now has a more subdued tone.

The housing of Egyptian exhibits



38
Model of the project (1 : 100) from the South side. In front of the museum building there are skylights for the subterranean study collections.



39
Model from the west side. Behind the west façade the hall with the three pyramids behind the great windows, which secure natural light for the study-collections.

underground is appropriate for many objects that have been excavated. It is particularly suitable for the presentation of funerary art and the cult of the dead. Here, the differentiated lighting referred to above, with softly lit rooms and brightly lit exhibits, is even more dramatic. The Osiris crypt in Paris (1979) creates just such an extraordinary ambiance in terms of form and content (unlike the display case design in the Castello Sforzesco in Milan where in spite of great technical sophistication the objects seem to hide the message). In the Osiris Crypt associations and tensions between the objects seem to invite the mind to span millennia. The free-standing objects are displayed individually or in groups, according to their importance, protected by all-glass cases and spotlit. Frameless sealed airtight display cases or glass *cloches* on stone stands (an early example may be seen in the Pushkin Museum in Moscow, 1969) are in very common use nowadays because they offer optimum protection with minimum visual obstruction.

The evocative effect of the Paris installation reflects yet another inspiring development in presenting Egyptian art, which is to exploit the sensuous and associative potential of the exhibits, and their power to stimulate the mind.

The special effectiveness of this approach to display lies in the skilful use of association in relation to content. It becomes particularly clear in this type of exhibition that information material must be used with extreme care in the vicinity of exhibits.

Conclusion

The presentation of Egyptian art and culture at its best reaches standards of curatorship technology and display that can serve as official norms for future work in this field. Minimum requirements for protection, conservation, restoration, and technical environment must be observed, through display philosophies can of course vary considerably. Indeed it is this variability that ensures the special value and interest of each museum.

A museum project for Munich

The State Collection of Egyptian Art in Munich is poorly housed in a noble building, the Munich Royal Residence. It is cut up into disparate space sequences, and its air-conditioning, lighting and display possibilities are inadequate. There is no space connected to the exhibition areas for restoration, temporary exhibitions, study, documentation, lectures, receptions, or staff facilities. These poor conditions on the one side, with steadily increasing public interest and numbers of visitors and public activities on the other, make it urgently necessary to redesign the collection.

This project, which began in 1981, concerns the construction of an Egyptian Museum in Munich and its location, for which no final plans have yet been adopted. We do not propose to describe in detail the special advantages of the best location or the beauty of the nineteenth century park (the *Finanzgarten*) to the north of the Munich Royal Residence in the neighbourhood of the *Englischer Garten* or the urban planning aspects of the project, but will confine ourselves to a description of the building and the design of the exhibition rooms. (Figs. 37-41)

A basic principle of the project was to make the most intensive use possible of the collection. The Egyptology Institute was therefore associated with the museum to ensure optimum interaction of research, teaching and museological activity. The joint use of rooms and facilities by the two bodies is also economical. The Institute, the museum administration and the restoration department are housed in a long narrow building between the street and the park, with a lecture-room linking them to the exhibition block (see site plan).

The project includes space requirement devised by Dr. Dietrich Wildung, Director of the State Collection of Egyptian Art in Munich. These provide for the incorporation of stocks held in storage with the permanent exhibition as a study collection. The permanent exhibition areas are in the basement and on the ground floor, and space will be made available for temporary exhibitions on the upper floor of the main building. The hall, store-rooms, classrooms and areas for staff, technical and other services are arranged to form buffer zones around the exhibition areas, which makes it easier to control the air-conditioning system. The height of the rooms is adjusted to suit the exhibits and can be relatively low (about 5 metres). The cubic volume of the building is thus reduced and this has a favourable effect on the air-conditioning and building costs. Considerations of cost were also taken into account in selecting the building system and materials: prefabricated elements are used for the supporting structures and ceilings, and the double outer walls, with coloured rough concrete blocks on the outside and limestone or sandstone ashlar on the inside. The inner walls are also of limestone or sandstone. Granite flags are used for the main floors, and wooden tiles for the study collections. The aim is to match the material to the nature of the exhibits. Monumentality and durability are reflected in the continuity of the structural mass of the wall surfaces and the rough ashlar.

Some features of the visitor's itinerary are as follows. The main entrance door consists of a sliding stone slab. The main hall is reached via a ramp at the south end, and a small lobby. It has the same functions as an urban piazzetta, providing a concourse, rest area, meeting point and orientation centre. There are bookstands, a few large pieces of sculpture and attendants in Arab robes serving coffee, dates and figs. Two ramps leading to the upper floor give access to two smaller exhibitions in the temporary exhibition area. The study collection rooms in the basement are lit by overhead light in the form of glass pyramids. There are large windows in the west wall and from the roof, a transverse strip of natural light. The shafts of light falling into the arcade-like main hall at three points add drama to the lighting. There are large square and triangular openings in the upper floor leading into the temporary exhibition area, which can be separated off with lattice-work and glass.

For temporary exhibitions the upper floor is fully air-conditioned and provided with adjustable natural lighting from long narrow skylights, supplemented with artificial lighting. Some areas are lit directionally from above or the sides, and others have diffuse lighting. Three elongated openings in the floor let the light pass to the rooms below.

Two large openings lead from the main hall into the permanent exhibition area, which is lit only by the small amount of light coming from the hall, and natural light from the openings in the ceiling. The slanting walls, behind which ramps lead down to the lower floor are also lit naturally. The niche containing Chnumit's tomb glimmers from the depths of the room, with a laterally illuminated wall surrounding it. The sculptures and display cases glow as if they were light sources. The micro-climate of the display cases is stabilized by means of regular checking and a link-up with a mobile air mixing equipment, and is always independent of atmospheric conditions in the room. Visitors are directed by taped instructions or music to the lecture room with its non-stop introductory films, group tuition, children's drawing area, and other such facilities. Information boards are placed at strategic points, where they do not interfere with the impact of the exhibits. The volume of information in the exhibition areas is graded to match visitors' expected interest level (see below). The ground-floor exhibition covers prehistory and early history, with a few additional pieces of sculpture from a later period.

Long ramps with high slanting walls lead down into the basement. As one descends and the overhead opening becomes narrower, the quantity of natural light gradually diminishes until one is in almost total darkness. The eye thus has time to adjust to the artificial lighting used for the main collection in the basement. The ramps are designed to be experienced by the visitor as important preparatory zones leading to the collection covering the third dynasty to Coptic-Islamic times.

In some areas the room seems to be illuminated by the exhibits themselves. The painted walls are in dark colours and the sandstone ashlar walls are left bare. As on the ground floor and the ramps, the floor is surfaced with reddish granite flags. Pedestals for the display-cases, reliefs and sculptures, where needed, are made of coloured concrete. The positioning and lighting of each object is designed to reflect its significance.

In the main collection, pieces from the Old, Middle and New Kingdoms and the late periods are displayed chronologically. A central unit of this kind is also ideal for acquainting crowds with the main pieces in the collection in the smallest possible area. The remaining pieces are displayed in areas devoted to particular periods, and space has also been set aside for new acquisitions. Thus particular periods or the entire collection can be viewed in chronological order.

The freely accessible study collections are connected to the main areas in the same way. They are clearly distinguished, however, by spatial separation, intermediate galleries and natural lighting. They include reading and study areas with references libraries. These study collection rooms could perhaps function as walk-in air-conditioned display cases. They are intended to show as much as possible of the museum's stocks. Some of the storage areas in the basement and on the ground floor could be converted into

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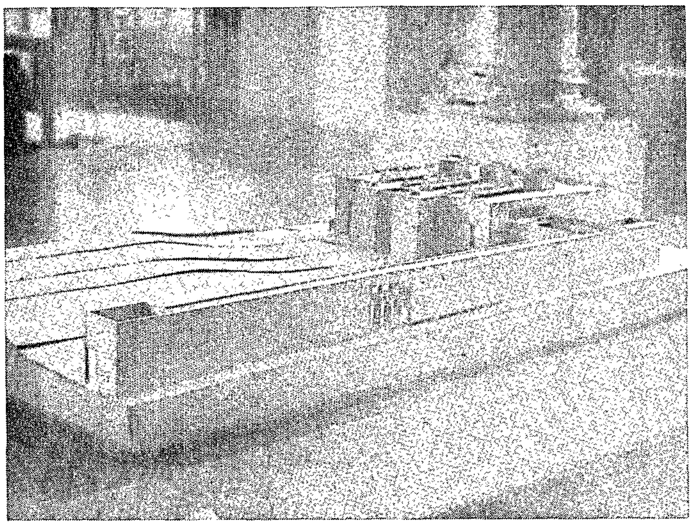
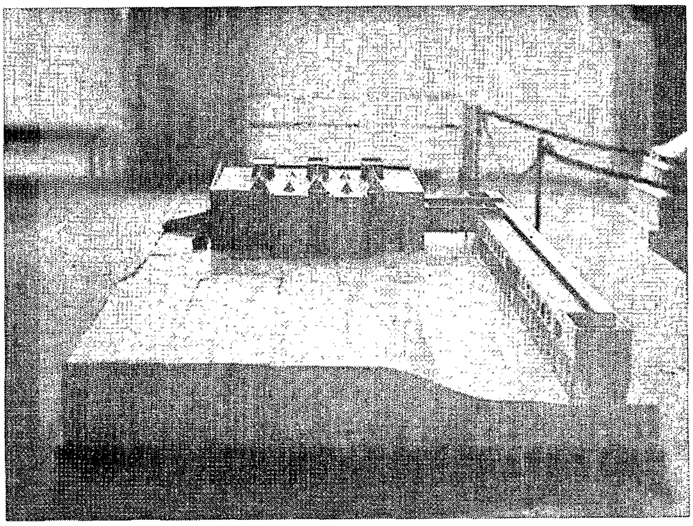
Model from the north-east (1 : 100) showing the street façade, as a wall against traffic noise.



41
Model from the east (1 : 100). Left: museum-building, entrance-ramp on the south. Right: administration, institute-building (street façade, north) under this building there is a shallow traffic tunnel — an auditorium bridges the tunnel and facility rooms.



exhibition areas on completion of the integration phase. Space for later expansion has also been provided in the south-east corner of the basement, but this could also be used as a small temporary exhibition area or a lecture room.

Other features include a room unit in which only small works of art are exhibited chronologically and in frameless sealed display cases, the so-called burial chambers with sloping ceilings under the ramps, and smaller rooms for the display of coffins and the Meroitic treasures.

This project demonstrates some of the many ways in which Egyptian art can be displayed in a museum which takes the visitor's different senses into account. ■

[*Translated from German*]

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The new exhibition in the Armoury of the Kremlin in Moscow

Mickhaîl Petrovitch Tsoukanov

Director of the National Museums of the Kremlin in Moscow since 1977. Before this he worked for many years as Vice-Minister of Culture in Kazakhstan, and then as Vice-Director of the central administration of cultural and educational establishments for the Ministry of Culture of the Soviet Union. He was in charge of remodelling the exhibition rooms of the Armoury. He is a member of ICOM and serves on its international committee on museum security.

The formal opening of the new exhibition in the world-famous Amoury of the Kremlin in Moscow took place on 25 April 1986. The Armoury is the oldest and largest museum of decorative and applied art[1] in the Soviet Union and houses artistic treasures from almost nine centuries.[2] Although it opened only recently,[3] the exhibition has already won acclaim from museum specialists, artists, designers, the academic community and the public at large and is attracting increasing interest. But this acclaim was preceded by a long and difficult period of search and experiment and the study of the best that Soviet and foreign museums had to offer.

The experience of working on a new exhibition in a museum of the size and importance of the Armoury in the Moscow Kremlin may also be of value to other museums.

The need for a new exhibition was dictated by the increase in the social function of museums, in their educational mission and their active aesthetic, moral, patriotic and internationalist role. The previous exhibition did not permit the great range and the character of the collections in the Kremlin museums to be displayed to the full. We set ourselves the task with the new exhibition of applying the experience accumulated by museological practice and we aimed to carry out this task at a qualitatively higher level with regard to science and aesthetics, as well as emotional impact and general layout. A very rare opportunity enabled us to carry out these bold plans since the Armoury building, which is an example of mid-nineteenth century palace architecture, was scheduled to undergo full-scale repair and restoration work and the museum was to be closed for three or

1. This is the name given to six museums — the Armoury, the Cathedrals of the Assumption, the Annunciation and the Archangel, the Rizpolozhenie Church, the Museum of the Applied Arts and Everyday Life of the Seventeenth Century — and a number of architectural monuments.

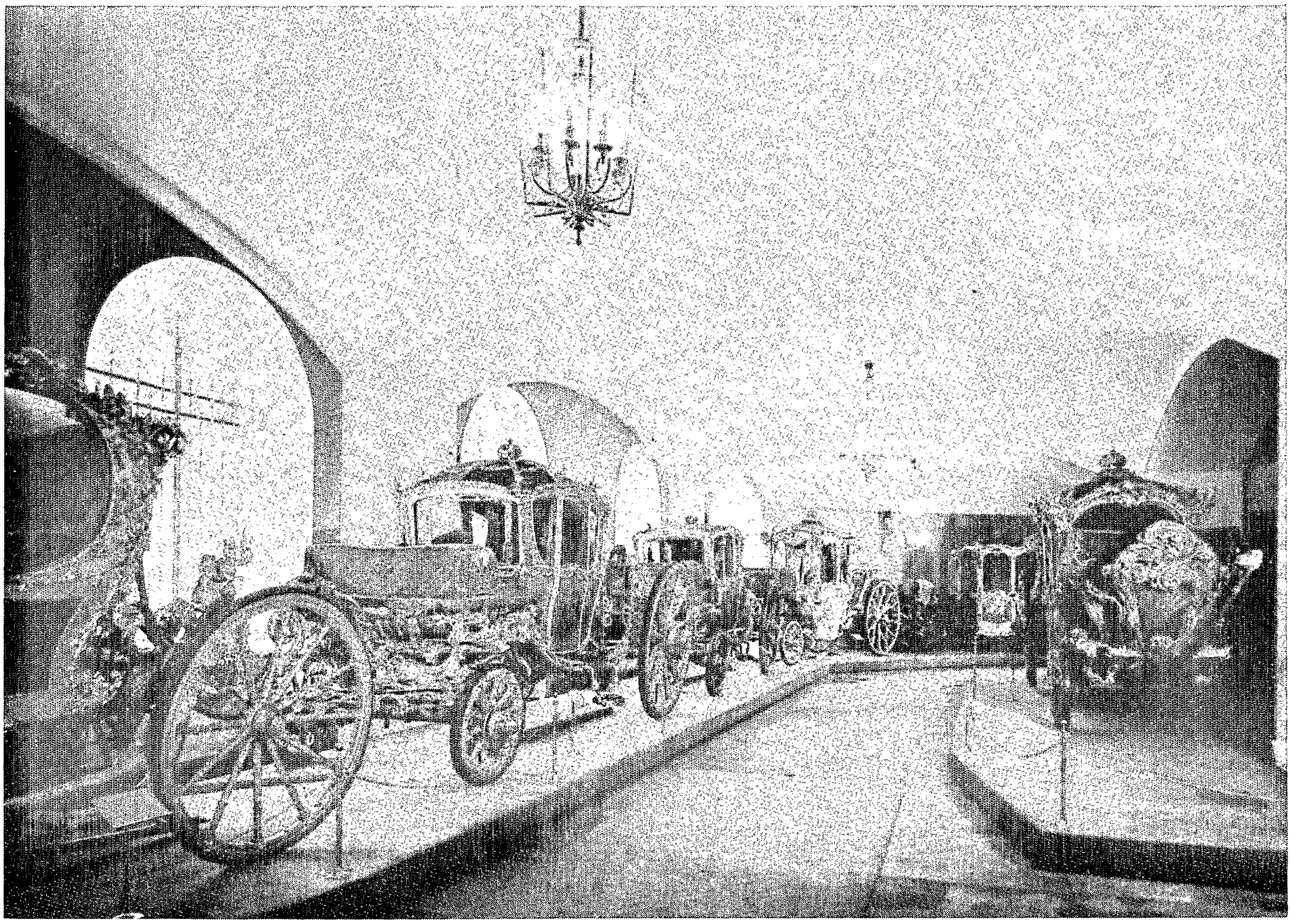
2. The first known reference to the Armoury was in 1508. Weapons, armour, jewellery and works of art destined for cathedrals were originally made and stored there and in other chambers in the Kremlin. These activities in the chambers of the Kremlin practically ceased when the capital was transferred from Moscow to Petersburg, and most of them became storehouses. In December 1709, shortly after his victory at the battle of Poltava, Peter I ordered that all weapons, banners and other trophies were to be moved for storage to the Armoury, as if recognizing its role as a museum. In 1727, various chambers in the Kremlin were merged into the Armoury and Workshop. In 1755, the first director of Moscow University, A. Argamakov, who was instructed to make proposals regarding the role of the Armoury and Workshop, wrote that the crowns, sceptres, gold and silverware and old weaponry could form a gallery, but that a special building needed to be constructed for them as the old one had deteriorated and been damaged by fire. It would also be necessary to draw up an inventory of all artefacts and publish a catalogue in Russian and in foreign languages. In addition, he proposed opening the Armoury and Workshop to visitors on one day a week, i.e. it virtually became a museum open to all. In the *ukase* concerning the rules for the administration and complete and orderly preservation of the antiquities in the Armoury and Workshop, signed by Alexander I on 10 March 1806, there is a reference to functionaries whose job it was to ensure that valuables did not go missing or become damaged while the public was visiting the palace. Thus, the Armoury and Workshop were considered as a museum even at that time.

In 1810, a museum building was constructed in the Kremlin to a design by the architect I.V. Egotov but as it proved unable to cope with the growing number of visitors, a larger building was eventually built in 1844-1851 to a design by the architect K.A. Ton as an extension to the Great Palace of the Kremlin.

Shortly after the October Revolution, the Armoury received many works of ancient Russian art of immense artistic and historical importance which had been held for centuries in the churches and monasteries of Russia. An exhibition of Russian enamels was opened in 1920, and in 1924 a permanent exhibition was opened in the Armoury, then known as the Museum of Decorative Art.

3. Article written in July 1986.

42 Room No. 9 houses one of the world's best collections of carriages from the sixteenth to the eighteenth centuries. The artists and designers have tried to create a special atmosphere in the room. The carriages are on open display on a low podium. The windows are fitted with specially made decorative grills. The single-tier chandeliers, similar to those in the other halls but with additional glass plates, are reminiscent of old lanterns.



four years. The idea and plan for the new exhibition in the Armoury were examined by the USSR Ministry of Culture which approved the proposal of the Board of Directors of the Kremlin Museums to replace the exhibition facilities completely and to design and instal new showcases meeting present-day requirements.

Thus, a fortunate opportunity to consider and think through as a single entity the three major components of the new exhibition — the exhibits, the exhibition facilities and the exhibition area — occurred at the design stage. Such an opportunity would be extremely important for any museum establishing a new exhibition but for us it was particularly significant as the Armoury belongs to a rare type of treasure-house museum. The core of its collections, historically built up on the basis of the national treasure-house and State store-houses, reflects the particular features of the process by which artistic treasures were accumulated in the Kremlin, their arrangement in complete collections and their structure. The formation of the collections in the Armoury and the other Kremlin museums is intimately involved, as in the case of no other museum, with the history of the Kremlin itself, Moscow, Russian culture and the formation and development of the centralized Russian State.

Most of the artefacts in the Armoury collection were made in the Kremlin itself, which had many workshops producing armour, paintings, jewellery, carriages, embroidery, etc., as the Moscow Kremlin was for several centuries not only the administrative, political and religious centre but also the leading artistic centre of the Russion State. These items were made by the best Russian craftsmen for the needs of the Kremlin and remained for centuries in its cathedrals, monasteries and palaces and in the Patriarchs' Vestry. They were used on ceremonial occasions, such as the reception of foreign ambassadors, and to meet the needs of the grand-ducal and Tsarist court and the clerical hierarchy. Hundreds of the objects preserved in the Armoury are directly connected to major historical events.

Other items came to the Kremlin as the gifts of ambassadors. With time they became integral and unique collections of Western European and Oriental decorative and applied art. Some of these works are unique and of exceptional historical and artistic value; all of them offer eloquent material testimony to the extensive commercial, diplomatic and cultural links between Russia and the countries of Western Europe and the East.

One important point about the collections in the Armoury which should be mentioned is that they mostly feature the leading branch of decorative and applied art, which is jewellery (Russian, Western European and Oriental). Most of the objects are made of gold, silver and precious

fabrics with a profusion of precious stones. This made special demands on the organization and artistic presentation of the exhibition, the choice of lighting for the exhibits and the nature of the display installations. Also on exhibition in the Armoury are unique collections of ceremonial weapons and armour, State regalia, precious fabrics, embroidery, secular clothing and ecclesiastical vestments. There is also a very rare collection of ceremonial horse harness and a collection of carriages (Fig. 42).

These collections helped to determine the main sections in the exhibition. The organizing principle for the whole exhibition and each of its sections is historical.

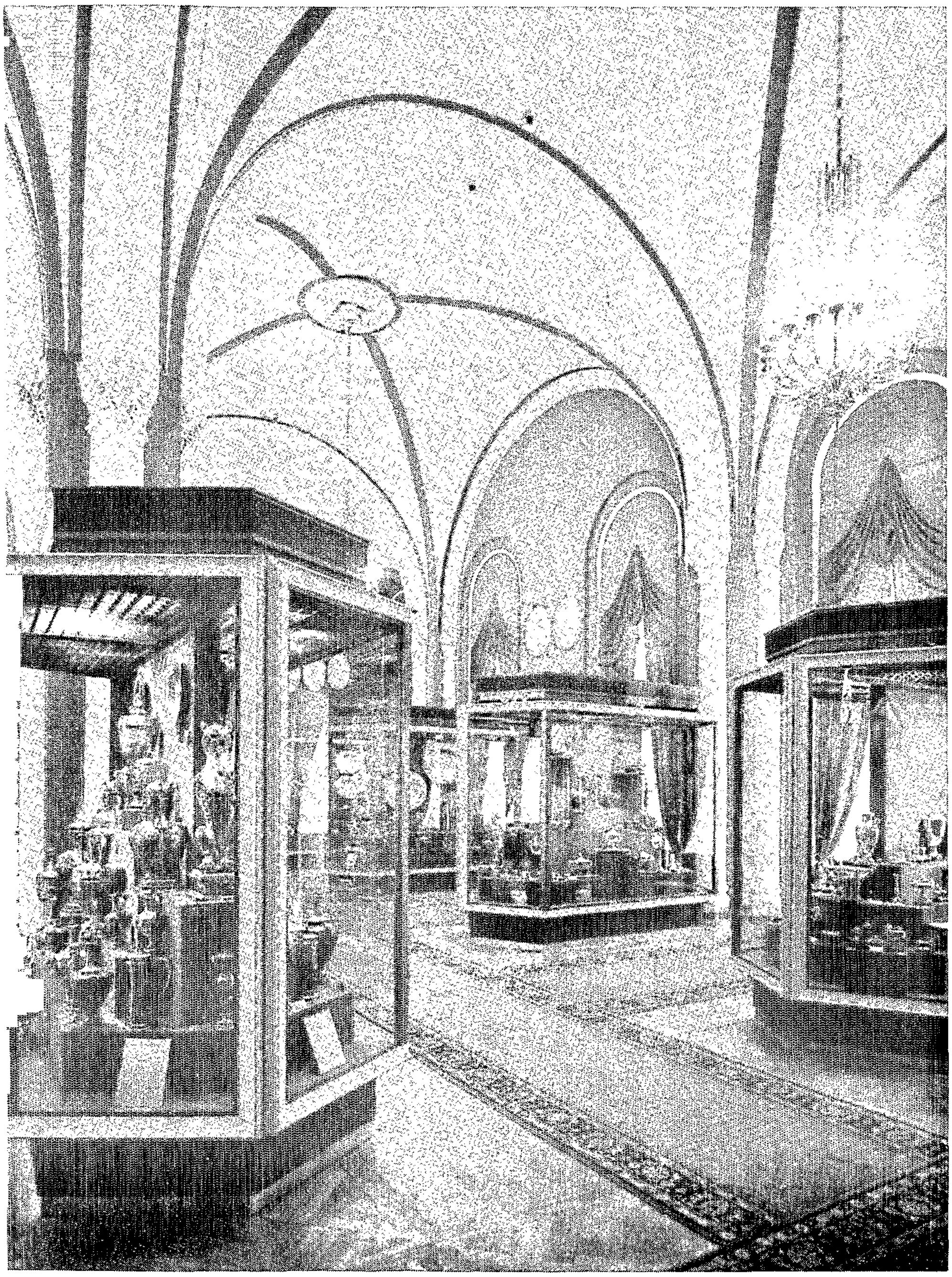
As items of old Russian decorative and applied art (twelfth to the beginning of the twentieth centuries) predominate in the Armoury, it was necessary to find ways of emphasizing the historical link between periods and the continuity of cultural and artistic traditions, to provide an impressive demonstration of the position of Russian culture and art in world culture, its deep historical roots and traditions, the supreme craftsmanship of Russian armourers, jewellers and artists and the role of the Kremlin itself as the leading artistic centre of the Russian State.

One of the tasks involved in the creation of the exhibition was to increase considerably its potential impact on all kinds of visitor. This involved making clear in a comprehensive way the general idea behind the exhibition and its different aspects.

In our view, the new exhibition has managed to provide a convincing historical panorama of Russian decorative and applied art, illustrating the paths by which it developed, its artistic diversity and national characteristics, its stylistic development over eight centuries, the variety of artistic and technical methods used in working the materials, and the creative identity of outstanding Russian craftsmen, and at the same time representing the main artistic centres and local schools.

It was equally important to display fully the extremely rich collections of Western European and Oriental art. In this way, we wanted to draw attention to the fact that Russian culture was not introspective and isolated from either general European developments or from contacts with the countries of the East, and to put across the idea that world culture and its component national cultures cannot flourish without the constant contact, interaction, reciprocal influence and exchanges which have always been to the advantage of all peoples.

Finally, we attempted to display as fully as possible another very important aspect of the general idea behind the exhibition — the supreme importance of artistic culture in the spiritual life of the nation, and its active role in aesthetic, moral and internationalist education. Our starting-point here was the fact that culture has, at all times, been one of the most powerful ways of influencing people's awareness and the development of their spiritual universe. The works of high art produced by all branches of art and architecture are not simply expressions of the ethical and aesthetic categories of their time but are also the source of high aesthetic, humanist and moral ideals which retain their capacity to



43
The Armoury, Room No. 5. Like the other exhibition rooms on the first floor, this is palatial in character, with a high, vaulted ceiling. The side walls are pierced by high, narrow windows. The marble medallions on the walls are bas-reliefs depicting Russian princes and Tsars, the work of the famous sculptor F.I. Shubyn, and date from 1774-75. They were transferred to the Armoury during the nineteenth century. When the new exhibition was created, the ceremonial character of the interiors was reinforced by the colour scheme in each room, the elegant two-tiered chandeliers and the style of the curtains. The tiered arrangement of the exhibits in the show-cases recalls a common arrangement of many objects in ancient Rus'. At ceremonial receptions given by the Tsars, large amounts of gold and silver plate symbolizing the splendour and wealth of the court were stacked on a tiered dresser. The arrangement of the show-cases in the room and the way in which they relate to its internal architecture are clearly visible.

influence people even in different socio-economic contexts.

In order to give practical expression to the general idea behind the exhibition and to our other aims, we selected three major lines of emphasis and concentrated on achieving three goals:

1. A fundamental improvement in the artistic presentation of the exhibition and the museum as a whole.
2. The development of new, better-quality display cases meeting the most up-to-date safety and reliability specifications for the display of exhibits and providing a wide range of display options and high aesthetic standards. (Fig. 43).
3. A fundamental improvement in the lighting system not only for each section of the exhibition but for each show-case, and also an optimal relationship between the lighting for exhibits and the general lighting in the exhibition rooms.

Now that the new exhibition has opened we can say with satisfaction that our choice of the areas in which practical efforts were to be concentrated was the right one.

One of the features of the Armoury museum is that it is housed in a specially constructed building in the unified architectural ensemble of the Great Palace of the Kremlin which displays all the typical features of palace architecture. The interior of the ceremonial halls in the Armoury and the nature of the items on display called for the establishment of a treasure-house museum in a ceremonial style. We considered that the resonance of the interior would have a beneficial effect on the general perception of the museum and the exhibition. Our starting-point here was the view that a contemporary museum and a well-presented exhibition should share the same artistic concept and be experienced as a single entity in both intellectual and spatial terms.

The display facilities — show-cases, lighting, furniture, assorted equipment — were designed to take account of the architecture of the interiors and the colour scheme in each exhibition room.

Everything is arranged so as not to distract the attention of the visitor.

The use of a separate colour scheme for each room was the key to the artistic presentation of the Armoury and the exhibition, as well as being an original, memorable and distinctive feature of the museum. The scheme for each room includes the colour of the walls, the backgrounds in the display cases, the curtains on the windows and the upholstery of the furniture.

The choice of colour for each exhibition room was determined by the nature and general tonality of the majority of exhibits and their presentation. The architecture of the room was taken into account, together with the combination of colours in neighbouring rooms (arranged in linear sequence), the colour schemes already existing in the Armoury and the general impression produced by the change in colour.[4]

The ceremonial style of the museum is reinforced by the use of new chandeliers, from one to three tiers high, and wall lamps.[5]

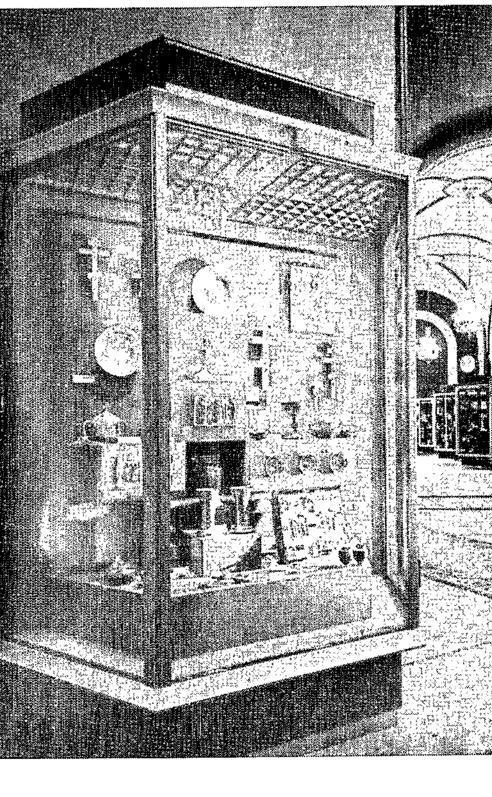
It is important to note that the different kinds of show-cases, the auxiliary fittings, the lighting, and all types of furniture, pedestals and other equipment were tested with life-size mock-ups of the appropriate colour, positioned according to actual spatial measurements. The designs were only submitted for manufacture after the mock-ups had been approved. We can recommend our experience to anyone faced with the task of setting up new exhibitions or the large-scale reshaping of exhibitions. It is not the simplest approach and it requires a certain outlay, but serious mistakes and setbacks are thus avoided which could only be rectified later at even greater cost in terms of time and resources.

It would be no exaggeration to say that in preparing the new exhibition in the Armoury, we achieved our greatest success with the new, modern show-cases.[6] In our view, we have managed to say something new here and achieved something which could serve as a point of reference for other art museums. These show-cases make a fundamental contribution to the artistic presentation of the museum and the exhibition. They have no parallel and, in our view, successfully incorporate all the basic requirements and preferences for secure conservation and convenience of display.[7]

The new cases, which are quite complex pieces of engineering, are extremely stable, sturdy and reliable. Unlike previous show-cases (and general practice), they are not made of wood but essentially of light metal alloys. The design of the frame enables them to absorb any kind of vibration. It is particularly important to note that all the show-cases (both the free-standing and the wall models) consist of three independent and separate modules: a technical module, a display module and a lighting module (Fig. 44). The show-cases are dustproof and *a fortiori* quite inaccessible to harmful insects. They are fitted with special filters based on the system developed by Academician Petryanov which has shown outstanding performance in tests and in many years of actual service in museums. The filters are guaranteed up to 20 years and are very easy to replace. At the same time, the display module of the case is not hermetically sealed, but can 'breathe'. The show-cases are simple to work with and offer easy access for the care and transfer of exhibits. The locks, sealing systems and conservation equipment are all original in design, and the cases can be easily viewed. They are fitted with special supports and brackets for mounting the exhibits. These can also be fixed on vertical surfaces by means of fittings which are aesthetically satisfying and meet the requirements for the secure and reliable conservation of works of art of every possible shape and made of a wide variety of materials (Fig. 45). The air-conditioning systems in the cases maintain stable, standard temperatures and levels of humidity. Their excellent fireproof rating is also worthy of note. The cases are also extremely aesthetically pleasing. Over 30 special light-alloy sections had to be produced in order to meet all these requirements.

The successful design of the show-cases and their suitability for arranging in rows made it possible to bring the exhibit closer to the visitors so that they can have direct contact with it, which is an essential aim for any museum.

As stated previously, one of our most important aims was to make a fundamental improvement in the lighting system. The lighting in the new exhibition is, we think, quite effective. The first thing we did was to eliminate the fluorescent lighting and get away from a single type of lighting for the show-cases. Each case now has its own individual lighting which depends on the material of the exhibits and protective light intensity standards. The ligth intensity in the fabrics section does not exceed 50 lux and in the metalwork section it does not exceed 250-300 lux. Only incandescent lamps are used to light the exhibits in the show-cases, so that a selective range of illumination can be provided which brings out the real colours of the exhibits and the sparkle of the precious stones. The fluorescent light used previously distorted the natural colour of the exhibits, impoverishing the visitor's



44
Room No. 1. Russian gold and silver objects from the twelfth to the seventeenth centuries. In the foreground, one of the kinds of wallcase with items by Novgorod silversmiths. Room No. 2 is visible in the background. The arrangement of the show-cases in the rooms of the Armoury corresponds to the building's architectural divisions. The three separate modules of the show-case, the technical (lower), display and lighting (upper) modules, are clearly visible.

4. M. N. Larchenko, 'The Concept of a Thematic Exhibition Plan and its Artistic Realization in the New Armoury exhibition'. Report at the meeting of the Academic Council of the State Museums of the Moscow Kremlin, June 1986.
5. All produced from a single plan by the designer, V. D. Golikov.
6. These were developed by the artists E. N. Smirnov and D. A. Sudakov and the designer V. S. Vartanov with close co-operation from the directors of the Kremlin State Museums and the academic staff of the Armoury.
7. See for example, R. Organ and B. Ramer 'Some Hard Truths', *Museum*, No. 146, 1985, p. 8.

perception of the exhibition as a whole and of the individual exhibits.

The lighting module is located above the show-case and to provide better ventilation there is a small space between it and the case top, made of highly translucent laminated safety glass. The show-cases are fitted inside with a special toned lurex lattice so that the light sources do not come into direct contact with the display module. Together with the ventilation system, this prevents any rise in the temperature in the display module.[8] The lighting module is easily serviced (bulb replacement and regular dusting of the laminated safety glass). The design of the module and the type of illumination employed enable adjustments to be made to the direction and intensity of the light. Optimal lighting conditions can thus be obtained, which is extremely important. The new show-cases also make use of fibre optics, which produces good results in spot-lighting. We are at present using this system on an experimental basis, testing all its applications to museum work.

Our specialists have worked out the best relationship between the lighting for the exhibits and the general lighting in the exhibition rooms.

An air-conditioning system maintains the most favourable temperature and humidity conditions throughout the museum.

Admittedly, the development of the air-conditioning system, new show-cases, auxiliary equipment, furniture and new chandeliers for the general lighting of the museum represent a considerable investment which would be beyond the reach of many museums, but in this case the necessary resources were provided by the government.

Over 20 all-union ministries and a hundred assorted enterprises and organizations in Moscow and a number of Union Republics played a part in the repair and restoration work in the Armoury and in the production of the new show-cases and equipment, the interior design, etc. They readily provided the museum with assistance, making every effort to produce high-quality work and bring forward the opening date for the new exhibition, which indicates the widespread interest that is taken in the Armoury.

The new exhibition was not an end in itself. In addition to establishing favourable conditions for the conservation of exhibits, it offers a wide range of new opportunities for more effective educational work with all kinds of visitors, from schoolchildren to specialized research groups, with visits based on specific themes, as well as seminars for museum workers, artists and restorers.

Over 300 previously unshown art works of high quality have been included in the exhibition, thus achieving another aim, which was to make the exhibition a more abundant source of information.

As the collections in the Armoury were constituted on the basis of the national treasury, the new exhibition still observes the principles of arranging the material by historical collections and in such a way as to provide a multi-faceted display without conflicting with the need for compactness.

As we have seen, the show-cases in the Armoury are either free-standing or arranged around the walls, and this seems to be the best way to enable visitors to tour the museum in groups. Visits for foreign tourists are conducted in many languages.

The new exhibition in the Armoury has now come to life. We can see where we should concentrate our efforts now in order to achieve further improvements, and in this respect there is no limit.

We would be delighted to welcome colleagues and specialists from other museums in order to share ideas and experience. ■

[*Translated from Russian*]

Just before going to press we were informed, to our deep regret, of the death of Mickhaîl Petrovitch Tsoukanov, the author of this article.

45
Room No. 2. Russian silverwork from the seventeenth to the beginning of the nineteenth century. In the foreground, a show-case containing objects made by Russian jewellers in the second half of the seventeenth century. The show-cases, which are made of metal alloys, appear light and 'airy'. The other cases in the room can be seen though the glass. An excellent view is provided of the exhibits in the case. In de middle of each case is a vertical surface to which exhibits are attached by special mountings. The size of the base unit varies with the size and shape of the exhibits. The design of the lock is visible.

8. Larchenko, op. cit.

The vexed question of 'permament' exhibitions in natural science museums in the provinces

Dominique Jammot

Born in 1941 in Clermont-Ferrand, France. Doctor of Science. Curator of the Natural Science Museum in Orléans. Higher education in Dakar. Research in palaeontology and zoology (on shrews) in Michigan (University of Ann Arbor), Montreal and Mainz. After teaching palaeontology at the University of Science and Technology in Algiers, was appointed Curator of the Orléans Museum.

Laurent Peru

Born in 1953 in Bourges, France. Doctor of Evolutionary Biology. Assistant Curator of the Natural Science Museum in Orleans. Higher education: Orleans and Paris. Research on ants. President of the Association des Naturalistes-Muséographes.

Before we broach the problems that arise in connection with permanent exhibitions we should outline the importance of the part such exhibitions play in our museums and state their purpose. In a theoretical diagram illustrating the different functions of a natural science museum the exhibition section occupies a central position: it is a focal point for utilization of the collections, museographical production and the organization of activities for the public. Exhibitions constitute our principal means of communication, their purpose being to display our collections and demonstrate certain points. They occupy 50 to 80 per cent of the surface area of our museums.

Our present aim is to analyse the considerable changes that have taken place in both the form and the substance of permanent exhibitions in French provincial museums since the appearance of curio collections, in order to define our present objectives and their material implications.[1]

The weight of the past

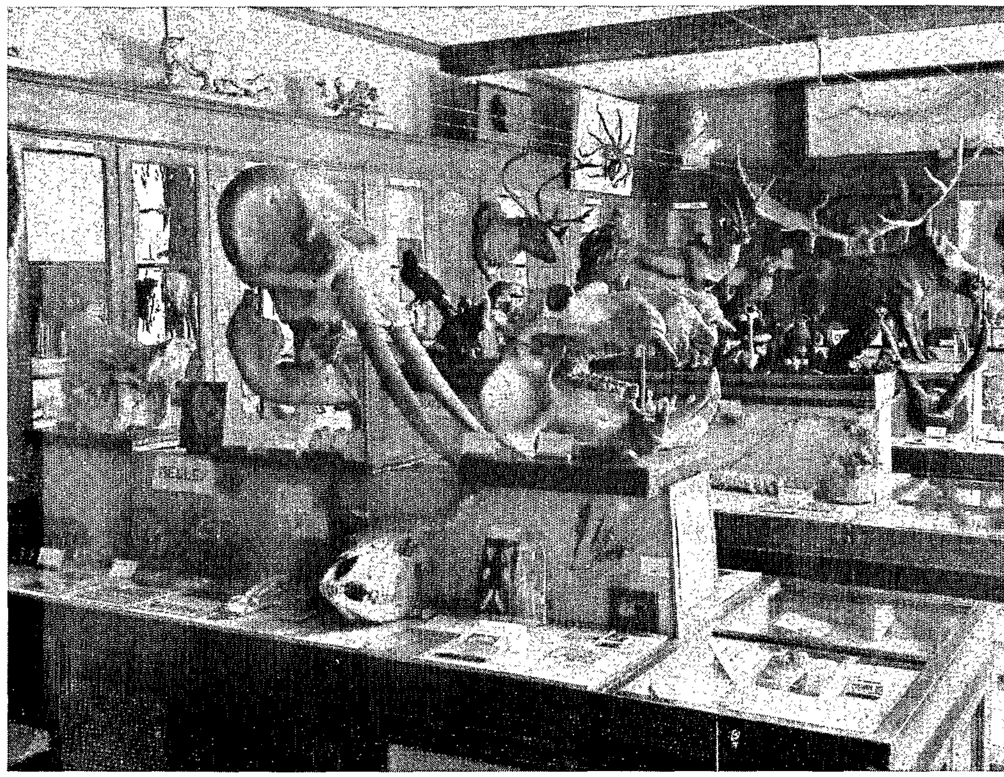
Many so-called permanent exhibitions may originally have been temporary; unfortunately there is no one left to tell us. Today they could readily be called permanent, many of them having remained unchanged since they were first set up. It is no easy matter in our institutions to disrupt tradition, which decrees that the work of the Ancients should be scrupulously respected. To be convinced of this, one needs only to refurbish a display room, or take it into one's head to remove a curator's bust from the entrance hall and put it away in the cellar, to realize very quickly that many of the visitors are genuinely determined to have tangible points of reference in a world where everything is changing. From this point of view, our museums have on the whole continued to provide values that may be counted on. This weight of tradition explains why necessary refurbishment is postponed and why curators do not dare to desecrate displays that have become truly historical set pieces. However, the blame should not be laid exclusively on the 'sociological barrier': it should also be recognized that it is often simply easier to leave things as they are.

A few years ago we found a way to counteract this enforced inertia by organizing temporary exhibitions, which provide plenty of scope for expression without upsetting people. These 'instant' exhibitions are generally related to something topical, incorporate appropriate technical methods and refer to recent scientific discoveries. They have the added advantage of being newsworthy.

Such exhibitions are often very well presented and of high quality, usually contrasting with the obsolescence of the permanent exhibitions surrounding them, with their exclusive attachment to the past. The problem is to find a way out of this ambiguous state of affairs in which we are forced to concentrate our efforts on the ephemeral at the expense of the essential.

The need to update taxonomic data

The specificity of what is kept in our museums cannot be ignored: natural science collections do not merely consist of donations or acquisitions that are catalogued as they accumulate; they are part of a spatio-temporal framework that must be taken into account, and this



46
A relic of the curio collection: the delightful jumble of the old Orleans Natural History Museum (around 1935).

makes the problem of their management especially complicated.

It should be recalled that taxonomy is the science of the hierarchical grouping of organisms and that it continually reorganizes categories and their content in accordance with the multifarious relationships that unite them.[2] This explains why our classification systems are perpetually changing. Unlike our colleagues in the fine arts, whose unchanging inventories we admire and envy, we are continually compelled to update our catalogues of specimens and reflect these changes in our permanent displays.

Whereas it is true that taxonomy reflects the progress of current knowledge, many displays give one the impression that time must have stopped and that Linné could be a contemporary of ours. It is hard to believe that taxonomy is an evolving science when we look at certain display cabinets. Historically cut off from the research establishments, our museums have suffered from the marked separation that prevails in France between taxonomists and what should have been their laboratory, or at least the showcase for their work.

The historical development of the methods of display

It would be rash to attempt a general history of these museums, given their great diversity, both today and in the past. What we shall do is adopt a palaeontological approach, outlining briefly their phylogeny and major trends during the main periods of their development.

The origins: curio collections

In the eighteenth century natural history enthusiasts abounded. Keen travellers and local scholars lumped all their treasures together, cheerfully putting tigers, ivories and ethnographic pieces with white blackbirds, regional fossils and other oddities. These collections showed the diversity of an unknown living world and the riches of distant lands to members of the public who were curious about nature. Colonial and scientific expeditions nurtured the budding museology of the Enlightenment with forms and colours, picturesque sights and quick impressions, giving free rein to the imagination (see Fig. 46).

The golden age: the great classification (the creationist period)

Following the Convention of 1793, the Jardin du Roy was reorganized as the National Natural History Museum. In the provinces the local authorities inherited the privately owned natural history collections, which were supplemented with donations and bequests from learned societies or enlightened collectors. Mu-

1. D. Jammot, 'Cost-effectiveness and Efficiency in a Small Museum', *Museum* (Unesco, Paris), 1984, 36, No. 1, pp. 25-29, provides an example of a French museum in the provinces.

2. For the benefit of the uninitiated it should be explained that a Latin binomial (e.g. *Canis lupus* for the wolf) is never a definitive designation for the species given that name by an author. Species and all supraspecific taxa (genera, families, etc.) are defined in a pluridisciplinary context in which morphology, palaeontology, study of behaviour, genetics, biochemistry, etc. all have their part to play. Taxonomists devise so-called evolutionistic classifications to group the species in categories that attempt to reflect their phylogeny. In order not to complicate the explanation unnecessarily we have based it mainly on zoology.

seology became classificatory. Following the example of the Paris Natural History Museum[3] all the natural history museums in the provinces set up Bird, Mammal and Mineralogy Rooms, where all the specimens were arranged like a gigantic catalogue. Each article was carefully labelled (to name is to know) and positioned so as to take up as little space as possible, as all knowledge seemed to be encyclopedic and all exhibitions exhaustive. The nineteenth century, and in particular the second half of it, witnessed a widespread mania for science, with the number of natural history museums in France increasing to form an extremely dense network (the 1900 directory of scientific and archaeological museums lists nearly 500).

At the beginning of the twentieth century evolutionist ideas were little known in France.[4] Most of the natural history museums in the provinces were deprived of scientific assistance in any form, and their collections, which were classified in an order that was no longer valid, gradually gathered dust. The destruction brought about by the Second World War and the explosive development of the mass media in the 1950s were to ring the knell for many of these museums[5] and considerably lessened the public's interest.

47
A heap of objects among others: humming-birds, *Aves* and *Trochilidae*, at the Bourges Natural History Museum (1986).

The pedagogical period

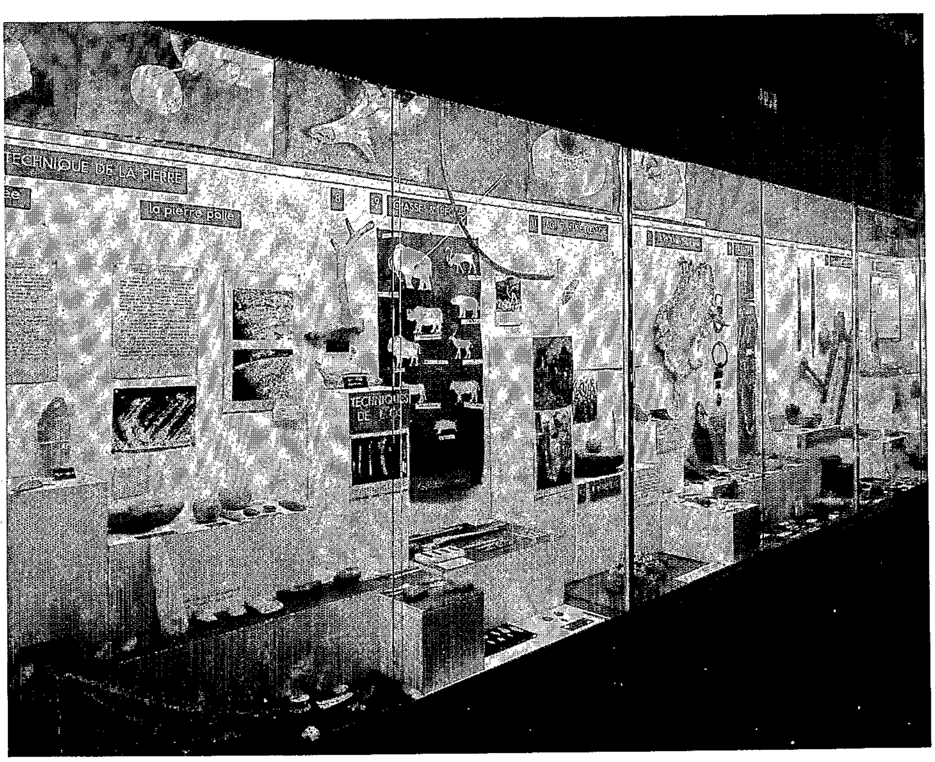
During the 1960s the increasing interest of the French public in the natural and environmental sciences (animal behaviour having been popularized through television, ecology, etc.) called for a lighter and more thematic method of presentation, which in some museums replaced the original heaps of items (Fig. 47). The message of the exhibition became an educational one, and was inspired by educational theory. The specimen was placed in a wider context, often with the help of panels covered with photographs and texts which consisted of pages from the appropriate school-book. Most of the curators of this period were professional education specialists. Attendance figures improved, particularly because of an increase in the number of visits by schoolchildren and teachers who were able to supplement and illustrate their natural science lessons in this way (Fig. 48).

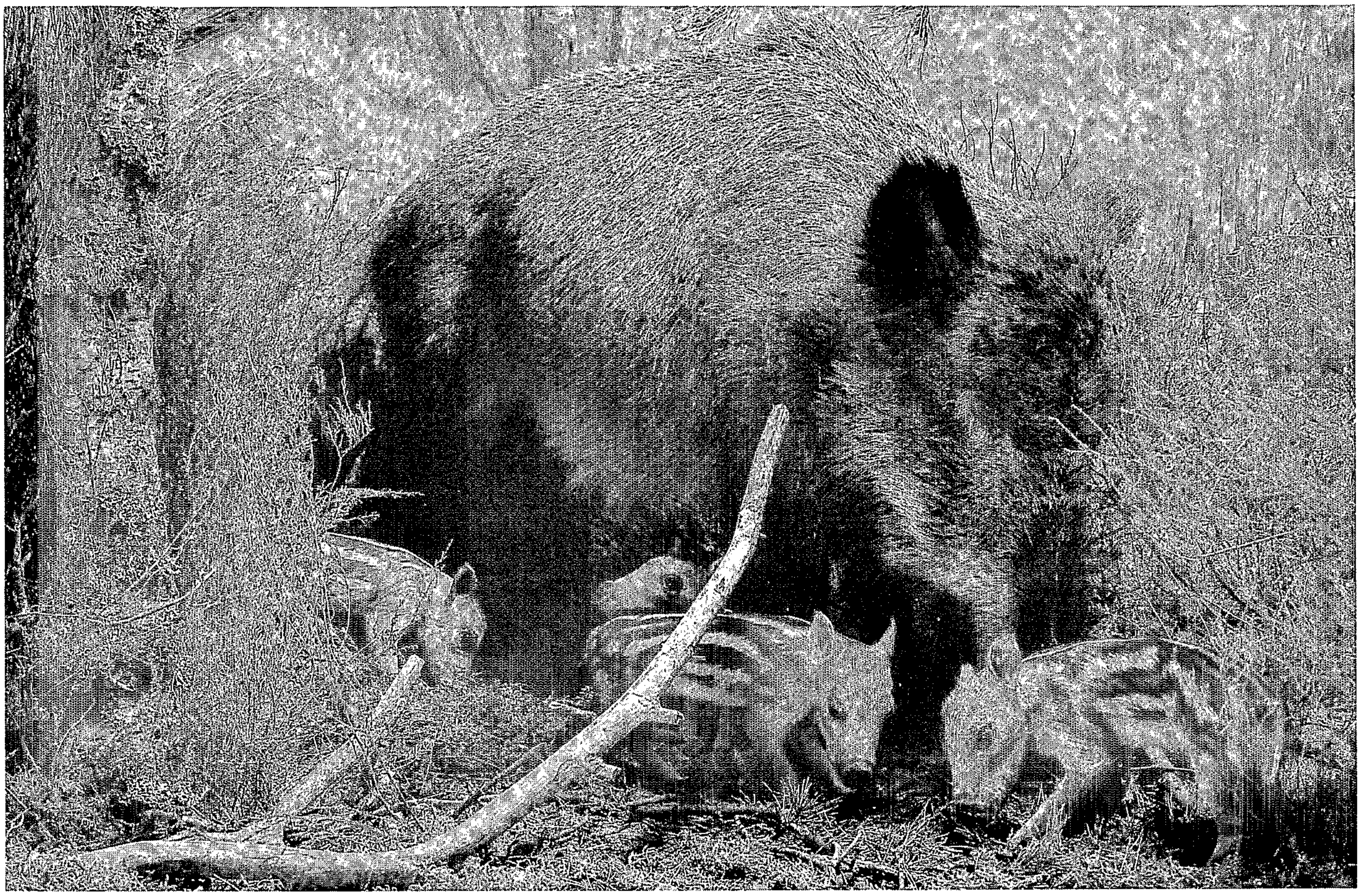
From a more prosaic point of view, this educational trend was reflected in our museums by the problem of finding a place to store items that were not being used: cellars, attics, and corridors were requisitioned to provide storerooms for displaced collections.

Present trends

The recent development of awareness of regional specificity coincides with the rediscovery of our local heritage. Rather than taking an interest in exotic flora and fauna, which have now become difficult to obtain, we realized that we were seriously lacking in information on the

48
The pedagogical period: prehistory display at the Orleans Natural History Museum (1971).





49
A recent regional exhibition: wild boar (*Sus scrofa*, Mammalia, Suidae). Contemporary diorama at the Orleans Natural History Museum.

world in which we live and our immediate environment (Fig. 49). There have of course been rooms featuring regional points of interest in our museums for a long time, but they were of little importance compared to the general exhibitions, and their displays were arranged in much the same way as those of the creationist period.

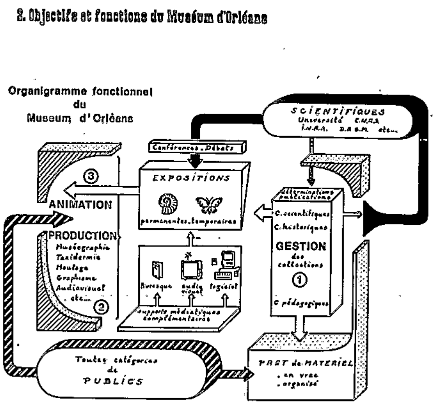
This development, which appears to have reached all the museums in the provinces, is symptomatic of a new mood; it is wholeheartedly supported by the local authorities and also enables museums to receive support from specialists in the different regional scientific institutes. The museums in the provinces are acquiring an identity of their own, in accordance with their geographical situation, and at the same time they are rediscovering their roots, adopting the new concepts of regional heritage and achieving a much-needed synthesis between the cultural and the scientific aspects of life.[6]

Present and future exhibitions

The foregoing historical outline does not apply to all provincial museums, each of which is marked to a greater or lesser extent by a particular period and is thus a kind of hybrid, but none of them is exempt from the current discussions on the functions to be fulfilled by permanent exhibitions.

None of the trends that have emerged in the past should be neglected: each of them, for all its excesses and shortcomings, represents an adaptive response to a given situation, and an awakening curiosity, whether about science, culture or regional identity. It is necessary to achieve a subtle balance between these different elements and to reflect this balance in attractive presentation, scientific accuracy and intelligent interpretation for the general public. In the choice of subject matter, the wealth of our heritage in existing collections should be

3. The Zoology Gallery of the National Natural History Museum of Paris, which is the epitome of 'shelf-mentality' museology, is immortalized in the book by Michel Butor and Pierre Beranger, *Les naufragés de l'Arche*, Paris, Editions de la Différence, 1981.
4. '*Histoire de la génétique et de l'évolutionnisme en France*' by Denis Buican, Paris, Presses Universitaires de France, 1984, is worth reading on this subject.
5. Out of the 500 establishments listed in 1900 the provinces still have 60 natural history museums (Ministry of Education) and 122 'mixed' museums (Ministry of Culture) concerned predominantly with the arts but having a natural history section.
6. F. Carre, D. Jammot, L. Peru and J.L. Pointal. 'La notion d'ensemble muséographique régional'. *Actes du 3ème colloque national des naturalistes-muséographes*. Strasbourg, 18-21 September 1984, pp. 49-55.



50
'Ongoing' exhibitions are of primary importance in the theoretical functional organization chart of a natural history museum.

taken into account, as well as our own scientific potential, the avialability of outside help and the kind of impact on the public that is sought.

The fact that we have called these exhibitions permanent reflects a disquieting state of affairs. The term itself points to the limitations of a process. It is no accident that there have been in our provincial museums a number of rather creationistic exhibitions intended to display material and specimens whose primary interest was evidently evolutionary. Similarly, it is always ironical to see rooms on the theme of evolution that have remained unchanged for over twenty years. We should opt for exhibitions that are both ongoing and evolving (Fig. 50). There are several reasons for this. Whatever the subject matter, if it is scientific it deserves at least to be updated. The taxonomic data we use must be revised if necessary, and constructive criticism from the public should encourage us to modify its presentation. In practice this will mean that these ongoing exhibitions cannot remain unchanged for more than five to ten years. For example, changes have to be made in the permanent exhibition on the history of the earth at the Geological Museum in London, only five years after its opening. In concrete terms, we are faced with the problem of scheduling and, most importantly, paying for the reorganization of these exhibitions, which must be written into the budget just as it is for temporary exhibitions.

The integration of complementary media

Specimens in permanent exhibitions were for a long time presented entirely on their own. The complementary message was limited to the label, which was the legitimate means of communication of all classical museum displays.[7] During the pedagogical period the information panel appeared, with educational material in the form of photographs, diagrams and text.

Nowadays, technology has made it possible to include complementary media of all kinds in exhibitions. It is in fact worrying to see exhibitions in which they actually take the place of the object, which is only present in the form of artefacts such as casts or reproductions of various kinds.

Although we should avoid such excesses we should not undervalue the use of sophisticated tools such as audio-visual media and interactive computer programmes, which diversify the public's means of acquiring knowledge, and the fact that our exhibitions cannot be exhaustive makes these additional resources all the more important.

It is admittedly easier to speculate about what the exhibitions in our museums ought to be like than to demonstrate what must be done in practice to make them truly ongoing and evolving. This will call for a great deal of hard work and must begin with a change of attitude, which is probably the most difficult part of the process.

The permanent exhibitions certainly provide the most faithful reflection of the present state of our museums. Their current development prompts us to rethink both the form and the substance of the specific problems to which they give rise, and we prefer to call them ongoing and evolving for the simple reason that they deal with theories and with scientific material that constantly needs to be updated.

The ever-growing demand on the part of the public has made us aware of our inherited role in the transmission of knowledge. We have an educational role with regard to taxonomy, which, against all expectations and all reason, has almost disappeared from school syllabuses in France. We have collections of scientific and educational reference material. We are in a position to show specimens which the audio-visual media have certainly popularized but which can only be fully understood in museums. We have many assets, but we still have to achieve a kind of symbiosis with our scientific colleagues so that our establishments can become an ideal place for exchanges between the public and research workers. That is the challenge facing museologists today. ■

7. L.J. Demay. 'Le Musée d'Histoire Naturelle et la Communication'. *Ibid.*, pp. 115-22.

Reinterpreting the Stone Age at Moesgård

Annette Damm

Has a Master's degree in prehistory, and works at the Information Centre of Moesgård.

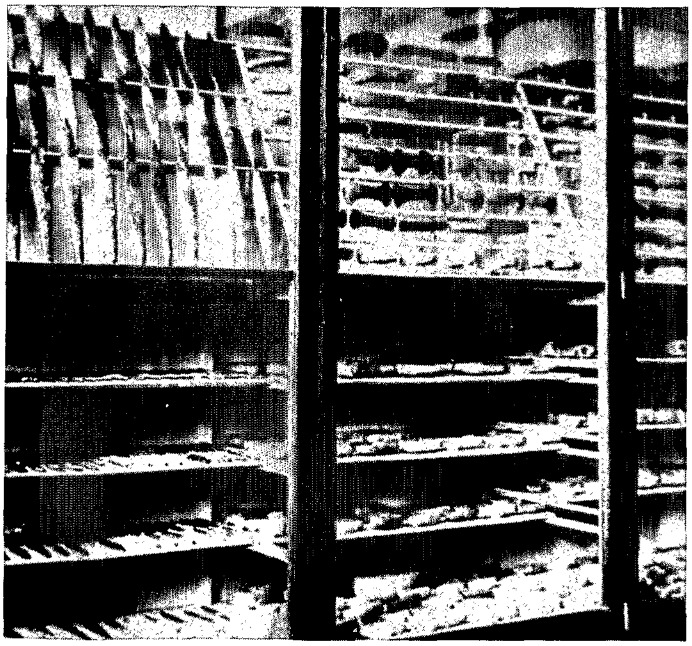
In 1983 the Prehistoric Museum of Moesgård in Denmark redesigned its permanent exhibition which had been set up thirteen years previously, starting with the Stone-Age section.

Historiography

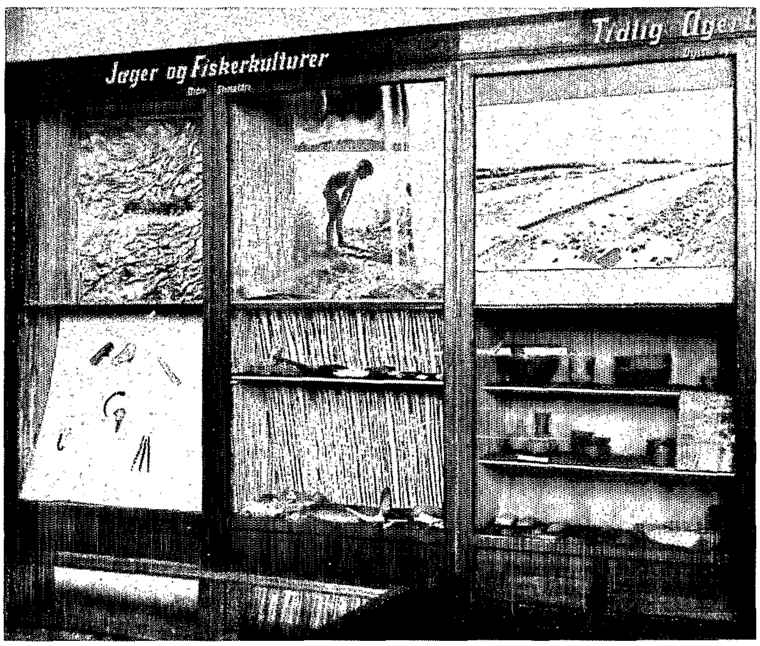
During the first half of this century the objects in the Århus Museum were displayed in exhibition cases, arranged according to their material, form and presumed function. Explanatory texts were sparse and rarely stated more than the place of discovery (Fig. 51). In 1954 the museum set up a new permanent exhibition categorizing the objects culturally and historically, and photographs were added, with more informative texts (Fig. 52). Towards the end of the 1960s the museum moved to Moesgård, an eighteenth century manor house south of Århus, and the permanent prehistoric exhibition opened in 1970.

Above all, this provided an opportunity to exhibit many old and new discoveries that had previously been relegated to storage. Everything was presented according to the latest developments in archaeological research and exhibition techniques.

Moesgård Museum is not the only Danish museum to have evolved in this way. Similar changes are found in most of the other cultural historical museums of Denmark. This reflects the increasing tendency to focus on the dynamic aspects of museum presentation and on the interplay between the museum and society. At the same time it illustrates the growing sense of responsibility among museum workers towards the present age. Not only as collectors, preservers and researchers, but also as information workers, they see their task as presenting the material in such a way as to further our understanding both of the past and of the present. As a consequence of this development, the Moesgård Museum recognized in the early 1980s that its prehistoric exhibition was becoming outmoded in its form and content.



51
Århus Museum, before 1954.



52
Århus Museum, after 1954.

The Stone Age exhibition of 1970, for example, reflected the materialistic view of culture prevalent in the 1960s, based on economic and technological preoccupations.

In the 1970s a more differentiated view prevailed, leading to ideologically oriented studies of the structure of society, where all aspects of society were taken into consideration. This led to new ways of evaluating archaeological and ethnographical research. One exciting consequence was that the contemporary interest in new religious movements and problems of identity resulted in research into burial rituals, stylistic analysis and the identification of subcultures.

Our knowledge of the Stone Age has increased immensely over the last decade, both in Denmark as a whole and locally. The latter is a result of the Moesgård programme of excavation and analysis and the new ideas and attitudes prevailing in society. As to the actual display, the original exhibition had been on show for so long that something new was called for. In addition to this, the competition of the mass media, popular scientific books and periodicals, and many other kinds of educational activity had made new methods indispensable.

The conception of an exhibition

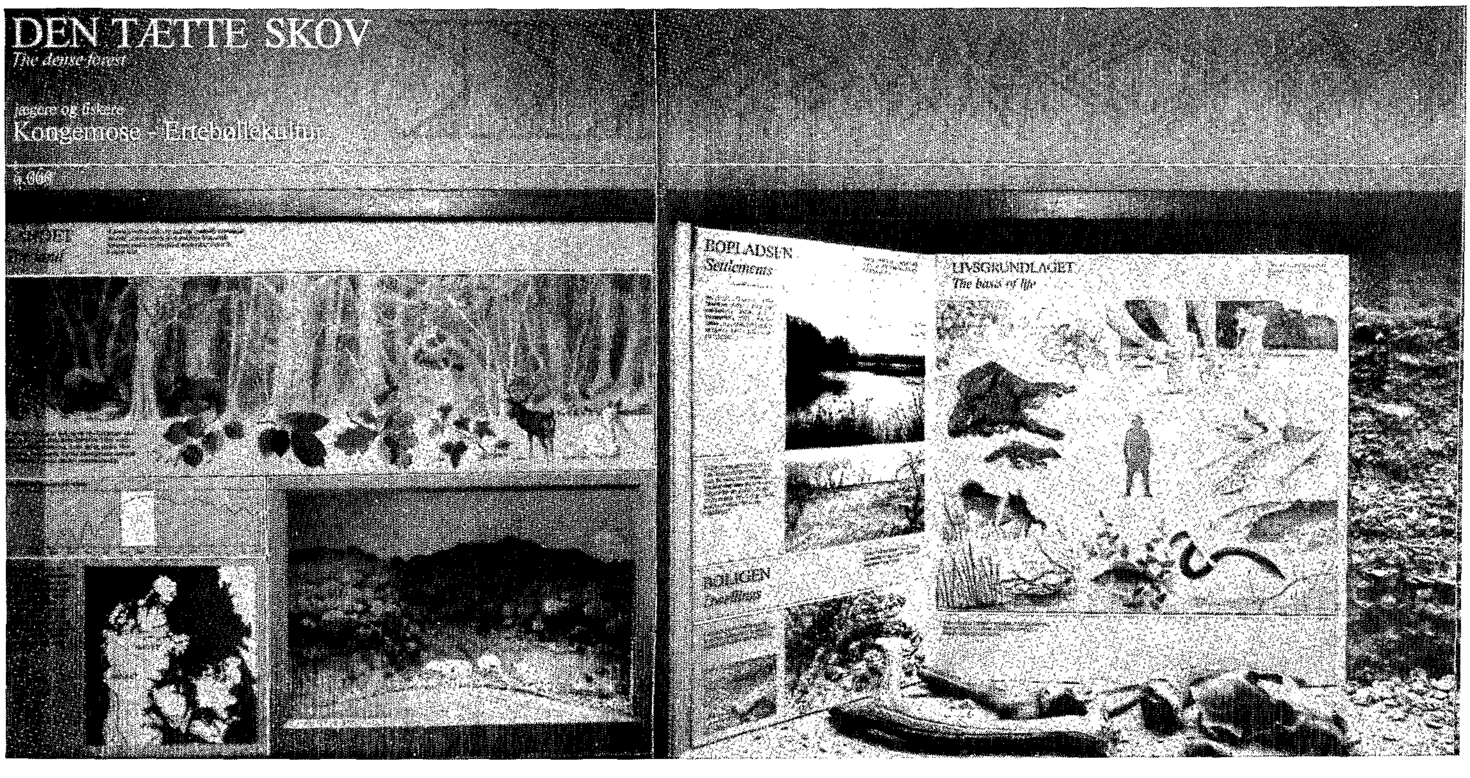
In the spring of 1983 the museum established a work group consisting of three archaeologists, specializing in the Stone Age, to formulate the theoretical basis for the new Stone Age exhibition. The initial discussions concerned the place of this in relation to other Danish museums. Regional prehistory, or national prehistory? With the growing interest in regional history at that time, the question was an important one. The conclusion was that the museum's size and its reputation, as a sort of 'National Museum in Jutland', gave it the major role of presenting the prehistory of Denmark, though its regional aspect should be given equal recognition. The next question was the overall aim of the exhibition.

A museum consists primarily of objects, and its exhibitions should be based on these. However, objects cannot speak for themselves, and if one tries to let them do so, they turn into mere *objects d'art*, with no connection to either time or place, and the museum becomes an art gallery or a curio collection. This kind of display is quite justifiable, and can be very inspiring, but it is out of place in a museum of prehistory, where the main emphasis should be on the bearing these objects have on the history of culture. It must not be forgotten that in addition to the objects themselves, the archaeologist also brings back a lot of other material, such as photographs and drawings of settlements, graves and houses, animal bones or the remains of plants. The settlements, graves and houses cannot be brought to the museums, except in very rare cases, and most of the bones and plants have meaning only for the specialists, but the information gathered from them gives life to the objects displayed and tells a story about them. This documentary material is kept in the museums, usually in archives and storerooms, and must also be regarded as prehistoric 'objects' which the museum has a duty to present to the public.

These considerations led to the conclusion that the objects should be displayed in a cultural and historical way, showing as many aspects of the contemporary society as possible. In short, the aim is to illuminate social history, and the selection of objects should be based on their quality and the extent to which their art is representative, rather than on quantity.

Thirdly, it was necessary to decide on the target group. This in itself is a rather abstract question, especially in the case of an exhibition planned to be on display for a decade or so. However, the fact that the physical display area and the size of the galleries had not changed since 1970, while the material had grown immensely, meant that a critical selection of objects for display was necessary. Various criteria may be found for the selection of material, but it was decided to choose on the basis of the prime target group.

The target group was not the professionals, who would always be able to obtain their information from other sources, nor was it the amateur ar-



chaeologist, who would come for example, to see a special kind of axe like the one he had in his private collection, or like the one his greatgrandfather had found. His demands would be so varied that only the study collection could meet them.

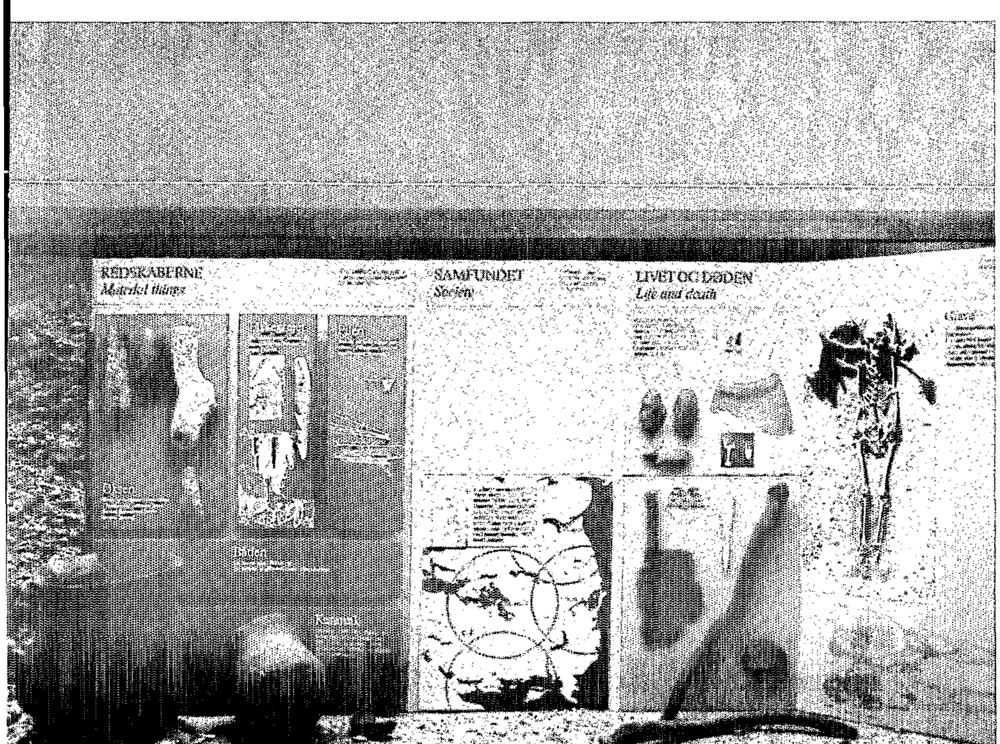
Thus it was decided that the prime target group should be the visitors, adults and children, who came to the museum unprepared. The task then was to set up an exhibition whose cultural significance everybody would understand without needing specialized literature or information folders or slide shows.

Disposition and choice of material

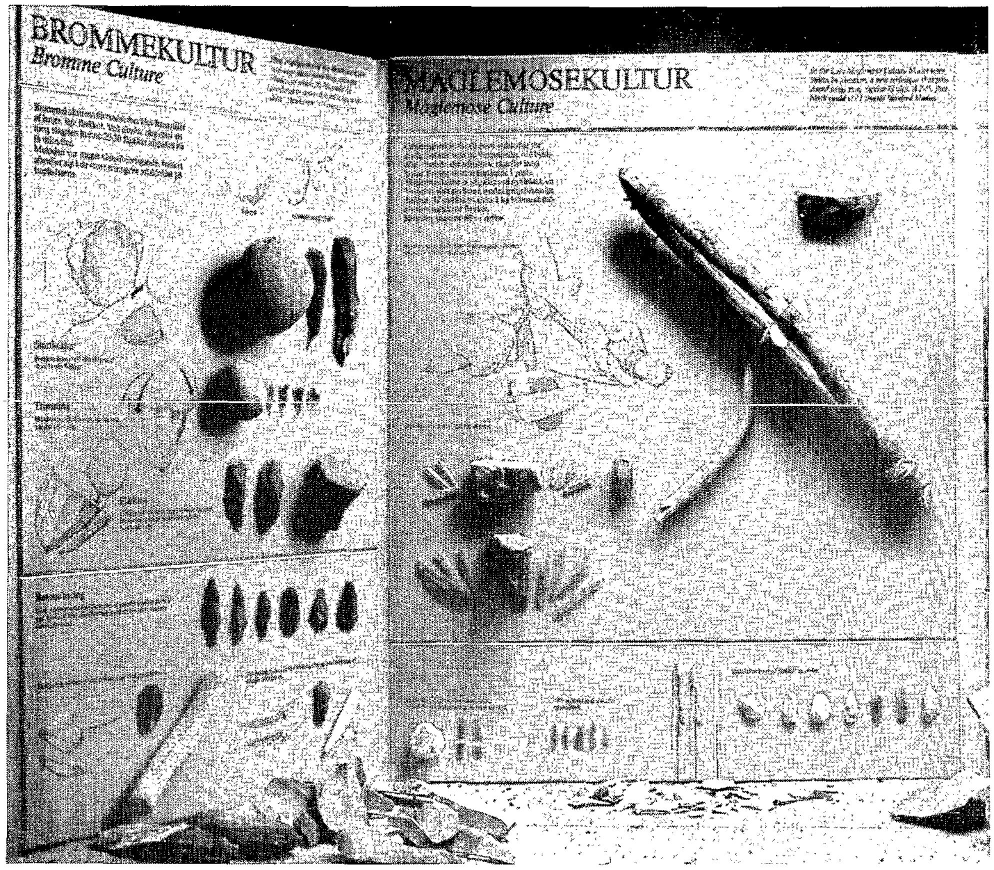
After these preliminary discussions the basic ideas of the exhibition were discussed, as well as which objects should be shown and how they should be arranged. Some visitors prefer to have a fixed framework for an exhibition, so that they always know where they are. These are the people who know their history and believe in being systematic. Others come to see the 'show-pieces'. (Fig. 53) The Iron-Age 'bog-body', also known as the Grauballe-man, for instance, has brought many visitors to Moesgård. The majority, however, probably want a little of both and consequently the presentation had to be clear and well-planned, but also varied and life-like.

To meet these demands the exhibition was divided into two sections, one chro-

53
Some visitors come to experience the 'show pieces'. (Drawing by Bo Bojesen.)



54
The chronological series is divided into sections, with changes in the environment as the main basis of division. Each section is built up on the same formula as here in the 'THE DENSE FOREST': the land, settlements, the basis of life, implements, society, life and death.



55
The technology section includes the results of many years' experiments in reproduction of the flint-knapping techniques of the past.

nological section and the other thematic. The chronological section was to be the backbone of the exhibition, or a 'ladder' in time, of which the major rungs would be the changes in natural surroundings under the increasing influence of man. (Fig. 54) Changes in culture would be a subsidiary theme.

Continuity was stressed, to present a continuous development in which new ideas were adopted as and when they were needed. It was in this section that the history of the Danish Stone Age was to be told. (Fig. 55)

The thematic section met the demands for variation and liveliness. Here topics such as occupation, beliefs and preconceptions were to be elaborated. This also had the advantage of keeping the chronological section clearer, making it less overburdened with information and confusing digressions. It was now the technology section, for example, which provided information on the use and manufacture of certain tools and on how the information was acquired.

The thematic section also offers the possibility of a closer study of local finds, presented in such a way that the visitors can see something of the processes a find goes through before reaching the stage when it can be displayed to the public. They learn about the site during excavation, the objects found (not only the implements themselves but debris from implement production and other activities on the site), the scientists' conclusions as to their dates and how they were used, and finally a hypothetical demonstration in diorama form, showing a situation at the settlement when it was inhabited, supplemented by a selection of reconstructed implements which the visitor can handle. Here the visitor can obtain answers to many of the questions that arise both at the exhibition and at the excavations. (Fig. 56)

Diorama and reconstructions

Dioramas are in no way a novelty in museums, but this is the first time that Moesgård has used them in a permanent exhibition. We consider this to be a good way of giving today's public an idea of how the past may have looked, without using too many words and, providing the diorama is used carefully, without inhibiting the use of imagination.

It is obvious that if a diorama is to create the illusion of a real situation as it was several thousand years ago, the actual objects involved cannot normally be used. (Fig. 57) The original structure and colour will have disappeared from the wooden objects, for example, clay pots may have been put together from many small pieces, flint changes in colour and surface texture over the years. Replicas have to be made with as close a resemblance as possible to the original material when it was actually in use. Similarly, original material cannot be used in illustrating prehistoric work processes. There will be too many missing links, and often the only object available is the end product. If the aim is to give the public some idea of what is involved, it is necessary to repeat the entire process and illustrate all the stages in it, showing the tools that were used, the raw material at the start of the process, the various kinds of debris produced, and finally the end product.

The question arises as to whether to inform the visitor of where replicas have been used in the exhibition. We felt that it was usually quite evident when replicas had been used, and that the immediate experience would be ruined by signs saying 'replica' to distract the visitors as they moved from object to object. However, an inventory of objects included in the exhibition is planned so that interested visitors may look up the place of origin of the various objects and confirm which are replicas.

Texts

The most sensitive part of an exhibition is the texts, and the language they use. The ideal is surely for an exhibition to present its theme with the utmost vivacity and involvement by means of the objects themselves and the framework surrounding them, and with minimal use of explanatory texts.

As to the actual phrasing, it has been suggested that the ideal language level in this case is that of 12 to 13 year-olds, or that the texts should be comprehensible to an intelligent 11-year-old. However, such graduations seem rather absurd, and instead we would recommend, for non-specialist visitors, clearly formulated texts of reasonable brevity, without technical terminology or theoretical explanations, couched in a language which is not condescending to either children or adults.

It should be added that there are English texts throughout the exhibition giving a brief summary of each section.

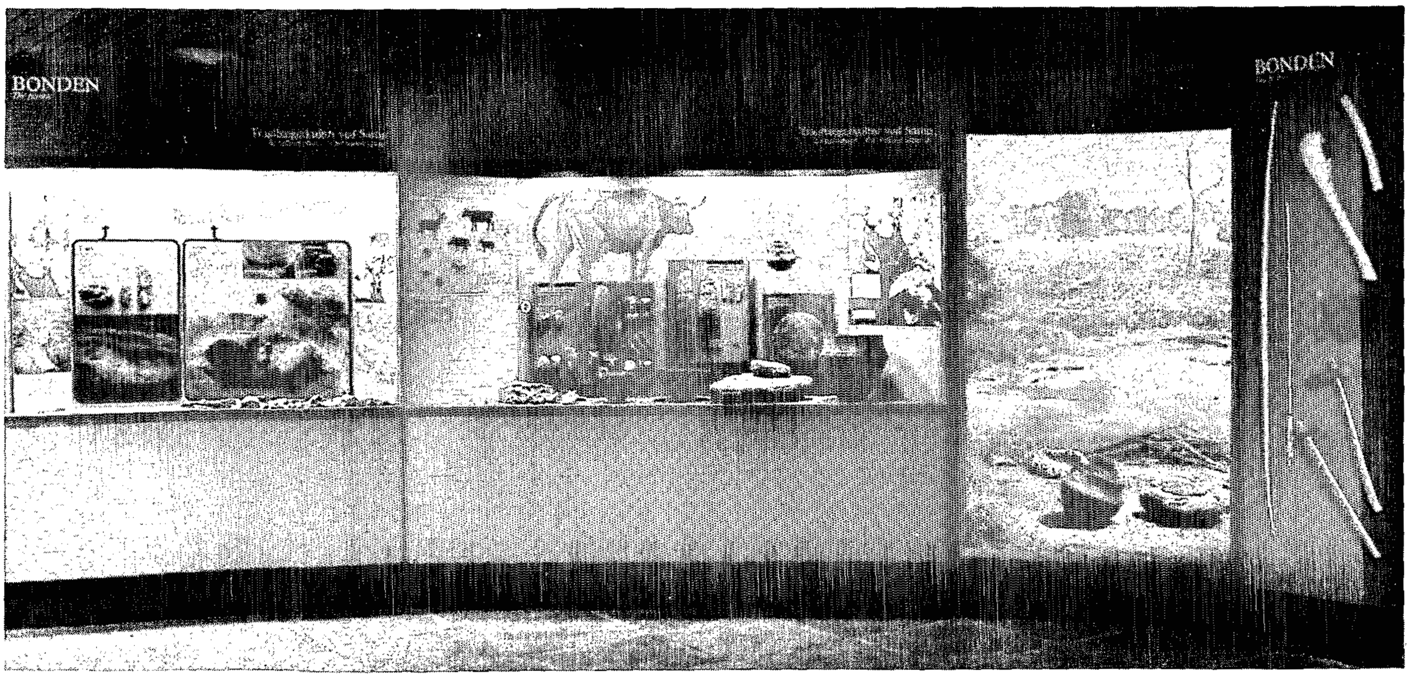
Secondary media of communication

The museum's primary medium of communication is the exhibition, in which the objects can be directly seen and studied. The secondary media comprise all the material and activities prepared in connection with the exhibition (Fig. 58). These can include audio-visuals such as slides and video shows, which in our case are deliberately excluded from the actual exhibition where they can cause too many distractions such as queues and discordant effects. However, they are an important supplement where, for instance, prehistoric processes like the building of megalithic tombs or flint knapping may be described in greater detail than is possible in the exhibition itself.

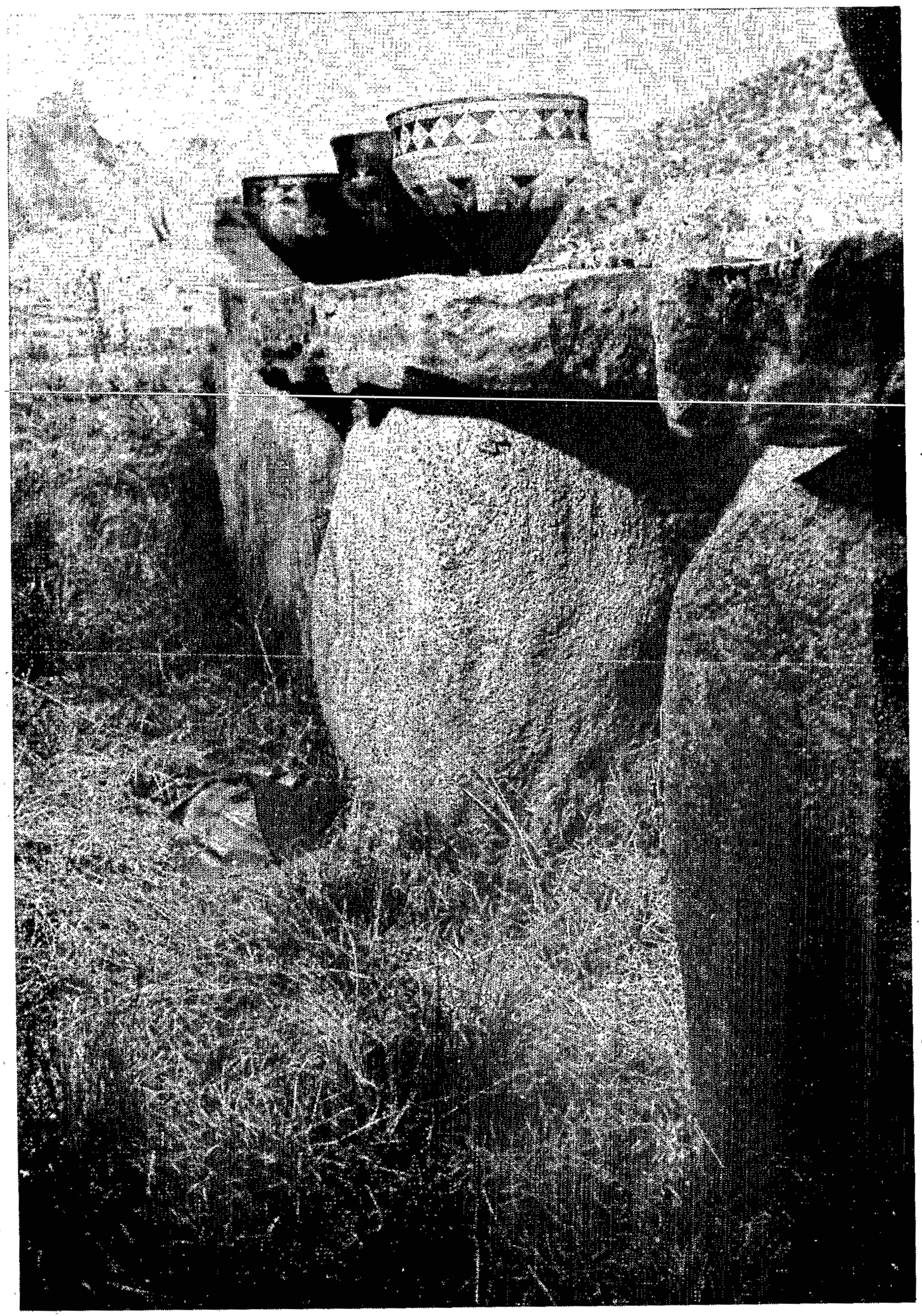
Supplementary thematic booklets are useful in discussing research and historical theories on, for example, the origin of farming or of individual cultures; a single object may be taken out of its cultural connection and discussed from an artistic, religious or functional angle.

Essentially, secondary communication is aimed at schools. Taking into account their curriculum, the exhibitions have been adapted accordingly at various points. But it is also important that students should come to a museum without bringing the school with them. It should be a new and inspiring experience, which encourages them to come again, and to visit other museums. For this reason, too, the written educational material provided is primarily a teacher's guide, explaining the ideas behind the exhibition and the museum's views on its use within the school curriculum. How the teachers use this information is up to them and depends on the work programme of which the museum visit is a part.

This will also be the case when work-sheets are to be produced. Ideally, questions on these sheets should be directly related to the topics and the problems that the students are dealing with. These can only be decided by the teacher, but the museum is quite willing to co-operate. In any case, the work-sheets must not be allowed to become mere



56
In the thematic series the visitor can view a single site in depth. Here a farming settlement of the New Stone Age is described: the excavation, the site with its implements and waste products, the research conclusions, a hypothetical situation in diorama form, and reconstructed implements for the visitor to handle.



'pacifiers' handed out to the children to make sure they trudge through the entire exhibition, at whatever cost in individual exploratory initiatieve.

Some of the ideas behind the organization of the exhibition may seem very simple, but that does not make them less essential. The majority of them have their roots in problems and questions which every museum must meet when preparing an exhibition.

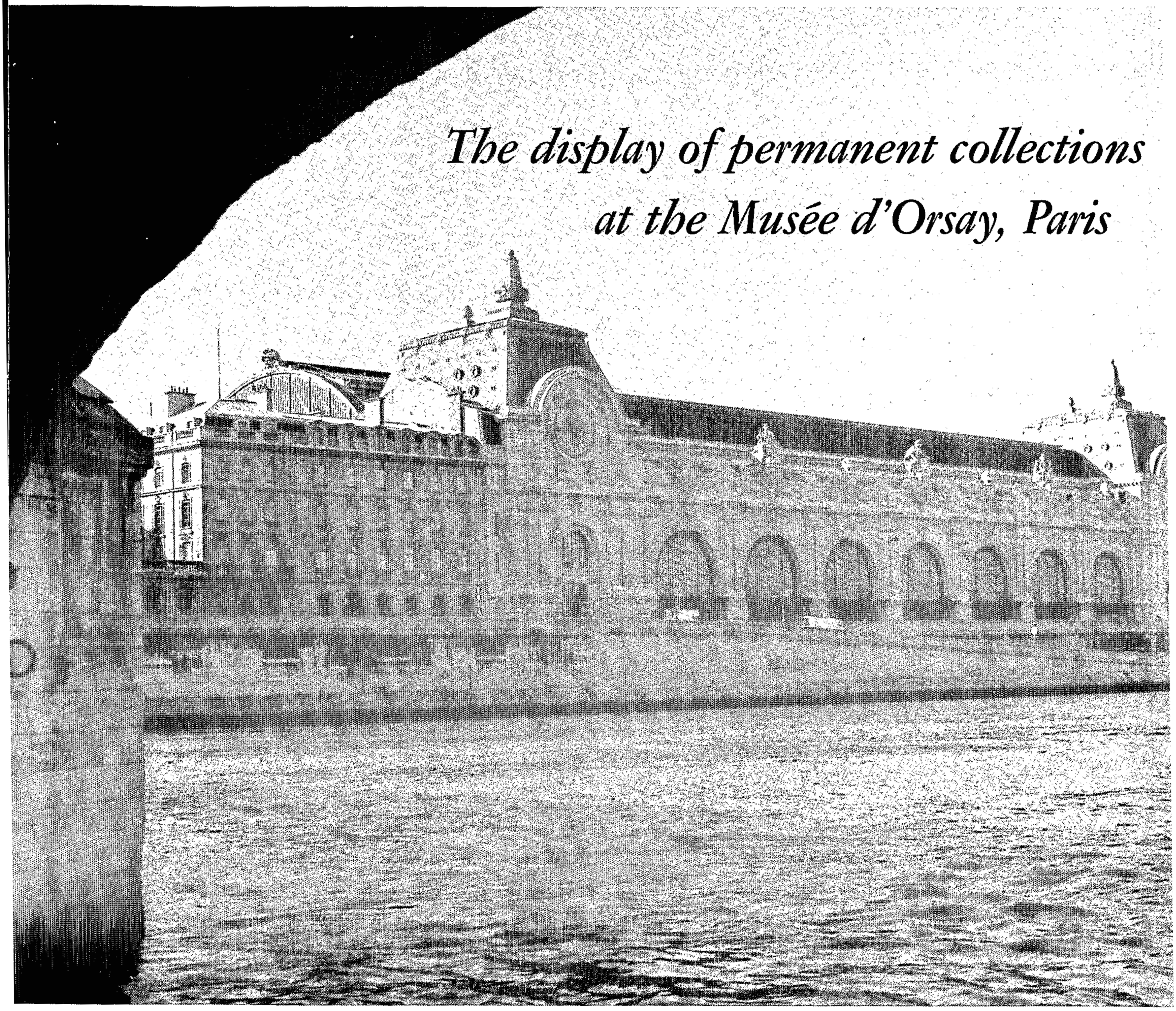
In the next phase of the exhibition project, archaeologists, exhibition designers and craftsmen worked closely together to express their ideas visually. At this stage the designers took over as the dominant element.

Much has been said of how, at every step of the way, it was necessary to pause and make a choice, particularly in order to meet the needs of the visitor with no special knowledge or preconceptions. But at the same time it should be emphasized that the exhibition works on so many levels that everyone, of whatever age or educational level, should be able to come away from it with some valuable or pleasant experience. And this must surely be the primary object of any 'permanent' exhibition.

57
Diorama showing a reconstruction of a megalithic tomb from the New Stone Age. Replicas have been used to give as close a resemblance as possible to the appearance of the original tomb when it was actually in use.

58
Use of audio-visual effects in the exhibition can have disturbing effects, and hamper the overall view. (Drawing by Bo Bojesen.)

The display of permanent collections at the Musée d'Orsay, Paris



Maria Teresa Almeida

Born in 1959 and has Brazilian nationality. Studied archaeology, art history, and museology at the École du Louvre, Paris, graduating with a Titre d'Ancien Elève in 1983 (specialized in Christian Archaeology) and a Titre de Muséologie in 1984. She then went to Rome to study the conservation and restoration of art works and spent two years working for the Documentation Centre of ICCROM.

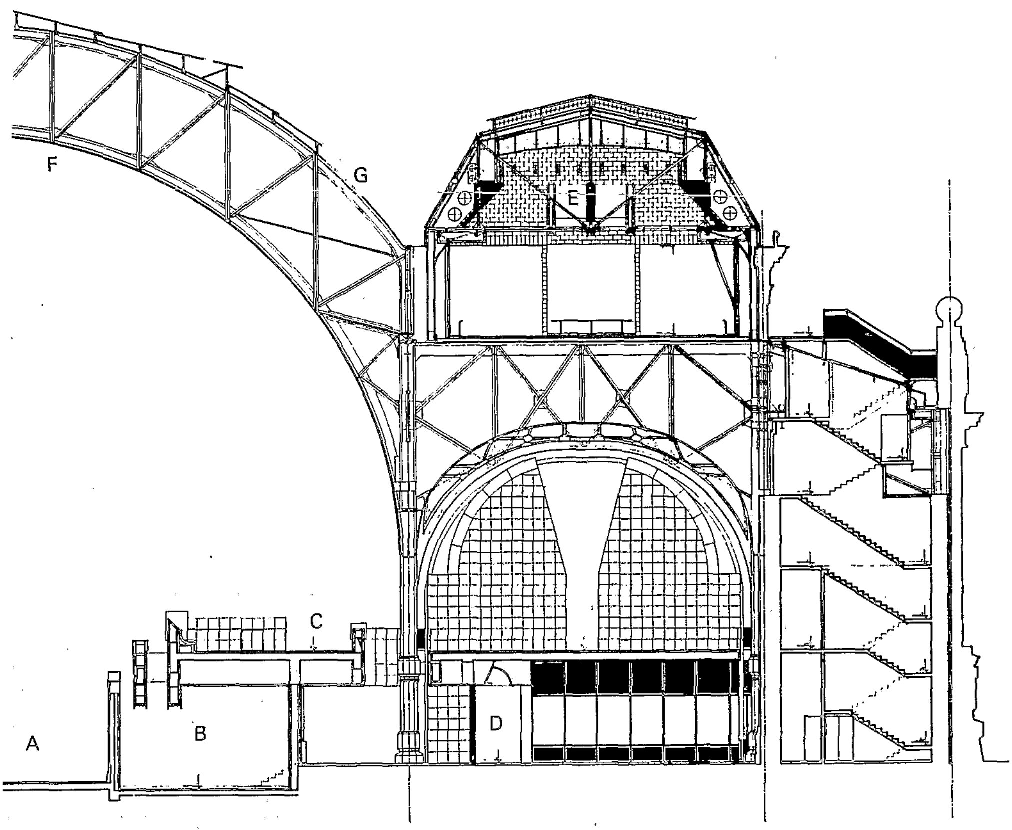
59
Musée d'Orsay, Paris. Façade of the Musée d'Orsay giving on to the Seine.

The objectives of the Musée d'Orsay

The aim of the Musée d'Orsay in Paris originates with the encyclopaedic educational approach which tends to present a chronological arrangement of works representing different periods and schools in art history. This conception of museology dates from the time of the French Revolution and was used in creating the Louvre Museum and many others throughout France, but in recent years the French Museum Service (Direction des Musées de France) limits its application to Paris institutions.

The Musée d'Orsay brings together art works which were formerly dispersed in the Jeu de Paume, the Palais de Tokyo, the Louvre, and other French museums.[1] New aquisitions were made through donations, *dation* (government aquisition of art works in payment of inheritance taxes), and purchases. The museum collection covers the period from 1848 to 1914, thus creating a bridge between the Louvre and the National Museum of Modern Art at the Centre Georges Pompidou.

1. Versailles, Fontainebleau, Le Musée des Arts Décoratifs, Le Mobilier National, La Manufacture de Sèvres and Provincial Museums also contributed to the Orsay collection.



60
Cross-section of the Musée d'Orsay. A, The central 'avenue'; B, Lateral cubicles; C, Middle level terraces; D, Display rooms and corridors; E, Third level attic galleries; F, Vault Intrados; G, Vault Extrados.

The transformation of Victor Laloux's 1900 train station and hotel (Figs. 59-60) into a museum is a museological novelty, and several teams of engineers collaborated to solve the unusual problems of environmental control and security it presented.

Gae Aulenti, the interior designer, worked with the initial plans made by the ACT Architecture Studio[2] and formulated thirty different types of display areas on three floors. Aulenti aimed to create an interior 'architecture' in direct contrast to Laloux's building, which neither conceals the original structure nor blends with it. The abundant use of stone and metal gives a permanent character to the building, which was originally designed for the transitory passage of visitors. The curators responsible for the project acknowledge the apparent contradiction in the increased display possibilities attained by the installation of rectangular exhibition rooms with fixed walls, thus turning their backs on the experiments carried out with 'mobile walls' ten years earlier at the National Museum of Modern Art.

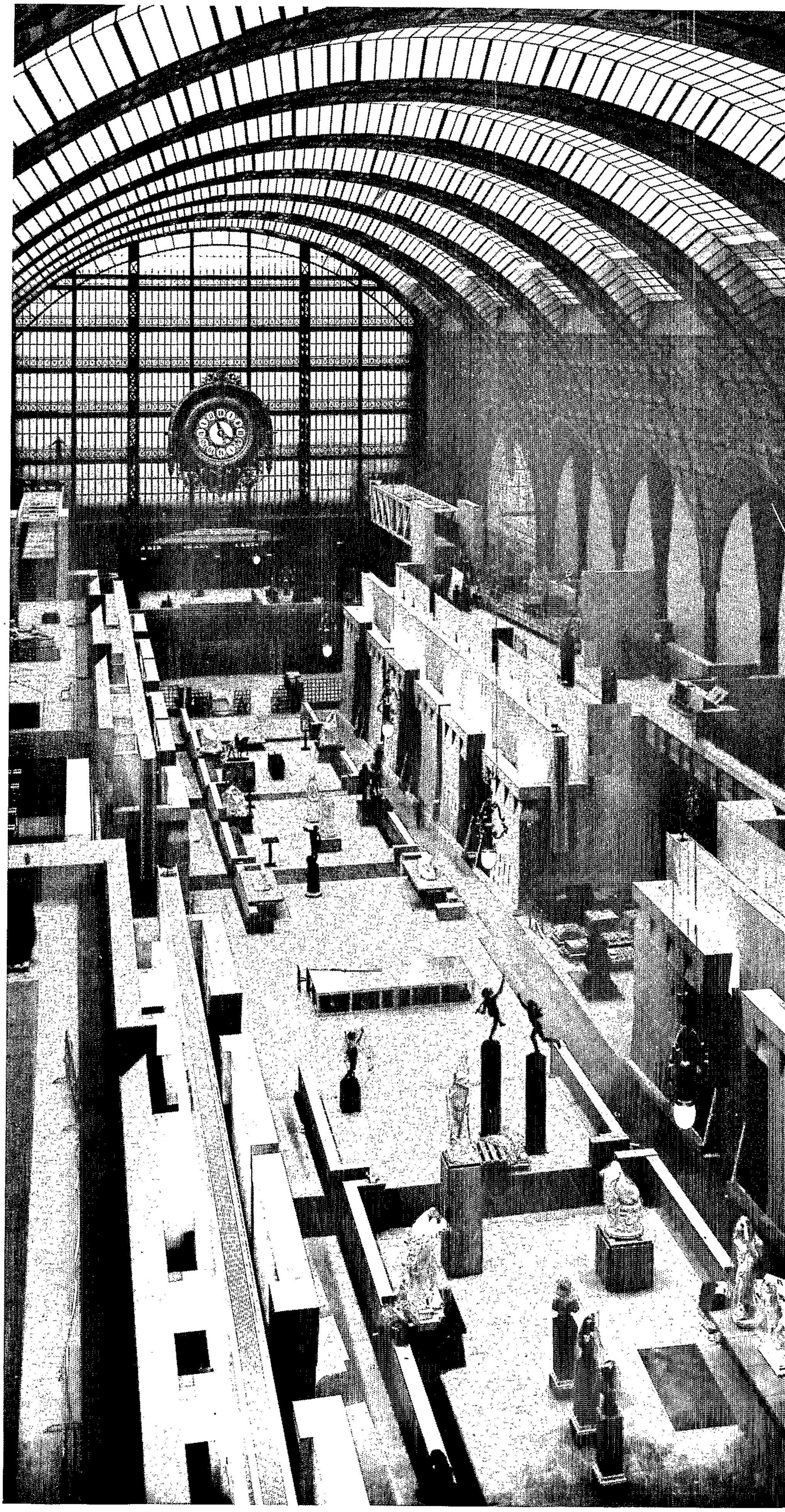
Technical and aesthetic criteria are responsible for Michel Laclotte's[3] decision to separate the different categories of art: oil paintings, photographs, furniture and fragile pastel drawings have different lighting requirements. The individual objects in the Orsay collection were judged sufficiently evocative of their era to render reconstitutions and artificial environments superfluous. The various schools of painting and sculpture are placed in different parts of the building, and two storeys separate the works of the impressionist masters from the academic paintings. The museographic programme aims to be both historical and critical.

Itinerary and general principles of museography

The museum itinerary was designed to make use of the extraordinary volumes and illumination of the building. These are accentuated by open and closed exhibition areas, natural and artificial lighting, and numerous steps, stairways and escalators. 4,000 art works are displayed in the 80 rooms and galleries of the museum. These exhibition areas occupy 16,000 m². The total usable museum surface is of 47,000 m². Gae Aulenti preferred stone, cement, plaster, metal and glass to the textiles and woods usually used as display settings. Echoes are absorbed by the 40,000 sound traps which are hidden throughout the museum. These devices consist of plaster boxes in seven sizes, filled with glass fibre.

The Orsay Museum building consists of one great 'nave' measuring 220 m by 75 m, vaulted with an enormous skylight (Fig. 61). Glass and iron arcades run down the sides and close off each end of the structure. A central aisle runs down the nave, built on an artificial slope and divided by steps (with lateral ramps for wheelchairs) into a series of landings where sculptures are displayed. Two massive towers displaying the work of Art Nouveau artists bring the vista to a close. Dark coloured paving indicates perpendicular 'streets' which lead into two rows of 'houses' running parallel to each side of the avenue. These are enclosed areas built to contain the paintings of a par-

2. The architects collaborating on the project were Pierre Colbac, Renaud Bardon and Jean-Paul Philippon.
3. Michel Laclotte, chief curator of the Louvre Museum Painting Department, is director of the Musée d'Orsay museum programme.



61
The building consists of one great nave vaulted with an enormous skylight. Glass and iron arcades run down the sides and close off each end of the structure. The designer wanted to create an interior 'architecture' in direct opposition to Laloux's building. Sculptures are displayed in the central 'avenue' and the middle-level terraces.

ticular artist or school. Running parallel to them in their turn is a display corridor and another row of rooms designed for the presentation of paintings, photographs and works of decorative art.

An intermediate level is formed by the rooftops of the 'houses', where another series of sculptures benefits from the volumes of the great nave, and are flanked by a further series of rooms containing paintings, furniture and art objects. The Orsay ballroom has been restored to its former gilded glory, and academic statues and paintings are reflected in its mirrored walls.

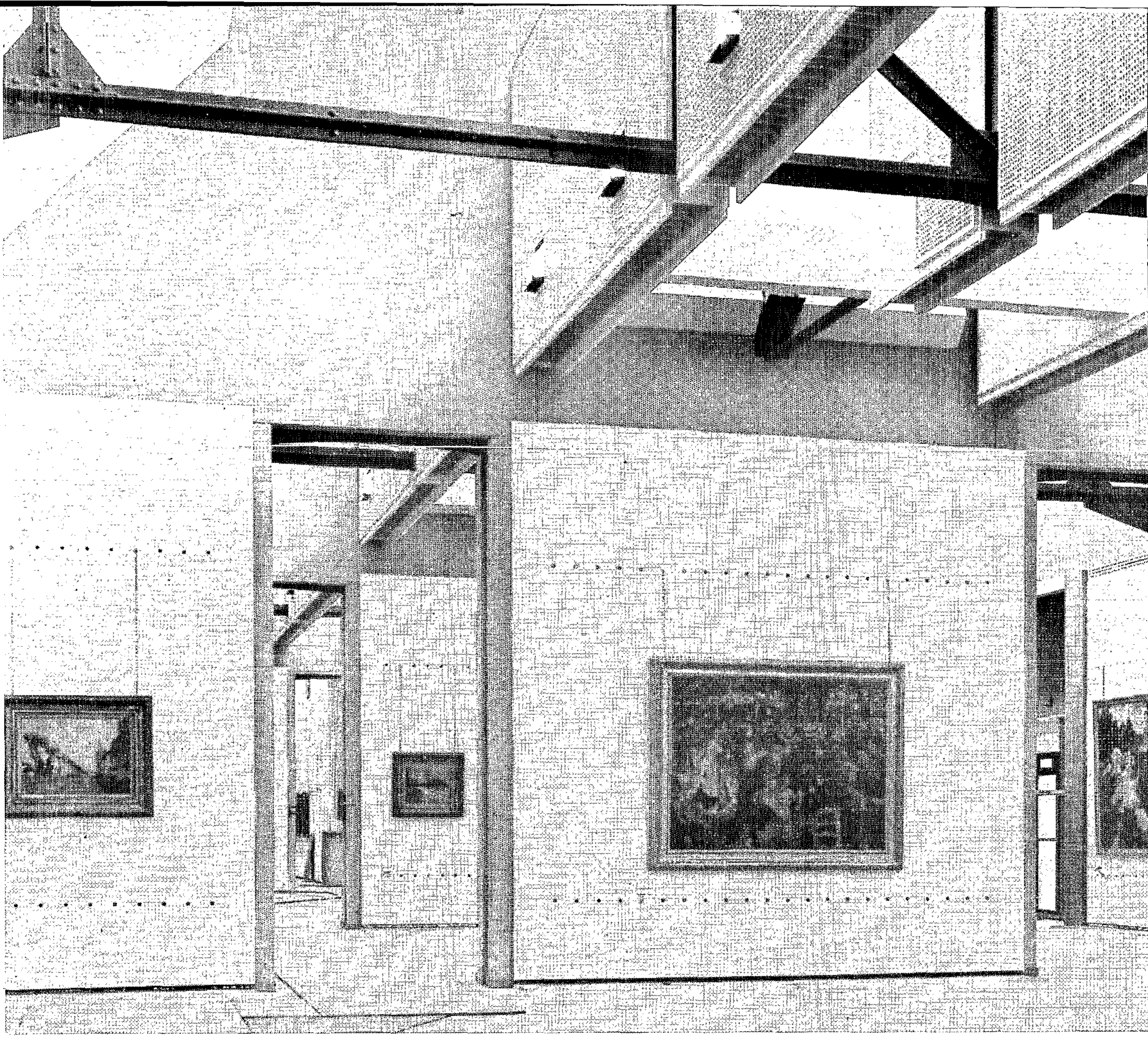
A third and final level, directly beneath the glass roof, displays the Impressionist and Post-Impressionist collection in a profusion of natural light. These bright galleries are interspersed with small 'dark' rooms which were specially conceived for the presentation of drawings, pastels, lithographs and photographs.

The Amont pavilion rises from ground level to the third floor, and was built to display the plans and models of architects from 1850-1900. Historical and documentary sections form annexes to the main exhibition galeries. With a museum plan in hand, it is possible to concentrate, for instance, on landscape painting or academic 'salon' sculpture, but this does involve some climbing from level to level.

Display techniques

Paintings

Paintings are displayed on all three levels of the building and sculptures are sometimes used to complete the presentation. The paintings are hung on slabs of pink limestone or on plaster panels. The Burgundy limestone is flame treated, which causes it to 'burst', thus forming a rough texture which permits an even diffusion of light while eliminating glare. The same stone is used as paving throughout the museum, but smoothed in order to reflect light. The plaster panels are painted with an off-white undercoat which is then sprayed with a



62
Plaster panels are pierced by an upper and lower row of holes. The upper holes hold the metal rods from which the paintings are hung, the lower holes support metal card holders. A sophisticated system of fixed vertical and horizontal panels prevents the sun's rays from striking the paintings. A longitudinal series of light diffusion panels runs directly above the paintings.

blue-grey emulsion, giving a speckled effect.

Each display panel has an upper row of holes from which the paintings are hung on rods and a lower row to support the metal label holders (Fig. 62). The paintings may thus be hung in different positions throughout the museum using any of the panel holes available. Very large paintings are hung from thick metal bars or placed on easels, while very small ones are either placed in showcases or grouped together on a second stone panel.

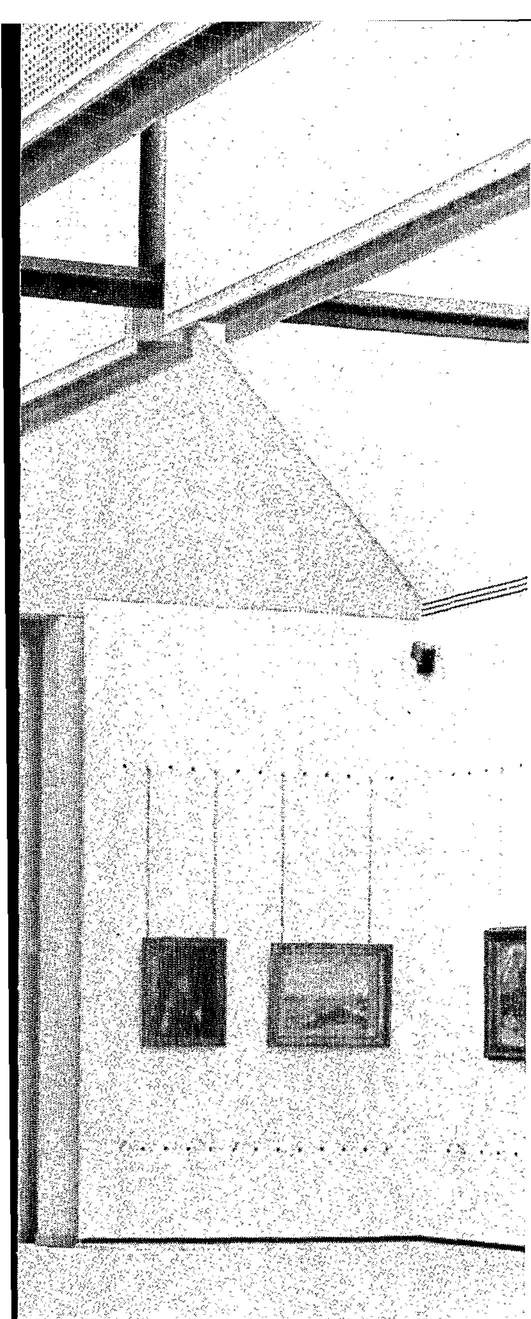
The curious decor of the ground floor 'houses' makes the contemplation of paintings difficult. The differently sized panels and rows of cement columns create a series of incongrous perspectives. In one case (Puvis de Chavannes' *Jeunes Filles au Bord de la Mer*) the painting is far higher than the background wall, and the spectacle of the torsos of passing visitors is highly distracting. Some of the side walls of the middle-level exhibition rooms are of such a peculiar design, with an upside-down trapezoid shape cut out of the middle, that they have a baroque *trompe-l'oeil* effect which transforms a normal square painting into a trapezoid (this time right-side-up).

At the attic level, on the other hand, the simple galleries with their rows of three-sided display rooms provide a tranquil setting for the appreciation of painting.

Sculpture

Large sculptures on the ground floor 'avenue' and on the middle level 'terraces' benefit from the impressive dimensions of Orsay's nave. The statues are supported by pedestals of all sizes, shapes and colours, in polished cement, metal, marble and other stones (Fig. 63). Some of the pedestals originally belonged to the statue in question, while others were specially designed. The range of cylin-

4. 'Cortel' is a self-protecting metal which was originally intended for the showcase frames. The brown rust which forms on the metal actually protects the material against further rusting. Museum conditions do not allow the weathering necessary for the brown rust to occur. The metal showcase frames were painted in brown as a souvenir of the desired effect.



ders, cubes, trapezoids and combinations of the above shapes, form a distracting ensemble.

Statuettes and models are placed in glass showcases which are supported from beneath, suspended from the walls, or built in. Very large showcases rise up directly from the floor. The steel and aluminium frameworks are coated with 'cortel'[4] brown paint. The glass shelves are either supported by bronze-coloured fixtures or suspended from above by thin transparent rods.

Drawings, small pastels, photographs and etchings

These are displayed in special 'dark' rooms where all sources of daylight are blocked out by white shades. The fragile objects are hung at eye-level in the showcases which line the walls. Photographs are mounted with a white passe-partout and framed in beechwood. Wax negatives are displayed flat on table showcases and illuminated from behind.

Architecture and town planning

This is represented by models and plans. A bird's-eye view of the Opéra district, designed by Baron Haussmann is provided by a 1 : 1000 scale model fitted into the floor and protected by a thick layer of glass which one can walk over. A cross-section model of the Opéra made by Garnier is displayed against a starry sky background, while built-in showcases contain original models of stage furnishings.

Many of the major public buildings of the second half of the nineteenth century are represented by models stacked one on top of the other, forming a central column in the yellow Amont pavilion. These models may be studied from each of the tower levels (Fig. 64).

Furniture and art objects

These are exhibited on plastic supports which sometimes evoke the intricate spaces of a home. Silverware and vases are placed in showcases, and plastic and stainless steel backgrounds are used for the *Art Nouveau* items placed on the landings of the look-out towers.

Museum glass

The 35,000 m² of double-layered glass walls are composed of thirty kinds of glass. The main varieties may be summarized as follows.

Slightly tinted non-reflective glass was chosen for the extrados and the exterior walls of the building, because a reflective glass would have been incongruous with the Paris cityscape. These materials absorb some of the sun's heat, thus reducing the running costs of the air-cooling system. The ultraviolet radiations are considered unharmful to the statues, and to the one painting (Thomas Couture's *Les Romains de la Décadence*) exhibited in the nave.

The slightly tinted non-reflective glass is accompanied by a *granular, metal-reinforced glass* on the intrados and the side wall interiors. The granular surface hides the technical apparatus and the long maintenance passage in the vault. The metal reinforcement imitates the original glass of Orsay. The two layers of glass on the side compose a double-glazed system with an air-passage in between, providing climatic insulation.

Colourless laminated glass was chosen for the interior and exterior of the attic gallery roof, where the subtle colours of the paintings prohibit the use of tinted glass. Safety regulations require glass roofs in public buildings to be laminated. Ultraviolet absorption is provided by a system of white, light-reflecting panels, and laminated glass was also chosen for the showcases.

Laminated opal glass was used to create part of the transversal light screen system (see 'Lighting'). This translucent material diffuses the light in the 'illuminating ceilings' installed in the attic rooms which are without daylight. An ultraviolet absorbing glass was placed over some of the light projectors in these ceilings.

Laminated glass tiles which are three centimetres thick cover the Opéra district floor model, and a replaceable 8 mm glass covering is used for the rest of the flooring. The tiles provide a resistance of 500 kg per square meter.

Lighting

The even distribution of light is one of the most successful aspects of this museology. Daylight is supplemented or replaced by no less than 3,894 fluorescent tubes and 4,205 spotlights. Large sculptures are illuminated by natural and artificial light which penetrates from the vault over the nave. Seven rows of fluorescent tubes (colour number 25 by Osram) run across each of the nine skylights. Six 1,000-watt light projectors (Osram) and two 6,000-sci metallic halide narrow beam lamps (Thorn) are placed at the foot of each skylight.

Paintings on the ground and middle floors are illuminated by artificial lights which are built into suspended panels. Most of the illumination is supplied by 250-watt metallic halide projectors (Osram) with a colour temperature of 4,800° Kalvin. This light is reflected one, two, or three times from white vertical or slanted panels before reaching the paintings, a process of reverberation which eliminates harmful ultraviolet rays. The lamps are placed far enough away from the art works to render infrared radiations harmless. The same lamps are used to supplement the sunlight in the attic galleries. A sophisticated system of fixed vertical and horizontal panels prevents the sun's rays from striking the paintings. An exception occurs in late spring, when shades have to be drawn across the ceiling. A longitudinal series of light diffusion panels runs directly above the paintings while a transversal network of

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Statues are supported by pedestals of all sizes, shapes and colours. Two look-out towers close off the avenue.

laminated opal glass is suspended from the roof structure.

Small movable halogen spotlights (50 watts with 12 volts, 100 watts with 24 volts) supplement the illumination of paintings and showcase displays. The lamps are provided with a built-in infrared reflector and allow for a colour rendering of 80 per cent.

A 75 per cent colour rendering is produced by the Osram fluorescent ceiling tubes (colour number 25, 4,000° Kalvin) placed in staff grooves which direct the light onto the vertical gallery walls.

As we have seen, all daylight is excluded from the 'dark' rooms created for the display of photographs, pastels and drawings. 50-lux fluorescent tubes are placed in reglets above and below the built-in showcases. The reglet has a small opening which only allows a tenth of the light rays to enter the showcases, and the remaining light is absorbed by the wall. In this way very few ultraviolet rays reach the photo-sensitive works. The distance between the lamps and the objects is sufficient to prevent the infrared radiations from having harmful effects.

Special sensors placed on the ceilings of sunlit rooms send signals to the central computer base when the sunlight is particularly strong. The artificial illumination is then automatically lowered.

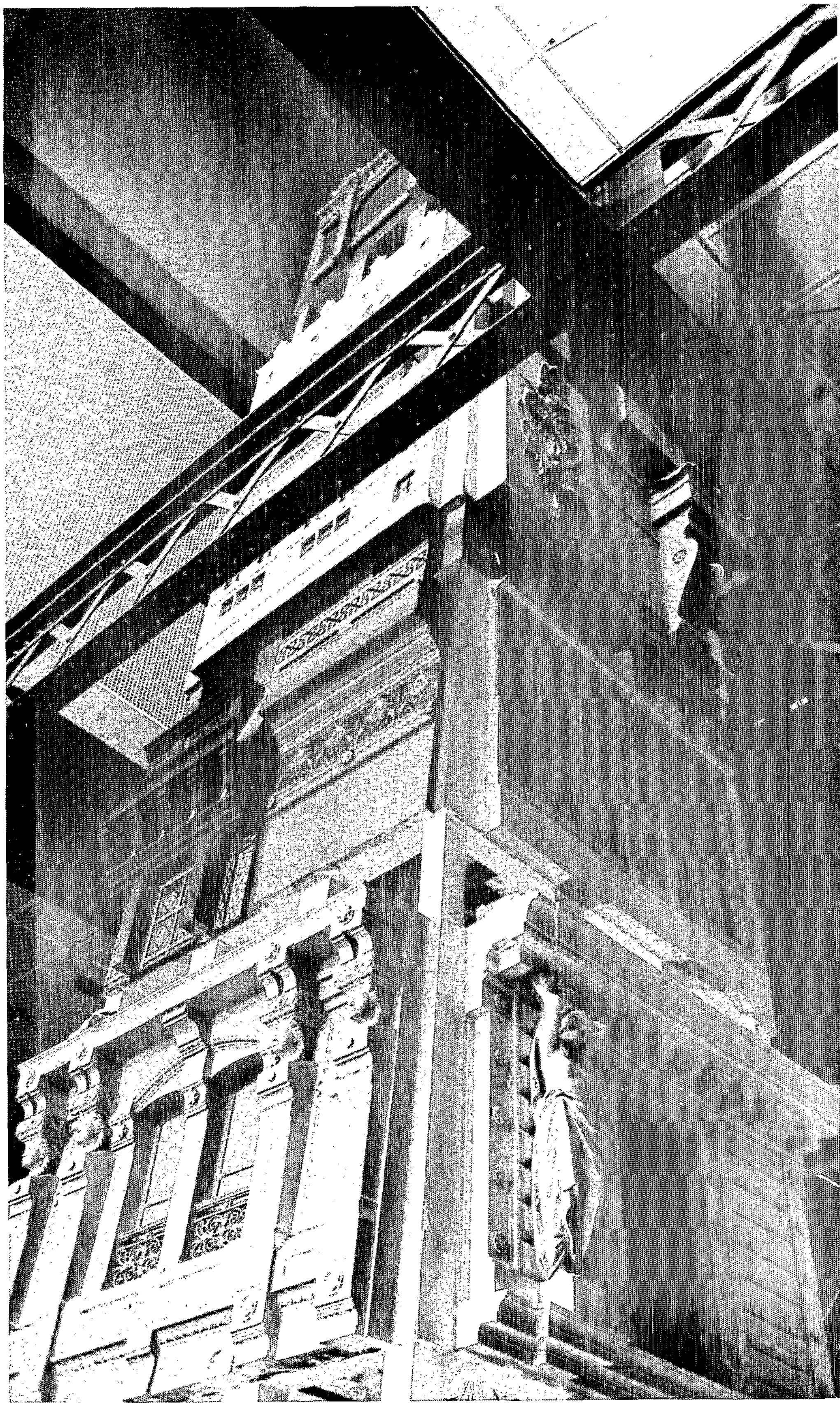
Environmental control and security

The Gestion Technique Centralisée (GTC) is a central control station which monitors the technical installations of the Orsay Museum. M. Bernard Guindollet spent five years designing the unique program of this system, which controls and regulates the museum's electrical circuits, air-conditioning, and security systems. The program was perfected during a four month trial period before the museum opened. The 'Clemessy' computer models chosen for the GTC also operate the technical installations of the Ariane IV space centre in Kourou, French Guiana. The GTC runs 24 hours a day, every day of the year.

Environmental control

The Orsay air-conditioning equipment contains four 500 kW air-cooling systems, two ice-water storage tanks, three 2,000 kW vapour heat-exchangers, and air-purifying equipment which processes 1 million m³ of air per hour. The ice-water storage tanks are placed 17.5 m underground. They are filled at night according to the next day's requirements, which are determined with the help of weather forecasts. The tanks are used even during winter as the 5,000 visitors present in the museum at any one time would otherwise overheat the exhibition areas. The heat-exchangers run on vapour supplied by the Chauffage Urbain Parisien. The air-mixing system is closed at night and begins to operate just before opening hours.

Fifty electronic sensors measure the temperature and relative humidity throughout the museum. A computer base compares data on exterior and in-



terior environmental conditions and automatically regulates the air-conditioning programme every 15 minutes. The programme prescribes a minimum temperature of 18 °C in winter and a maximum of 24 °C in summer. The relative humidity is fixed at 50% plus or minus 10 points, with a variation tolerance of up to 5 points per hour. Thirty air-conditioning units operate throughout the museum.

A combined system of sensors and heaters placed in the central skylight automatically heat the glass roof to prevent condensation.

Theft and fire security

The Orsay security service has a surveillance staff of 220 employees who belong to the French museums corps and the fire department, and this service is also run by the GTC. Every known theft detecting device is used, according to circumstances. These include 350 video cameras, 500 infrared and micro-wave radars, and a series of electrically controlled locks. 1,535 Cerebus smoke and fire detectors are distributed throughout the museum. The exact position of a fire can be immediately traced on the computer screen. The air-conditioning system is automatically shut down when a fire is signalled. A thousand fire and theft barrier doors can be shut from the computer base whenever necessary.

The curators, designers and technicians of Orsay claim to have created museum installations that are representative of our time and should take about a generation to become obsolete. ■

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Many of the major public buildings of the second half of the nineteenth century are represented by models stacked one on top of the other, forming a central column.

News brief on WFFM

Interest in museums becomes more lively as each year passes.

Nevertheless, it is easier today to buy from a bookshop certain catalogues for temporary exhibitions than books about permanent collections, with the exception of publications on leading museums.

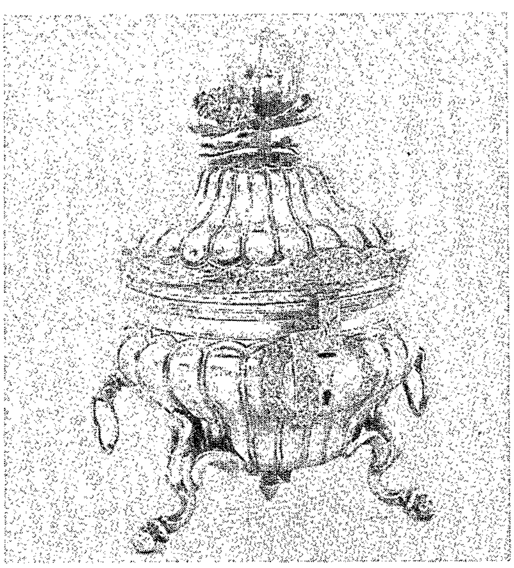
This has led the WFFM to produce a bilingual collection, with worldwide distribution through the networks of Friends of Museums throughout the world.

These books are neither guides nor catalogues, but are aimed at portraying the atmosphere of each museum, recalling the context to which it belongs and drawing attention to the major works in its possession, that is to say, to make the museum a place that is alive.

The Friends of Museums of Argentina make the arts and collections of their country known

The fourteenth General Conference of ICOM was held in Buenos Aires from 26 October to 4 November 1986. The Friends of Museums, in collaboration with the curators, took part in organizing the cultural events which the Argentine Committee of ICOM had prepared for the 1,600 museum professionals who gathered for this occasion. Although acting in an unofficial capacity, the WFFM has made a great contribution to the safeguarding and restoration of the permanent museum collections and obtaining access to private collections, many of which would otherwise have remained closed to the public.

This twofold action is a good illustration of the role of the Friends of Museums, which is to bring new life to the arts and to promote the museums, for specialists and the general public alike.



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Casket for the holy oils. Upper Peru, late eighteenth century. Isaac Fernández Blanco Museum.

The extremely small percentage of the national budget allocated to museums has not enabled them to develop their activities as much as they need to. For this reason the overriding concern of the Friends' associations in Argentina has been to work in close co-operation with the administrative departments of museums by covering basic costs such as the renovation of the National Museum of Decorative Arts in Buenos Aires, the restoration of the Isaac Fernández Blanco Municipal Museum (through the generous assistance of the Bunge Born Foundation) the building of an extension for the National Museum of Fine Arts and the construction of an educational plastic workshop for arts for this museum. The Friends of the National Museum of Fine Arts have financed work on the interior of this museum which includes painting, electric wiring and the installation of an alarm system, as well as the restoration of works of art such as the *Matin de brume à Rouen* by Boudin, ceramic fountains, and other items. These repairs made it possible, on the occasion of the General Conference, to inaugurate the permanent exhibition rooms on the first floor devoted to Argentinian painting of the nineteenth and twentieth centuries, for which display panels, notices and other equipment was also provided by the Friends.

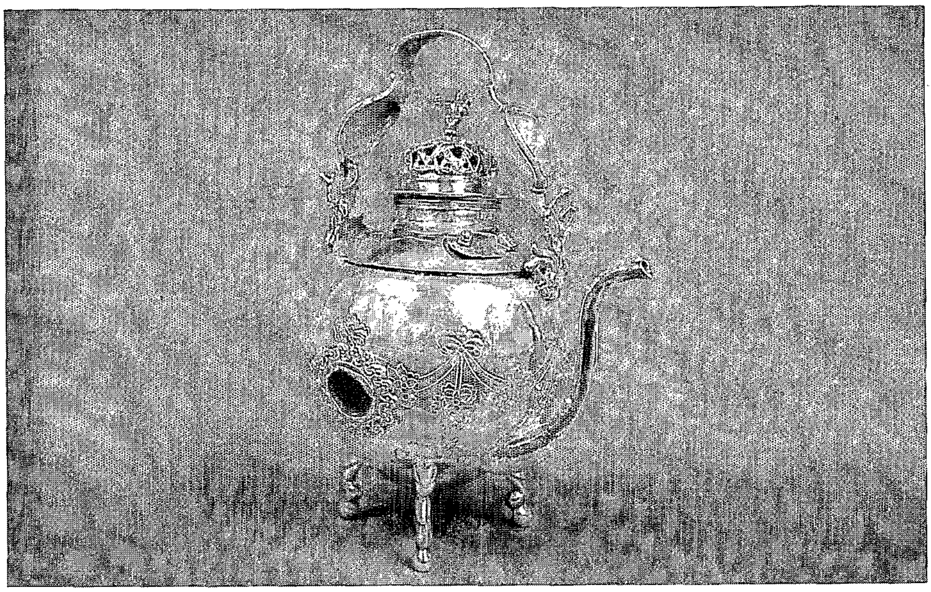
In certain museums, the Friends have also succeeded in producing publications, such as the catalogue of miniatures of the Zouboff Collection at the National Museum of Decorative Arts in Buenos Aires, the general guide to the same museum, and the catalogue for the exhibition on 'Western European Masters from the Sixteenth to the Eighteenth Century at the Hermitage'. Another contribution they made in the field of information was to facilitate an audio-visual display at the Isaac Fernández Blanco Museum, for participants in the ICOM General Conference.

The Argentine Federation of Friends of Museums, which currently includes forty-two associations of Friends, encouraged its members to offer fellowships to their museum staff in order to enable them to attend this Conference.

The Friends have promoted various temporary exhibitions in Buenos Aires and the provinces, such as the one held at the Dr Julio Marc Museum in Rosario, featuring Argentine and colonial silverware, which was organized in collaboration with the students of the local Institute of Museology; and the exhibition at the Museum of La Plata on the heritage of the region; and the exhibition at the 'Eduardo Sivori' Museum in Buenos Aires on twentieth-century Argentine painting.

This was perhaps the most original form of participation adopted by the Friends of the Museums. Their aim has been to make the museums aware of the art of their own country, particularly Latin American gold and silverwork, an art that was typical of the vast regions comprised by the Viceroyalty of Rio de la Plata, more commonly known as the Viceroyalty of Buenos Aires, an expanse which today contains the Republics of Argentina, Uruguay, Bolivia, Paraguay and part of the Brazilian states of Rio Grande del Sur and Santa Catalina. The Upper Peru region was undoubtedly the most richly endowed.

With few exceptions, the silverware of Upper Peru provides perfect examples of



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Pot for making maté. Peru. Eighteenth century. Isaac Fernández Blanco Museum.

the baroque, rococo and neo-classical styles. Silver used for the Roman Catholic ceremonies is predominant, owing to the well-known importance attached to richly ornate sacred vessels in Baroque liturgy, and the splendour with which the retable was adorned.

The churches and chapels in the north glittered with the precious metals covering their inner walls. The most striking works were the 'antipendia', made up of small embossed and chiselled plates, attached to a wooden frame and riveted together. Their artistry makes use of sixteenth-century motifs drawn from the mannerist prints which abounded in Latin America and which craftsmen reproduced tirelessly, introducing new themes with the passage of time, such as the rocaille effects.

Plates with a semi-circular vault, in the same style, were used to decorate the altars.

Mention should also be made of a series of caskets in which the holy oils were probably kept. The inside of these caskets is usually divided into three compartments designed to contain phials and small spoons (Fig. 65).

The lecterns are made of embossed and chiselled silver with openwork. When the ornamental composition involves a lot of openwork, the wood is covered with velvet.

A profusion of silver haloes and crowns gave added splendour to the representation of the Blessed Virgin and the Saints.

Mirrors were set in silver frames in order to reflect the lighting of the altars.

There are two styles that can be distinguished among the various utensils: one in which embossing and chiselling predominate and the other in which hammered and even cast metal is used without any ornamentation, thereby producing plastic rather than pictorial effects (Fig. 66).

Another technique, often used for perfume burners, was the filigree. The perfume holders often have animal shapes: llamas, deer and turkeys or pairs of animals, the bodies of which provide vessels for fumigations, while the heads are often used as lids (Fig. 67).

The other objects, similar in shape to the perfume burners, are matés, which were widely used in this part of Latin America and have survived in Argentina, Uruguay, Paraguay and certain provinces of Brazil. This term was widely used from Peru to the Rio de la Plata to designate the fruit of the calabash tree, particularly the calabash which contained the infusion of the Paraguay herb which became the 'maté herb'. It is a very typical object of which many examples are to be found. Originally, the term referred to a vase. It is now used to designate the calabash for containing the infusion of a Paraguayan herb which has come to be known as maté. The herb was cultivated by the Jesuits on their missions in Paraguay. The most common models were made from a calabash either partly or completely covered with silver.

As the indispensable complement to maté, the 'bombilla' is a hollow metal stem equipped with a filter at one end which made it possible to inhale the infusion of maté.

Ornamental plates were made that were sewn onto a woollen cape in order to symbolize armor. This garment, used by the Bolivians, celebrated the fight between the angels and the demons.

After the rococo style which prevailed in Rio de la Plata until virtually the end of the eighteenth century, neo-classical forms influenced the design of subsequent production until well into the following century. This influence is also to be found in cabinet-making and ornamental sculpture, as well as in religous and secular gold objects.

From the nineteenth century onwards, the Creole gold and silversmiths continued to work by hand and unsuccessfully resisted the advance of mechanical methods. These craftsmen, who remained active until the twentieth century, invariably displayed their skills in matés, bombillas, perfume burners and pitchers, as illustrated by the very rich Argentinian collections of works produced by the masters of the colonial period.

This article does not provide a full account of all the activities that were organized on the occasion of the General Conference of ICOM. Emphasis has been placed on the desire of the Friends of the Museums in Argentina to highlight certain characteristic aspects of their art treasures. They, in fact, were responsible for all the visits organized for members of the ICOM International Committee on Applied Art to the public collections in Buenos Aires and Rosario as well as to private collections. Their aim was to enable the museum specialists from all over the world who had gathered together for the first time in Buenos Aires to become acquainted with this original heritage and become more conscious of its importance.[1] ■

[*Translated from French*]

1. The photographs presented in this article show objects belonging to the silver collection of the Isaac Fernández Blanco Museum in Buenos Aires.

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Perfume Burner. Ayacucho (Peru), early nineteenth century. Isaac Fernández Blanco Museum.

Return and Restitution of Illicit Objects

The living past

Nwanna Nzewunwa

Born in Owerri in the State of Imo, Nigeria, in 1947. He received a B.A. in history and archaeology at the University of Nigeria in 1973, and a Ph.D. in African archaeology at Cambridge University in 1979. He has lectured on African history and archaeology at the Universities of Nsukka and Jos, and organized research visits in many countries of Europe and West Africa. He is currently the Head of the Archaeology Department and Acting Director of the Museum at the University of Port Harcourt. Of particular interest among his publications are *The Niger Delta: Prehistoric Economy and Culture*, Oxford, 1980, and *A Sourcebook for Nigerian Archaeology*, Lagos, 1983.

Introduction

The permanent archaeological exhibition at Yelwa, entitled 'The Living Past' is the first of its kind in the history of cultural resource management in Nigeria. Resources of this kind have various values and meanings attached to them by their makers and admirers alike, and serve as links between the present and the past. Their power in commemorating the immediate or distant past has been exploited by different nations at different times in their history, especially for political ends. Cultural resources assume added importance when they help to establish the chronology of certain events and processes.

Developing nations whose ancestry and antiquity have been the object of doubt and debate use cultural resources to anchor their national identity.[1] — In a multi-ethnic nation like Nigeria, museums which bring cultural objects from different ethnic groups under one roof serve as centres for forging national, cultural and political unity. This is a justification for the extensive museum development at both national and state government levels. National universities located in Zaria, Ibadan, Ife, Nsukka and Port Harcourt have various cultural resources at their disposal, for education and research and research on culture and history. Private museums are largely unknown in Nigeria's cultural resource management strategy, although this does not mean that there are no private collections. Archaeological research in Nigeria has come a long way.[2] In the Middle Niger Basin and especially in the Yawuri Emirate of Nigeria, archaeological research began after the Kainji Dam Project. One of the traditional rulers who co-operated with the various archaeologists during the 1968 Kainji Rescue Archaeology Project (KRAP)[3] was Alhaji Muhammed Tukur, Emir of Yawuri and first Pro-Chancellor of the University of Port Harcourt. He was a historian who had a great interest in cultural matters, and in 1979 he invited the University of Port Harcourt to send experts to visit his Emirate for the purpose of conducting fresh archaeological research. The fieldwork which Professor E. J. Alagoa (historian) and I began in March 1980 and continued until mid-August, with the assistance of Mr. Abi Derefaka (archaeologist), produced a large amount of data (Fig. 68).

Alhaji Muhammed Tukur was enthusiastic about bringing the archaeological objects to the notice of the wider public since this would increase people's cultural awareness of his Emirate. Consequently I was invited to exhibit the objects during the first convocation ceremony of the University of Sokoto, in late 1980, and at the University of Port Harcourt. I also set up an exhibition at the Kanta Museum, Argungu, for the Sokoto State Government, during the International Fishing Festival at Argungu in February 1981. The objects remained on display until August 1981. But while the bulk of the data from the excavations was still being analysed Alhaji Muhammed Tukur died on 17th April 1981.

The idea of an archaeological exhibition

In May 1981 the Vice-Chancellor of the University of Port Harcourt, Professor Donald E. U. Ekong, suggested that I should establish a permanent exhibition of the artefacts from our excavation in the Middle Niger Basin, to be dedicated to the memory of Alhaji Tukur. It was to be located in Yelwa, Yawuri, in Sokoto, State of Nigeria.

The idea represented an exciting challenge to me. I was not a professional museum curator or a technician, and had

1. N. Nzewunwa, 'Nigeria', in Henry Cleere (ed.), *Approaches to the Archaeological Heritage*, pp. 101-108, Cambridge, CUP, 1984.
2. N. Nzewunwa, *A Sourcebook for Nigerian Archaeology*, Lagos, National Comm. for Museums and Monuments, 1983, 140 pp, 14 maps, 2 tables, bibliog., index.
3. See the series of Preliminary Reports in *West African Archaeological Newsletter* (Ibadan) No. 10, pp. 31-42 (1968), and No. 12, pp. 7-42 (Ibadan) 1970 and *West African J. Archaeology* (Ibadan), No. 2, pp. 121-122; No. 5, pp. 91-151.

only picked up my knowledge from visits to different museums in England, Europe and West Africa. The exhibition would be unique in several ways. It was to be the product of an amateur curator, its content would be largely archaeological and it would be the first permanent exhibition of archaeological objects in the country. Its location was equally unique, not in a state or federal government headquarters but in Yelwa, which is an emirate headquarters. It would also be the first time for a Nigerian university to be involved with its resources in an establishment of this kind outside its own campus. All these factors made involvement in the project particularly fascinating.

Space and facilities

After the university authorities had accepted my proposal, I travelled to Sokoto where I discussed the idea of the project with State Government and Emirate Officials who warmly received it. They made available a room for the exhibition in the grounds of the Emir's Palace within the Emirate Secretariat in Yelwa.

The room, measuring 7 m long, 3 m wide and 6.6 m high, had served at one time as the Emirate Reading Room and at another as a sub-Treasury. A mason and two painters were hired to rehabilitate the walls and floor, and an electrician to rewire the room and install new lamps. A carpenter replaced the doors, repaired the windows and secured them with metal protectors.

It was decided that the display facilities should be provided locally in Yelwa, which would save time and money. I sketched out the disposition of the show-cases and the shelves, and the positions for wall photographs and soft boards for pinned pictures, and discussed these plans with two carpenters and a local artist. The artist was helpful with advice on the colours for the interior of the show-cases, which he recommended after closely inspecting the objects to go on display. Under my supervision, the carpenters produced seven show-cases — five of them measuring 2.0 m × 0.6 m × 0.5 m, and two measuring 2.8 m × 0.8 m × 0.6 m. Two double-chambered hanging shelves, each 2.0 m × 1.0 m × 0.5 m, and a reception table were also constructed. A large five-chambered cupboard was built into the north-east corner of the room to hold conservation materials and undisplayed artefacts. The disposition of the objects on display was arranged with the curaturial assistance of Benjamin Ogbonna and Livinus Opara, both of the University of Port Harcourt.

Communication

In planning and setting up the exhibition, my greatest concern was with the visitors. I imagined that it would attract people from widely differing social and economic backgrounds. There would be some who had never left their homes before, and others who had travelled internationally. The exhibition might receive governors, kings and queens

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Archaeological excavations in progress at Waira. Some of these pots being unearthed were placed on display.

alongside servants and cleaning ladies. It needed to be suitable not only for diplomats, bureaucrats, businessmen, academics, students and school-children, but also for illiterate farmers, herdsmen, fishermen, and beggars. I was being called upon by the challenges of the exhibition entitled *The Living Past* to strike a balance between the top and the bottom ranks of society. How would you convey an understanding of the culture represented in Ulaira and Yawuri to this variegated audience? I had not closely observed this being done elsewhere, so I had no immediate experience to draw from, but I still had to provide an answer.

Communicating to non-specialists the story of the archaeological excavations at Ulaira and the way the objects were procured was particularly challenging. Finally I adopted a five-point solution. The first point was to use a series of photographs taken during the site survey, showing excavation, and how the objects were unearthed and processed. These photographs were arranged sequentially to illustrate the different stages of the field operation. The second solution was the use of a slide projector mounted in the north-east corner of the display room and projected onto the south-western wall. This provided a fascinating view of the local environment, settlement structures, and people in their everyday activities. Thirdly, we played recordings of local music of the Kambari, Gungawa and Hausa as used in recreation, work and festivities, thus providing a sound environment that is reminiscent of the cultural area. Fourthly, we provided guides who explained the nature of the objects and the exhibition in English and in local languages. Finally, I prepared a twenty-page exhibition guide-book entitled *The Living Past* for the visitors.[4]

The archaeological objects on display include different types of stone articles such as axes, grinding and cutting stones, beads and a carved stone representing a stylized human face. Objects in clay included decorated pots, saucers, lip and ear plugs, beads, whistles and smoking pipes. There are also terracotta figurines of humans, some naturalistic and others stylized, often in the form of double-headed humans or horned human heads. Metal objects are largely farm implements, sword and dagger blades, arrow and spear heads, finger rings, anklets, bracelets and bangles. There are also objects made of shell, bone and glass. The radio-carbon dates obtained on the site now show that the culture represented at Ulaira began during the first millenium B.C. The large collection of illustrations is arranged in eight albums depicting the life of the late Alhaji Tukur and the archaeological fieldwork.

Visitors

The exhibition was planned to open in December 1981, but this was delayed until the eve of the installation of Alhaji Shu'aibu Yakubu Abarshi as the new Emir of Yawuri. The Sokoto State Governor, Dr. Garba Na-Dama, declared the 'The Living Past' open on 25 March 1982 as one of the major activities marking the installation ceremony. In the first week alone over a thousand visitors were recorded in addition to the large number of local people who did not sign the book. The keeper says that this group forms the bulk of the visitors, which he estimates at six thousand per annum (Fig. 69). The visitors' book, however, shows that the exhibition has also attracted government officials, students, schoolchildren, research students and foreign visitors, thus increasing the tourist potential of Yelwa. The University of Port Harcourt has now formally presented the exhibition 'The Living Past' to the Sokoto State Government in order to provide for its effective management.

4. N. Nzewunwa, *The Living Past: An Exhibition Guide,* Port Harcourt, 1981.

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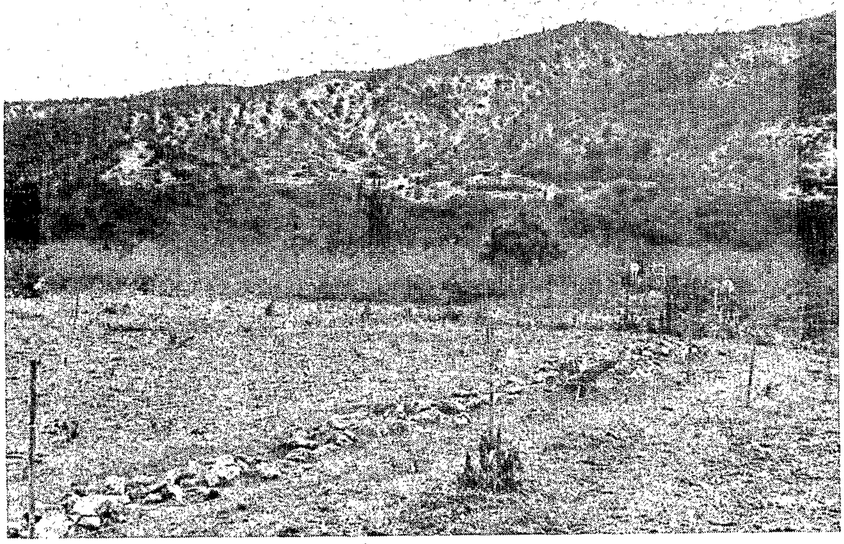
Visitors of different walks of life come to the museum.

Focusing pride in the past:

Agua Blanca, Ecuador



Chris Hudson

Studied three-dimensional design in London and then worked in the British Museum design department. Later, at James Gardner Studio, he worked on a variety of international museum projects and the studied development planning at London University. Moving to Ecuador to direct the British Volunteer Programme, he stayed on to design the archaeological museums of the Pacific Bank in Guayaquil. Now resettled in the United Kingdom as a freelance designer, he has recently been back in Ecuador to work on an archaeological site museum.

Colin McEwan

A professional archaeologist from Great Britain who specializes in the Precolumbian cultures of South America. His current excavation at Agua Blanca is part of a long-term project supported by the National Institute for Cultural Patrimony (INPC), the Central Bank of Ecuador, the programme for Ecuadorian Anthropology, the University of Illinois and the British Museum.

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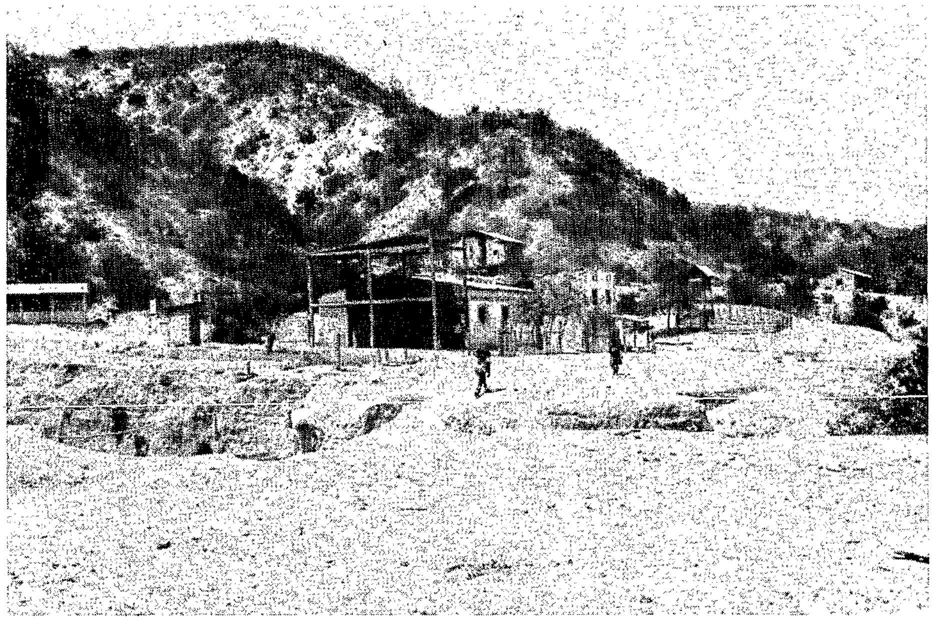
Agua Blanca, with the excavation site in the foreground.

Amid growing concern to stem illegal traffic in cultural property from the Third World, little mention is made of positive 'grass roots' action to encourage local people to evaluate prehistoric artefacts in terms other than immediate monetary return. People knowledgeable and proud of their past are less likely to part with objects that are perceived to be important elements of their cultural identity. Artefacts, rather than disappearing for the private enjoyment of a few, remain to enrich the lives of their rightful guardians — the descendants of those who produced them. The accidental discovery of a carved stone seat in the rural Ecuadorian community of Agua Blanca in South America led to a chain of events that provides a good illustration of what can be done to focus pride in the past.

The pre-Columbian heritage

Coastal Ecuador is exceptionally rich in pre-Columbian remains, with many sites yet to be explored. Some of the earliest pottery in the Americas was produced here more than five thousand years ago by the Valdivia culture, giving rise in turn to two other intriguing and sophisticated cultures, the Machalilla and the Chorrera. Ecuador soon lay at the hub of a flourishing long-distance exchange network introducing formative traits that appear in both Middle America (Mexico) and the Central Andes (Peru). The later Regional Development (Bahía, Guangala, Jama Coaque, La Tolita) and Integration phases (Manteño, Huancavilca) are represented by a wealth of beautifully crafted ceramics and metal and stone sculpture. Unfortunately, the vast majority of pre-Columbian antiquities from Ecuador in both national and international museums have been procured by the illegal looting of ancient sites, and this often severely compromises their aesthetic and scientific value.

The typical *huaquero* (grave robber, from *huaca* — burial mound) is, as often as not, a poor *campesino* (peasant) who begins casual excavation to supplement an otherwise meagre income. For some it becomes a lucrative source of year-round



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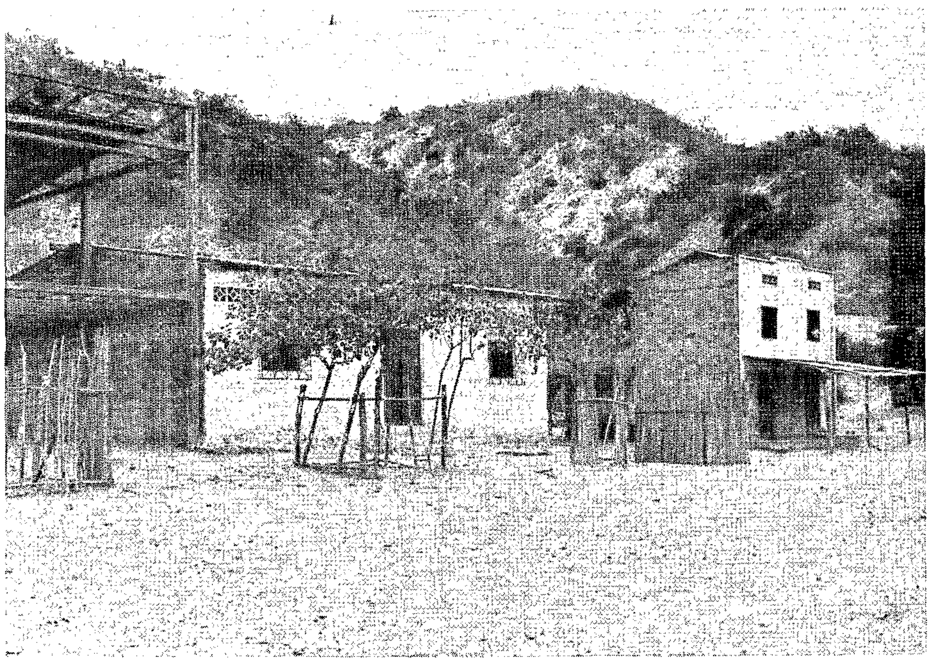
The *casa comunal* at the centre of the village.

employment. Professional *huaqueros* soon develop an uncanny expertise in locating cemeteries and tombs where the most attractive and valuable objects are to be found. Inevitably this results in not just the removal of the objects themselves and their sale to private collectors, but also the wholesale and irreparable destruction of unique archaeological sites.



This trade in Ecuador grew significantly from the 1970s until 1985, when the National Institute for Cultural Patrimony ordered the museums of the Central Bank to acquire artefacts only from approved scientific excavations. This was a bold move, but many fear that while it may help to reduce the illegal trade it could also lead to the increased export of items to North American and European buyers.

Despite international legislation sponsored by Unesco designed to curb this illicit trade by intercepting and impounding large shipments and eventually returning material to its country of origin, few Third World countries can muster the resources to stop the traffic in antiquities at the source, which is the archaeological site itself.[1]

Agua Blanca: a rich past facing modern dilemmas

Agua Blanca is a small village in the province of Manabí on the central coast of Ecuador, in the heart of the Machalilla National Park. Nearby is an extensive Manteño archaeological site comprising the ruins of several hundred rough stone and adobe structures, mounds and terraces, described by Olaf Holm (director of the Central Bank Museum in Guayaquil) as 'the largest pre-Columbian settlement yet discovered in Ecuador' (Fig. 70).

Lying 8 km inland from the Pacific coast in the Buenavista River Valley, the hamlet of Agua Blanca consists today of approximately fifty families living in traditional houses of timber and bamboo. Its name ('white water') derives from the adjacent sulphurous springs. The villagers' principal economic activities have traditionally been charcoal-burning and horticulture, but the first is now forbidden by the National Park and the second is only feasible with irrigation and appropriate soil management. The village has a primary school, a church and a community meeting house (*casa comunal*), all built by the community's own efforts and without government assistance (Fig. 71). There is no electricity or running water, and basic supplies are brought from the fishing towns of Puerto Lopez and Machalilla, reached by a two hour walk along dirt tracks. Curiously, the location of these modern settlements closely mirrors the prehistoric pattern described by an early Spanish chronicler in which an alliance (*señorío*) of four pre-Hispanic towns was ruled by a powerful lord.

Since 1979 Colin McEwan has been conducting an archaeological survey here, and mapping the Buenavista Valley. In 1985 he began excavation in the ruins at Agua Blanca, working with a team of local residents. The site is remarkable both for its long record of continuous human occupation, spanning at least five millenia, and for the excellent preservation of its surface architectural remains. The site has remained relatively undamaged by looting.

The challenge is to protect the site for the benefit of future generations and to preserve it for scientific study. However, the pressing economic needs of the local people cannot be ignored and if subsistence alternatives are not developed, Agua Blanca risks being added to the long list of sites which have been plundered out of need rather than greed. The strategy adopted has been to seek the fullest possible co-operation and collaboration of the people of Agua Blanca. Work on the site is regularly discussed at meetings between the archaeological team and a village committee, together with other items that affect the life of the community, such as a project to expand the irrigation system so as to develop viable alternatives to the activities proscribed by the National Park. But it was the discovery of a Manteño carved stone seat, perfectly intact, that provided an unexpected opportunity to raise the villagers' awareness of the significance of the cultural resources that lay, quite literally, beneath their feet.

Seats of power

The Manteños, who lived on the central coast of Ecuador at the time of the Spanish conquistadores in the sixteenth century, manufactured a distinct type of U-shaped stone seat. Under the 'U' of the seat is the sculpture of a crouching human or feline figure. The seats evidently functioned as powerful icons of social status. It is rare for undamaged seats still to be discovered, because nearly all of them have been exported as curiosities to the major museums of Europe and North America.

At Agua Blanca people have watched with mixed feelings as the best examples of the seats where whisked away from the ruins by outsiders. Resentment vied with the prospect of making some occasional ready cash from the sale of other casual finds of pre-Columbian objects exposed by annual winter rains.

In early April 1985, while a trench was being dug through the village to carry long-awaited water pipes, a complete Manteño seat was accidentally uncovered. It was immediately sold to a commercial trader from nearby Machalilla for the sum of US$40 — the equivalent of nearly a month's income for the person who discovered it, but a mere fraction of its real worth. Excitement and interest grew during the next few days into a groundswell of opinion that the seat should be returned. The event also raised the question of how this and other objects found over the years might be suitably displayed in the village.

The exhibit

Thus it was the discovery of this seat that catalysed the process of providing for the long-term conservation of the site and setting up a site museum and visitors' centre. Over the years villagers had frequently mooted the idea of a cultural exhibit in the *comuna*. The availability of an exhibit designer, Chris Hudson, made it possible to implement this idea. Suggestions for a simple display in a corner of

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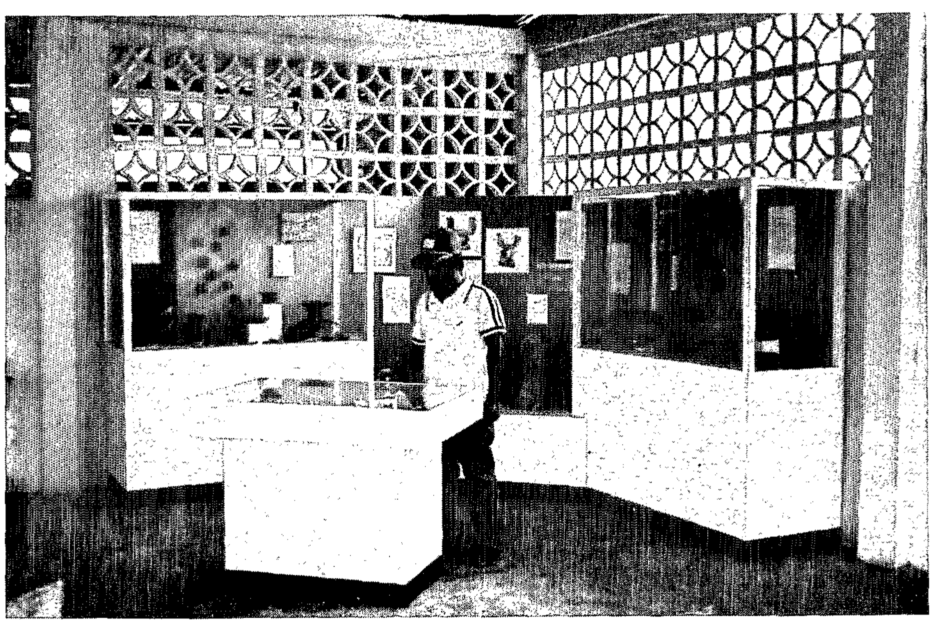
The exhibition.



1. See 'Ecuador Recovers an Important Fragment of its Cultural Memory', *Museum*, Vol. XXXVI, No. 1, 1984.

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The stone seat, on display.

the *casa comunal* were discussed with the village committee and a drawing and list of materials were prepared and presented to the Central Bank Museum in Guayaquil, which agreed to finance the work. Support was also given by Alfredo Moreira of the Archaeological Museum of the Pacific Bank in Guayaquil and Carlos Zambrano, director of the Machalilla National Park.

Materials were acquired and two young carpenters from the village worked with the designer to produce a pair of upright showcases, a plywood plinth and a table case to contain a relief map of the site (Fig. 72). The work was carried out in the *casa comunal,* which was filled with schoolchildren during breaks, inquisitive to see what was happening. Villagers called in to observe progress and to give a hand. As work advanced the combined enthusiasm of the village committee, the excavation team, the archaeologist and the designer generated wider interest and villagers readily donated pieces for the exhibit. Anticipation mounted as the opening day approached and the seat itself had still not appeared. Some doubted that it would be returned without money changing hands. Finally, to the relief and delight of all concerned, Don Segundo Vásquez donated the seat in time for it to be proudly cleaned and restored (Fig. 73).

A lively celebration sponsored by the *comuna* inaugurated the exhibit on June 7, 1986. Quotoas collected from each family by the *comuna* committee paid for the *chica* (maize beer), *seco de chivo* (traditional goat stew) and *aguardiente* (a kind of brandy) served to over 150 guests after the more formal opening by Olaf Holm.

Should you be down our way ...

The experience at Agua Blanca is a modest but important success story. It might be argued that short-term gains in the form of *huaquero* sales were passed up for possible long-term advantages: an eventual site museum and the creation of an archaeological park would certainly improve the village's fortunes. However, we cannot assume that this experience could be easily replicated in other locations for, in many ways, Agua Blanca is a remarkable community with a rare degree of collective organization and unity.

Nevertheless the safe return of the seat is a 'first' for Ecuador and sets a challenging precedent for archaeological projects being conducted in rural areas of Latin America.

For a modest outlay (the exhibit budget was less than US$ 1,000) Agua Blanca has tangible proof of the significance of its cultural resources, and is already drawing visitors from all over Ecuador and beyond. The creation of their own 'museum' is helping the people of Agua Blanca to focus on their past and to develop responsible attitudes with regard to its conservation and preservation. And should you manage that once-in-a-lifetime trip to the Galapagos Islands do stop by and visit! ■

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ISSN 0027-3996