

Proem

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In the prologue to the *Bulletin of the Museu Nacional d'Art de Catalunya* No. 2, I referred to the obligation the Museu Nacional d'Art de Catalunya has to make known the artistic heritage in its collections, along with everything relating to its research, both from the point of view of art history and of museology in all its aspects of conservation, restoration, documentation and publicising. Today we have fulfilled with satisfaction the duty to make available to the public the work and the documentation gathered for the current presentation of the Romanesque mural painting in its permanent exhibition rooms in the Palau Nacional.

This monographic volume of the *Butlletí del Museu Nacional d'Art de Catalunya* is devoted entirely to the relocation of the apses and to the present installation of the Romanesque paintings. The differences as regards previous relocations have been noteworthy, both in the preparation and in the methods used. This work follows step by step all the studies and experiments in a complicated museographic operation culminating in 1995. The event can be described as unprecedented, due to the considerable technology employed and the scope of the problems raised.

It describes the preliminary studies, justifies the decisions taken and comments on the most interesting aspects of the steps taken towards the new exhibition, from its genesis to its resolution. All of this has also generated data and

suggestions which feed and stimulate new investigations and contribute understanding for future interventions. They set the path and, therefore, the future actions of the Museum.

Technically, therefore, it has been possible to carry out the relocation and the new installation taking into account the memory of the work undertaken in the recovery of the paintings and in the presentation by J. Folch i Torres. The mounting by J. Ainaud in 1973 has also been studied in depth. The work by the most recent Directors in the Museum's history has also contributed: J. Sureda's inventory and museographic plan, and also the museographic plan and the theoretical studies for the relocation of the apses begun by X. Barral.

I would like to thank all the team of the Museum staff who have made this new installation of the Romanesque art possible; without them it would not have been possible. Also of great help were the consultations and the criteria of those people, restorers and art historians linked in some way to the Museum, who because of their work at that moment were not directly involved. Thus, Joaquim Pradell and Gianluigi Collalucci in the restoration field, and Milagros Guardia, Núria de Dalmases, Imma Lorés, Rosa Terés, amongst other university lecturers and researchers, and Joan Ainaud, who followed the museological project from start to finish.

Finally, let me add that this new installation of the Romanesque art in the Museu Nacional d'Art de Catalunya has been possible thanks to the financial support of Barcelona City Council, the Catalan Government and the Ministry of Culture.



Prologue

Antoni Morer

The last relocation of the apses and the new presentation of the Romanesque paintings, essential on account of the refurbishing of the Palau Nacional as the definitive home of the MNAC, became an exceptional cultural event in 1995. Museum circles followed the project, to which the media gave ample coverage, regularly and expectantly.

The object of this miscellany is to make available to all those interested the documentation and the story of the experiences shared in the course of this event. It lays out the criteria adopted and adduces the decisions taken before, during and after the move, by each of the groups involved. The idea is to make the whys and wherefores of each of the actions carried out understandable.

The informed public is broad and heterogeneous. The challenge is to make the content instructive for those who are not specialists and useful and rigorous for the experts. It is therefore directed at the Museum visitor, the university student, the Romanesque art scholar, but also at the scientist and the professional historian.

The authors of the articles are specialists in each subject and have taken part in every phase, from the obtention and study of the preliminary documentation to the resolution of the final details. The people responsible for each field established the scientific criteria and were responsible for their implementation. It is also important to mention the interrelation and co-ordination between the Museum departments as well as with the outside firms.

To succeed in our proposed aim we have opted for a text that was easy to read but also of the utmost rigour. The specific vocabulary used in the texts has been unified, as the terminology could lead to confusion at times, and brand names of certain products have been maintained when this terminology is the most easily understandable in the respective fields. As far as possible, we have avoided being repetitive both in the descriptions and in the argumentation. Similarly, the graphic aspect has been reinforced and the illustrations have been carefully selected to provide a complete, global view of the whole process and to facilitate comprehension of the text, which has been synthesised because of the number of matters dealt with.

The contents comprise general and technical information arranged in five sections. The first chapters help to understand this event not as an isolated, random fact, but in the evolutionary context of the conservation and exhibiting of Catalan Romanesque art, together with the political and cultural fluctuations surrounding museum programmes. In this respect, the choice of the Palau Nacional as the definitive home to the Museu Nacional d'Art de Catalunya is of prime importance. The architectural, museological and museographic criteria selected on the basis of these circumstances have been explained.

There follows a description of the global strategy and the technical measures adopted for moving the works. It comprises the calculation of structures, the plans for the dismantling and moving, as well as those for the new location, the monitoring, adaptation and control of all the parameters called for by preventive conservation, and the programmes for occasional intervention and restoration before and after the relocation operations.

The chapter on documentation provides a collection of documentary, graphic and audio-visual sources, from the acquisition and detachment

of the paintings in the Pyrenean churches, in around 1919, to the final operations in 1995. This section includes a careful selection from the general bibliography on the contents of this miscellany, in chronological order.

We have felt it wise to attach some annexes, which are useful to have at hand, either to help in the understanding of the text or to consult other references. This section is of particular interest for the brief biographical notes on the people involved in the acquisition, detachment and formation of this collection. It is also important to remember that some of the documents selected are published here for the first time.

The last part includes the simplified and revised guide to the permanent exhibition of Romanesque art, published on occasion of the inauguration of the new installation in December 1995.

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A History of the Relocations of the Romanesque Mural Painting Museology for a New Permanent Exhibition

Introduction

Eduard Carbonell

After analysing the museological and museographic discourses that have been made of the Romanesque mural paintings kept at the Museum, those of 1924 in the Parliament building in the Parc de la Ciutadella and those of 1934 and 1973 at the Palau Nacional, we considered what the museological discourse should be and how to resolve the problems raised by the museography at the end of the twentieth century.

Previously we studied the relocations of the mural paintings and the various detachment campaigns, so as to determine the origin of a whole series of fragments stored in the Museum's reserves and their place in the original whole, so as to relate them to their pictorial context.

We then established some basic ideas which served as a guide for the new museological discourse, bearing in mind that our treatment of the Romanesque would, from now on, condition the Museum's overall discourse, as the successive collections of Gothic, Renaissance, baroque, etc. are opened to the public.

First of all, we consider that the Museu Nacional d'Art de Catalunya is an art museum. Therefore, the work of art must play a central, almost absolute role, without concessions to historical and social explanations of the period, which at all events must be present alongside the artistic discourse. It was, however, necessary to explain the history of the art, with all its iconographic and formal components of analysis, in all its complexity. But without any kind of obstacle to prevent our seeing the works in all their splendour. This is a generic premise which holds for the mural painting.

It is by virtue of this concept that the mural painting with its support, the apse, becomes the object in all its force, located in the great hall of the permanent exhibition, without concessions. It is true, though, that in six cases there is a historical reconstruction of the space occupied by the paintings, also keeping to the typology of this architecture: the lateral aisles of Boí, the two churches at Taüll, the porch at Cardona, Sorpe and the chapter house of the monastery of Sixena.

In the arrangement of the mural paintings, a chronological and stylistic itinerary has been followed, except in the case of the mural paintings from La Seu d'Urgell, which, located in the first room, open the permanent collection of Romanesque art in all their magnificence. It is precisely the Romanesque mural painting that makes the Museum unique in the perspective of the museums of the world.

The mural painting shares this chronological and stylistic itinerary with the other arts, sculptures in stone, wood carvings, painted panels and the arts of the object, in a unique discourse, since the Museum is a museum of all the arts.

A history of the change of location of the apses

Jordi Camps and Montserrat Pagès

The pages that follow provide a brief summary of the long history of moves to which the Museum's collections of Romanesque mural painting have been subjected since they were removed from their original buildings. A summary in which we have wanted to take into account the large-scale moves as well as the individual journeys of what are sometimes rather sweepingly referred to as apses, a name which nevertheless also extends to other types of architectural constructions and volumes (naves, porches and other parts of religious constructions).

The central aim of this summary is to recall and contrast the internal and external moves that preceded what for the time being is the last move on occasion of their installation in the new Romanesque Room at the Museu Nacional de Catalunya, inaugurated in December 1995. Over and above the purely technical side of the removals, we have thought it essential also to analyse the background and the factors that motivated them as well as the spirit that prevailed in their presentation and distribution in each of the different installations. In this way, we shall see how the history of these moves is related, directly or otherwise, with the country's own cultural history and that of the institutions in which the collections have been housed. In short, we shall see how a significant part of the arguments behind these moves are a consequence of decisions on cultural policy affecting Catalonia's heritage and museums, as well as

the efforts of particular individuals. Without forgetting, of course, the emblematic value of the series of mural paintings in the Museum's Romanesque collection, which are what makes it so special.

The Background to and Origins of the Formation of the Collection of Mural Painting

Background

The remote origins of the MNAC's collection of Romanesque mural painting must be set in the context of events such as early discoveries and publication of series such as that of Sant Quirze de Pedret (1887), in Berguedà, or that of the church of Sant Pere at Terrassa (1895), Vallès, amongst others. At the same time, some series were publicised in Roussillon. Before this, interest had already been roused by the painted panels from this same period.

These discoveries, along with the first research work and the publications it gave rise to, formed part of the atmosphere of cultural renovation, the claim to a separate national identity, which turned for its origins to the medieval past. This atmosphere was related to the *Renaixença* and its consequences, which, from different points of view, had its continuity in *modernisme* and *noucentisme*, while on a political level it materialised in events such as the founding of the Mancomunitat de Catalunya. It was also, of course, connected with the interest in the medieval world which grew up in Europe following romanticism, especially in the twentieth century.

The first institutions devoted to safeguarding the architectural and artistic heritage, like the formation of the first collections, are directly related with this situation. In this respect, one prominent figure is Josep Puig i Cadafalch, founder of the Artistic and Archaeological Association of Barcelona, which in fact published, in 1889, one of the earliest studies of the paintings at Pedret. Museums

such as the Episcopal Museum in Vic (1891) and the Museum of Solsona (1896) were founded in the final decades of the nineteenth century and from that moment became involved in the work of researching and publicising the discoveries.

The Discovery and Revelation of the Collections

The first decade of the twentieth century, though, was marked by a series of decisive events for the future collection of mural paintings. The first of these was the reorganisation in 1907 of the Junta de Museus (Museums Board), a body which included active and significant figures such as Ramon Casellas, Josep Pijuan and Josep Puig i Cadafalch. That same year an expedition took place to Alt Urgell and Cerdanya as a result of which some Romanesque works of paint on wood, sculpture and metalwork were purchased which added to and enriched the Museum's catalogue.

Behind these events was a clear wish to avoid the disappearance and dispersion of the country's artistic heritage and to promote the purchases made by the Junta de Museus.

But the key date in this period, especially for the collection of mural painting, is without doubt 1907. That year, the Institut d'Estudis Catalans (Institute of Catalan Studies), the organisation responsible for the archaeological and juridical expedition to the Aragonese border, was set up on the initiative of Enric Prat de la Riba. This was what really led to the discovery of the most important collections of mural painting, especially in the Western Catalan Pyrenees, like those in the Vall de Boí, many of which are conserved at the MNAC.

After that, the study of these works had another instrument made available to it: the publication in instalments of the work *Les Pintures Murals Catalanes*, with text by Josep Pijoan, which

included studies of the collections, as well as plans, photographs and drawings. The venture had French models carried out a few years earlier which had been purchased for the library. For the illustrations, the Junta de Museus commissioned copies of the paintings that were being discovered and studied, a job that was eventually undertaken entirely by the painter Joan Vallhonrat. Another monumental work prepared during that period was *L'arquitectura romànica a Catalunya*, under the direction of Puig i Cadafalch.

Towards the Formation of the Nucleus of the Collection

The echo of the successive discoveries and the publications devoted to the study of the collections roused an interest in Romanesque mural painting, not only amongst experts but also amongst people in the world of the art market and of private collecting, both Catalan and international. It is worth bearing in mind that all of this was going on at a time when certain Catalan institutions and figures were taking steps to avoid the loss and dispersal of the artistic heritage, with the problem of the legal gaps there were in this field. One clear reflection of this situation came about when, in 1919, during the work of reproducing the paintings in the lateral apse of Santa Maria de Mur by Joan Vallhonrat, a campaign was discovered to remove and export the mural paintings. The names of the people involved in this operation, and the emigration of the central apse from Mur to Boston (where it is recorded since at least 1921), are well known. Swift action was taken at the time by the Junta de Museus and, especially, by Joaquim Folch i Torres, who since 1918 had been the Director of the Museum's Medieval and Modern Art Section.

Having halted this large-scale operation, cancelled the first purchase and thus avoided dis-

persal, the decision was taken to detach the paintings and move them to Barcelona and a contract was drawn up for their sale to the Junta de Museus. The poor condition of the frescos and the worrying state of the buildings housing them was taken into consideration and steps were taken to try and avoid repetition of the situation. In this way, the Junta de Museus purchased the paintings from Sant Joan de Boí, Sant Pau d'Esterri de Cardós, Santa Maria de Ginestarre, Santa Maria d'Àneu, Sant Pere de la Seu d'Urgell, Santa Eulàlia d'Estona, Sant Climent de Taüll, Santa Maria de Taüll and Sant Pere del Burgal, thought this last group was finally replaced by the group from Sant Miquel d'Engolasters. Shortly afterwards, removals were authorised from Sant Quirze de Pedret.

The First Move: from the Original Churches to Barcelona and the Former Arsenal of the Ciutadella (1919-1923)

The operation to detach and transfer the collections of mural painting and install them in Barcelona lasted from 1919 to 1923. This first move, the first of the various "journeys" undertaken by the collections of mural painting, met with many difficulties, some of them caused by the means of transport available and the precarious state of communications. In the case of the collections from the Vall de Boí, the canvases, rolled up and packed in boxes, were carried by mule as far as La Pobla de Segur, by lorry from this point to Tàrrega, and by train to Barcelona.

One of the basic differences between this first move and subsequent ones is that in the first one the paintings, attached to the cloths used in removing the paintings, had not yet been transferred to canvas or mounted on any kind of support. The cloths used in removing the paintings were simply rolled up and packed in wooden boxes with straw

to isolate and protect them. Transferring the paintings on to canvas took place in Barcelona.

The collections were first installed in the old arsenal of the Ciutadella, which had since 1915 been the home of the Museu d'Art i Arqueologia, as it was then called. The new presentation of the rooms with the mural paintings was inaugurated in 1924. The collections were presented on architectural forms built with wooden structures that disguised the outer, convex shape of the apses. These apses were built according to the dimensions of the originals, to plans drawn up by the architect Josep Francesc Ràfols. Obviously, there were also flat fragments, which were set in the walls.

From the museographic point of view, there was no intention at that time of reconstructing the original specific settings for all the pictures. On the other hand, a relationship was sought with other techniques, and aspects of Romanesque art's religious and liturgical nature were stressed. The arrangement did not therefore conform to criteria of chronological or stylistic order, and the apse paintings were often accompanied by altar elements and therefore by samples of painted panels, wood carving and artistic objects. In the catalogue of the Romanesque Section published in 1926, we can follow the spirit of this arrangement along the length of the eight rooms it was made up of. In Room 12, for example, the apse from Ginestarre was exhibited (with the altar frontal from Esterri de Cardós inside), the apse from Sant Miquel d'Engolasters (with the frontal of Alòs d'Isil) and the remains of the northern doorway from Sant Joan de Boí.

The Second Move: from the Ciutadella to the Palau Nacional (1931-1934)

The installation of the collections of Catalan art in the Palau Nacional on Montjuïc arose from

the reconsideration of the country's cultural and, in particular, museums policy, begun as a logical result of the changes brought about in the State and in Catalonia with the advent of the Second Republic. The Museu d'Art de Catalunya was founded in the building constructed on occasion of the 1929 International Exhibition, at which time it enabled the collections of Catalan art to be concentrated and classified. There had been other possibilities for installing the collections, as, for example, the Monastery of Pedralbes (negotiated in 1930) or the construction of a new building on land near the present-day Plaça Francesc Macià, but in spite of the disadvantages (amongst others, the distance from the city), the Palau Nacional was adopted as their new home. The inauguration had been foreseen for 7 October 1934, but the so-called October Events of that year forced it to be postponed until November. With the Catalan Government in prison, the ceremony took on a very different character to what had originally been intended.

Before the collection could be installed work was necessary to consolidate and refurbish the Palau Nacional, which had been abandoned since the closure of the Exhibition. Although during the event it had been home to the exhibition *El Arte en España*, the building's characteristics were not suited to museum conditions. On the other hand, it did have rooms that were large enough for works like the collections of mural painting, which were unusually tall. The future exhibition rooms were therefore waterproofed and dividing walls were built to isolate them from the exterior conditions. An attempt was also made to adapt the rooms to their new function from the decorative point of view. As the architect Ramon Reventós, who was commissioned to carry out the conversion work, said, "There has been an effort to make the rooms simple and light so that the works exhibited there can be easily contemplated without obstacles". The aim was that in this way the rooms and the architectural elements of the restoration

should be discreet and would therefore make the works of art stand out. But at the same time it was intended that the interior appearance should be adapted to the artistic forms. Thus the windows of the rooms in which the apses were exhibited had semicircular arches.

The collections were moved between 1931 and the beginning of 1933. This of course involved moving the Romanesque art collection and especially the collections of mural painting, which on account of their size and their emblematic nature called for special care and caused rather a stir. The structures of the apses were transported in one piece or partially dismantled, according to their size. The means used in those days were characterised by a certain technical simplicity. Transport across the city was by lorry.

The new presentation of the Romanesque mural collections was part of a project which Folch i Torres was able to take on more coherently than the previous one, with the chance of rearranging and reorganising the rooms, which furthermore were adapted to the museographic trends of the time. It is important to bear in mind that there were new specimens, especially following the purchase in 1932 of the Plandiura collection, which added fragments from Sant Pere de Burgal, Sant Pere d'Esterri d'Àneu, Santa Eugènia d'Argolell, Santa Maria del Castell d'Orcau and Sant Romà de les Bons. The exhibition also acquired the elements from the nave of Sant Pere de Sorpe, deposited in 1929 though not formally purchased until 1946, and the elements from the Andorran apse of Sant Romà de les Bons, which arrived as a donation by Lluís Plandiura.

In spite of the interest in establishing a chronological and topographical arrangement, some collections were still slightly broken up, while others now tended to be concentrated in one area, as in the cases of Santa Maria de Taüll and Sant Joan de Boí. Often, the apses were also occupied by altar elements, especially frontals and crucifixes.

The Odyssey of the Spanish Civil War: Olot (1936); Paris (1937); the Works Return (1939)

The Journey to Olot

The start of the Spanish Civil War raised the issue of the safety and well-being of the works

housed in the Palau Nacional. To the insecurity arising from the war itself had to be added the fact that Montjuïc, because of the castle, was a military area, so that it was in danger of possible attacks, as in fact happened. It was therefore necessary to evacuate the works of art. For this reason, a new campaign to safeguard the artistic heritage was begun, which led to further movements of works of art and which affected the collections of Romanesque mural paintings. These movements formed part of a series of measures taken by the Catalan institutions to preserve the artistic heritage. In this respect, and in view of the exceptional nature and the precariousness of the situation, the Comissaria General de Museus had been set up and carried on the functions of the Junta de Museus, which had been broken up in July 1936.

Orders were therefore given for the Museum's works to be moved, including the mural paintings, to Olot, in Garrotxa, an area close to the border and far from the points where the military conflict could be most intense. The pieces were dismantled and carefully cut into sections, a job which Folch i Torres entrusted to Josep Gudiol i Ricart. The collections from Seu d'Urgell and Estaon were therefore dismantled once again and, like the others, deposited in the church of Sant Esteve in Olot, as illustrated in photographs of the time. The move took place between October and December 1936, in precarious technical conditions, by road and in a situation of evident danger.

The Exhibitions of Medieval Catalan Art in Paris (1937)

Like other of the Museum's works, some of the collections of Romanesque mural painting took part shortly afterwards in the exhibition of Catalan medieval art entitled *L'Art Catalan du X^e au XV^e siècle*, held in the Jeu de Paume in Paris from March to May 1937. This exhibition,



which arose from an initiative by the Department of Culture of the Generalitat de Catalunya, revealed the importance and the exceptional nature of this part of the collection in France and abroad, at the same time as it helped to publicise it amongst experts.

The selection of items had been made by Joaquim Folch i Torres, who, along with the architect Josep Lluís Sert, also organised the presentation of the works. Conditions in the exhibition hall did not allow the installation of items of great height, so that only the small apses and flat fragments could be included. They were transported by road, using lorries. One of the publicity posters for the exhibition was illustrated with a detail from the apse of Santa Maria de Taüll.

In spite of the response and the success with the public, the exhibition at the Jeu de Paume had to be closed on 20 May due to prior commitments. The French government offered the possibility of moving it to the castle of Maisons-Laffitte, at the gates of Paris, so that the exhibition, now called *L'Art Catalan a Paris*, took place parallel to the International Exhibition of that same 1937. The space in this building enabled the larger works to be installed, such as the apses of Sant Climent and of Santa Maria de Taüll. The Romanesque works, and, amongst them, the mural paintings, were exhibited on the ground floor. The first room contained the fragments from Sant Joan de Boí (Stoning of Saint Steven), Orcau and Sorpe (Annunciation, Virgin with Child); the second, the series from Santa Maria de Taüll; the third, the central apse from Sant Climent de Taüll, another fragment from Sorpe and fragments from the apse of Sant Pere del Burgal; the fourth, the small apse from Sant Esteve d'Andorra la Vella, and the fifth, the apse from Sant Miquel d'Engolasters. The exhibition, as previously in the Jeu de Paume, was characterised by its austerity and reinforced the wish to penetrate the atmos-

sphere of the apses with the altar furnishings. Thus some of them appeared exhibited on structures reached by steps, and under the surfaces of the apsidal vaults altar frontals were exhibited alongside carved or metalwork crosses. In general, in each room collections of fresco painting alternated with works in other techniques.

The new exhibition was held from June to November 1937, though the works remained there until September 1939, when the Spanish Civil War ended, under the supervision of Folch i Torres. Meanwhile, the other works had remained in Olot and other points of the Pyrenees.

At the same time, campaigns were carried out to safeguard series which at the start of the armed conflict had remained in place. This is the case of the work undertaken by Josep Gudiol i Ricart, who in 1937 was occupied in detaching and moving the paintings from the chapter room of the monastery of Sixena, burnt down in 1936. They were stored at the Casa Ametller together with elements from other series, which later came to form part of other collections.

The Return of the Works (1939)

Following the end of the war, a body set up at that time, the SERPAN, saw to the return of the works in October 1939, an operation in which Folch i Torres also took part indirectly. The works were transported by rail from the area of Maisons-Laffite to Barcelona.

The reconstruction of the apses halted the work on the Romanesque art rooms, which did not open again until 1942. Taking part on the technical side was the architect Ramon Raventós, who had previously collaborated with Joachim Folch i Torres in the installation of 1934.

Reforms Due to Enlargement of the Collections and the Exhibition of Romanesque Art of 1961

During the first years of the post-war period, the rate of new additions diminished considerably. Nevertheless, there are some significant facts to be taken into account which were reflected in later exhibitions. In this respect, there was first of all the acquisition of the large series of paintings from the chapter house of the monastery of Santa Maria de Sixena, which had been saved in 1937. In 1943 various fragments from the Castilian monastery of San Pedro de Arlanza were purchased, which had been detached and transferred by Ramon Gudiol. In 1946 the fragments from Sant Pere de Sorpe were officially added after being deposited in the Museum for years, as has been described above.

After Joan Ainaud i de Lasarte was appointed director of the Museu d'Art de Catalunya in 1948, there were new detachments and additions, especially from the sixties on. They were the result of a campaign to revise the churches from which there were already important collections and of the search for others still little known. Some of the collections were mounted at different moments, for example for the exhibition of Romanesque art organised in 1961, in subsequent reforms and, of course, for the installation in the years 1971-1973. All of this will be described in detail later on. The fragments were not always exhibited immediately, though, and some were added to the rooms later or remained in the Museum's reserves. Although it was not such an emblematic or large-scale campaign as the 1919-1923 campaign, it involved a series of individual removals to the Museum from the respective places of origin, and a remarkable effort which needs to be taken into account not only from the point of view of art and its conservation but also



because some of the new additions were decisive in organising the change of location in 1995.

If we bear in mind the series of works currently exhibited in the Romanesque Room, the most significant novelties and movements were as follows: from 1950 to 1953 the paintings from the right lateral apse of Santa Maria de Mur were detached and removed – a task undertaken by Ramon Gudiol – and added to the Museum in 1961; in 1952 the paintings from the apse of Sant Cristòfol de Toses arrived; in 1953 those from the porch of Sant Vicenç de Cardona were deposited; and in 1958 the Amics dels Museus donated various fragments from the apse of Sant Pere d'Àger. And we must not forget a further addition from Sixena dating from 1960.

Between 1960 and 1964 a series of new detachments took place which came from a revision of the series from which paintings were already owned from the campaign of 1919-1923. Thanks to this, in 1960 new fragments arrived at the Museum from Sant Climent and Santa Maria de Taüll, followed in 1961 by the paintings from the lateral apse at Mur and a fragment from the central apse, and in 1964 new fragments from Sant Pere de Sorpe and Sant Pere del Burgal. That same year new fragments entered the Museum from Ginestarre, such as the bottom layer of part of the apse. In addition, in 1962 the paintings in the apse of the church of the castle of Marmellar were acquired and were detached and transported by Ramon Gudiol; in 1963, the fragments from Sant Iscle and Santa Victòria de Surp and from Santa Caterina d'Isavarre were acquired, although other fragments from these two series, which were in obvious danger of destruction, came to form part of the Museu Diocesà of La Seu d'Urgell.

Shortly afterwards, in 1969 and 1971, yet more paintings from Santa Maria de Taüll were added, in particular those from the altar in the

central apse and the bottom layer from the same apse. Also worth mentioning is the donation made by Josep Gudiol in 1973 of a fragment from San Pedro de Arlanza.

In the framework of the international exhibition of Romanesque art in 1961, already mentioned, organised by the Spanish government under the auspices of the Council of Europe, the Romanesque art rooms acquired prominence as the opening of the exhibition. In this way, the ground floor of the Museu d'Art de Catalunya, in the Palau Nacional, which contained works from the Museum's collections, provided the framework for other works. Obviously, the collections of mural painting was a basic element in the organisation of the programme. The novelties were the paintings from the porch of Sant Vicenç de Cardona, which were installed on the upper floor and shown to the public for the first time, though they were not added to the permanent collection. In 1961 the lateral apse from Mur was also mounted and the column from the central apse of this same site was presented. In addition, the paintings from the chapter house at Sixena were also installed.

The Internal Move and the Reorganisation of 1972-1973

Between 1972 and 1973 there was a further reform of the Romanesque art rooms which was also reflected in the organisation and arrangement of the apses and of the collections of mural painting. However, it was foreseen that this new installation would be a provisional one, as "a first step towards the realisation of a far more complete plan" (according to the introduction in the relevant guide, published in 1973) which involved a change of setting to the monastery of Pedralbes. Indeed, on the basis of an agreement signed in 1972 between Barcelona City Hall and

the community of nuns of this monastery, a project was planned which included the construction of brand-new buildings to house, amongst others, the Romanesque works of art.

The Romanesque rooms remained in place on the ground floor of the east wing of the building and part of the periphery of the Oval Hall. In this case, too, the integration of the mural paintings was a priority objective which aimed for simplicity in the mounting and dismantling of the structures with a view to the new exhibition planned for the future. Every effort was made to reinstate the collections of mural paintings, and in some cases it was necessary to lower the level of the floor on account of their height, while others, some of them also very tall, were installed in the central nave of the room. In this way, part of the collections changed to a new setting as regards their previous presentation.

The new arrangement set out to maintain a philological and stylistic thread. Furthermore, most of the frescos were placed in settings which brought to mind their original home. This was particularly manifest in the collections from Sant Climent and Santa Maria de Taüll, whose corresponding rooms partly reproduced the naves of their respective original churches. The nave from Sorpe was also reproduced at that time with the corresponding paintings. Toses was added, which, remember, had already been mounted for the 1961 exhibition. Some fragments which until then had been exhibited flat were added to the structures reproducing the original forms: the small north apse of Sant Quirze de Pedret, the apse of Burgal; also included was the apse of Marmellar and the apse of Ginestarre was raised and had the fragments of the triumphal arch added. Another characteristic of the exhibition was the presentation of the bottom layer of some sites, detached a few years before, such as the apse of Santa Maria de Taüll.

Towards the New Internal Move of 1995. The Museological and Architectural Arguments

Once again, political changes in the Spanish State and Catalonia after 1975 gradually led to a series of transformations aimed at reorganising the country's museum situation. These transformations materialised in what for the moment is the last move of the collections of mural painting.

It is worth remembering, first of all, that at the beginning of the seventies a change of home was planned and that the previous reorganisation was of a provisional nature. In this respect, we have already mentioned that a future move to the monastery of Pedralbes had been foreseen. Even so, Barcelona City Hall's 1985 Museums Plan foresaw that the home of what was still called the Museu d'Art de Catalunya was to be the Palau Nacional itself. Continuing in the field of museum policy, the framework provided by the Museums Act approved by the Catalan Parliament on 17 October 1990 is also of prime importance. It was thanks to this law that the Museu Nacional d'Art de Catalunya was founded, with a series of postulates that have determined the Museum's museological content and have, of course, been reflected in the arrangement and distribution of the pieces.

At the same time, the building, which was very run down, required important repairs and restoration work. That same year, 1985, the project was commissioned to the architects Gae Aulenti and Enric Steegman, who put forward a range of different proposals. In the first, in 1987, some of the apses were presented in the Oval Hall of the Palau Nacional as a point of reference beside equally emblematic items from other departments. In July 1990 another proposal was presented. The old Romanesque art rooms had been progressively closed down between 1987 and 1990.

The need to consolidate the architecture of the Palau Nacional made it necessary to start with an operation to replace soil and bind the building's foundations. This made it vital to move the apses to another area, as important building work was necessary in their old location to be able subsequently to prepare the rooms that had been reformed. In this way, the Romanesque Room and the collections of mural painting had to be moved to the opposite wing of the building.

The process which began at that moment was long and complex, with numerous protagonists and various proposals. One point worth mentioning is the decision to abandon the diagonal arrangement originally planned for the collections of mural painting and return to the orthogonal one.

The change of location of the apses and, by extension, of the collections of mural painting, which along with the installation of the selection of works in other techniques led up to the reopening of the Romanesque Art rooms in December 1995, is the subject of the detailed description that follows.

the building about to begin, the Museum closed its doors. Before that, when it was also thought that the beginning of work was at hand, some of the rooms of the permanent Romanesque exhibition, those at the end of the visit, had already been closed, so that it was necessary to vary the exit itinerary.

Some rooms, numbers 25 to 34 –in other words, from Mur and Camarasa to those containing the Gothic paintings from Bierge and from the Palau Aguilar in Barcelona–, were dismantled and emptied between August and September 1987. The Toses and the Andorra rooms, located in the centre, were also closed and dismantled. The works of art in these rooms were moved to the reserve, except for some stone items which were left in place, such as the Camarasa pillar and the rest of the capitals in this series, which at the time were exhibited in niches, as for the moment they were in no danger where they were. This room was then adapted as a reserve for the stone sculptures. The arches from the chapter house of Sixena, on the other hand, like other works of mural painting, had to be dismantled and, with the arches divided in halves, moved to the reserve on the upper floor. The arches from Sixena, though they were moved on various occasions, stayed on this floor until the year of the reopening, 1995, when, once the paintings had been consolidated, they were moved and mounted in the corresponding position in the new museographic installation. The other works of mural painting dismantled at that time (the small apse from Andorra, the Toses apse, etc.), along with the lateral apse from Mur, which had not been assembled in 1973, also remained in the upstairs rooms adapted as a reserve.

The 1995 installation

*Eduard Carbonell,
Montserrat Pagès
and Jordi Camps*

Closing the Museum

A large part of the rooms used for the 1973 installation remained open to the public until the summer of 1990, at which moment, with Joan Sureda as director and the work of reforming

When the other Romanesque rooms were closed in 1990, the works of art exhibited there were left untouched for the time being. In other words, they were left in the same position as in the 1973 installation, because, as the Gothic Room in the eastern wing of the building had to be emptied

first, the old Romanesque room was made into a temporary reserve. Trestles were set up in the rooms to hold Gothic and Renaissance panels and altarpieces, as well as Gothic sculpture, all of which remained there until 1995, when they were gradually moved to the new permanent reserve as the rooms had to be emptied prior to moving the apses. Meanwhile, in Joan Sureda's time, the state of conservation of the mural paintings had been reviewed, and at the same time –also in Xavier Barral's time–, an important job was done of documenting, computerising and photographing the collections. This work has continued since then, under the present administration.

Museology of the 1995 Installation

The museological discourse of the present installation is determined by the Museums Act approved by the Catalan Parliament in November 1990, which grants the Museum national status; as a National Museum, then, it has to present the history of Catalan art. This legal definition is perfectly in keeping with the Museum's historical vocation and with the nature of its collections. Whenever possible, they must also include works from other geographical areas so as to enable comparison between styles and influences.

Starting from this initial condition and this initial premise, four considerations have contributed to the museological discourse: to understand art as flowing through time and classifications of styles as mere methodological instruments; to put across a global image of art, that is one including the different techniques represented in the Museum, including numismatics; to enrich the chronological and stylistic visit with formal, iconographic, thematic or typological sections providing parallel readings, whenever the collections allow. Finally, to encourage a direct relationship between the spectator and the work of art, apart from the

educational instruments or historical contextualisation. In this respect, the only contextual notes come from the numismatics, which provides links with the specific moment in history, and, only in the introductory section, from the epigraphy, with Islamic, Hebraic and Christian inscriptions. In line with this philosophy, the items have been selected according to criteria of quality and representativeness so as to explain the background to the history of Romanesque art in Catalonia as clearly as possible. At the same time, great care has been taken over the ordering, arrangement and grouping of the works already selected to form part of the permanent collection. The selection and association of the works, as well as their inclusion in one section or another, has always taken into account the current state of investigation and research in art history and the latest contributions by historiography. This is especially noticeable, as we shall see, in the definition of the final phase of Romanesque, as for example in the inclusion of sections devoted to the art of the thirteenth century (XIII), and to what is known as the Ribagorça workshop (XIX).

Having to move all the works, including the apses and other architectural structures with paintings, meant that for the first time in years there was complete freedom to rethink the order of the collection. The last time a move of this sort had been made –that is one involving the whole collection for reinstallation on a different site– had been in 1934. For the first time in many years it was now possible to replan the arrangement: for one, considering the possibility of including in the permanent exhibition items from the reserve and some recent acquisitions; for another, changing the order in which some apses and other painted architectural structures were exhibited so as to facilitate contextualisation and understanding. The arrangement, in this respect, was only conditioned by the pre-existing architecture, that of the building from 1929, which had to house the structures on which the mural paintings were mounted. As for

determining the final moment of the collection, the Museum has based itself on the present state of the historiography of medieval art in Catalonia. Thus some works exhibited in 1973 in the Romanesque Room (as, for example, the paintings from the Palau Aguilar and the panels from Toses) have not been included this time.

Museography of the 1995 Installation

In the Romanesque Room of the present installation (1995), the works exhibited form twenty-one sections, most of which, so as to be able to lay out the history of Romanesque art in Catalonia, have been designed on the basis of chronological or stylistic criteria.

One of the most important characteristics of the present project, and probably the most evident, is that the apses can also be seen from behind, that the supporting structures (of wood and plaster or just of wood) on which the paintings are mounted (frescos transferred to canvas) are visible. In other words, they are not hidden as in previous installations. This feature of the museographic project is intended to let people get a sense of the space from any point in the room. The option of leaving the backs of the apses visible removes some of the mystery inherent in the 1973 installation, which was a succession of spaces. At present, the apses are presented almost as free-standing works, as though they were sculptures, which stresses the decontextualisation and the abstraction of the museum exhibition. One of the reasons why this solution has been chosen is an educational one, as it is now possible to see how these structures, the support for a great part of the mural painting, are built. Another very important reason is that it ensures better preventive conservation, because now, with the backs of the apses uncovered (instead of being walled in, like before), conditions of humidity and temperature are the same inside and outside the apses. This means that there is no differentiated microcli-

mate created behind them. At the same time, being visible, they have to be constantly maintained, which also contributes to their conservation. As well as the thirteen apses reproduced, which are supports for the corresponding paintings (Sant Pere de la Seu d'Urgell, the lateral apses from Sant Quirze de Pedret, Santa Maria d'Àneu, Sant Pere del Burgal, the lateral apse from Santa Maria de Mur, Sant Miquel de Marmellar, Sant Pau d'Esterri de Cardós, Santa Maria de Ginestarre, Santa Eulàlia d'Estaon, Sant Miquel d'Engolasters, the lateral apse from Sant Esteve d'Andorra and Sant Cristòfol de Toses), six further architectural structures (the lateral naves from Sant Joan de Boí, the churches of Sant Climent and Santa Maria de Taüll, Sant Pere de Sorpe, the porch from Sant Vicenç de Cardona and the chapter house from Sixena) have been reconstructed as faithfully as possible in the Romanesque Room so as to place the paintings in context.

Although the number of works exhibited is less, in absolute terms, than in 1973, because several of the works previously exhibited are now classed as Gothic, we can, on the other hand, say that there are new works in the room. This is the case especially as regards the mural painting. In fact, there are more frescos exhibited, some of which complete series exhibited previously (Sant Joan de Boí, Sant Climent and Santa Maria de Taüll) and others that are new (the lateral apse from Mur, the porch from Cardona).

At the same time, we have tried to improve on the way the various pictorial series were presented before, to preserve greater fidelity in the archaeology and mounting as regards the original buildings, and to make the iconographic programmes more easily understandable (apse from Pedret, apse and frontal from Esterri de Cardós, lateral apse from Sant Climent, orientation of Sorpe, height of the small apse from Andorra, reconstruction of the lower part of the arches from Sixena). In this respect, the reconstruction of the two naves of the church at Boí

stands out as a first attempt to situate the murals in place. At the same time, the series of paintings from the two churches at Taüll (Sant Climent and Santa Maria) also stand out in the 1995 installation, not just because the original buildings have been very fully reproduced and because new paintings have been added, but also because the access point gives a complete, overall view of both items, and greater proximity to some of the pictures, such as the Christ of Taüll. Finally, and still on the subject of the mural painting, various fragments are exhibited on a flat support, framed and separated from the wall, so as to stress the decontextualisation. We find this along the length of the exhibition, but where we can best contrast the two ways of presenting the works –contextualised painting set into the wall and decontextualised painting set in frames– is, for example, in the sections of Sant Joan de Boí (II) and the Circle of the Master of Pedret (III). As well as the incorporation of new frescos, another feature of the present installation is the introduction of numismatic art, which figures alongside the other artistic manifestations.

The 1995 installation also features a miscellaneous introductory first section, presided by a work of a monumental nature (the apse of Sant Pere de la Seu d'Urgell), and the inclusion of sections specifically devoted to the most frequent iconography of the Romanesque world, in particular that of Christ and the Virgin (IV), the saints (X) and the angels (XVII).

The monumental sculpture, for its part, has been arranged in two separate sections so as to highlight it: that of the early works, in the introductory section (I), and that of the peak of this technique's development (VI). One important objective of the first section is to show the formal and technical evolution of monumental structure from earlier works related in some way to the tradition of late antiquity (Visigothic pieces) or with their reinterpretation in the Islamic world (caliphal capitals). In the second,

the section devoted specially to monumental sculpture, the aim is to show how in the framework of sculpture applied to architecture widely differing artistic manifestations can be found that follow the various predominating influences, with some solutions that bring to mind the classical world, chiefly in the reinterpretation of the Corinthian capital, and others whose figuration is more closely related to other traditions, such as the workshops of Roussillon, Languedoc, etc. At the same time, also in this technique new works are presented (caliphal capitals, imposts from Roussillon, capitals from Besalú). As regards the metalwork and enamelware, their importance is illustrated in a special section (XV), in which there is a typological selection. Together, though, they reveal their function as liturgical furnishings for the Romanesque altar (section V) or their iconographic interest (IV). Other items have also been chosen because they indicate the importance of episcopal power. On the other hand, we have avoided large repetitive exhibits of the same type. And we have also tried to include new works, such as the enamelled plaque with a holy bishop and the casket with the Holy Innocents (137).

The wood carvings are arranged in two main places: in the section on the iconography of Christ and the Virgin (IV), where this aspect predominates, and in the section on Imagery (VIII), in which the new works have been arranged according to type: images of the Virgin and Child, carvings from sculptural groups of the Descent from the Cross and finally two remarkable versions of different types of Christ on the Cross, the culminating image of Christianity: a suffering Christ, that of 1147, and the Batlló *Majest*.

As regards painting on wood, due to the importance of the Museum's extensive collection and its relation to mural painting, it is amply exhibited along the length of the exhibition, in some cases in sections of an iconographic nature (X, XVII) or a technical and stylistic nature (XIX), which only features works in this technique. In



other cases, it figures alongside mural paintings and works in other techniques, in miscellaneous, iconographic sections referring to Romanesque church furnishings, style, etc. (I, IV, V, XIII, XVIII).

Numismatics appears in three sections: the introductory section, to illustrate its historical origins; section III, which corresponds to it for sociological, chronological and iconographic reasons; and section XVIII, for questions of dating, to indicate the start of an important historical period in Catalonia, the thirteenth century, which in the artistic field proved less innovative than the preceding centuries.

The epigraphy is limited to the three stones in the introductory section, where three epitaphs corresponding to the three cultures existing in Catalonia during the Romanesque period are juxtaposed: Christianity, with an inscription in Latin; Judaism, with an inscription in Hebrew, and Islam, with an epitaph in Arabic.

Finally, it is important to point out that in the wish to let the visitor receive a direct visual impact of the works rather than a mediate one, the explanatory elements in the Room are the essential ones, basically introductory texts for each section and for the educational display cases. The latter provide complementary infor-

mation on the eighteen most important collections of mural painting, those that are mounted on supporting structures, be they apses or other architectural forms that are reproduced. The elements used here are intended to place the collection in its original geographical context and provide information on the church and the iconography of the paintings. Parallel to all this and outside the room there are other educational elements, amongst them a video on the mural paintings, their detachment and transport and the last change of location of the apses. More recently the guide has been published in Catalan (1997), Castilian, French and English (1998).

The Palau Nacional, an Architectural and Museographical Project

About the Permanent Exhibition of Romanesque Art

Gae Aulenti

Here in Barcelona we have architectural fragments: apses, arches, walls, columns, etc.: dismembered churches.

Architecture, by definition of the discipline, is at once a link with and the foundation for a place.

We can visit old ruins with the same attitude with which we visit a museum: we know of the beauty of architecture and we rediscover it also in ruins, in architecture that has lost its sense of purpose.

It is through the *genius loci* –the physical, geographical and also cultural and conceptual whole of these ruins– that we can say that we discover the most profound meaning of its form. Then the museum problem appears: how to give form to this fragmented architecture that has lost its true place, lost the structural conditions of its existence. How to give something that lacks form a form suitable for a museum object. We can consider two conditions:

1. Attention to technical conditions of conservation: maintaining the same climatic conditions inside the apse, where the murals are, as outside. Seeing the inside and outside at the same time is the same as declaring the apse a work of art rather than one of architecture.

2. Try to make the most of the disorientation any fragmented church represents, forcing simultaneous contemplation of the collection of frag-

ments by constructing a sort of new and artificial landscape –an architectural refounding–, something unique and never seen before.

Because of all this I think the exhibition of Romanesque art offers the same as it demands: intense participation by visitors, who must discover for themselves the emotions these churches have lost by being moved from the Pyrenees.

Catalonia take its place in international museum structures and, at the same time, demonstrate one of the solidest aspects of its cultural identity. So it is hardly surprising that when the Franco regime went out of its way to destroy the testimony of this identity it decided to dismember the Museum –between the Ciutadella and Montjuïc– with the equally significant excuse of erasing all memory of the Parliament and with the criterion of returning to a previous situation in which the collections had not yet been explained in the form of a coherent itinerary. Until the arrival of democracy, no-one had dared to demand unification of the Museum.

The second objective is no longer so politically significant. It is more an act of urban reconsideration. The decision to use the Palau Nacional sparked off quite a controversy. Opponents, with some foundation, pointed out two problems: the urban and social remoteness of the mountain of Montjuïc and the poor architectural quality of the Palau Nacional, a *pastiche* in the typically Spanish style of Primo de Rivera's dictatorship. Folch i Torres and his team were set on using the Palau Nacional and repeatedly laid out their theory of "Montjuïquisme": the Palau Nacional existed and had the right conditions for adaptation as a museum; if it was not used it would become physically run down, the urbanistic success of 1929 would go to the dogs and that part of the mountain would return to its old degraded state; finally, if Montjuïc was a long way from the city centre, what was needed was to equip it with public amenities that would involve it more in the life of the society. Museums, other cultural and sports installations and activity centres would have to be planned for Montjuïc. Folch's brilliant vision was ahead of the times. But we had to wait until the Olympic Games for the "Montjuïquisme" programme to be fully implemented. If the argument was valid in the thirties, today it is even less questionable.

As regards the architectural quality, the controversy is still alive today. But to approach it

The Palau Nacional, Home of the MNAC

Oriol Bohigas

In the days of Folch i Torres, when the decision was taken to move the Museu d'Art de Catalunya to the Palau Nacional on Montjuïc, two objectives were put forward. One was to bring together in a single physical unit all the Catalan art treasures accumulated until then thanks to various efforts and agreements. The other was to reuse a building which had been constructed for the 1929 Exhibition and had the right conditions, which was a feature of the city and which was a step towards the integration of Montjuïc in Barcelona's social reality.

The first objective responded to scientific common sense and, above all, to political criteria. National demands called for, amongst other things, an explanation of the signs of identity arising out of our cultural history. In spite of the scarcity of contents, a museum of some scope had to be established that would avoid provincialism. And it was important that the museum should express the historical unity of the entire development of Catalan art in relation to the main international trends. Only in this way could

calmly we need to remember that the values of this great hulk are primarily town-planning values. You either like Montjuïc's great monumental complex or you dislike it, but it would obviously be meaningless without the monumental accent of the Palau Nacional –monumental even in its eclectic mixture of styles and its tendency towards *pastiche*. If it were demolished, no-one would know what to put in its place, especially when contemporary architectural culture suggests an anti-monumentality of a barely urban type.

But as well as the town-planning values that make it so difficult to replace, we have to allow for a reconsideration of its strictly architectural importance. Obviously, the building has an awkward composition and is full of details of bad taste, as always happens in works designed outside their corresponding cultural context. But even so, it is of considerable value, especially because it corresponds to the grandiloquence of a type of monument of which there are very few in Barcelona. The eclectic, reactionary monumentalists were worse architects than the enlightened *noucentistes*, but they were not afraid to imitate the large spatial sequences of Renaissance or Baroque architecture. Rooms such as the Oval Hall, the vestibule, or the exhibition rooms are unusual episodes in a city which in recent times has been built on the scale of a not very developed and –especially– not very wealthy middle class. At the same time, these rooms are functionally the most suitable for a museum which not only wants to exhibit a country's history in a unified sequence but also wants to be the identifiable home of genuine identities. And wants to be grand and monumental because it does not want to lapse into the useless sentimentalism of small domestic and nostalgic museums which deliberately avoid educational popularising amongst the masses.

All these arguments are still very important and incontrovertible today. The Palau Nacional, thanks to its particular qualities, has successive-

ly assimilated three different and efficient interpretations. The first was the inauguration during the Republic with a museum project which was a shake-up for the usual methods. During the Franco regime there was another one in line with the mediocrity of the climate. And now, the final installation of the Romanesque and Gothic shows a new, intelligent attitude thanks to which, for the first time, the old building's spatial qualities have been demonstrated with an autonomy for Catalonia's art treasures that is highly instructive.

Catalunya, the Palau Nacional underwent its first repairs, themselves followed by various patching-up operations which failed to get to the root of the problem. Over the years, the building deteriorated steadily, at the same time as its silhouette became established as one of the city's most emblematic images. This process of degradation reached the point where, by the mid-eighties, only 30% of the building was in use.

At that moment, radically and definitively repairing the Palau Nacional became inevitable, with a complete constructional and functional restoration directed at making it the home of the new Museu Nacional d'Art de Catalunya.

Defects in the Palau Nacional

The building of the Palau Nacional showed constructional defects which can be summed up under four headings: subsoil, structure, roof and materials.

Leaving to one side problems derived from defects in the building's waterproofing –the roof– and the wear on the artificial stone, of which almost the whole of the outside of the Palau Nacional was built –the materials–, the defects present in the subsoil and the building's superstructure were what marked the way for its constructional restoration.

The instability and heterogeneity of the surface layers of the land on which the Palau Nacional stands forced the builders to found the building on layers of rock –some near the surface, some deeper– which were so uneven and discontinuous that in some places the foundations had to be sunk almost thirty metres into the ground.

The building raised on this foundation had no horizontal binding other than the bays of the ground-floor ceilings in those cases where they are not vaults.

The Restoration Project for the Palau Nacional de Montjuïc

Enric Steegman

The Palau Nacional, the building that presided the 1929 International Exhibition, became the home of the Museu d'Art de Catalunya in 1934, with a layout that has survived to our day with few changes.

The Palau Nacional, originally designed by Pere Domènech, Enric Catà and Eugeni Cendoya, took just under three years to build despite its enormous volume. It made use of techniques which, while allowing extraordinary efficiency in the organisation of the work, obviated the problems inevitably arising from the lack of articulation between the different parts of the building, the poor quality of the surface layers of the terrain and a cheap and fragile construction practically unable to withstand any force other than that of its own weight.

On the occasion of its adaptation in 1934 for conversion as home to the Museu d'Art de

All this, added to the fragility of its very thin walls –made by pouring wet concrete into the chamber left by a moulding of artificial stone used as temporary shuttering– and the absence of proper articulation between the different parts of the building, which had no expansion joints, meant that the construction was unable to stand up to any horizontal force, whether rheological, thermic or seismic.

These circumstances, added to the fact that the ground-floor paving was set directly on top of poorly stabilised levelled ground and the need for underground service galleries, called for the renewal of the floor with a framework of beams resting on the foundation system itself and at the same time as it binds it and stabilises it.

The Aims of the Functional Restoration

With most of the rooms in the Palau Nacional devastated by previous operations which had treated the building as little more than a covered building site, the basic criteria for the present restoration project are based on the reconstruction of the architecture of the rooms preserved with the original decoration, in a dialectical confrontation with newly built architectures allowing a rational use for this immense building. As well as having to find solutions for the usual structural defects –already mentioned–, there were functional shortcomings as regards the needs of a modern museum today: complex service installations, reserve premises, workshops for restoration, offices, archives, etc., as well as the ever growing means for attending to the visiting public.

We have therefore tried to control the enormity and the inhospitaleness of the original rooms with added architecture whose forms and dimensions are suited to the intended use. Where previous operations had choked the building, we have elected to let the original

architecture show again, in spite of its coarseness, as it made no sense to maintain the building and not the interior. Unfortunately, some of the original rooms –as well as the monumental staircase–, which suffered from irremediable structural defects, have had to be sacrificed. The new staircase must to play an active part in the restoration, which gives prominence to the new transparency and the recognition of the building from inside.

In the first phase, the work of consolidation and architectural refurbishing was directed at making the great Oval Hall available for the 1992 Olympic Games. In 1995, the object was to reopen the Museum to the public, so that the sense of the restoration work already begun could be seen, if only in part.

Criteria for the Architectural Layout of the Permanent Exhibition of Romanesque Art

The architectural layout of the permanent exhibition of Romanesque art, a paradigm of museography which sets out to reconcile the requirements of a museum with an already existing construction, follows a series of readily appreciable criteria that are set out below.

1. The exhibition of Romanesque art is fully in keeping with the principle of the restoration of the original building dating from 1929, in a dialectical confrontation with the new architectures, which allow the adaptation of the Palau Nacional to the new functional and museographical requirements. The installation of the apses must not get in the way of the perception of the architectural form of the original room.

2. Halfway along the route of the visit the stone sculpture section preserves the original wide opening offering a splendid view over the Montjuïc park.

3. The art collections to be exhibited in the hall are of widely varying types. Nevertheless, there is a predominance of painted architectural forms: facings, arches, vaults and, especially, apses.

4. The three tallest apses –Burgal, Àneu and Seu d'Urgell– must necessarily be arranged in the central bay where the newly built ceiling is highest.

5. The virtual reconstruction of the interior of the churches of Taüll has only been possible in the chancel naves after lowering the floor with regard to the hall.

6. Due to their particular characteristics and the reinforcement of their structure, the apses are stable units. Their location, though statically independent, confers visual strength on a series of low parallel walls which, besides integrating other painted architectural forms –Boí, Sorpe and Sixena– and providing support for the smaller works of art which the architecture of the hall stiles, have the following advantages:

- they organise the course of the visit;
- they leave the original architecture of the hall in the background;
- they allow the air from the air conditioning to circulate and contain the lighting and security installations;
- they force an arrangement of the apses in one direction, so that the effects of the visual confusion with the arches of the original architecture are reduced to a minimum.

7. The wooden construction reproducing the form of the apses is left visible, in discreet shadow. This is a requirement for the homogeneity of atmospheric conditions inside and outside the apses. The protecting socle repeats the thickness of the original construction.

8. The screens supporting the smaller works of art not hung on the supporting or dividing walls

are arranged perpendicularly, blocking the view and forcing the direction of the visit.

9. All the lighting in the large square hall is artificial, direct and directional, with projectors on the ceiling equipped with low-voltage halogen lights, with a pleasant colour temperature and excellent tone reproduction, while in the Taüll churches the light is indirect and comes from panels located above the access balcony.

The Museographical Project for the Permanent Collection of Romanesque Art

Valerie Bergeron

The collection of Romanesque works of art permanently on show at the MNAC is made up of 200 items. The whole is characterised by an artistic production expressed in several fields of architecture, decoration and even numismatics.

The exhibition criteria that have been applied are chronological and stylistic. This means that in the course of the visit the public is able to contemplate works of art of widely varying size: mural paintings from an apse followed by a series of coins and an altar frontal. The viewing mechanisms are very variable according to the size of the works of art. The exhibition includes nine groups of mural paintings which come from Romanesque churches. As a consequence of the methods used in removing the mural paintings, they are presented on wooden supporting structures which reproduce the dimensions of the original architecture.

The previous installation set out to reconstruct the church interiors by means of enclosures surrounding these items. This series of spatial indications, which were partial and even in juxtaposition with the containing space, caused confusion and distortions it was decided should be avoided.

For educational purposes, it was important to allow a varied perception of the different volumes. Some exhibits are from small churches with a single nave, while others are from larger churches with three naves. This objective meant grouping the items in the same exhibition hall, in search of a spatial relationship between them.

The Palau Nacional had a ground-floor room of suitable dimensions. Nevertheless, a solution had to be found for the cohabitation of the structure of the hall –28 large pillars and relieving arches– with the architectural fragments to be exhibited, which required the best possible viewing conditions.

The condition for the success of this cohabitation is the clear differentiation of the new intervention: simplified geometry without decorative details and the use of a single colour, contrasting with the profusion of materials, capitals and socles of the building's original architecture.

In the framework of the project to consolidate and reform the Palau Nacional as home to the Museu Nacional d'Art de Catalunya, the need to respect and reveal the original typology of the building's rooms had also been observed. The collection has therefore been installed without enclosures that would have been an obstacle to the reading of the room as a whole. Walls were built to a height of 2.5 metres to frame the works of art, pass the installations and accompany visitors on their tour of the museum.

Following the same criteria of respecting the original conditions for the observation of the works of art, there was joint reflection with the MNAC's conservation team on the best way to

present each exhibit (frontals, altarpieces, crosses, wood carvings, etc.).

The frontals were seen from above as they were located beneath the level of the altar. Their isolation also called for a surrounding space. The decision was therefore taken to build a low pedestal to protect the work and an individual support structure. The fragment of the *Tavèrnoles Canopy* was hung at a height of three metres for the same reasons.

Taking advantage of a room next to the large exhibition hall, a precise geometric reconstruction has been undertaken of two important series of mural paintings: Sant Climent and Santa Maria de Taüll. The size of the hall has allowed a complete reconstruction, including roofs, of two thirds of these Pyrenean churches. Their mural paintings are therefore placed in position, having up till now been exhibited flat and without volumetric dimension. Some items of liturgical furnishing have been placed in these reconstructions.

Whenever the works of art on display are fragments of larger items, explanatory showcases contain models and written and graphic information for visitors' guidance.

The fragile items (metalwork, small carvings and coins) are placed in showcases set into the new walls.

So as to reproduce the original lighting conditions of these works of art the level of illumination is kept low in the whole of the room. Each work receives direct light, with controlled UV and infra-red radiation, so as to favour individual observation. A uniform linear background light has been found for the apses, thus accentuating the volume. This system of lighting also provides protection for the work. For the series of mural paintings from Sixena the light has been placed where the windows of the original room were, so that the conditions of observation are similar to the original ones.

The Strategic Option for Moving and Relocating the Apses

Introduction

Antoni Morer

The plan to restore the Palau Nacional made moving the apses to the opposite wing to the one they had occupied for sixty years inevitable. Because of the complexity and the exceptional nature of the project, it was essential to establish the most suitable strategy for the whole process and the planning for the steps this involved.

Using the technical and instrumental means of analysis and procedure available today, it was fundamental to adopt the necessary precautionary, handling and follow-up measures for carrying out the work with every guarantee. Ignorance of the artistic "essence" and of what is and is not fitted to preservation is the principal cause of degradation in works of art other than from wear and tear, along with accidents which, though sometimes inevitable, must have the minimum consequences.

The choice of two firms with proven experience and the collaboration of the team of architects and the Museum's departments of conservation, restoration and security contributed the knowledge and the specific technology necessary for this complex undertaking.

The process was begun with a series of preparatory studies of the make-up of the exhibits, the state of conservation of all their component parts and the environmental characteristics of their previous exhibition and storage. This information provided the basis on which were decided the necessary protection and reinforcement, the most suitable methods for dismantling, the route and the stipulations for the move, as well as the technical characteristics of the final location.

Moving the apses was the culmination of a period of research. It involved carrying out the series of steps laid out in the architectural, museographic, dismantling and preventive conservation plans, all closely interrelated. At the same time, daily coordination between management and each department provided solutions for the unforeseeable obstacles which arose.

During the course of the move, the methods for the follow-up and control previously determined as regards environmental conditions and the vibrations and movements of the apses were rigorously monitored.

Coordination of the Work during 1995: Preparation and Change of Location of the Apses

Mercè Jofresa

The MNAC had been closed to the public for various years due to restoration work and was still in the same theoretically undesirable situation in January 1995.

This fact, though, became our closest ally in carrying out the tasks still outstanding, in view of the characteristics of the work to be done during that year and of the number of firms, Museum departments and individuals who had to coordinate and be coordinated.

Inwardly, though, the Museum was still operating. The work of the curators and of dissemination never stopped. Loans of works of art, for example, continued and perhaps even increased,

as a way of keeping the MNAC's presence alive in the country, in Europe and in the world.

Moving the apses, because of the complexity of the operation, was the central objective of all the activity to be undertaken. But at the same time, there were many more objectives to be achieved by everyone involved: the conversion of the building itself and the installation of the permanent exhibition of Romanesque art in the opposite wing to the one the previous set-up had occupied made it necessary to move the MNAC's reserve of works of art to another area and/or another floor. The necessary elements also had to be provided, during the time that the work was going on, which would allow the functioning of the Museum open to the public. The services which would occupy the vestibule and the oval hall and the security systems all had to be installed.

Programming the Activities

With time as an inevitable companion, with a schedule laid out and a deadline on which everybody's work, whatever it was, had to converge, a united effort had to be made by all, with the following aspects in mind:

- Preparing the rooms for the new location of the Permanent Exhibition of Romanesque Art.
- Preparing the way for the transfer of the large and small apses.
- Keeping control of the physical aspects that could cause damage before, during and after the move, bearing in mind the complexity of the different materials the apses are made of and of the rest of the material to be exhibited.
- Coordinating the different firms, the different work, the different specialities of the Museum staff so that everyone did their job without getting in the way of the others.
- Having all the essentials of the museum's running ready and agreed, according to the Museological Project.

• Keeping constant track of the work of installation. The nature and size of the chief works of art –the apses– and the need to move them before building the walls that separate the different areas and mark the route within the room raised a problem of cohabitation between some of the building work and the works of art in the room.

None of the day-to-day situations arising could involve a danger to or a loss of control in the Museum's heritage as a whole.

All the Museum's normal activities were affected during this period. Some departments (Maintenance, Security, Restoration and Preventive Conservation), in view of the situation and of what was expected of them, greatly increased their dedication, organisation and efficiency.

The Work of the Centre for Restoration and Preventive Conservation

In the series of operations undertaken with a view to reopening the Museu Nacional d'Art de Catalunya when the Romanesque Art Exhibition Room was inaugurated, the MNAC's Centre for Restoration and Preventive Conservation played a very important part. Its activities, amongst others, were as follows:

Preventive conservation programme for adapting the rooms which were to be made into the Museum's reserve rooms (still provisional!), making use of different places for works of different types.

Design and selection of the furnishings that would contain the works of art, their support systems and the best order according to the characteristics of these works of art (fitments, large stone sarcophagi, wood carvings, sculp-

tures in stone, plaster, terracotta, etc., canvases, polychrome panels, mural paintings, metal-work, decorative arts, engravings, drawings, etc.).

Creation of the strategy to be followed and monitoring of the movement of works of art to the new reserve rooms.

Diagnosis, proposal and subsequent preparation of the large apses to make their transfer possible, and the necessary retouching once they were deposited in their new location.

Construction of new structures, new supports, and/or adaptation to these supports of fragments of mural paintings never before exhibited.

Control by Preventive Conservation and/or intervention by Restoration of each of the works to be exhibited.

Description of the Controls undertaken and their Protagonists

On 1 February 1995, the transfer meetings began, at first on a daily basis, to ensure coordination between the different sections and departments of the Museum. These meetings and the way they were organised were what led to the success of the task facing us: the change of location of the apses, intervention of Romanesque works of art, the transfer and installation of the Reserve works, the installation and opening to the public of the Romanesque Art Permanent Exhibition Room, the installation and functioning of the services to the public in the vestibule, the design and functioning of the security systems and personnel, etc.

The success of the final outcome can be put down to the transfer meetings and their strategy,

and also, of course, to the work meetings held on a weekly basis between Museum officials and representatives of each of the firms taking part in the work.

To a great extent, the issues raised as a result of the observations and experiences of everyone attending the transfer meetings were subsequently passed on to the work meetings.

At all events, the daily transfer meetings called by the Museum authorities were informed of the developments, problems, doubts, needs, etc., arising in each department.

This made it possible to correct situations, incorporate solutions and solve problems day by day.

After some months, once the necessary working practices had been acquired, the frequency of the transfer meetings was changed to two days a week.

The minutes of the meetings, of which about a hundred were held, made it possible to document the obstacles arising as well as the solutions adopted, which made for a high level of security, added to the experience acquired, when we were working one year later to inaugurate the Gothic Art Permanent Exhibition Room.

The transfer meetings were normally attended by the Director of the Museum and the Administrator, as well as representatives from the following sections:

- The Museum's Curators of Romanesque Art. These were the director's main collaborators in seeing to it that the museological and museographic criteria previously decided were fulfilled.

- Preventive Conservation. In charge of atmospheric aspects and supervision of the works of art before, during and after the move and during the setting up of the Exhibition.

- Documentation. All the movement of the works of art, carried out by specialist firms, was supervised, with verification of the existing documentation, which was completed by means of computers, photographs, etc. A record was made with photographs and video of all the movement and intervention of works of art, as well as of the installation and setting up of the Romanesque Art Permanent Exhibition Room.
- Maintenance. At all times provided the required atmospheric conditions, cleaning, installations, scaffolding, elevators, assembly of fittings, etc. and, needless to say, the functioning of the installations that made it possible for everyone to work.
- Restoration. Played a very important part in the responsibility in the work that made the change of location and installation of the works of art possible.
- Security. Ensured that everything mentioned up till now took place without danger to people and works of art.
- Mounting. At the final moment of the installation of all the works in the areas created in the room, specialist personnel was available to mount them, ensuring the best possible solution to the requirements of the departments of Preventive Conservation and of Architecture as regards the supports for the works.

Someone from one of the sections was put in charge of coordination, and as receptacle and/or interlocutor if needed between the different departments and the outside firms.

The order of the day for each meeting was drawn up under the following points:

- a. work done
- b. work to be done the next day
- c. needs and incidents

From the first day, those attending the meetings were asked to make their contributions brief and structured so as to make the meeting agile and practical. Even with more than ten

people meeting together, in half an hour at most all the points were cleared up, agreed and recorded.

The reopening of the Museum on the date arranged, the solution of all the technical aspects in good time, the absence of incidents affecting either individuals or works of art and the general success suggest that the strategy employed by the Museum's administration in the organisation and the elements playing a part in the work described and in that described and enlarged on in the rest of the articles in this Bulletin was not only right but the best possible.

final mounting, but extended to concepts such as the all-round definition of the operations forming part of the move and of the auxiliary means necessary for undertaking and controlling this move, the proposal for the most suitable forms of reinforcement, should this be indispensable, discussion on the most suitable techniques for connecting the apse structures to the rest of the constructive elements forming part of the whole, etc.

The different phases making up the operation were as follows:

Prior Studies

With a view to establishing the specific measures to be adopted at each stage, the methodological treatment was developed as follows:

- *On-site geometrical measurements*, consisting in recording the position of the apses by means of ground plans, elevations, sections and details, and the general dimensions of the structure's components, as well as the state of the unions between them, especially as regards the system of connections between the different struts forming the main structure of the support. At the same time, taking advantage of this phase, the state of conservation of the paint was inspected and a search made for possible fissures or cracks, with a twofold objective: for one thing, to make sure that the operations for the dismantling, moving and new installation did not affect it in any way; and for another, to allow an interpretation of any existing fissures or cracks on the basis of the results obtained by computer analysis of the way the apse structure behaved.

- *Functional characterisation of the main variables* defining the resistance response of these complex frameworks, so as to establish the most accurate analysis models possible, paying special attention to everything related to potential incom-

Plans for the Dismantling, Moving and New Installation of the Apses

Agustí Obiol

In keeping with the unusual and complex nature of the problem raised by the analysis of conditions surrounding the apses at the moment of the intervention, as well as the establishment of all the significant variables of the move and the definition of the final installation conditions, the plan was based on a parametrisation and a global treatment of all the operations to be carried out, using the most sophisticated methods and techniques available at the time, including computer modelling of the whole series of situations which could arise between the beginning of dismantling and the conclusion of the definitive installation.

The scope of the operation was not therefore limited to guaranteeing an ideal structure for the

patibilities between the basic wooden structure and the overlaid plaster or plywood components which are what ultimately supports the paintings.

- *Definition of the basic characteristics of the calculation model*, with an exhaustive consideration of the most suitable approximation techniques for such a specific subject as this; that is, establishing as many variants as seemed necessary, according to the possible diversity of response in unions with behaviour which it is difficult to assimilate to elementary node models, and paying special attention to the establishment of references by which to judge the results. With a view to reaching the ideal solution it was extremely important to determine the sensitivity of the problem to possible variations in the support conditions. Nevertheless, the objective established was to identify the best possible option for these support conditions, regardless of those existing until then.

- *Computer modelling and checking of tensions and distortions*, by means of all the necessary calculations to that effect, including the establishment and representation of the "sensitivities" of the problem to all the possible variations in the support conditions and the identification of the best possible features of the support, regardless of those already existing. To this end, the effect of each of the variables taken into account in the analysis was determined separately, so as to anticipate the system's response for each of them and in this way determine what effect the deviation of a given parameter could have in relation to the hypotheses adopted in the calculation.

- *Establishment of the most important conclusions resulting from this process of analysis*, proceeding to their interpretation and the correlation of possible links with the minor defects the paintings showed.

Discussion of the effects of some very representative variables, such as those relating to the

bracing effect of the walls, possible excessive thickness of plaster or uncontrolled variations in the support conditions.

The study showed that the most elementary approximation of supposing that the wooden framework constituted the resistant skeleton for the whole and that the plaster and plywood are no more than filling is totally mistaken.

The result of applying these support layers over the structure has in fact meant that the whole behaves like a "nerved shell", which on the one hand improves the overall rigidity but on the other hand introduces restrictions as regards distortions –which are necessarily much stricter– when it comes to guaranteeing that the work of art is not damaged in this process of "compatible distortion".

Apart from the mechanical characteristics of the plaster and the wood, the formulation of a mixed structure was justified, in which the effect of the shell would have to be taken into account. However, it makes an important contribution to those stresses of a basically laminar nature and has no significance for the rest.

The conclusions of the work of on-site measurement also contributed a significant degree of uncertainty as regards the system of connections between the different struts making up the main wooden framework, sometimes in the form of "half-nick" joints and at others carried out in such a way that the continuity of one of the members crossing the node is maintained while the other is completely interrupted.

For the creation of the structural model, it was felt best to count only those secondary struts necessary for their own coherence, while the rest were classed as simple collaborating elements.

Most of the joints were made by means of splicing between the two pieces, which produces an

acceptable effect of insertion by force in the structural plane.

The modelling of struts and nodes in all cases took into account this splicing effect of the joint, with a view to checking stresses in the critical sections.

Finally, and although having effects on a second level, in some specific cases the varying thickness of the plaster layer and the irregularity in the conditions of support of the pedestal are also important factors. We must not forget one very important aspect which is the incompatibility of the movement produced by changes in temperature and humidity between most of the structures and any "inert" element of architecture implemented (wooden panels, supporting walls, etc.), which gives rise to the practical impossibility that any type of reinforcement can take the form of the addition of an external element.

This process of structural analysis was not intended to provide unequivocal results, unlike what usually happens in this field. The idea was to establish the whole range of possible solutions amongst which we could be sure was the true model of behaviour for the framework, so as to check that the design of this framework meant it could offer an acceptable degree of security in the face of any of the alternatives foreseen in the calculation.

Protection and Preparation for the Move

On the basis of these premisses it was obvious that the solution in the case of a wooden framework which did not offer proper guarantees could not be based on the addition of reinforcing elements, so as not to cause situations of distortional incompatibility, so much as on the addition of "supplementary" pieces. The action foreseen centred on the use of small metallic components which, working compatibly with



the structural elements of the apse, gave it the degree of rigidity necessary to respond satisfactorily to those actions that might require it.

When this supplementary action was necessary it took the form of a ring around the plane of the opening which, for those apses with a triumphal arch in which this problem appeared, due to the considerable rigidifying effect introduced by the transition arches between apse and doorway or between two apses, was limited to the front arch of the outer doorway. The only exception to this general rule was the apse of La Seu d'Urgell, in which, because of its large size, this addition could not be limited only to the plane of the opening but had to be extended to all the main wooden "meridian" members and complemented with rings contained in horizontal planes, but, as in the general case, always understood as elements that had to work together with the constituent elements of the main structure of the apse.

Apart from these specific consolidating actions which raised certain doubts, there was another of a more general nature, which consisted in the addition of a metal socle following the perimeter of the base and embracing all the vertical struts, so as to eliminate the possibility of damage in the region where the main stress produced by the operation of lifting the apse made itself felt and to formalise a regular element which would allow the subsequent formation of the pedestal.

The following is a brief description of the basic reinforcing elements for each of the constituent components of an apse type, from the point of view of the resistant analysis, taking as our reference the most complex cases:

Semi-cylinder

- *Lower ring formed by a high-temperature laminated UPN beam attached to the present base of the apse. Arrangement by sections, with the*

bottom on a level with the top of the plane of the existing pedestal.

Previously, the supporting crosspiece has to be thickened so as to bring the total height to 14 cm.

- *Cross brace for the opening*, formed entirely of thin-walled members.
- *Upper brace for rigidifying the semi-cylinder*, formed by thin-walled members arranged radially.
- *Doubling of the vertical struts corresponding to the previous radii*, with open members to allow bolting.

In most cases, the joints are provided with self-screwing bolts, so as to optimise the connection of the reinforcing structure in the work to that of the apse.

Semi-dome

- Rigidification of the horizontal plane, using a perimeter ring with thin-walled members, and of the vertical plane, with solutions of the same type as those described for the upper plane of the semi-cylinder.

- This operation is completed with the arrangement of two families of wooden triangles: one between some of the radial nerves of the dome and their crowning arch, and the other between certain generating lines of the annex doorway and the transition arch with the main doorway, which becomes incorporated in this piece.

Doorways

- The fixing for this element took the form of a diagonalised encirclement of the rectangles formed by their projection on a plane.
- This operation was completed with a radial rigidification of the top semi-circles, like the

one illustrated for the frontal plane of the semi-dome.

As regards the connections between the structure of the apse and the reinforcement, these were conceived on the basis of bolts screwed directly to the wood so as to ensure that the load distribution provided by the solution planned produced actions of very low intensity on each individual piece.

Dismounting

In establishing criteria for dismounting, after resolving the protection of the elements of each apse, it was not only necessary to take into account the structural aspects of the problem, but also the volume of work involved in other associated operations, such as the pictorial consolidation and the restoration. Obviously, the importance of this work grew proportionally to the number of pieces into which the apses were divided. In addition, breaking them up into many pieces called for the preparation of considerable secondary support structures, which conflicted with the time and space available.

For these reasons, the criterion adopted was that pieces as large as possible should be moved. The effective limitation was established according to the minimum dimensions of the areas they had to be moved through, characterised by the geometry of the type of arches containing the main reinforced concrete beams.

In this way, the collection of apses were moved as single pieces (Pedret), or broken up into a maximum of six modules (Sant Climent de Taüll).

So as to introduce the minimum perturbation of the structure's response mechanisms, another criterion was that of respecting, as far as possible, conditions characteristic of its behaviour. The processes of lifting and handling were



therefore effected by interventions concentrated at the bases of the struts, so as to avoid “decompression” of the plaster and/or plywood shells.

Furthermore, dismantling the apses with doorways involved supporting them, demolishing the lateral supporting walls, when these were brick-built, or removing them, when they were made of wooden panels.

The Move and Definitive Installation

The operations forming part of the process of moving were carried out in keeping with the reference formed by the preceding reflections as regards the most suitable alternatives for breaking up each apse. This stage included the definition of the supplementary structures for the move, on the basis of the analysis of behaviour models of the substructures resulting from breaking up the apses, as well as the basic criteria for carrying out the process itself.

However, prior studies established the tolerances admissible for this operation, especially as regards vibration and movement, as well as the necessary instrumentation for their control.

For the definitive installation the reverse process was followed, starting with the lowering of the semi-cylindrical body on to a neoprene support over the whole of the area where the apse rested on the ground, so as to ensure that the metal socle could fulfil the function for which it had been conceived as an element of distribution. This was followed by the raising of the semi-dome by means of cables operated by *tractels* and attached to a mobile scaffolding, so as to allow its location in the projection of the previous body.

To complete the operation, the doors were placed in position in the case of those apses which had these elements.

Action Protocol

Although a specific process of dismantling and moving was defined for each apse, in keeping with its particular characteristics, the set of operations involved in most cases is described below in general terms:

- Mounting of exterior scaffolding surrounding the apse, so as to allow access to every point and protect it from possible damage during the demolition of the supporting walls it was attached to, or dismantling of wooden panels, according to each case.

Detection of the state of the fixings joining the semi-cylinder to the semi-dome and triumphal arches.

Definition of the procedure for suspending the semi-dome from the ceiling of the room, so as to be able to remove the semi-cylinder located below.

- Protection with *Porexpan* of all the vertical arises (jambs of the openings, transition arches between doorways or between apse and doorway, etc.).

Protection of a facing of this same material, some two metres in height, attached to the interior surface of the apse.

- Thickening of the lower wooden crosspieces, so as to allow a suitable connection with the metal socle.

- Attachment of this socle, in sections, and adaptation to the ground plan by means of joins with metal panels and high-resistance bolts.

- Reinforcement of the main wooden struts, where necessary, by means of thin-walled members, so as not to add unnecessary weight to the body to be moved.

- Formation of a perimeter ring reinforcing the crossbeams for lowering the dome on to the cylindrical body, should the move require the first to be dismantled, also with thin-walled members.

- For the apses without doors, formation of a structure to brace the opening using spokes for the cylindrical body, once again thin-walled, and a radial framework for the semi-dome.

For those with doors, all that was installed for this first action was the radial bracing of the front arch of the doorway.

- Erection of a canvas to protect the opening, so as to safeguard the painting from dust while demolition of the supporting walls or removal of the wooden panels went on.

- In the case of the apses with doors, these were dismantled. The lower bracing over the doorway was then formed and set on a mobile platform.

- Raising of the semi-dome using cables operated by *tractels* and attached to the ceiling or the protective scaffolding.

- Formation of a radial bracing plane over the semi-cylindrical body, connected to the metal reinforcements of the wooden struts. Closure of the front of the socle ring and removal of the *porexpan* protection.

- Raising of the semi-cylindrical body with jacks applied to the metal socle, following demolition of the pedestal, and lowering to rest on the mobile platform.

- In the case of the apses which had to change level, this operation was carried out with the help of fixed platforms of variable height.

- Finally, for the definitive installation, the reverse process was followed, starting with



the raising of the semi-dome by means of cables attached to a mobile scaffolding or to the ceiling, depending on each case, unloading of the semi-cylindrical body on to the neoprene support and the final placing of the former on the latter.

To ensure that all these operations were carried out without causing any damage to the work of art, the plans drawn up to this effect foresaw the provision of suitable control mechanisms, basically with extensometric bands allowing measurement of the deformations which in each particular case were judged most representative.

Plans, Operations and Implementation of the Move of the Apses

SAPIC

The object of this article is to describe the main operations in the process of preparing and moving the apses from Area 2, their old location, to Area 3, which was to be the new location according to the museography chosen in the MNAC's definitive project.

Planning

Having studied the initial (Area 2) and final (Area 1) positioning of each of the apses, they were numbered and an order established for the move. It is important to bear in mind that the order in which they were moved was determined by the initially pre-existing situation of the apses and their definitive position in their new location. Although various priorities could

be chosen for the move, we selected the one that allowed movement without interference or obstacles from the westernmost room in the Palau Nacional to the easternmost room, so as to set them up as foreseen in the architectural plans, without creating any kind of obstacle for the successive arrivals foreseen. In planning each movement of each item, we took into account whether it was to be moved in one piece or whether it would be necessary first of all to remove some of the elements (half-domes, triumphal arches, etc.), as laid out in the master plans.

Having analysed this situation in detail, the order established for the move was as follows:

1. Sant Quirze de Pedret - 1
2. Sant Quirze de Pedret - 2
3. Bottom layer Santa Maria de Taüll
4. Sant Pere de la Seu d'Urgell
5. Santa Maria d'Àneu
6. Santa Maria de Ginestarre de Cardós
7. Chapter room of Santa Maria de Sixena
8. Sant Cristòfol de Toses
9. Sant Esteve d'Andorra la Vella
10. Santa Maria de Mur
11. Sant Miquel de Marmellar
12. Santa Maria de Taüll
13. Sant Climent de Taüll
14. Sant Pere de Burgal
15. Sant Pere de Sorpe
16. Sant Pau d'Esterri de Cardós
17. Sant Miquel d'Engolasters
18. Sant Eulàlia d'Estaon
19. Porch of Sant Vicenç de Cardona

Communication between Areas 2 and 3 of the Palau Nacional was via an inner corridor which was specially prepared for this move. A reinforced concrete floor was laid with a special smooth-textured surface to facilitate the passage of the wheeled mechanisms used in the move and avoid the transmission of vibrations to the objects. The necessary lights were installed the length of the corridor to illuminate the itinerary, since the whole process, from the begin-

ning of the dismantling to the installation in the new site, was carried out without interruptions of any kind.

Preparation

Having established the order for the move, the specific planning of all aspects of the work was finalised. The work prior to moving the apses consisted, first of all, in assessing the difficulties involved in the initial location of each one so as to foresee the essential steps to be taken before the preparatory phase: how to get to each one, how to detach them from the anchor points, whether or not lateral and/or adjacent demolitions were called for, locating the braces joining the semi-cylinder to the half dome and the triumphal arches so as to separate these parts, studying the best way to suspend the half domes from the roof of the hall while the semi-cylinders were being moved, etc. It was therefore absolutely necessary to put up auxiliary scaffolds for the relevant inspections, as well as to put in place the necessary reinforcements and rigidifying structures.

It was also very important to establish beforehand each individual route with its corridors, different levels, rooms and arches to be negotiated during the move within Area 2, until it arrived at the connecting passage between Areas 2 and 3, and to check the height and radius of the arches, see whether new flooring was needed to avoid differences in height, etc. The specific auxiliary measures which would be necessary in each case were also selected.

Once the apse had been detached from its initial position, and following the specifications in the master plans indicating the different types of reinforcement and underpinning needed, a template was made of each of the items to be moved so as to bring curved CPN beams from the workshop to reinforce the socles of the semi-cylinders and the half domes, as well as the tem-



plates for underpinning the openings and the bases of the half domes, so that they fitted perfectly once in place. Sometimes, on account of the large size of the apses, it was necessary to reinforce the wooden nerves of the original structure so as to guarantee the continuity of each of the parts during the processes of suspension, moving and mounting.

Depending on the size and weight of each part to be moved, the different anchors were adapted *in situ* to raise the half domes and the triumphal arches. The position on the CPN-240/300 beams, installed to reinforce the socles, was also decided for the special anchor points welded to the core of the beams to attach the mechanical jacks and the wheels which were specially built for raising the semi-cylinders off the ground.

Elements Constructed Specially for the Move

Auxiliary Anchors

Having installed the rigidifying structure for the whole apse, the position of the auxiliary anchors for attaching the jacks and then the wheels was reconsidered. These anchor points were welded *in situ* to the core of the CPNs and consisted of HM 50/30 x 80 mm profiles. The upper wheel and jack accessory had M16 mm regulating screws for fixing the mechanisms and an HS 50/30 profile with a 16 x 50 mm fixing M screw.

Mechanical Jacks

These were designed for hoisting the different elements to be moved, in such a way that coordinated manual operation by the different workers, using the crank for each jack, resulted in a lift of 4 mm for each 180° turn of the crank. The use of hydraulic jacks was ruled out as they respond to the action of a weight and it was very

difficult to distribute the special anchor points equally in such a way that each one bore the same load; in this case the jacks would put more pressure on one side than the other. With the mechanical jacks it is possible for each one to go up the same path each time, as the thread of the axis of the jack is always the same, the same as the turn of the crank in operating it.

Wheels

For the horizontal movement of the apses, wheels were prepared suspended on mechanisms adapted to fit exactly between the upper and lower flanges of the CPN beams used to give rigidity to the socles. They had a diameter of 200 mm and had polyurethane as the element of contact with the ground. This plastic material has the same characteristics of elasticity as rubber, has exceptional resistance to abrasion, high load capacity, low resistance to turning, does not damage the ground and, furthermore, is clean and silent. The wheels had a bearing on top that allowed a 360° turn and were attached to a device identical to that on the mechanical jacks so as to take advantage of the same anchor points for the supports welded to the socle beams.

Modular Metal Platform

For the apses on levels lower than that of Area 3, of the order of 2m, a platform was designed to raise them to the height for the move. They were attached to beams suspended from six tubular pillars that acted as a bridge crane and had anchor points on top to hold chain hoists weighing 3,000 kg each.

Dismantling and Moving

As moving each apse involved a series of very delicate and meticulous tasks, the work went on continuously so that the parts moved could be put together again as soon as possible and avoid as much as possible the residual tensions that

could result from moving the parts individually. This made it possible to advance the deadline for the work planned by two months with respect to the original work schedule, which allowed for a duration of nine months.

In planning the movement of each item it was borne in mind whether the apse was being moved in one piece or whether it was necessary beforehand to separate any of the elements it contained, half domes or triumphal arches, on account of their large size and as laid out in the master plans. Summing up the specific plans drawn up for each apse, a new one was prepared which merely indicated the move for each piece of the apse and the date it was completely put together.

The small apses were the easiest to move because of their weight and size, which made them easier to rigidify. The medium and large ones had to be separated into two or more parts before moving. This physical separation called for the involvement of the restorers so as to decide the cuts in the paintings and their consolidation in this area. On a structural level the complexity of the rigidifying increased as it was necessary to tie in the openings of the semi-cylinders with the half domes and to horizontally underpin the separated surfaces.

Once the apse was ready with the right reinforcements, the different elements were raised by means of the mechanical jacks. This operation was supervised by means of levels arranged along the length of the perimeter of the horizontal CPN beam on the socle of the apse and the jacks were corrected as necessary every rise of 2/3 cm to keep the whole thing level. Once it had been raised manually 40 cm, the apse was supported on wooden chocks, the jacks were dismantled and the wheels were put in position using the special anchor points welded to the side of the jacks. The apse was then lowered by working the jacks in the opposite direction until the wheels touched the ground. The jacks were

raised to the limit to avoid rubbing and the move from Area 2 to Area 3 began.

If the apses were at a level lower than that of Area 3 in their original location, they had to be raised. After anchoring the pillars to the ground, the modular metal platform described above was introduced, beams were placed underneath, the chains were anchored to the hoist and, by operating them in coordination, the platform was raised or lowered to the level of the new floor so as to clear the differences in height. When the platform reached the height of the upper level, a system of firmly underpinned scaffolding was raised beneath it, on which CPN-140 beams were arranged that acted as rails to get the platform on to firm ground.

Once the architectural element had been loaded on the platform prepared with its wheels fitted, the physical move from Area 2 to Area 3 of the Palau Nacional began. The work team took up position around the element to be moved, and, under the orders of the person directing the operation, pushed the platform under the arches and along the connecting passage to its new location.

On its arrival in Area 3, it was placed in its final position, previously drawn on the floor according to the architectural plans, on a strip of neoprene, and the different parts of the whole were put together piece by piece. The operations carried out in this area were the same as the ones for dismantling, but in reverse order.

In the course of the move, the vibrations and movements of the different parts of the apses were checked to see to what extent the paintings were subjected to dangerous movements. The results obtained were totally satisfactory, well below the levels established *a priori* in the previous theoretical studies. The detailed explanation and corresponding graphics are explained in the next article.

Preventive Conservation Procedures: Planning, Monitoring and Preparing the Move

Antoni Morer

In 1934, when the Museu d'Art de Catalunya moved into the Palau Nacional, its Director, J. Folch i Torres, demanded that consideration be given to "all the issues the museum technique (a rather fashionable science to apply) advises today...". In 1995, this science, preventive conservation, deployed all its resources to carry out with full guarantees the change of location of the Romanesque mural paintings. This all-round approach to conservation, based on scientific research and the historical background of the works themselves, involves the knowledge, strategy and monitoring of a whole series of mutually interrelated measures.

Background

Climatic Conditions in the Exhibition Areas and Reserve Rooms: 1934-1994

In the architectural work to adapt the Palau Nacional as a museum in 1934, care was taken, with the means then available, to favour the most elemental conditions for the climatic conservation of the works, according to the account by R. Raventós, the architect attached to the Servei de Museus. Doctor Ainaud de Lasarte, General Director of Museums for the city of Barcelona from 1948 to 1986, concerned at the progressive degradation of the Palau Nacional and spurred on by the example of Europe's chief

museums, set up the museum's laboratory, with two main objects: to monitor the state of conservation of the works of art and to study their characteristics.

Starting in 1978, regular checks were established of the climatic conditions in the exhibition rooms, the reserves, and especially of the front and back of the apses, as well as individual checks of the works. When the Museum closed in 1990, monitoring of the state of conservation was intensified, on one hand with a series of preventive measures, control of micro-organisms and salt crystallisation in the rooms, fire and theft precautions, etc., and on another with the most urgent actions: preparation of an air-conditioned room for the more fragile works, systems for renewing the air, disinfection and fumigation of the works in poor condition, isolated immediate interventions, etc. In the final stage, in 1992, dataloggers were installed with sensors to record relative humidity, temperature and movement in two apses, by means of precise computer programs which facilitated the collection and tabulation of the data.

Relative humidity in the rooms of the Palau Nacional has always been high, with average values between 50 and 80% and fluctuations of up to 20% during the course of the week. The spring months were the ones showing the widest oscillations inside the building, with swings of between 30 and 85%, and the autumn months were the most stable, varying between 50 and 70%. However, the city of Barcelona has occasional climatic phenomena which sometimes produces variations during shorter periods of time. The figures for the interior and the external structure of the apses itself did not coincide, but showed a variable gradation according to the place and the size of the room, with fluctuations of between 10 and 15%. Temperatures showed a curve with an annual interval between 9° and 27° C., but without sudden fluctuations.

The conclusion is obvious: the materials and structures of the mural paintings had for a very long time been kept in conditions that could not be considered the most suitable, but, at the same time, monitoring of the objects and their surroundings have made it possible to take those steps essential for their conservation.

Investigation of the Materials, Techniques and Supports of the Mural Paintings

In 1980 the MNAC laboratory began systematic research of the materials and the pictorial techniques used in the Romanesque paintings, with the collaboration of the Scientific and Technical Services of Barcelona University and of the "Jaume Almera" Institute of Earth Sciences at the CSIC. Subsequently, a small group of samples was investigated at the Laboratoire de Recherche des Monuments Historiques in Paris. At the same time, with the help of the Getty Foundation, a study was made of the state of conservation of the cloths and materials used for fixing the paintings on their supports. This research was completed during the tests prior to the diagnosis *in situ* with X-ray techniques and infra-red reflectography.

The materials used in the mural paintings are inorganic and very stable, they have been applied using the *buon fresco* technique though at the same time using other techniques, especially that of *fresco secco*, or lime-painting. Pictorial procedures used selectively by some masters can also be identified, such as the *veneranda* technique for laying down blue pigment, and the *membrana* technique for the obtention of flesh tones. Analyses of the canvases showed a slight loss of mechanical properties, caused in part by the degeneration of the materials, but also produced during the initial process of fixing the painting transferred, as can be seen from the X-ray study. The adhesives most widely used, casein and flour paste, do not show important alterations; at all events, the results of the

analyses confirm that the possible alteration is stationary. The decrease in the mechanical properties of the whole, canvases and adhesives, was of 30%. In a later article the state of conservation of the mural paintings and the structures of the apses is described in detail.

This understanding of the nature of the materials and the background to the climatic conditions have been fundamental in establishing criteria for the move and its preparation.

The Move: Criteria and Precautions

Planning the move of the apses and monitoring all the operations involved was a complex, delicate and at the same time interdisciplinary task which called for full agreement amongst all the organs involved, those of the Museum itself and those of the companies contracted. This process meant adopting criteria and taking steps that affected the climatic surroundings, static factors, manipulation of the works and acceptable tolerances.

The most suitable interior route was selected between the points of departure and arrival, a special auxiliary passage was constructed specifically to avoid the transmission of vibrations as much as possible. As there were no precedents to go by, tolerances were established for each variable on the basis of theoretical studies carried out and of the background mentioned. For the predetermined parameters, control mechanisms were established for each operation, which made it possible to adopt the most suitable decisions if the maximum values established were exceeded in any case.

Each apse was moved continuously, from the beginning of dismantling to the end of the definitive installation in the new location, in particular to keep structural deformations to a minimum. Along the route, of between 200 and

250 metres, each part of the apse –pictorial surface, backing, structure, sensors, etc.– was subjected to specific surveillance by qualified personnel from each of the departments involved. In the most paradigmatic cases, such as in moving the apse of Sant Climent de Taüll, international experts in the conservation of mural painting were also present.

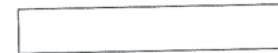
Temperature and Relative Humidity: modelling possible distortions

To find out the incidence of the changes in temperature and ambient humidity in the apses, the team of architects Obiol & Moya studied the behaviour of the different materials making it up: wood and plaster. As a basis for their calculations, they quantified the degree of sensitivity of the structure, the variety of elements forming it, when necessary, the dimensions, the geometrical forms and the freedom of movement of its support. The conclusion drawn from this analysis is summed up in the non-observance of critical states that could damage the plaster elements in particular. These circumstances were also taken into account in the reinforcement action. This resolved the possible negative effects due to variations in these parameters during the move.

At the same time, bearing in mind the annual climatic variations inside the building, as has already been explained, the months of October and November were the most suitable for carrying out these operations.

Vibrations and Movements

It was important to monitor the vibrations and structural deformations during the move to confirm that the right protective measures had been taken. A monitoring programme was established for each apse. The services of the Catalan Government's General Laboratory for Tests and Investigations were contracted to confirm the results. The apse from La Seu d'Urgell was cho-



sen because it was the first one to be moved to the new location, the heaviest and was at a level some two metres below the passage. For these reasons, the results obtained were representative of all possible situations and provided a pattern for subsequent moves. It was repeated with the apse from Sant Climent de Taüll.

The vibration censors were strategically placed on the reverse structure and the neutral areas of the pictorial surface and data was obtained in real time using digital recording. Five phases were distinguished during the move:

Phase 1: raising the structure

Phase 2: lowering the structure on to the metal rails

Phase 3: moving the structure on the metal rails

Phase 4: moving the structure on the floor of the room

Phase 5: moving along the connecting passage between areas 2 and 3.

The results of the vibrations showed levels of less than 0.1 m/s^2 . The highest values were only recorded from time to time, were of very short duration and did not exceed 0.5 m/s^2 , they coincided with the manual impulse the structure was subject to when movement was reinitiated after a pause. As a reference, according to ISO 4886, these vibrations are comparable to the continuous vibrations to which pictures are subjected when hung on the wall of any building in a quiet street and which fluctuate between 0.02 m/s^2 and 1 m/s^2 .

The amount of movement measured also corresponds to the five phases described and the sensors were strategically placed on the central window and the diagonals of the opening. The rate of obtention was adjusted to between 10 and 100 readings per second; the interior sensor worked by compression and the exterior sensor by traction. The results oscillated between 0.244 and 1.185 mm during the move of the apse of Sant Climent de Taüll; from time to time a maximum value of 2.175 mm was recorded in the

first phase and one of 2.102 mm in the fifth, due to a mechanical problem in the platform. The highest values were produced on the diagonals. In all cases, recovery was correct and quick.

All the operations were carried out according to the established previsions. The results for the vibrations were noticeably lower than the tolerances originally forecast on the basis of theoretical calculations and therefore within the safety margins accepted as ideal for this move. The values for the deformations were in the upper range of the margin established, but fully absorbable both by the wooden structure and by the plaster reinforcements.

The Permanent Exhibition of Romanesque Art

In the museographic and preventive conservation projects for the new permanent exhibition, all the factors affecting the conservation and correct exhibition of the works were evaluated, as well as the prevision of contingencies, surveillance systems and emergency solutions. It was also essential to estimate the time needed for the works to adapt to the new stipulations.

Preparing the Exhibition Room

One of the questions considered was that of maintaining part of the provisional structure used for the move. All the apses have conserved the metal template at the base of the socle to keep them rigid. As well as the conditions of stability this reinforcement implies, especially for the vertical struts, it serves as a load-bearing area for possible moves in the future.

The definitive location of the apses was on a neoprene base, and not directly on the floor, for two reasons: one was to avoid irregularities in the support due to possible defects in the levelling of the floor, and the other was to prevent vibrations in the floor from being trans-

mitted to the structure as a whole. The geographical location of the Palau Nacional can in this respect be considered a privileged one, being a long way from heavy surface and underground transport and from built-up or industrial areas.

In the choice of display cabinets, auxiliary elements and *acrochage* in general –wooden or metal supports, carpeting, fixings for coins, etc.– consideration was given to the specific characteristics of each object and the secondary effects the materials chosen might have.

The museographic project lays out the conceptual criteria adopted for the illumination of the Romanesque paintings. The technical data referring to the level of illumination of the works of art are of 150-200 lux, at the points of maximum intensity, and an average installed power of 50 w/m^2 . It is important to mention that the use of optic fibre was previously ruled out, following the test carried out in the apse of Santa Maria de Taüll. Apart from economic reasons, it was found that the mass of light sources flattened the volumes, at the same time as some colours were covered which the lighting chosen picked out clearly.

Climatic Conditions

The museographic project considered an all-round solution for the best conservation of the works at the same time taking visitors' comfort into account, two realities which are not always easy to combine. The choice of a definitive system of air-conditioning placed special emphasis on the budget for this object, the maintenance service foreseen and passive conservation factors in the building. In this context, the decision taken was aimed at global measures, embracing architectural solutions and air-conditioning. In fact, air-conditioning in itself does not fully guarantee conservation and furthermore calls for constant preferential attention, both technical and economic.



	day	M1 Area XXI	M2 Area XIV	M3 Area VII	M4 Area VI	M5 Area V	M6 Vestibule	M10 Exterior
CO ₂ (ppm)	17/11/96	550	460	525	455	525	415	375
	25/11/96	371	429	418	451	445	465	344
SO ₂ (µg/m ³)	17/11/96	<20	<20	20	20	<20	<20	30
	25/11/96	<20	<20	<20	<20	<20	<20	<20
NO ₂ (µg/m ³)	17-25/11/96	11.4	11.6	19.5	18.6	12.4	34.3	45.8
	23/1/97					<10	<10	
Formaldehyde (µg/m ³)	17-25/11/96	12.5	38.5	13.6	7.9	17.0	7.9	4.5
	17/11 a 12/12	190	198	175	81	147	102	73
Bacteria (UFC/m ³)	17/11/96/96/96	110	95	95	23	122	19	34
	25/11/96	15	8	8	19	26	41	60
Fungi (UFC/m ³)	17/11/96	0	8	8		12	60	70
	25/11/96	13	8	26	23	15	200	74

Results obtained in five areas of the permanent exhibition room, compared with the figures for the entrance vestibule and the exterior. When possible a peak visiting day, Sunday 17/11/96, is compared with one when the Museum was closed to the public, Monday 25/11/96.

During the restoration of the Palau Nacional, the exterior walls were dressed with a two-centimetre thick layer of plaster mixed with vermiculite and on the hidden walls this was replaced by panels of expanded polyester. Abundant absorbent porous material was also used indoors. At the same time, consideration must be given to the inertia of the building itself, especially that arising from the large volume of the exhibition rooms and others, which forms a thermic and hygroscopic ecosystem which regulates external variations towards the interior. These measures were considered appropriate for ensuring climatic stability for a sufficient period of time to allow the works to adapt to possible oscillations, without sudden variations.

The air-conditioning is driven by nozzles located at the top of the double dividing walls, except in rooms V and VI, where it is at ground level for technical reasons. The return takes place by aspiration in the platforms. In this way it is possible to correct the problems which would be caused by stratification of the air inside the room. The nozzles were dimensioned adjusting the range and induction of the air so as not to directly affect the works. Consideration was given to treatment with filtration units of the air

both inside and outside. Strategically distributed atmospheric sensors provide reliable information on temperature and humidity in different parts of the room. In this way, the machinery is constantly working to maintain the established levels.

A period was established for adaptation to conditions in the new location through an optimum start-up programme based on stored historical data. For normal conditions the levels chosen were 55% relative humidity, with a margin of $\pm 5\%$, and a temperature of 21°C with a tolerance of $\pm 2^\circ\text{C}$. The climatic conditions of the apses are the same inside and outside, this is one of the most important innovations as regards the former museography.

The key to the success of this climatic control programme is the maintenance. A specialised firm is responsible twenty-four hours a day for the control and proper functioning of the machinery and has the most frequent and most important spares available.

The Department of Preventive Conservation has installed sensors in different areas, linked to computer programmes allowing different com-

bination in the acquisition of data and the presentation of the results. This is complemented with traditional thermohydrographs which provide *in situ* information on changes in these parameters. This twofold control by the maintenance firm and the Museum allows comparison and exhaustive monitoring of data.

Environmental Surroundings

After one year of operations, the environmental surroundings of the Romanesque art permanent exhibition room and other rooms at the MNAC were evaluated from the chemical and microbiological viewpoint. The object was to check the quality of the air inside and, if necessary, prevent possible adverse effects on visitors and exhibits, as well as to compare the values obtained at peak visiting hours with those obtained with the museum closed.

This research was possible thanks to the collaboration of the Centro Nacional de Condiciones de Trabajo. The study was coordinated by Dr X. Guardino, director of the technical programme for environmental and biological analyses.

The samples were obtained at various sessions: the days chosen were one of the busiest, Sunday 17 November 1996 –728 visitors–, and Monday 25 November 1996, when the Museum was closed. Some 150 samples were taken at seven points in the exhibition room, the vestibule and the exterior. These measured environmental concentrations of carbon dioxide (CO₂), nitrogen dioxide (NO₂), sulphur dioxide (SO₂), ozone (O₃), formaldehyde and volatile organic compounds (VOC), as well as the presence of microbiological agents. It can be seen that CO₂ levels are highest in the exhibition room on 17/11/96, the busiest day, and correspond to the concentrations in the air of the city, 370-600 ppm, below the level used as an indicator of air quality, 1,000 ppm. The SO₂ levels are close to or lower than the analytical detection limit. At the same time, there is a significant decrease in concentrations



of NO_2 inside the room, in comparison with figures for the exterior. The results for O_3 concentrations are lower than $10\text{g}/\text{m}^3$, the analytical detection limit, also considered a suitable limit for museums and historic buildings.

There is an appreciably high concentration of formaldehyde in the area of the permanent exhibition. The most probable causes are the internal emanations from the wood and from the decorative elements with products containing formaldehyde. The level for VOC is also higher in the exhibition room than outside. In this case the cause could lie either in the recirculation of the air or the presence of residual quantities of these solvents in recently treated finishes. In all cases, though, the concentrations are very low.

On 25/11/98, without visitors, the quantity of bacteria was lower in the samples from the exhibition room than on 17/11/98, the busiest day. The higher values for bacteria and fungi in the vestibule are very probably due to the fact that the samples were taken while cleaning was going on. However, the figures obtained in no case exceed the maximum of $500 \text{ UFC}/\text{m}^3$.

Therefore, chemical and microbiological contamination in the exhibition rooms is low: the results obtained were in all cases below those recommended by the World Health Organisation (WHO). In addition, the values satisfy the demands for air quality most suited to the conservation of the works of art on show.

The preventive conservation procedures include, as well as the measures described in previous sections, periodical supervision of the works in the exhibition rooms and more exhaustive cyclical inspections. On the basis of the observations noted on the files, plans are made for the most suitable curative interventions *in situ* and, if necessary, the treatment of the works in the restoration workshops. This planning involves the majority of the Museum's departments: curators, restorers, maintenance, etc.

Moving the apses and opening the permanent exhibition of Romanesque art has been an important step forward in the approach to conserving and exhibiting the works. Greater attention by the institutions, technical innovations and professional updating and coordination of the Museum staff are the main reasons for this.

Initial Situation

The original location of the MNAC's Romanesque apses was on the ground floor and first floor of the Palau Nacional on Montjuïc and occupied the areas currently occupied by the Gothic exhibition and the upper floor of these rooms.

The security conditions of the works were as described in the following sections:

Physical Measures

Physical Security

Structural conditions in that part of the Palau Nacional on Montjuïc containing the Romanesque collections were correct. As regards physical security measures, the walls and the existing railings were considered sufficient to provide acceptable resistance to intrusion throughout the installation.

Electronic Security

The electronic security systems functioned mainly during the hours at which the Romanesque rooms, used as a general reserve, were closed. This security system ensured that no-one was in the rooms outside the hours during which entry was allowed. The system consisted of the following elements:

- Volumetric detectors distributed in the access points to the different exhibition areas.
- Magnetic contacts on access doors.
- A central burglar alarm located in the area known as the "bunker".

With reference to fire prevention measures, the system was made up of the following elements:

- Ionic detectors distributed according to regulations in the different parts of the exhibition rooms.

Security during the Transfer of the Romanesque Apses

Josep Maria Arenillas

In the way of specific references to the protection of people and property, we find Article 7 of the Catalan Law 17/90 on museums, and subsequently Chapter 1 of Decree 35/92 on the implementation of the law on museums, which establish certain criteria for protection in relation to people and property (whether exhibited or not) in Catalonia's museums. As a general criterion, Article 2 of Decree 35/92 establishes that one of the main functions of museums is to guarantee the protection and restoration of their collections and, as places for cultural participation, to facilitate access to the public and guarantee visitors' security.

Following the stipulations described above, the MNAC's Security Department worked according to the stipulations defined in the security manual in the relevant existing plans for security and self-protection. In this way, it was possible to respond to any event leading to an emergency situation in the installation with the existing means. In particular, the security measures for the Romanesque apses were as follows:



b. A central fire alarm located in the area known as the "bunker".

Staff

The security staff were the foundation on which the whole of the structure of the security system rested during working hours. The various surveillance rounds of the halls were what confirmed the correct state of conservation of the works.

The staff taking part in the different aspects of the security work during this phase consisted of 52 people distributed over the whole of the building of the Palau Nacional de Montjuïc, in shifts covering daytime, night-time, weekdays, holidays, etc.

Procedures

As a necessary complement to the sections mentioned up till now, the various procedures laid down in the MNAC's Security Manual were used. These allowed the most suitable reply to any emergency situation arising inside or outside the reserve rooms but which could have direct or indirect repercussions for the works and the installations.

Moving the Works of Art

This sort of operation to move works of art calls for very careful planning as regards, amongst other things, supervision of staff taking part, regulations, etc.

In 1994, a number of reports had already been drawn up which were aimed at establishing a security system which would guarantee that all the operations to move works could be carried out without risk. The chief priority, leaving aside the timing of the operation described in other parts of this presentation, was to achieve a

rigid compartmentalisation of the area of operations in which the work was taking place and limit control of access to the areas of origin and destination.

The security plan centred on the following elements:

- a. Staff.
- b. Physical measures.
- c. Regulations.
- d. Control and revision.

Existing problems were analysed under each of these headings and the most suitable system was sought for each situation discussed. In general, the procedure followed consisted in establishing a security capsule.

The move, strictly speaking, took nine months, and during this period the security service provided cover for the transfer of each of the apses moved to a new location, maintaining the levels planned and uninterruptedly working the hours needed for the journey between the old and new locations.

The security capsule established was kept sealed at all times and achieved the objectives previously established in the plans drawn up beforehand.

As the apses arrived at their new location, the new security systems were installed and surveillance was set up as previously decided.

The Present Situation

The present location of the MNAC's Romanesque apses is in the right-hand wing of the ground floor of the building of the Palau Nacional de Montjuïc. The security conditions surrounding these items are described in the following sections:

Physical Measures

Physical Security

The part of the building of the Palau Nacional de Montjuïc where the Romanesque collections are currently located are rooms with conditions of structural security suitable for containing works like the apses being exhibited there. As regards the physical security measures, the walls and existing railings are considered sufficient to provide acceptable resistance to intrusion throughout the installation.

Electronic Security

The electronic security systems function on a twenty-four-hour basis in the Romanesque exhibition rooms as well as in the adjacent areas.

There are two subsystems: one against aggressions and the other against intrusion. Each of these two subsystems ensures that no-one is inside the rooms outside permitted visiting hours and, during visiting hours, that visitors do not have access to certain areas of the apses from which they could damage or manipulate the works of art. The subsystems are made up of the following elements:

- a. Closed-circuit television.
- b. Volumetric detectors arranged in access points to the different parts of the exhibition.
- c. Microwave barriers to access to the apses.
- d. Magnetic contacts on access doors.
- e. Central burglar alarm located in the installation control centre.

As regards the existing fire-prevention measures, the subsystem is made up of the following elements:

- a. Regulation distribution of ionic detectors in the different points of the exhibition rooms.



- b. Manual extinction systems (BIEs, extinguishers).
- c. A central fire-alarm located in the installation control centre.

The Staff

The security personnel is an important part of any security system and in the case of the MNAC reacts as necessary to any sign of intrusion, aggression, fire, etc. taking place in the Romanesque rooms, both during the hours the rooms are open to the public and outside these hours.

There is a specific distribution of rooms for each security guard and the entire surveillance team forms a homogeneous whole which takes part in the different assignments in the building. The total workforce responsible for the work of security at present consists of 47 people distributed over the whole of the building of the Palau

Nacional de Montjuïc in shifts covering daytime, night-time, weekdays, holidays, etc.

Procedures

As a necessary complement to the above sections, it must be added that different procedures for action are used as laid down in the MNAC's Security Manual. These procedures allow the most suitable reply to any emergency situation arising inside or outside the Romanesque rooms but which could have direct or indirect repercussions for the exhibition rooms. The Self-protection Plan foresees the different variants that could cause an emergency in the exhibition rooms and establishes the specific role of each security guard. Every day, when the new shift comes on duty, each security guard is given his or her assignments (depending on each one's point of service) in the form of a plasticised duty card with a view to the best and clearest action in case of emergency.

There is a specific distribution of rooms for each security guard. Within these areas, the different security guards responsible for supervising the area carry out a control of the assigned area and each of the items exhibited at the beginning of the shift and completes a check-list for the opening of the room. Subsequently, a check is made of the correct state of the inventory of the items exhibited and the control centre is informed of the situation in the area within the time stipulated by the department. At closing time the correct state of all the installations, rooms and items on show is checked again and another check-list is completed before closing the room, the exhibition room is left empty and the intrusion subsystem is activated.

Surveillance rounds of the building's different rooms continue twenty-four hours a day and in particular the Romanesque room is visited non-periodically according to the directives established by the Security Department.

Programme for the Intervention and Presentation of the Romanesque Mural Painting

Introduction

Joan F. Bolet

The work entrusted to the Restoration Department, throughout the process of moving the mural paintings to their new location, was stimulating but at the same time very complex. From the outset it was important to establish a temporal and spatial strategy for all the work involved, and at the same time to coordinate it in each phase with the work of the Museum departments and the other teams involved.

In the first phase, we gathered all the documentation and studied the reports already existing so as to fully familiarise ourselves with the nature of the materials and the supports, the state of conservation and the defects in the mural paintings. We also asked the opinion of the Museum's specialists, past and present, and of a large number of national and international experts, on the action to be taken, in the preliminary interventions and during the move, as well as the final presentation in the new location.

On the basis of all this information and after comparing ideas amongst the department's staff, we established a global plan of action and intervention for the works. In this phase, therefore, we adopted and unified the most suitable criteria, techniques and materials for the work throughout the process.

It is important to point out that it was not exactly a question of in-depth restoration work, but of work associated with the change of location, such as the treatment of the areas separating fragments of the apses, the consolidation of parts of paintings in very bad condition, etc., or with the final exhibition of the mural paintings, such as cleaning the surface, treating neutrals

and presenting the paintings being exhibited for the first time.

The articles in this part of the *Butlletí del MNAC* describe these questions in precise detail and lay out the working methods used in each operation.

Finally, let me just say that there is still one very important job waiting to be done: the restoration as such of the mural paintings exhibited since December 1995 and in particular the apses. This work will benefit from the support of the studies and the documents which, as a result of this move, have been written, classified and exhaustively researched. Furthermore, the department's interventions have provided a large number of complementary data, some of them previously unknown and of enormous value.

Detaching the mural paintings was a procedure that had already been used in Italy since the seventeenth century, which explains why an Italian team was contracted to carry out this work. It was made up of Stefanoni from Bergamo and his collaborators Artur Dalmati and Artur Cividini. Taking part from the outset, though, were, as well as the Italian experts, Folch i Torres, Director of the Secció d'Art Medieval i Arqueologia in the Ciutadella; Emili Gandia, curator at the Museu d'Art i Arqueologia in the Ciutadella; Enric Marcó and Antoni Maristany, Gandia's collaborators; and the architects Josep Danés and J.F. Ràfols. The work of detachment and removal began in 1919 and continued until 1923. In subsequent stages, in 1960 and 1977, the work continued under the direction of the local experts: M. Grau and J. Pradell. Today, this work makes use of new, more advanced techniques and new materials.

We must not forget the job of documentation before and during the detachment operation, which provided essential information for the work in hand and for the subsequent mounting. In June 1920, the architect Ràfols drew up plans identifying the Romanesque paintings which existed under the whitewash and the exact location of the paintings to be detached. The drawings by J. Vallhonrat (1907-1908) and the photographs by J. Vidal Ventosa (1920s) were of great use and made it possible to reconstruct the fragments of painting.

Detaching, Removing and Mounting the Mural Paintings

Àngels Comella
Paz Marqués
and Marta Serra

In 1906, on the initiative of the Junta de Museus and the Institut d'Estudis Catalans, work began on publicising Catalan mural painting. As is explained in Part One of the *Butlletí del MNAC* and for the reasons described –chiefly to avoid their being stolen and to improve their conservation–, the Junta intervened directly and decided to purchase the Romanesque mural paintings in the Pyrenees, detach them and move them to Barcelona.

Detachment

The *al fresco* painting is executed on a preparation of lime with aggregates, extended over the wall while still damp, hence its name. This preparation, in contact with the carbon dioxide of the atmosphere, is converted to carbonate of lime, which is insoluble and highly resistant. In this way, the painting forms a single body with the preparatory layer and adheres far more firmly than with other painting methods.

Over the years, two main detachment techniques have been used: so-called *stacco*, which involves extracting each pictorial layer along with the plaster and sometimes part of the rendering, and *strappo*, which involves detaching only the surface layer containing the colour pigments. In both cases the bond between the canvases stuck with organic glue to the paint must be stronger than the bond between the pictorial surface and its immediate support. The Catalan mural paintings were mainly detached using this second technique.

Some of the paintings in the churches in the Pyrenees were not visible because the walls had been whitewashed or because a wall had been built in front of them or an altarpiece or some other object covered them. To get to the paintings, scaffolding was erected using wooden planks and thick posts, nailed together or tied with rope.

Once the painting had been uncovered, the surface was cleaned and then protected with resin. Before the operation different sections were marked out so as to break up the detachment and keep the different pieces in order for the final mounting. Care was taken not to let these cuts affect the figures, faces or other important parts of the composition.

After outlining all the fragments to be detached, the animal glue was prepared and the cotton sheets were boiled and ironed. They were then submerged in hot glue and, once soaked, they were placed over the painting one by one to cover it entirely. The glue was carefully extended all over the surface with a brush to avoid the formation of lumps. Once the first cloth was totally dry, the second one was soaked and placed over it, and sometimes a third was added. This thick, consolidated layer of cloths had the object of assisting in detachment.

Once the cloths were dry, the plaster was cut away from the mortar with a sharp instrument

following the lines marking out the different fragments of the painting. Using suitable tools, the cloths were lifted and pulled away, thus separating the pictorial layer from the wall. They were then carefully rolled up and the detached fragments were placed in wooden crates. The empty space was stuffed with straw to cushion the jolts and bumps on the journey.

As the churches were located in little villages in the Pyrenees where at that time there was no transport, the crates were carried on mules or on foot as far as the road, where they were loaded on to lorries which took them to Barcelona. On some occasions they were transported by train.

Transfer

Once the paintings had been removed to Barcelona, the operation of transferring the mural painting to its new backing took place in the workshops in the Parc de la Ciutadella, during the first phase of the detachments, and later at the Palau Nacional de Montjuïc.

After unpacking them, the fragments of painting were unrolled and placed upside down on a flat surface, that is the pictorial surface had to be in contact with a support. Using suitable tools, the intonaco was removed from the back of the painting as much as possible. So as to create a uniform backing which would replace the original mortar, two cloths were stuck to the back of the clean pictorial layer. They were normally cotton and were attached using caseinate of lime, obtained from cheese and milk. The first, thin cloth was attached once dry; with the second, thicker one, the process was repeated and in this way the stability of the painting was increased. In the seventies, vinylic glue was used for this stage, but results were not fully satisfactory.

Next, the fragment of mural painting was turned over and nailed to a panel by its perimeter so as to prevent subsequent movement. Using a sponge and very hot water to dissolve the animal glue, the cloths used in the process of detachment were removed. Finally, the sponge was wrung out and used to clean the pictorial surface of remains of glue. In this way the painting was transferred to the new cloth backing.

Mounting

The fragments of wall detached and transferred painting could now be mounted on a rigid backing which imitated the original shape of the apse and had been prepared meanwhile in the restoration workshops.

Different ways of constructing the apse-shaped backing can be distinguished. The so-called "old support" was made during the campaign between 1919 and 1923. This apse structure was made with halved and dovetailed pine-wood uprights and struts. The wooden structure consisted only of struts and uprights forming a framework. The bottom was coated with a cloth on to which the fragments of painting were stuck, fitted together according to the drawings and the collected documentation. Pieces of sacking cut to size were attached with plaster to each quadrant on the back of the apse framework as reinforcement.

Later, new techniques and materials were used. The completed framework was lined with plywood. The sheets of plywood were softened with steam to give them the required shape. A sheet of non-reticular polyurethane was stuck on top as a measure of reversibility and the fragments of painting were laid out on it and attached with an organic adhesive (flour-and-water paste) which was applied while still warm between the transfer cloths and the polyurethane sheet, the two parts were fitted together and the excess glue was removed.



For the last mountings, in 1995, new materials were used which had other properties and greater technical quality, both for the transfer stage and in the mounting, as is explained in a later article.

Final Presentation

Once the fragments of wall painting had been fitted together, the final stage consisted in treating the pictorial surface. This operation was made up of the following stages:

- Closing the cuts between the different fragments detached: a mixture of lime and casein was applied to the joins between the fragments separated during detachment.

- Treatment with neutral colours of the parts where the pictorial layer was missing. We can differentiate between two types of neutral area:

- Areas without paint, but surrounded by original paint, with transfer cloth backing. The stucco filling the areas without paint was a highly resistant elastic adhesive made of charged organic glue with an inert aggregate. This stucco was used to level the loss of the existing paint and create a uniform surface.

- Large areas without paint where the wooden structure of the apse showed through. These large areas were mainly located at the bottom of the semicylinder of the apse and had lost their paint mainly as a result of rising damp. Before applying the stucco or rendering a cloth was fixed on the wooden structure so that the layers of rendering stuck fast. A very thin layer of adhesive with an inert aggregate known as solatge was applied on top of the cloth. Several layers of stucco were then applied. Finally, it was important to tampon with brushes while the last layer was still soft so as to imitate the texture of the original wall painting. Once dry, it was coloured to unify the original tone.

- Pictorial reintegration. In the area of the cuts, the reintegration became illusionistic. In the large neutral areas the colour was treated as follows: with a sponge impregnated in pigment with organic glue it was given a first coat of light colour, tamponing with the sponge so as to avoid a flat appearance. One by one, the colours white, black, natural shade, orange and, sometimes, ochre, depending on the general tonality of the work, were overlaid. A second, complementary phase was to sprinkle these colours from a brush impregnated with colour, using a flick of the wrist and without touching the surface. The pigments were used with organic glue as an agglutinative.

solidation of the paintings before moving them and on the criteria for the final presentation.

Preliminary Inspections

In 1988, Barcelona City Hall's Servei de Museus i Exposicions commissioned J. Pradell and E. Porta to produce a report on the state of preservation of the Romanesque wall paintings in the Museu d'Art de Catalunya. At the beginning of 1989 this study was enlarged with a second, more exhaustive examination. The object of study were the sixteen apses already mounted and the flat paintings from Sant Pere de Sorpe, Sant Joan de Bof and Santa Maria de Taüll. The rest of the flat wall painting was not studied because it was felt that it would be easier to manipulate these structures during the operations of dismantling and removal. The working method consisted in an examination by eye of each of the wall paintings' constituent elements, front and back, contrasting the results with the photographic records in the archives. Consideration was given not only to the pictorial layers but also to the backing and the wooden structures forming the ultimate support. All the anomalies observed were marked using a code of symbols. An analysis was also carried out of the fabrics and adhesives used in the transfer and mounting of the paintings.

Preliminary Studies of the State of Conservation of the Wall Paintings

*Teresa Novell
Koro Abalia
Rosaura Jano
and Núria Prat*

In 1987, when the first museological and museographic studies were carried out for the new permanent exhibition of Romanesque art, the decision was taken to carry out an exhaustive examination of the Romanesque paintings with the collaboration of internationally renowned experts and researchers. It was essential to assess the state of conservation before beginning the whole process of the move which was to culminate with the new location of the apses. This research therefore had two interrelated objects: to discover in detail the present situation and, on the basis of these results, to decide on a strategy for intervention and con-

In 1989, following the studies described above, an international seminar was convened, under the auspices of Barcelona City Hall and the P. Getty Foundation, of specialists in cultural heritage and professionals from the field of restoration and conservation of wall painting. All the participants corroborated, with slight differences, the conclusions drawn in previous studies, that the technique used in the execution of these wall paintings was *buon fresco*. They did not consider there was any need for a major operation involving transferring the paintings to new structures. In addition, although moving the paintings is not something to be recom-

mended, they advised removal of the apses from Area 2 to Area 3 rather than refurbishing their current location (Area 2) without moving them. For this reason, they considered the prior studies of rigidity and removal essential. It was also proposed that the climatic and environmental study should be extended, along with control of the vibrations and deformations which might occur. Finally, they recommended establishing clear-cut criteria for the presentation of the paintings in their final location.

Diagnostic Tests

In 1991, experts from the MNAC's Departament de Pintura Mural continued and completed these studies, specifying the compositional elements and the total surface area of the series, differentiating the pictorial area from the neutral areas, analysing the state of preservation of the original painting and the retouching, defining the characteristics of the structure of the support, etc.

During the period 1992-1994, diagnostic studies were carried out on the apse from Pedret and some fragments of the *Pantocràtor* from Sant Climent de Taüll. They were done by the firm EDITECH and the Centro Diagnóstico per i Beni Culturali in Florence. Using X-ray techniques and infra-red reflectography, they evaluated the technique used by the artists and the state of preservation of the innermost layers of the paintings. The Instituto de Conservación y Restauración de Bienes Culturales in Madrid carried out a photogrammetric study of the apse of the epistle from Pedret. At the same time, in the MNAC laboratory, research continued into the materials and the pictorial techniques used by the different masters.

During this period, specialists in restoration, current and former experts at the Museum and national and foreign experts were all consulted. G. Colalucci, at that time head of the restoration

services of the Vatican Museums, and Guido Boticelli, restorer of the Opificio delle Pietre Dure in Florence, drew up various proposals for restoration, based on photographic, chemical and micro-biological analysis methods, as well as suggestions for moving the apses.

Pathologies of the Wall Paintings

In 1994, the Department of Mural Painting and the MNAC Laboratory drew up the final reports on the state of preservation of the paintings in the apses and of all the flat paintings on the basis of the results obtained in previous periods in the years 1988, 1989 and 1991.

The collections of Romanesque paintings made up a very heterogeneous whole. The anomalies discovered in the course of this process coincided in all the studies and analyses carried out and are laid out here systematically.

1. *Front of the apse*, comprising the visible part of the pictorial surface.

The defects most often present in the apses as a whole and generally in each one of them are:

- Superficial dirt affecting the chromatic quality of the paintings.
- Flaking and efflorescence of the pictorial film.
- Variations in the consistency between the pictorial layer with the transfer cloths and the support canvas or plywood of the structure, which makes some of the pictures very fragile. One cause of this is that the caseinate of lime used in some of the first detachments was diluted and therefore the bond is much weaker.
- The presence of tacks used by the Italian restorers to fasten the cloths in the transfer process to the new support. These have rusted over the years and have not only deteriorated

the pictorial layer slightly but also the support cloths.

- Cuts in the pictorial layer coinciding with those made in the support structure for the mounting or moving. These surfaces have generalised reintegrations to complete the reading of the work of art as a whole, which can be seen with the naked eye.

More occasional anomalies which are not generalised:

- Bulges produced by the thickness of the mortar which was not eliminated during the transfer process.
- Various stains such as waxes, oils and oxides. Some splashes can be seen which are due to the 1973 restoration.
- Soluble salts in some areas.

2. *The back of the apses*, comprising from the structure to the support of the wall painting.

The irregularities most frequently observed in the apses as a whole and in general in each one are:

- Cracks in some of the wooden uprights forming the structure.
- The plaster forming part of the support of the structure shows small cracks, especially at the bottom of the apses, where there is also a gap to be seen between this plaster and the wood.
- Woodworm.
- Accumulated dirt.
- Unprotected electric cable very close.

Other anomalies observed which are not so generalised:

- Some structures are reinforced with iron rails which have rusted or else the fastening is damaged.
- Here and there one can see wooden reinforcements added where the structure of the apse has been cut.

- Bulging and accumulated plaster on the grid.

The study of the state of preservation of the mural work, especially the apses, has for one thing allowed the elaboration of an exhaustive dossier for each one. This prior information was indispensable for establishing the preventive intervention strategy for the move and the museographic reordering of 1995. At the same time, this documentation was essential for future restoration work and for carrying out periodic conservation studies of the pictorial material and its supports.

operation including cleaning and repairing the pictorial layer as the main point, was adjourned since it is part of the overall work the Museum will have to carry out in the near future, apart from the architectural work. Even so, in most cases proposals for restoration were made since prior examinations and this operation had given rise to alternatives which had to be taken to improve the state of preservation and the presentation of the wall paintings.

As an initial methodology, the experts agreed on a series of basic rules for the work prior to the move and on the terminology to be used, even if it was only for the single case of the wall paintings transferred. Terms often used verbally and in the documentation, such as adhesion, consolidation and fixation, were differentiated so as to remove their ambivalence and thereby undo any possible confusion.

For this work, the word "adhesion" refers to the application of an adhesive between the support of the transfer cloths and the rigid structure of the apse, without this implying intense penetration by the adhesive. "Consolidation" is the application of an adhesive between the pictorial film and the preparatory layer with the transfer cloths, proceeding with impregnation if necessary, and giving cohesion to scattered or loose particles of material. Finally, "fixation" was used as a more general term which could refer to either adhesion or consolidation; it is applicable to operations for the final protection of the pictorial or paper layer.

The agreement took in the products used, since from the wide range of materials available, it was best to homogenise the most suitable and facilitate operations with a reduced number. This was done with the collaboration of the MNAC laboratory, which through previous testing selected those products which fulfilled the principles of reversibility, easy solubility and stability and which did not stain or affect the pigments or the retouching in the area intervened.

One of the most frequently used was Plexol B 500, both for adhering and for consolidating. It is thermoplastic, which improves performance, does not stain and different degrees of dissolution allowed many operating possibilities. Paraloid B 72, an acrylic resin, was used as a fixative for the pictorial layers. It has great power of penetration and does not affect the colour at all. Another adhesive used was hydroxypropilcellulose diluted with ethyl alcohol for fixing occasional surface damage and for papering the areas that had to be cut.

Operations before the Move

The series of apses located in the old exhibition halls is where the work plan designed really came into effect. These were consolidated, fixed and separated in pieces, according to the dimensions and the geometric complexity.

The adhesion of the unattached areas of the transfer cloths followed the graphic reports in which the location of the damage had been indicated. Plexol B 500 was injected without letting the adhesive material run in the cavity, in search of a key effect. Occasionally, where the cloths had come away from the support, the empty space was filled in with a mixture of the adhesive and micronised sand.

The consolidation of the pictorial layer which showed blistering, scattering or efflorescence was done with hydroxypropilcellulose. This operation was completed with a surface treatment by aspiration to remove the accumulated dust, with the help of brushes and always without water, except in the case of organic concretions of plaster or paint, which were removed with the help of a scalpel and a touch of water.

The preparation of the affected areas for separation into pieces took place as follows: they were given a coating of Paraloid B 72 dissolved in dimethylbenzine to form an isolating film at

Action Plan: Consolidation and Presentation of the Mural Paintings

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The studies and preliminary documentation which had been carried out were from that moment on the chief aid to progress in this complex programme, from the technical point of view as well as from the point of view of schedules.

In preparing the removal of the apses, it was felt that an essential series of operations of a preventive nature and for conservation were needed for proper consolidation of the supports of the wall paintings with a view to stability, and the general fixing of the preparatory layers and the layers of paint. It is important to point out that restoration, understood as an in-depth

the limits of the cut, followed by a coating of Japan paper in strips, adhered with the hydroxypropylcellulose gel and ethyl alcohol. The cut almost always coincided with pictorial reintegrations, since the very construction of the apse and the various panels, originally and in subsequent dismantling and mounting, naturally called for these joins. There are some exceptions, such as one side of the apse of Sant Pere del Burgal, in which the cut had to be made in the original area of a frieze; the edge of the cut was made as cleanly as possible using a scalpel and other cutting tools, such as a micro-milling-machine.

There was a considerable difference between separating a polychrome area and separating a neutral area. In the neutral areas the plaster was not so thick and the supporting cloths did not reach the cut. This made the separation process much quicker in these areas but meant a greater loss of stuccoes.

So as to dismount the panels, a metal detector was first of all used to detect the numerous screws totally invisible beneath the layers of stucco. Once the head of the screw had been located, the area was protected with Japan paper before proceeding with the dismantling. This was the case of the flat paintings from Sant Joan de Boí and Santa Maria de Taüll.

Operations Subsequent to the Move

Once the elements separated from the apses and the different panels had been moved, the next step was the difficult operation of fitting the pieces together correctly. Although it was not expressly the job of the restoration experts, their collaboration was absolutely essential in view of the importance of the intervention process and its repercussions for conservation. The work of fitting the pieces together was laborious, as each irregularity along the whole length

of the semi-circumference of the apse had to be made to coincide, as well as other architectural elements, windows, arches, etc. The edges of the transfer cloths were trimmed or else the gaps were filled in with implants of ligneous material. The next steps consisted in removing the Japan paper, a simple job thanks to the reversibility of the hydroxypropylcellulose, stuccoing and repairing the painting in the areas affected by the cuts.

As regards the polychrome areas, the stucco used was made from organic glue and the gaps were filled in with water-colours and distemper. This procedure was also used in the neutral areas, where the textures produced in previous interventions were imitated. Some neutral areas were altered so as to improve their integration in the corresponding section, such as those of Sant Pere de la Seu d'Urgell, Sant Joan de Boí, Santa Maria de Taüll and the porch of Cardona.

Observation of Some Particular Aspects

The operation described above was carried out with scaffolding which provided access to the whole of the painted surface. This proximity revealed some interesting facts regarding the apses. It was possible to observe and document not only the original pictorial technique but also the marks left following transfer to a rigid support, and the presence of numerous tacks, which has already been mentioned.

But here we would like to mention that the additions have been studied and documented. In many cases, the dimensions of the structures did not correspond exactly with the dimensions of the paintings transferred, especially if the surfaces were irregular or curved, as was the case. To correct this, as the structures tended to be bigger than the paintings, implants of canvas were made and painted in such a way that they were invisible. By way of example we

might mention the left-hand side of the mandorla from Santa Maria d'Àneu, where there is a half-moon shaped strip which at the widest part measures twenty centimetres; or else the left-hand side of the mandorla of Santa Maria de Taüll, where the offering bowl of one of the kings, which was originally painted above the yellow line of the mandorla, was repainted further away, altering the original composition.

During this intervention process a study was made of the *puntates* in two apses, which were the areas of fresh mortar prepared for work in a predetermined time. The mortar was very thick and kept the whitewash moist for longer, allowing detailed work on the picture. The work affected *puntates* which could be considered border areas and generally corresponded to the scaffolding levels. It has to be borne in mind that the masters worked with assistants and this made it possible to apply large areas of colour. The most important points observed in the apse of Santa Maria d'Àneu are: the *puntates* went by scaffolding levels; if necessary, figures were divided and then continued on the level below, as can be seen with the *puntata* line that divides the legs of the kings of the epiphany; and also the vertical *puntates* followed outlines, as in the case of the majority of the Pantocrators. But when the paintings were detached, the cuts were made along the lines of the *puntates*, and this interferes in the study of the pictorial procedure of the frescos. This fact is aggravated by the subsequent mounting and moving of the paintings.

White chalk marks have also been observed on the polychromy. Presumably this was a method of indicating the coordinates that would help assemble the pieces of each mural, and some have survived subsequent erasure.

Another important subject is that of the graffiti or inscriptions observable on most of the murals. These are generally incisions made in the wall and are of varying origin and date.

There are some that represent horsemen, houses or animals on the door of Sant Joan de Boí, and some that are short parallel lines which, they say, were used for counting masses. But it is worth singling out an inscription located in the apse of Sant Pere del Burgal, some metres above the ground. It read "de Morera" and could have been made at the moment the paintings were detached, in the twenties, or else in the subsequent restoration.

Taking advantage of the particular characteristics of these operations, and in keeping with the instructions of the laboratory staff, samples were taken of the pigments and supports to complete the research into the materials and the pictorial techniques used by the masters of mural painting.

Finally, this work has given rise to material for study which, with the latest technologies, will provide new considerations for the future.

The Supports: State of Conservation and Treatment. New Small Apse Structure

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Description

To safeguard and exhibit the mural paintings from the Pyrenean churches, structures were built which reproduced the form of the original apses. The material used in the construction of these frameworks was wood. Different types of coniferous wood were used: fir, stone pine and Flanders pine. In special cases, such as the apse of Marmellar, poplar was used.

The wood was chosen for its specific characteristics: ease of handling, long life, high mechanical resistance and lighter weight than other available materials. Furthermore, it was found on the market in sizes suitable for large structures.

All the apse structures use the same construction system: struts and uprights joined by dovetails and half-nicks. The different parts making up the framework were fastened with screws, which are easily dismantled (diag. 2). The older joints have no adhesive; this has the advantage of avoiding mechanical resistance from contraction and enlargement of the wood. The structures of the main apses, those of the high altars, were allowed a certain margin, or play, both in the crossing of the uprights and struts

and in the assemblage joints. This allowed corrections during construction to the defects and variations in the support of the mural painting transferred.

In the structures' interior coating two different systems were used: a support of sacking and plaster, or else a more rigid support lined with 4-mm thick mahogany or okoume plywood. One important aspect, in the first case, was the autoregulation of the water absorption by this sort of wood in the course of fitting the soft, wet plaster support that prevented forcing of the structure during drying, due to the use of two different materials like wood and plaster.

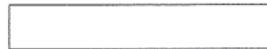
Most of the apses have iron railings as reinforcement and as structural binding for some sections, which might have been fitted on the occasion of one of the moves.

State of Repair

The chief features of the structures were as follows: the wood had been machine worked and was unpolished and unvarnished; almost all the frameworks showed signs of woodworm, mainly *anobium punctatum*, and fungi; there was little breakage of any significance, and there was a great quantity of dust and dirt.

The cuts or divisions made in previous moves had been clumsily repaired with bits of wood and little reinforcements such as iron brackets or rails in an advanced state of oxidation.

The weakness of the smaller joints between the vertical uprights was aggravated by the natural contraction of the drying wood and by the added elements of tension. During the new move, the wooden structure could easily transmit the movement and cause damage in the reinforcing wall of sacking and plaster. This would lead to splintering or detachment of the plaster support, which was very dry and therefore brittle.



Intervention Process

All the work in this phase, for obvious reasons, was carried out before the move. It was completed in the new location, when the different parts of the apse were fitted together.

The back of the apses was cleaned without water so as not to alter the hygroscopic balance between the wooden structures and the supports of the paintings, especially the plaster reinforcement, which was very dry. Mechanical methods were used with brushes, scrapers and professional vacuum cleaners.

Subsequently they were treated for insects and fungi, with a twofold objective: to combat the activity of woodworm and carry out a preventive therapy with the new location in mind. A solution of permethrin and ethanol was injected several times into the holes or galleries that showed signs of activity. Apart from this, to achieve the second objective, a generalised treatment was made using brushes to impregnate the whole structure, regardless of whether it showed signs of woodworm or not, to immunise the wood against any possible new outbreaks.

Finally, the wooden and iron reinforcements damaged by division in previous moves were restored. Some of the wooden reinforcements were very weak and had to be replaced; as regards the iron, this had to be treated to stop the process of corrosion using rust remover and applying a film of metal varnish made up of Paraloid B-72 diluted in dimethylbenzine.

New Small Apse Structure: Sant Climent de Taüll

With the new museographic project for the Romanesque art, the decision was taken to transfer and mount for the first time the fragments of mural painting from the small apse of

the church of Sant Climent de Taüll, which had previously been exhibited as flat paintings. This involved the construction of a new structure reproducing this small apse.

The reasons behind the materials chosen for the construction of this structure were ones of durability and also of uniformity with the other apses kept in the Museum. At the same time, experience had shown that the behaviour of these structures and the wooden panels as a support for the mural paintings was good, both in terms of resistance and of stability.

Flanders wood was used. It was first of all given a fireproofing treatment and another preventive treatment against woodworm using water-soluble copper salts, arsenic and chrome. The whole of the structure, except for the vertical uprights, were also impregnated in permethrin dissolved in heptane.

For the structure of the dome and all the curved pieces, solid wood was used, while the vertical uprights were made from plywood using 1 cm-thick veneers glued together, a technique similar to the manufacture of the boards, as in the case of the plywood used in the interior lining for this apse as the supporting wall for the mural painting. The wood was glued using polyvinyl acetate. To make the curved pieces for the quarter sphere the plaster was reduced between 4 and 3 millimetres so as to produce the required spherical form.

Criteria and Technical Solution for the Mounting of the Mural Paintings in 1995

Benoît de Tapol

This article looks at the three campaigns for the mounting of the *fresco* technique mural paintings kept at the MNAC –1920, 1960 and 1995– and analyses the selection of products and supports, taking into account developments in knowledge, materials and techniques.

In describing the technique of Romanesque mural painting of the twelfth century, we often find in the specialised literature the terms *mezzo fresco*, *fresco secco*, *fresco* with a dry finish, and also mixed technique. These niceties give the impression that in this period there was a special mural painting technique which was unrelated to traditional *fresco* painting.

It is worth pointing out that the creators of the Romanesque painting of the Pyrenees certainly intended to paint in *fresco*. The occasional presence of touches with lime indicate that the wall has dried, rather than the use of a special technique. So far, no dry treatment using organic adhesives has been identified in the laboratory.

Characteristics Common to the Three Interventions

What the three interventions to mount the paintings during the course of the century have in common –apart from their urgency– is the homogeneity of the type of material transferred.

In each period –1920, 1960 and 1995– the treatments consisted in providing a rigid support for a series of fragments of *fresco* paintings detached by the *strappo* method and transferred to a mobile canvas support. As the only exception, eight fragments from Santa Maria de Taüll were transferred to canvas, in the years 1974–1975, with a commercial brand of white vinylic glue in emulsion (Vivatex). These fragments showed a degree of elasticity which was worrying and a high reactivity to organic solvents, and the glue had caused lifting of the pictorial layer.

The fragments of paintings detached and transferred to canvas have the following features in common:

1. Once the fragments had been detached, the back was levelled, consolidated and “fed” with caseinate of lime before being glued to a fine unsized cotton cloth (23 threads/cm), and then glued with caseinate of lime on a thicker, sized cloth.
2. The size of the fragments ranged from 0.04 square metres to 6 square metres. They have a certain flexibility, show slight bulging, and the surfaces are slightly shiny due to remains of the shellac used to protect the painting just before detachment.

Views of the Different Mountings of 1920, 1960 and 1995.

- (a) Wood of the apse structure
- (b) Material transferred: *fresco*, caseinate of lime, cotton cloth
- (c) Plaster and jute cloth
- (d) Support: polystyrene, vinylic glue, plywood
- (e) Support: Polyester fibre sheet, Plexitol B500, polycarbonate

The Mounting of 1919-1923

While the detachment was done by Italian professionals, the mounting in these years had few secrets. The same apse-shaped wooden *engatillat* formed the rigid support for the fragments of paintings transferred. The canvases were nailed and sometimes glued on to the wooden bars and rigidified from behind with plaster. In some cases a sheet of jute was used in between.

The problems in the mounting are as follows:

1. The gradual decomposition of the organic glues have allowed the partial desolidification of the transfer cloth on the wooden structure.
2. Rust on the nails has stained the canvases and, in some places, the surface of the *fresco*.
3. It has been possible to demonstrate that the transfer glue, caseinate of lime, gives rise in damp conditions to calcium carbonates and oxalates in the interior and on the surface of the *fresco*. The latter product is very resistant.
4. Although future dismounting is foreseeable, in one case it has been observed that there is not a perfect match between the jigsaw of bits of paintings and the cuts in the wooden structure of the apse and dome.

Improvements in the Mounting of 1960-1973

The mounting of these years was carried out with the materials and methodology perfected by the Italians and adapted by the team at the Museu d'Art de Catalunya, who successfully combined *savoir faire* and technique.

The supports used were independent, light and semi-rigid, such as plywood or wooden sheeting. In addition, their reactivity to damp was

reduced by the application of a shellac varnish. The reversibility of the mounting was increased using a layer of polystyrene between the canvases and the plywood. Finally, all the elements allowing future dismounting and mounting of the apses were kept (rings, hooks, etc.).

In spite of these improvements, the mounting still has chronic disadvantages:

1. In fact, plywood is an unstable material chemically and biologically.
2. The use of polystyrene raises a potential long-term risk as it dissolves in organic products for cleaning the paintings or eliminating fixatives. For example, acetone would dissolve polystyrene and create unevennesses in the pictorial layer.
3. Flour and water paste or vinylic glues wet the caseinate of lime, with the risk of producing migration of salts towards the surface of the painting during evaporation. These salts come from the non-carbonated calcium hydrate present in the caseinate of lime.

Available Options and the Technical Solution Adopted in 1995

In 1995, at the time of selecting the ideal mounting, references were sought to mounting operations undertaken in other European countries. The most modern versions were presented at the Fourth International Seminar on Mural Art held at the Abbey of Saint Savin in 1992. These, schematically, are as follows:

In the eighties, in Rome, the polystyrene was replaced by a layer of cork to give greater chemical stability to the reversibility layer, and furthermore is a material which is permeable to steam.

In Florence, during the same period, a mixture of multi-layered paper and synthetic fibre was used, with or without an aggregate of barium carbonate, as a reversibility layer. Since the sixties, a resin of polyester chlorate and glass fibre had been used as a rigid support.

At the beginning of the nineties, the Florentines presented a new support consisting of a thermosetting epoxy resin set in a sandwich with expanded polyvinyl chloride. This support was used in the aerospace industry and had a very high cost.

Our Proposal

We had to find a support which was at once thin, flexible, light and, furthermore, mechanically, biologically and chemically resistant. It also had to be sold in large sheets of more than 12 square metres and have a low surface temperature to avoid the risk of condensation in extreme climatic conditions. Finally, it had to be easily fitted and the fixing easily concealed.

We selected polycarbonate with alveolus, which is sold in different thicknesses: between 4, 6 and 16 millimetres. This is a sort of highly resistant organic glass which can be curved without cracking and is generally used exteriorly for glass doors, etc.

Its ageing characteristics are very good:

- weight: 1,000 gr/m²;
- thermal conductivity: $Y = 21 \text{ w}/^\circ\text{C}$
- thermal dilation: 0.065 mm/°C
- elasticity: $E = 2,100 \text{ N}/\text{mm}^2$
- ideal adhesive: acrylics
- price: 2,000 to 3,000 pesetas (in 1995 and according to thickness).

Taking all of this into account, two problems were left pending: the adhesion of the cotton cloths to the polycarbonate and the creation of a reversibility layer between the support and the painting.

The sandwich created is illustrated in figure 1. Two products were used which were tested in the restoration workshop. These were the polyester fibre sheet and an acrylic emulsion adhesive, Plexitol B500, used in different ways.

The series of operations was as follows:

- Phase A: Adhesion of the polyester fibre sheet to the polycarbonate with pure Plexitol B500. In this case, water evaporation presents no problem.
- Phase B: Adhesion to the back of the painting, on the last transfer cloth, of a polyester fibre sheet with Plexitol B500 adhesive thickened with methyl cellulose. In this case, the adhesive was applied through a grill so as to leave only points of glue rather than a continuous film. Water evaporation presents no problem in this case either.
- Phase C: Joining of the phase A support elements and the phase B transfer elements. For this union, Plexitol B500 thickened with toluene was used on the polyester fibre sheet of polycarbonate. It was left to dry to eliminate the water and regenerated with toluene to make the painting adhere. The sandwich formed in this way was subjected to a weight of up to 60 kg/m² to increase pressure during adhesion.

Reflections on the Work and Conclusions

Contrary to tradition in the Museum, which uses large quantities of water in the operation to stretch canvases, we feel the use of little water is to be recommended in this work.

For the four fragments of painting glued with vinylic glue on the cotton cloth, this system is not valid and phase B of the mounting has had to be modified. In fact, the tests showed an unacceptable streaky appearance.

This test provided the occasion to check the reversibility of the system and the importance of mixing the cellulosic glue with the Plexitol, as well as the application of the adhesive by points between the painting and the support.

Bearing in mind the alveolate aspect of the polycarbonate, one might think of perforating the back and setting it over a vacuum or suction table. This suction mounting might give controllable results.

In the following article by Reyes Jiménez de Garnica, in charge of interventions, and her colleagues, Imma Amorós and Rosaura Jano, we can follow the application of this laboratory prototype on a large scale.

Use of New Supports for Transferred Mural Paintings in 1995

Reyes Jiménez and Imma Amorós

The purpose of the new Romanesque museography was to exhibit fragments of mural paintings from various places in the Catalan Pyrenees. Altogether they amounted to 65 square metres. Some of them were not exhibited in their original architectural form in previous presentations; for example, three intradoses from Sant Joan de Boí and the small apse from Sant Climent de Taüll. Others were not accessible to the public as they were in the reserves, such as the remaining intradoses from Sant Joan de Boí and other fragments from Sant Climent de Taüll and Santa Maria de Taüll.



These paintings had already been transferred to canvas, but without a definitive support. They presented a variety of problems:

1. Paintings transferred with caseinate of lime, referred to as *bacallà* (detached wall paintings) in restorer's jargon, because of their appearance.
2. Paintings transferred between 1963 and 1970 with vinylic glues. Due to ageing, the pictorial layer showed a lot of blistering, was extremely elastic and looked like plastic. There were also chromatic alterations.
3. Two fragments of painting detached by an unusual technique known as *stacco*. The two fragments are from the small apse at Sant Climent de Taüll, the only ones at the MNAC which preserve the original plaster.

Once each individual painting had been dealt with as necessary, a suitable support had to be constructed for them. The traditional type was discarded due to the disadvantages described in the preceding article.

Mounting the Mural Paintings on Polycarbonate with alveolus

A. Paintings detached by *strappo*; intrados from Sant Joan de Boí.

A.1 Preparing the paint

State of the painting before the intervention.

State of preservation: painting mounted in the seventies, on a flat wooden grid support, even though it was the intrados of an arch. The wood has suffered a severe attack of woodworm.

Elimination of the old wooden support. One can see how the woodworm has even attacked the transfer canvas.

Having levelled the original painting and cleaned the remains of old glues, a layer of Plextol B500 mixed with cellulosic glue is applied to the back with a toothed spatula to avoid a continuous adhesive surface. A layer of tissue is then applied as an intervention layer. The canvas is fixed at the edges to avoid deformations and contractions during drying of the adhesive. It is left to dry for 24 hours. The Plextol has previously been thickened with toluene so as to control the level of penetration.

A.2 Preparing the support

Having cut the polycarbonate to the desired size, a layer of pure Plextol is applied with cotton. Immediately following, a layer of tissue is applied and then a second layer of Plextol. It is left to dry.

Application of the adhesive through a grill so as to produce a discontinuous layer which will provide greater reversibility. It is left to dry. In this case the Plextol B500 is applied thickened with toluene, so as to increase the density.

A.3 Mounting the Painting on the New Support

The adhesive is applied to the back of the painting, by the same procedure explained in points A.1 and A.2. It is left to dry.

The two layers of adhesive are regenerated by dusting with toluene. When it reaches mordancy, the original paint is applied to the new polycarbonate support and is left under a pressure of 100 kg/m² for 24 hours, until the toluene has completely evaporated. This system reduces the presence of humidity from the Plextol (aqueous emulsion).

Diagram 1: Paintings detached by *strappo*.

Beginning of adhesion: force exerted by the two layers of Plextol regenerated with toluene.

Mounting the painting in the exhibition hall. The polycarbonate with alveolus is screwed on to the Pladur, which facilitates both mounting and dismounting. Adapting to the curve of the arch is very simple.

Final presentation in the permanent exhibition hall.

B. Paintings detached by *stacco*: fragment of the small apse from Sant Climent de Taüll.

State of preservation: painting detached by *stacco*, which preserves the original plaster, though much fragmented and very fragile. Unlike the previous items, this one preserves its mural characteristics, roughness and original texture intact, although there is a lot missing.

As a consequence of the previous mounting, using a wooden grid and an internal structure of iron, plaster and burlap has the following properties: high weight, wooden support weakened by woodworm attack, saline efflorescence in the form of a white coating which visually and structurally affects the pictorial layer and difficulty of handling.

Detail of the bulk of the old support.

Detail of the support materials.

B.1 Preparation of the Original Painting

Detail of the pictorial layer's double protective covering, which will allow safe handling of the item.

Detail of the elimination of the internal wire structure.

Detail of the mechanical removal of plaster from the old support, leaving the original mortar exposed.



Back of the painting with the original mortar exposed. To create a homogeneous surface facilitating adhesion to the new support, the unevennesses are filled in with a light, coloured mortar.

Consolidation of the back with Plectol B500 emulsion and strengthening cloth.

B.2 Preparation of the New 8mm Rigid Polycarbonate Support

The polycarbonate is cut to the size of the painting. A film of acrylic cement is applied over the entire surface, which is then sifted with a layer of marble sand. This creates a rough surface similar to and compatible with the mural surface. It also facilitates future adhesion to the plaster of the original mortar.

Adhesion tests of the polycarbonate aggregate.

B.3 Mounting the Painting on the New Support

Diagram 2. Paintings detached by *stacco*.

Beginning of adhesion: in this case adhesion is based on the force exerted by the aggregate, made up of a traditional mortar of lime and dolomite sand with the addition of 10% of Plectol in an aqueous emulsion. To facilitate identification, this aggregate was coloured with mineral pigments.

Anchoring of the new support using stainless steel bolts.

Mounting on the small apse structure.

Presentation in the permanent exhibition hall.

Conclusions

When the only possible solution for saving a mural painting involves detaching it, that is removing it from the architectural setting for which it was conceived, one of the chief problems facing restorers is the future presentation of this painting. A context must be found which shows the greatest respect for its specific nature, original form, texture, irregularities of the wall, etc.

After its detachment by *strappo*, the pictorial layer is transferred, that is subjected to a process by which the original plaster is replaced by two layers of canvas attached with caseinate of lime, therefore adding materials of an alien nature to the original materials.

In the case of fragments detached by *stacco*, though infrequent, the problems are different. As they preserve part of the original plaster, the material integrity is better protected, but the problems of conservation will be more complex

because of the weight and fragility of the plaster.

In the course of history, several solutions have been adopted in the manufacture of replacement supports, in particular at the end of the twentieth century, with the introduction of new materials, used alone or in combination with traditional materials.

The Department of Preventive Conservation and the Laboratory suggested this new support. Its introduction involves techniques and methodologies similar to those used in the seventies in the new systems of recanvassing of painting on canvas and the mounting of mosaics from archaeological excavations.

After this practical experience, satisfactory solutions can be said to have been found for the problems arising in the complex world of supports in the conservation of works of art. It is based, as has been explained, on the combination of traditional and synthetic materials.

The materials used as aggregates include marble sand, which allows the creation of mural textures in the new support, and dolomite, to reduce the total weight of the aggregate. The cementation material used is the traditional one in mural painting: slaked lime.

Documentation

Introduction

Maria Teresa Guasch

A careful selection has been made of all the existing –and considerable– bibliography, so as to include only those titles referring explicitly to the question of detachment, moving and subsequent installations in different museums in Barcelona.

The selection of documentation referring to the saving, installation and museography of the Romanesque mural painting in the collections of the Museu Nacional d'Art de Catalunya has been arranged chronologically so as to facilitate consultation of the data. This chronology is structured around a series of events which form the thread of the story behind the Museum's collection of Romanesque mural paintings. These events or points of reference are as follows:

1. Initiatives for the Creation of an Inventory of Mural Painting in Our Country (1907-1918)
2. Negotiations for the Obtention of the Mural Paintings, their Detachment and Subsequent Removal to Barcelona (1919-1923)
3. First Installation at the Museu de la Ciutadella (1924-1930)
4. Removal and Installation in the Palau Nacional, Museu d'Art de Catalunya (1931-1935)
5. Civil War (1936-1939). Removal to Olot and Paris (1937). Return to Barcelona (1939)
6. From the Post-war Period to the International Romanesque Exhibition (1961), with the Various Recovery Campaigns
7. The Reorganisation of the Romanesque Section (1973)
8. Final Move and New Installation (1995)

For each of the dates mentioned the sources used have been classified as manuscripts, diverse correspondence, memoirs, minutes of the Junta de Museus, periodical publications or books. A brief summary is given of practically all of them so as to provide a general idea of the content, except for those whose title is explicit or descriptive enough in itself.

The most voluminous part of the documentation is that corresponding to the years 1907-1925. From this date on, the information is much scarcer and is reduced to brief notes and references centring on the work of publicising by J. Folch i Torres, first, and J. Ainaud de Lasarte, later. Even the minutes of the Junta de Museus, which are rich in details of all sorts until 1925, ration the information after this date and reduce it to brief notes without any sort of details. On the arrival of the Plandiura collection there is sufficient general information and only the cataloguing of the documents has been referenced. One outstanding gap in the documentation goes from 1940 to 1964, although graphic information can be consulted in the picture archives arranged by sites.

In the MNAC's documentation archives there are copies of all this documentary collection, at present scattered over several centres. To be able to consult the originals, the sources have been indicated according to the information available to us, in the bibliographical references supplied.

The MNAC documentation team is engaged in computerising this material, the files and documentary data.

Documentary sources

*Jordi Casanovas and
Neus Conte*

1. Initiatives for the Creation of an Inventory of Mural Painting in Our Country (1907-1918)

1907 was a decisive year in all this long process. For one thing, it was the year mural painting was discovered, the year the Institut d'Estudis Catalans was founded and the year of publication of *Les pintures murals catalanes*, by Josep Pijoan, the person responsible for recovering and publicising Romanesque painting in Catalonia. On 1 June of that year, Rafael Padilla was commissioned to copy the paintings at Pedret with a view to publication and by the end of the month had completed the work. Jaume Llongueras was subsequently commissioned with further work. At the end of 1907, Joan Vallhonrat started work on the copies of La Seu d'Urgell. His work went on until 1919, when the process of detaching the paintings began. For a complete description of the prior process of discovery, study and strategic planning, see GUÀRDIA, M., and others, *El descobriment de la pintura mural romànica catalana*, Barcelona, 1993 (Els dossiers del MNAC).

Manuscripts and Minutes of the Junta

On 2 January 1907 the Commission for reproductions of mural paintings presented the Junta de Museus with a proposal for the publication of a monograph with the title: *Los mosaicos y pinturas murales de Cataluña desde la antiguedad hasta el Renacimiento*, which, with scientific criteria and under the supervision of a commis-

sion, laid out the need to preserve the legacy of mural paintings, which was practically condemned to disappear unless immediate action was taken. This project was accepted at the meeting on 15 February and a commission was appointed.

At the Episcopal Library in Vic a manuscript by Mossèn Gudiol is conserved with the title *Missió a la ratlla d'Aragó*. Backed by the Institut d'Estudis Catalans, it set out to list the surviving religious heritage. Forming part of this mission, carried out between 30 August and 14 September 1907, were Josep Puig i Cadafalch, as director, Guillem M. de Brocà, as legal advisor, Mossèn Josep Gudiol and the architect Goday, as attachés, and finally the photographer Adolf Mas (a copy of this manuscript is kept in the MNAC's Romanesque Department). There is a reference to this expedition in the "Crònica de la Secció Arqueològica" of the *Anuari de l'Institut d'Estudis Catalans*, 1907, pp. 477-478. The year before there had been another expedition to La Seu d'Urgell directed by Josep Pijoan and Josep Font i Gumà, with the object of acquiring new objects in keeping with the new criteria established by the Junta de Museus.

2. Negotiations for the Obtention of the Mural Paintings, their Detachment and Subsequent Removal to Barcelona (1919-1923)

1919

Joan Vallhonrat, on occasion of his second visit to Mur, discovered that the paintings had been detached and moved to Boston following arrangements by Lluís Plandiura, who carried out the operation in secret. These events triggered off all the subsequent actions by the Junta de Museus (AINAUD DE LASARTE, J. "Les col-

leccions de pintura romànica del Museu Nacional d'Art de Catalunya" in *Butlletí del Museu Nacional d'Art de Catalunya*, 1993, I, 1, pp. 60-61).

Minutes of the Junta de Museus

Having read the report by the President of the Special Commission for medieval and modern art accompanying the project, the technical reports and the financial plans for the acquisition of the mural paintings, the decision was taken to go through with the project from the initial negotiations to their installation in the Museum (meeting of 5 December).

Report by the Special Commission after studying the projects for contracts between the Junta, Mr Pollack and Banca Fàbregas i Recasens. It is foreseen that when the different parties have studied the modifications proposed in the initial contract, the definitive contract will be signed. Once signed, permission will be requested from the "governor of Lleida or the maximum authority" for the detachment of the paintings at Taüll by Mr Pollack (meeting of 19 December).

Reports, Plans and Other Documents in the Archives of the Junta de Museus

Plans for the acquisition, detachment, removal and installation in the Museu d'Art i Arqueologia de Barcelona of the Romanesque mural paintings of Catalonia. Presentation of the plans having seen and studied the report in favour. Specification of the specimens affected, cost of the operation per square metre of painting detached, negotiations with the Banca Fàbregas i Recasens. Final approval of the project (undated) (Archives of the Junta de Museus [AJM], case 57, 1919).

Explanatory report on the preliminary arrangements made for the formation of the project to purchase Catalonia's Romanesque mural paint-

ings and remove them to the Museum. Summary of the process publicised on occasion of the definitive presentation before the Commission on medieval and modern art of the project for the acquisition, detachment and removal of the Romanesque mural paintings, after the protest –the Mur case– expressed at the last meeting on 15 October (AJM, case 57, 1919).

Genesis of the project for the acquisition and removal of the principal specimens of Catalan mural paintings. Information on the acquisition of paintings on the part of a foreign antiquary. Considerations on the possibility of conserving them *in situ*. Final decision to detach and remove the mural collection to the Museu de Barcelona. First contacts with Mr Pollack and the Italian expert Steffanoni and preliminary estimates. Account of Catalan, French and Italian mural paintings (24 October 1919) (AJM, case 57, 1919).

Documents signed by the director of the Medieval and Modern Art Section, Mr Folch i Torres, certifying that the contract for the sale and detachment of the mural paintings between the Museum and Mr Pollack, G. Dereppe and F. Steffanoni has been signed. The paintings are: Pedret, Sant Climent de Taüll, Santa Maria de Taüll, Santa Maria de Boí, Santa Maria d'Àneu, Sant Pere del Burgal, Sant Miquel de la Seu d'Urgell, Ginestarre, Esterri de Cardós and Santa Eulàlia d'Estona. Included is a list with a valuation of the paintings (12 November 1919) (AJM, case 57, 1919).

Report on the acquisition, extraction and removal of the ten principal specimens of mural painting to the Museum. This dossier includes a summary of the process of acquisition, detachment and removal of the paintings: interest and value of the Catalan pictorial series with a list attached. Criteria for undertaking the detachment and transport of the Catalan paintings (23 November 1919) (AJM, case 57, 1919).



Economic aspects of the project. Terms of the contract with business and with Banca Fàbregas i Recasens. Means for defraying the debt (undated) (AJM, case 57, 1919).

Copy of the draft contract presented by Banca Fàbregas i Recasens, for discussion and finalization. (AJM, case 57, 1919).

1920

Minutes of the Junta de Museus

Report by Mr Bassols on the technical and economic contracts for the acquisition of the Romanesque mural paintings. Following is a detailed account of the contract between Josep Llimona, President of the Junta, and Mr Pollack, and the one signed between Josep Llimona and Eduard Recasens, one of the directors of the Societat Fàbregas i Recasens, signed on 1 March (meeting on 16 January).

The Junta is notified of the communiqué from the nuncio "accepting with pleasure the wishes of the Junta regarding the acquisition of mural paintings and prohibition of the sale and extraction of artistic objects from temples and convents" (meeting of 30 January).

The President of the Junta announces the signing of the contracts before notary. Mr Pollack is requested to deliver to the Junta the bench from Taüll, as the Junta had paid 8,000 pesetas for its purchase (meeting on 26 March). In the Archives of the Junta de Museus there is a letter from Carles Pirozzini to J. Folch i Torres urging him and Vidal i Ventosa to arrange for transport of the Taüll bench to Barcelona, once the 8,000 pts have been paid to Mr Pollack. (2 March 1920).

Mr Pollack informs the Junta that the detachment of the paintings will soon begin as laid down in the contract and that this operation ought to be supervised by a technical official. The decision is taken (meeting of 14 May).

Mr Folch i Torres, the official appointed to supervise the detachment (his appointment was decided at the meeting of 28 May), announces that the Taüll bench has been dismantled and is ready for packing (meeting of 18 June).

The Taüll bench enters the Museum (meeting of 29 October).

The Junta is informed of a letter from Mr Pollack in relation to the difficulties of detaching the paintings at Santa Maria de Taüll and Sant Joan de Boí (meeting on 12 November).

Approval of an account presented by the architect Mr Ràfols regarding the preparation of plans of the churches where detachments are taking place (meeting on 26 November).

Diverse Correspondence

Letter from mossèn Bonaventura Roca warning J. Folch i Torres that the sale decree authorised by the bishop should make express mention of the Taüll bench to differentiate it from the paintings. Otherwise he will not give permission for the removal of the paintings. (Folch i Torres Archive, BGHA, 19 February 1920).

J. Folch i Torres writes to the rector of Santa Maria de Boí explaining the delay and the problems arising in the transport of the paintings from this church to Barcelona. He tries to overcome the rector's misgivings by guaranteeing the necessary authorisation from the nuncio and the minister (23 February 1920). On 2 March, Carles Pirozzini had written to Folch i Torres urging him and Vidal Ventosa to arrange the removal to Barcelona of the Taüll bench, after paying Mr Pollack the 8,000 pesetas. On 7 March, the rector, mossén Josep Camarasa, gave his reasons and justified the delay saying that in Taüll Steffanoni promised money to the people in exchange for the paintings. In his own words, "people want money, wherever it comes from, and take no interest in paintings, whoever they go with".

Series of eight letters from J. Vidal i Ventosa, a photographer and Museum official, to Joaquim Folch i Torres, written between June and September 1920. All of them abound in details of the difficulties involved in getting to and removing the paintings. All of them are kept at the Biblioteca General d'Història de l'Art, in the section devoted to their correspondence.

30 June. On the immediate dispatch of the Taüll bench and the process of detaching the paintings in the two churches in Taüll.

4 July. On the delay in the detachment because of the Italian restorers. In spite of the difficulties they have raised, he says he now knows all about the detachment technique from having spied on the Italians.

16 July. More complaints about Mr Steffanoni. He reports the disappearance of the consecration of Sant Climent, which he attributes to revenge by the village against Steffanoni.

26 July. The inscription is recovered in pieces and very badly damaged. Having completed the detachment of Sant Climent, the rector and the people of the village say they will not let them into Santa Maria unless they pay the 6,000 pesetas they owe them. There are also two telegrams, with no date, from G. Derepue to Folch i Torres, asking him, after events such as the destruction of some frescos, to accompany him to Taüll.

19 August. Return to Barcelona, having left everything ready for the continuation of the detachments in Taüll and Boí.

23 August. Vidal i Ventosa justifies the enormous financial cost and the fact of having to return to Barcelona so soon.

25 August. Vidal i Ventosa tries to persuade Mr Pollack to remove in Taüll the fragments of paintings not visible.



The last letter, dated 4 September, does not contain information of interest in relation to the detachments.

Letter from the architect Mr Ràfols to J. Folch i Torres. It contains an account of churches with mural paintings and a series of observations on them (Folch i Torres Archive, BGHA, 28 August 1920).

Letter from J. Folch i Torres addressed to the Bishop of Urgell and Co-Prince of Andorra, Justí Guitart. It mentions the dispatch of the various authorisations and necessary documents for the acquisition of objects of interest for the Museum. It also mentions the previous situation, with the lack of legal protection and the policy of selling antiques to the highest bidder, which led to the episode in Mur and the removal of objects abroad. It also mentions the start of the work of detachment in the churches of La Ribera de Cardós. In Folch i Torres's opinion, Guitart's promotion to the position of bishop has led to a pronounced change in this situation. (Folch i Torres Archive, BGHA, 9 October 1920).

1921

Minutes of the Junta de Museus

It is decided that Mr Pollack, on behalf of the Junta, should acquire the paintings of Sant Climent de Taüll, Santa Maria de Taüll, Sant Pere de la Seu d'Urgell, Ginestarre, Esterri de Cardós and Santa Eulàlia d'Estaon.

The Bishop of Solsona gives permission for the purchase of the paintings of Pedret (meeting on 8 April).

Arrangements for payment to the Bishop of Urgell for the paintings acquired (meeting on 22 April).

An agreement is reached with the firm of Priu i Simon for the construction of a sample wooden

apse for the installation of the mural paintings and for the preparation of an estimate for the rest of the paintings (meeting on 10 June).

The plan for the installation of the different apses is approved. The quantity of 150,000 pesetas is fixed for the work of installation (meeting on 28 October).

The Junta is notified of the municipal agreement of 23 November which assigns 250,000 pesetas for installing the mural paintings and making new acquisitions. The formalities are also discussed for the sale and detachment of the paintings at Engolasters and some fragments from Bof and Taüll, still the property of the Bishopric of Urgell until the definitive sale (meeting on 16 December).

1922

Minutes of the Junta de Museus

In accordance with the agreements of 10 June and 28 October, and having seen the model manufactured by the firm Priu i Simon, the decision is taken to commission the rest of the structures (meeting on 13 January).

Payment is approved of 5,993 pesetas to Priu i Simon for the construction of the apse of Santa Maria d'Àneu (meeting on 17 February).

Notification of the protest by the Bishop of Urgell at the fact that he has not yet been paid for the Taüll bench. For this reason the Bishop will not authorise any more detachments unless paid.

It is also announced that there is an organisation of foreign antiquarians who have set their sights on acquiring antique mural paintings from churches in the rest of Spain, and for this reason the decision is taken to notify all the country's prelates of this fact (meeting on 18 July).

Books

Memòria succinta de la tasca acomplerta per la Junta de Museus de Barcelona en el trienni 1919-1922, Barcelona, 1922, pp. 16-19.

1923

Minutes of the Junta de Museus

Report on the latest work of detachment, which puts special emphasis on the new fragments located and which were not previously visible (meeting on 9 February).

Approval of an expenditure of 914.65 pesetas by the architect Josep Danés, "relating to fees and travelling expenses to examine the churches of Santa Maria de Bohí and Taüll, prior to the detachment of the mural paintings" (meeting on 11 May).

Report to the Junta that the installation of the apses in the Museum is nearing completion and that they trust that by July "the rooms making up the section of mural paintings will be completely installed" (meeting on 15 June).

The decision is taken to form a team entrusted with the reception of the mural paintings in the Museum on behalf of the Junta (meeting on 26 October).

Notification regarding the completion of the work of detaching, transporting and installing the Romanesque mural paintings, and a report on the execution of this work carried out with great care. Attached is a history of these detachments since 3 September 1919 to 29 January 1922, and the substitution of those from El Burgal for those from Engolasters is reported. The work of installation finished on 9 November 1923 and it is mentioned that there are still 172 square metres of mural paintings to be paid to the Bishopric of Urgell. The report ends with references to the quantities to



be paid to Mr Pollack, to the obligations undertaken with Banca Fàbregas i Recasens, and to the methods used in the construction and reproduction of the apses (meeting on 15 November).

3. First Installation at the Museu de la Ciutadella (1924-1930)

1924

Minutes of the Junta de Museus

Differences between Mr Plandiura and the Junta relating to the price to be paid for the paintings. The price proposed now is 725,000 pesetas instead of the 422,672.50 pesetas foreseen (meeting on 28 March).

A new commission is set up to study the problem and decide, if necessary, to cancel the contract signed (meeting on 5 May).

Various invoices have been submitted by the firm Priu i Simon: 6,492 pesetas for the apse of La Seu d'Urgell, 3,975 for Sant Miquel d'Engolasters and 6,755 for Sant Climent de Taüll (meeting on 24 May).

In view of the complaints presented with relation to the total price, the Junta proposes the intervention of arbitrators in the search for a solution (meeting on 31 May).

A complete dossier has been prepared of all the measures taken and of the work of detachment, to send to the Mayor of the city, appointed as arbitrator by the Junta (meeting on 25 June).

The appointment of José Ramón y Pascual is accepted as arbitrator by Mr Pollack. Finally notification is made of payment to the Bishopric of Urgell of 58,000 pesetas for the paintings of Boí, Taüll and Sant Miquel d'Engolasters (meeting of 25 June). The same meeting

approved three invoices for 745, 472.50 and 787.50 pesetas for uralite panels needed for the installation of the mural paintings.

Since the Mayor stated that he could not accept the post of arbitrator, the decision was taken to approach Baron de Viver (meeting on 24 October).

Eight invoices are submitted for various works of carpentry for the inauguration of the mural painting rooms (meeting on 14 November).

Periodical Publications

FOLCH i TORRES, J., "Les pintures murals romàniques al Museu de la Ciutadella. I. Com s'han arrencat i transportat els frescos romànics" in *Geseta de les Arts*, 1 July 1924, year 1, 4, pp. 1-3, 10 figs. (from the Arxiu Mas and the Museum laboratory).

FOLCH i TORRES, J., "Les pintures murals romàniques al Museu de la Ciutadella. II. Les esglésies d'on s'han arrencat els frescos romànics" in *Geseta de les Arts*, 1 August 1924, year 1, 6, pp. 1-2, 3 figs. (from the Arxiu Mas i Vidal). As a complement to this article a further contribution by FOLCH i TORRES, J. appeared: "Dades relatives a les esglésies del Pirineu d'on han sigut arrencades les pintures murals romàniques" in *Geseta de les Arts*, 1 October 1924, year 1, 10, pp. 2-3, 3 figs.

FOLCH i TORRES, J., "Las pinturas murales románicas en el Museo de Barcelona" in *Mercurio*, 18 September 1924, 472, year XXIV, pp. 285-287, 8 figs. A short article on the installation of the paintings in the Ciutadella, no museum owns such a complete collection, and the difficulties of detaching them.

PIJOAN, J., "De com es varen descobrir i publicar les pintures murals catalanes" in *Geseta de les Arts*, 15 October 1924, year I, 11, pp. 5-6.

1925

Minutes of the Junta de Museus

Since no amicable arrangement had yet been found, it was proposed that the quantity of 422,672 pesetas, the amount previously agreed, should be kept in deposit, and if the case arose that a greater amount was needed, it should be requested from the City Hall in the new budgets (meeting on 10 January).

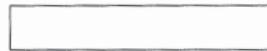
The treasurer informs that the deposit of 422,672.50 pesetas has been made. The arbitrators present the proposal, dated 29 November, for the payment by the Junta of the sum of 675,000 pesetas, by which means the paintings will become the property of the City Hall without any further expense. The Junta writes to the Mayor to request approval of a special loan to complete the quantity stipulated (meeting on 24 January).

Discussions continue on the text of the document cancelling the contract for the mural paintings and the dates are fixed for the payment of the quantities to be obtained from the regular budget for 1922-1923 (meeting on 21 February).

A definitive decision is taken to pay the amount fixed according to the terms of the contract (meeting on 28 February).

The treasurer informs that the representatives of Mr Pollack and Mr Plandiura do not consider resolved the question of a difference of criteria over a quantity (58,586 pesetas) which the Junta considered had to be deducted from the total and had already paid to the Bishopric (meeting on 11 March).

The Junta finally agrees to pay the total through the signature of a private document, drawn up by the lawyer Lluís Serrahima, before witnesses, amongst which will figure Lluís Plandiura (meeting on 21 March).



The Marquis de Mariano declares in the course of the meeting on 30 March, "that the mural paintings acquired by the Junta de Museos, paid at the price agreed on 19 December last, were for their intrinsic value worth very much more than what had been paid, constituting not only a great acquisition from the artistic point of view, but a bargain from the economic point of view".

1926

Books

FOLCH I TORRES, J., *Museo de la Ciudadela. Catálogo de la Sección de Arte Románico*, Barcelona, 1926, pp. 52-59 ("El arranque y transporte de las pinturas murales románicas de Cataluña"). Includes the measures taken and a description of the detachment.

4. Removal and Installation in the Palau Nacional, Museu d'Art de Catalunya (1931-1935)

1932

Documentary Sources

As a result of his efforts, Lluís Plandiura had by 1919, ahead of the Junta de Museos, obtained for his collection several examples of Romanesque painting from El Burgal, Esterri d'Àneu, Orcau, Argoiell and Sant Romà de les Bons, works which eventually entered the Museum with the acquisition of his entire collection in 1932. The Arxiu Històric de la Ciutat conserves a Lluís Plandiura collection of which a catalogue was made in 1995 by Eloïsa Cendra, which contains a large part of his correspondence from the years 1902-1904, 1915, 1917-1936, 1938-1941-1953, where abundant references to all these questions can be found.

1933

Minutes of the Junta de Museus

Throughout the year, mention is made, without going into details, of the work of installing the Museu d'Art in the Palau Nacional and of transporting the apses (meetings on 10 May, 23 June, 29 July and 4 December. At this last meeting there is general discussion about the installation of Barcelona's museums).

Periodical Publications

MIRET, O., "Para el primer Parlamento de Cataluña. Las elecciones y el desocupo del Museo de la Ciudadela" in *Barcelona Atracción*, January 1933, 259, pp. 3-7.

"El desallotjament del Palau de la Ciutadella" in *Butlletí dels Museus d'Art de Barcelona*, January 1933, III, 20, pp. 22-28.

1934

Minutes of the Junta de Museus

A variety of information about the date and the inaugural ceremony without giving any details about the installation (meetings of 28 May, 3 July, 14 August and 1 October).

Periodical Publications

REVENTÓS, R., "Les obres de consolidació i habilitació del Palau Nacional de Montjuïc" in *Butlletí dels Museus d'Art de Barcelona*, June 1934, IV, 37, pp. 169-171.

FOLCH I TORRES, J., "El Museu d'Art de Catalunya al Palau Nacional de Montjuïc" in *Butlletí dels Museus d'Art de Barcelona*, June 1934, IV, 37, pp. 171-191.

PLANAS, A., "El Museo de Arte de Cataluña. Antecedentes y carácter de su instalación" in *La*

Vanguardia, 4 October 1934, p. 9. Description and commentary of certain technical aspects of the new installation.

BRUNET, M., "La inauguració del museu" in *La Veu de Catalunya*, 11 November 1934, p. 1.

"Inauguració del Museu d'art català" in *La Veu de Catalunya*, 13 November 1934, p. 7.

BENET, R., "El Museu d'Art de Catalunya" in *La Veu de Catalunya*, 13 November 1934, p. 13.

FOLCH I TORRES, J., "Como fueron arrancados y transportados los frescos románicos del Museo de Arte de Cataluña" in *La Vanguardia*, 6 December 1934.

1935

Periodical Publications

"Una gran institución barcelonesa. El nuevo Museu d'Art de Catalunya" in *Barcelona Atracción*, January 1935, 283, pp. 9-13.

FOLCH I TORRES, J., "La nouvelle installation du Musée d'Art de Catalogne" in *Mouseion*, IXe année, 31-32, pp. 61-66.

5. Civil War (1936-1939). Removal to Olot and Paris (1937). Return to Barcelona (1939)

1936

"Faced with the intensity of the fighting, and to avoid possible losses, Pi i Sunyer arranged to move the most important works deposited in the museums and the various concentration points, out of the way of possible danger from the military activities. Large farmhouses were made ready in Bescanó, Darnius and Agullana, as well



as the cathedrals of Tarragona and Girona and the monasteries of Poblet and Sant Esteve. A large part of the Barcelona archives had already been moved to Villadrau."

The Arxiu de la Junta de Museus contains a report by the General Commissar for Museums dated 5 October 1936 which reports on the measures taken to protect the deposits of objects of art that have been formed at different points in Catalonia. A.J.M., case 97, 1936 (Constitution and action of the General Commissariat for Museums).

At the end of October the General Commissariat for Catalan Museums requested Olot Town Council the cession of the church of Sant Esteve "to store the works of the Museums of Barcelona [...] and proposing the formation of a Board to watch over the safeguarding of the works mentioned".

The works were moved to Olot between 31 October 1936 and 6 September 1938. A plan of the church of Sant Esteve and an account by sectors of the works in store have survived from this new provisional installation. The movement of articles to the secondary deposit in Darnius took place between 30 April 1938 and 21 January 1939. The documents relating to the lorries and their loads, the list of works moved and an account of their installation can be found in the Archives of the MNAC's Documentation Department, under the heading *Trasllat a Olot i a Darnius del patrimoni museístic dels Museus de Barcelona. Relació d'expedicions*. On the basis of these documents an annex has been drawn up with a detailed account of the movements of each of the series of Romanesque mural painting.

Periodical Publications

GUDIOL, J. "El salvament dels monuments de Catalunya medieval i diverses conseqüències" in *Arquitectura i Urbanisme*, Barcelona, December 1936, pp. 188-206.

Books

FOLCH I TORRES, J., *Catàleg del Museu de Catalunya. Art Romànic. Art Gòtic. Art del Renaixement. Art Barroc*, Barcelona, 1936.

1937

In the MNAC's Documentation Department, under the heading *Trasllat a Olot i a Darnius del patrimoni museístic dels museus de Barcelona. Relació d'expedicions*, there is a draft of the minutes of the loading and transportation of the works to Paris, signed on 27 February 1937 in the church of Sant Esteve d'Olot.

Books

L'art catalan à Paris, Paris, 1937. Pages 14-17 describe the transport and installation of the works in Paris.

Periodical Publications

FOLCH I TORRES, J., "L'Art Catalan au Jeu-de-Paume" in *L'Illustration*, Paris, 27 March 1937, 4,908, pp. 320-322.

FOLCH I TORRES, J., "Exposició d'art català a París dels segles X al XV" in *Catalunya*, year VIII, 79, pp. 22-24.

1939

With the war over, on 7 March 1939, as a result of a meeting held in Paris, at which the participants were Eugeni d'Ors, Director of Fine Arts, Ventura Gassol, Chairman of the Committee for the Exhibition of Catalan Art in Paris, Joaquim Folch i Torres, André Dezarroi, Curator of the National Museums of France, and Miquel Joseph i Mayo, the decision was taken to return the works exhibited in Paris to Catalonia and in keeping with this decision André Dezarroi handed them over to Eugeni d'Ors and Joaquim Folch i Torres.

That same year, the return of the deposit in Olot was carried out. The return expeditions started on 19 March and ended on 31 August 1939. Archives of the Junta de Museus, case 109, 1939 (Depósito de Olot. Hojas de las expediciones de retorno).

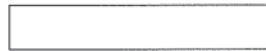
1940

There is a surprising lack of documents in the archives of the Junta de Museus and those of the MNAC on the period when the works were in Paris and on their return to Catalonia. In this respect, a search is foreseen in the Salamanca Archives, the Alcalá de Henares Archives and the Archives of the Crown of Aragon

Letter from Javier de Salas, Commissioner Chairman of Art Museums, to J.M. Iñíguez, General Commissar for the National Artistic Heritage Defence Service, dated 28 May 1940, requesting that he do what he can to recover the documentation from the exhibition of Catalan art in Paris. Archives of the Junta de Museus, case 114, 1939-1940 (Restituciones del Servicio de Recuperación a la Junta).

1942

Reopening of the Romanesque art rooms on 12 June 1942. Archives of the Junta de Museus, case 117, 1942.



6. From the Post-war Period to the International Romanesque Exhibition (1961), with the Various Recovery Campaigns

1952

Periodical Publications

FOLCH I TORRES, J., "El problema de la instalación definitiva de los Museos de Arte de Barcelona" in *Destino*, 9 August 1952, 783, p. 15; 16 August 1952, 784, p. 15; 30 August 1952, 786, p. 18; 13 September 1952, 788, p. 14.

FOLCH I TORRES, J., "El Museo de Arte de Cataluña y el Parque de Montjuich. Un traslado del Museo, ¿Fue un disparate?" in *Destino*, 15 November 1952, 797, pp. 19-20.

FOLCH I TORRES, J., "Asunto desorbitado. La extensión del problema de la instalación de los Museos de Arte de Barcelona" in *Destino*, 22 November 1952, 798, pp. 20-21.

1956

Periodical Publications

FOLCH I TORRES, J., "Cómo y por qué se arrancaron los frescos románicos que están en el Museo de Montjuich", 17 March 1956, 971, pp. 9-11, 8 figs.

1959

Book

AINAUD, J., "Le Musée d'Art de Catalogne" in *XVII Congrès Arqueológico de France*, 1959, pp. 91-97.

1961

Periodical Publications

FOLCH I TORRES, J., "Cómo se formó la colección de pintura, única en el mundo, del Museo de Arte de Cataluña" in *Destino*, 17 June 1961, 1,245, pp. 13-15, 10 figs.

FOLCH I TORRES, J., "Las aventuras del arranque y traslado de los restos románicos de las iglesias pirenaicas catalanas (1922-1924)" in *Destino*, 24 June 1961, 1,246, unnumbered pages. A detailed account, full of anecdotes, of the arrangements for safeguarding the Romanesque paintings.

FOLCH I TORRES, J., "La instalación de la pintura románica en Montjuich" in *Destino*, 1 July 1961, 1,247, pp. 15-17, 3 figs.

1971

Books

JOSEPH, M., *El salvament del patrimoni artístic català durant la guerra civil*, Barcelona, 1971.

7. The Reorganisation of the Romanesque Section (1973)

1973

Minutes of the Junta de Museus

Short informative notes by Joan Ainaud on the reopening of the Romanesque art rooms (meetings on 26 April and 24 May).

Periodical Publications

AINAUD DE LASARTE, J., "La nueva presentación de la sección románica del Museo de Cataluña en Barcelona" in *Goya*, March-April 1973, 113, pp. 272-279.

Books

AINAUD DE LASARTE, J., *Art Romànic/Arte Románico*, Barcelona, 1973.

1977

Periodical Publications

AINAUD DE LASARTE, J., "Descubrimiento de importantes pinturas románicas en Bof" in *La Vanguardia*, 29 May 1977.

1978

Books

BORRÀS, G.M.; GARCÍA, M., *La pintura románica en Aragón*, Saragossa, 1978. Pages 228-229 contain a text by J. Ainaud in which he describes his memories since seeing the paintings of Sixena for the first time, in 1934.

1987

Books

GUDIOL, J.M., "En su defensa: La intervención de Josep Gudiol en el salvamento del Patrimonio Artístico durante la Guerra Civil" in *Tres escritos de Josep Maria Gudiol i Ricart*, Barcelona, 1987, pp. 87-115 (Opera Minora, 1).

1989

Periodical Publications

(Meeting on the state of conservation of the mural paintings in the Museu d'Art de Catalunya, held at the Palau Nacional de Montjuïc from 6-8 April 1989. Taking part: P. Brambilla, J. Camós, G.L. Colalucci, E. Guillamet, Ll. Hortet, Ll. Monreal, L. Mora, P. Mora, A. Palet, E. Porta, J. Pradell, M. Stefanaggi, J. Sureda, A. Velat, R. Vergés and J.M. Xarrié).



"Expertos mundiales en restauración estudian los frescos del románico catalán" in *El País*, 6 April 1989.

SALA, M., "Tres dies entre els murals de Montjuïc" in *Diari de Barcelona*, 7 April 1989.

FONTRODONA, O., "Expertos mundiales estudian la conservación de los murales del Museu d'Art de Catalunya" in *ABC*, 7 April 1989.

"Expertos internacionales inspeccionan los murales románicos de Barcelona" in *La Vanguardia*, 7 April 1989.

FONTOVA, R., "Cumbre para salvar el románico" in *El Periódico*, 7 April 1989.

ANTÓN, J., "El traslado de los ábsides del Museo de Arte de Cataluña preocupa a los conservadores" in *El País*, 7 April 1989, p. 35.

FRISACH, M., "Restauradors a consulta. La pintura románica s'està degradant" in *Avui*, 7 April 1989.

"Experts en restauració estudien la conservació dels murals del Museu d'Art de Catalunya" in *Diari de Girona*, 7 April 1989.

"Las pinturas del románico catalán están 'mejor de lo que cabía esperar', según los investigadores" in *El País*, 9 April 1989.

"Los expertos aconsejan estudiar el medio ambiente de los frescos románicos" in *El País*, 11 April 1989.

"Las pinturas del Museo de Arte de Catalunya están bien conservadas, según los expertos" in *El Periódico*, 11 April 1989.

"Una bona climatología preservará els murals de Montjuïc" in *Diari de Barcelona*, 12 April 1989.

1990

Periodical Publications

ESPADA, A., "Les pintures necessitaran temps per adaptar-se a les noves condicions de vida" in *Diari de Barcelona*, 16 January 1990.

1991

Books

VIDAL, M., *Teoría i crítica en el Noucentisme: Joaquim Folch i Torres*, Barcelona, 1991.

1992

Books

Prefiguració del Museu Nacional d'Art de Catalunya, Barcelona, 1992, pp. 48-58.

XARRIÉ, J.M., "Quelques problèmes concernant les peintures déposées du mur, ainsi que celles conservées in situ, en Catalogne" in *Actes du 4ème séminaire international d'art mural 22-24 avril 1992*, cahier 1, pp. 39-42. A brief reflection on the need for the mural paintings to remain in their place of origin after restoration.

1993

Books

GUÀRDIA, M; CAMPS, J; LORÉS, I, *El descobriment de la pintura mural romànica catalana. La col·lecció de reproduccions del MNAC*, Barcelona, 1993.

Periodical Publications

AINAUD DE LASARTE, J., "Les col·leccions de pintura romànica del Museu Nacional d'Art de Catalunya" in *Butlletí del Museu Nacional d'Art de Catalunya*, 1993, I, 1 pp. 57-69. This subject is dealt with above all on pp. 60-64.

GUÀRDIA, M., "El patrimoni artístic català durant la Guerra Civil: un informe inèdit de J. Folch i Torres" in *Butlletí del Museu Nacional d'Art de Catalunya*, 1993, I, 1, pp. 303-321. Note 1, p. 303, lists other unpublished writings on the same subject.

1994

Books

VIDAL, M., *Viatge a Olot. La salvaguarda del patrimoni artístic durant la Guerra Civil*, Barcelona, 1994.

GUÀRDIA, M., "Pintura mural. Sant Joan de Bof" in *Catalunya Romànica. Fons d'art romànic català del Museu Nacional d'Art de Catalunya*, Barcelona, 1994, pp. 318-319.

BARRAL, X., "El Museu Nacional d'Art de Catalunya i l'art romànic català. Història d'una gran col·lecció" in *Catalunya romànica. Fons d'art romànic català del Museu Nacional d'Art de Catalunya*, Barcelona, 1994, pp. 195-234.

Final Move and New Installation (1995)

1995

Periodical Publications

"El MNAC inicia el trasllat dels vint absis romànics al Palau de Montjuïc" in *Diari de Girona*, 28 February 1995.

"Traslladen els 20 absis romànics del MNAC al Palau Nacional" in *Punt Diari*, 28 February 1995.

SPIEGEL, O., "El MNAC inicia el traslado de sus ábsides románicos y espera reabrir en diciembre" in *La Vanguardia*, 28 February 1995, p. 38.

D.M. "Los dos ábsides románicos de Pedret ya están en su emplazamiento definitivo en el MNAC" in *ABC*, Catalonia section, 28 February 1995, p. XI.

FONTOVA, R., "El MNAC inicia el traslado de los ábsides románicos" in *El Periódico*, 28 February 1995, p. 28.

SERRA, C., "Comienza el delicado traslado de los ábsides románicos del MNAC" in *El País*, Catalonia section, 28 February 1995, p. 11.

FRISACH, M., "El romànic sobre rodes / Dels carolingis al rei En Jaume" in *Avui*, 28 February 1995.

UBERQUOI, M.C., "El MNAC echa a andar de nuevo" in *El Mundo*, 28 February 1995, p. 58.

AGULLÓ, N., "El romànic català més valuós" in *Diario de Terrassa*, 4 March 1995, pp. 1-3.

"Trasllats al MNAC" in *El Temps*, 6 March 1995.

FONTOVA, R., "El traslado de los ábsides románicos recibe elogios" in *El Periódico*, 15 March 1995, p. 35.

J.B., "A ritmo de polipasto" in *El País*, 15 March 1995, p. 15.

"Traslladat l'absis de Sant Pere de la Seu d'Urgell" in *Regió 7*, 15 March 1995.

D. DE G., "Traslladen 200 metres l'absis romànic més gran del MNAC" in *Diari de Girona*, 15 March 1995.

"Gianluzzi Colalucci visita el MNAC" in *Avui*, 15 March 1995.

MASSOT, D., "El director de la restauración de la Capilla Sixtina elogia el traslado de ábsides del

MNAC" in *El País*, Catalonia section, 15 March 1995.

PERMANYER, LL., "Y, sin embargo, ¡se mueve!" in *La Vanguardia*, 5 April 1995.

BARÓ, M., "Quan claustres i sepulcres naveguen per l'Atlàntic" in *El País*, Quadern, 15 June 1995, pp. 6-7.

FRISACH, M., "El romànic s'obrirà el 13 de desembre" in *Avui*, 8 July 1995, p. 22.

"El último viaje del ábside de Taüll" in *La Vanguardia*, 8 July 1995.

FONTOVA, R., "El MNAC abrirá el 13 de diciembre" in *El Periódico*, 8 July 1995, p. 22.

VIDAL J., "Las salas de arte románico del MNAC serán abiertas al público el próximo 13 de diciembre" in *El País*, 8 July 1995.

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Graphic Collections

Manel Plana

All the collections of photographic material described below are part of the photographic archives of the MNAC's Documentation Department.

The graphic collection of the MNAC's Documentation Department is arranged in monographic series and chronological series. All the graphic chronicle of the relocation and installations can be found in the chronological series. The graphic documentation of the state of each work of art at each of the museographic stages it has passed through can be found arranged as monographs in the dossiers containing all the information on each item, from its file to photocopies of different articles. Part of this information consists in the contacts or photographic copies of the different pictures taken of the work.

Chronological Series of the Graphic Collection

1. Detachment and Move to Barcelona (1919-1923)

The photographic reportage begins with views of the original locations of the churches containing the mural paintings.

The detachments began in 1919 and ended in 1923. The work was carried out by a team of Italian restorers under the direction of Sr. Steffanoni, Sr. Cividini and Arturo Dalmati.

The photographic collection covers the work of detachment, transfer, packing and transport by mule of the paintings from Sant Climent de Taüll and Santa Maria de Taüll, Sant Joan de Bof and Santa Eulàlia d'Estaon, from the Pyrenean villages to the points from which they were sent on to Barcelona.

See general graphic album No. 12: 38 b/w photos in 18x24 and 9x14 format. See also the Romanesque graphic album No. 2: 13 b/w photos 18x24: location of Romanesque churches, 13 b/w photos 18x24; packing mural paintings and transport by mule, and subsequent installation 1924-1931?? Ciutadella.

2. The Apses at the Museu de la Ciutadella. Romanesque Installation in La Ciutadella (1921-1922)

Reportage on the work of installation of the Romanesque apses in the rooms of the Museu de la Ciutadella.

The rest of the photographic collection is of the final state of the rooms and of the exhibition as a whole. Total 16 b/w photos in 18x24 format.

See general graphic album No. 9 and Romanesque album No. 11; 29 b/w photos 18x24 plus 49x14 (complete reportage).

3. Move to and Installation in the Palau Nacional, Museu d'Art de Catalunya. 1934

In album No. 8 of the general graphic chronicle, two photos of the Santa Eulàlia d'Estaon room, b/w 18x24 (1934-1936).

Album No. 10, general, collection of pho-

tographs of the work of installation of the Romanesque at the MAC (1932-1934), with views of the apses: 10 b/w photos 18x24.

4. During the Civil War. The Move to Olot and Exhibition in Paris in 1937

Album No. 15 of the general graphic chronicle: collection of photographs of the departure by lorry of the Romanesque apses and items from the Museum for Olot (29/11/1936), of the journey and arrival in the town where they are deposited in an improvised warehouse in the church of Sant Esteve.

Also part of the collection is the reportage on the premises of the General Commissariat of Museums, which was provisionally established in Olot, and of the restoration workshops with Sr. Domènec Xarrié, Sr. Jesús Arcas and Sr. Manuel Grau, who were in charge of the workshops. 24 b/w photos 18x24.

Album No. 16 of the general graphic chronicle: from the same collection as the last, many repeated.

Reportages of the transfers of the MNAC collections, of the confiscations made during the Civil War, of the journey to Olot and of the warehouses in the Church of Sant Esteve.

It also includes a photograph of the arrival at the Museu d'Art de Catalunya of the items forming part of the exhibition of Romanesque art at the Jeu de Paume in Paris and also at the Maisons-Laffitte Castle in 1937; furthermore, five photocopies of the installation; 12x17 b/w.

5. Romanesque Exhibition 1961

(See general graphic chronicle album No. 16)

That year the Romanesque installation was added to with the Cardona Porch (Room I), of which there is a photographic reportage (the

exhibition was organised by the Spanish Government under the auspices of the Council of Europe). Some of the mural paintings from Sixena (Chapter Hall) –5 photos– were also added, as well as some of the panels of profane scenes –2 photos– b/w 18x24.

6. Detachment of the Second Layer of the Paintings in the Central Apse of Santa Maria de Taüll in 1969

There is no reportage of the detachments, but there is of the restoration of the nave, which was taking place at the same time. A first group of photographs of the works *in situ* (7 photos). A second group reflects the work in the workshops of preparing and transferring the paintings by the restoration team of the Museu d'Art de Catalunya (5 photos). Total 12 photos. b/w 18x24.

7. The Refurbishing of the Romanesque by Joan Ainaud in 1973

Reportage on the work to refurbish the Romanesque rooms. General graphic chronicle album No. 20. 29 b/w photos 18x24.

Continuation of the subject in album No. 20 bis. 25 b/w photos 18x24. Also includes a small photographic collection in colour of the final state of the rooms, 20 colour photos 9x15.

On the final state of the rooms in 1973 there is abundant photographic material in album No. 21 of the general graphic chronicle.

In the album of the Romanesque graphic chronicle: 1973 installation, 6 b/w photos 18x24.

Last detachments in Sant Joan de Boí 1976-1977, 7 b/w photos 18x24.

8. Detachment of Paintings from the Sixena Chapter Hall 1960

The first part of the reportage begins with the

view of the scaffolding set up in the monastery chapter hall, in which the restoration team of the Museu d'Art de Catalunya can be seen working on the detachment of the paintings.

The second part of the collection consists of the reportage on the restoration of the paintings in the restoration workshops of the Museu d'Art de Catalunya and the work of preparing the detached wall paintings, including their transfer to panels.

See album No. 12 of the general graphic chronicle; 13 b/w photos 18x24.

See also Romanesque graphic chronicle album No. 35.

Monographic Series: albums of the graphic chronicle

(Almost all the albums in this chronicle include photographs of the original locations and of the first installations.)

Sant Pere de la Seu d'Urgell

Album No. 1; 15 b/w photos 18x24, reportages of the 1934 installation; includes a photograph of the calculation of the price per square palm.

Sant Joan de Boí

Album No. 2; 13 photos, location and state of the church, 13 of the paintings being transported by mule, 12 of the 1934 installation in the Ciutadella; 6 of the 1973 installation; 8 of the state of the church in 1977; 1 of the detached wall paintings of Boí in 1981. b/w, 18x24.

Album No. 3: 57 b/w photos 18x24.

“ No. 4: 43 “ “ “

“ No. 5: 28 “ “ “ plus one in



colour of the same format; identification of the fragments.

Sant Quirze de Pedret

Album No. 6: the photographic collection. Begins with the geographic location of the churches: 3 b/w photos 12x16. Continues with other graphic illustrations from before the detachment: 3 b/w photos 18x24. A single photo of the calculation of the price per square palm. 19 b/w photos 18x24 installation reportage.

Album No. 7: graphic illustration before detachment, 3 b/w photos 18x24. Several previous installations, 12 b/w photos 18x24. Interior of the Church of Sant Quirze, 3 b/w photos 18x24. A single photo of reliquaries b/w 18x24.

Album No. 7 bis: installation 1994-1995 27: 18x18 colour photos.

Sant Pere d'Àger

Album No. 8: graphic illustration Vallhonrat before detachment, 1 colour photo 12x18. State of the church –interior and exterior– in 1921, 8 b/w photos 18x24.

Of the panels with the first paintings transferred, 5 b/w photos 18x24.

Sant Pere del Burgal

Album No. 9: reportage of the state of the paintings in 1902; 11 b/w photos 18x24. Of the restored paintings, 33 b/w photos 18x24. Different installations –1934-1961-1973– 9 b/w photos 18x24. A single illustration, sketch before detachment, b/w 18x24. Work of installation of the apse in 1972, 2 b/w photos 18x24.

Santa Maria d'Àneu.

Album No. 10: original state of the church and paintings, 5 b/w photos 18x24. Calculating the

price per square palm, 1 b/w photo 18x24. Installation and exhibition Ciutadella 1931-1932-1934, 7 b/w photos 18x24. Refurbishing of the previous installation for the 1973 exhibition, 7 b/w photos 18x24. One photo reproductions of Vallhonrat, colour 13x18.

Castell d'Orcau-Argolell

Album No. 11: mural paintings, 5 b/w photos 18x24. Illustration, one b/w photo 18x24.

Santa Eugènia d'Argolell: mural paintings, 12 b/w photos 18x24.

Sant Pere d'Esterri d'Àneu

Album No. 12: location church, 1 b/w photo 13x18. Mural paintings, 5 b/w photos 13x18.

Sant Maria de Mur

Album No. 12: location church, 2 b/w photos 11x18. Mural paintings, 3 b/w photos 18x24. Mural painting, 1 colour photo 20x25.

Marmellar

Album No. 12: original location Marmellar Castle, 6 b/w photos 18x24. Mural paintings, 6 b/w photos 18x24, 13x18. Reportage 1964 exhibition Tinell, 4 b/w photos 13x18.

Santa Maria de Ginestarre de Cardós

Album No. 13: drawing calculation price per square palm, 1 b/w photo 13x24. Mural paintings and different installations, 23 b/w photos 13x24.

Sant Pau d'Esterri de Cardós

Album No. 13: mural paintings and different installations, 15 b/w photos 13x24.

Sant Climent de Taüll

Album No. 14 Section I: original geographical locations, architecture, details inscriptions, 42 b/w photos 20x25. Illustration calculation price square palm, 1 b/w photo 18x24.

Album No. 15 Section II: mural paintings, different installations, 44 b/w photos 18x24. Pantocrator, 1 colour photo 18x24.

Album No. 16: mural paintings and some architectural elements, 29 b/w photos 13x24.

Santa Maria de Taüll

Album No. 17: original locations architecture, first installations, Vallhonrat reproductions, 49 b/w photos 13x24.

Album No. 18 - section I: Vallhonrat reproductions mural paintings, 42 b/w photos 13x24.

Album No. 19 - section II: mural paintings, 52 b/w photos (2 in colour) 13x24.

Album No. 20 - section III: mural paintings, graffiti, interior architecture, details, 1973 installation, 48 b/w photos 13x24.

Album No. 21 - section IV: graffiti, mural paintings, 24 b/w photos 13x24.

Album No. 22: identification of fragments, 1973 installation, mural paintings, 31 b/w photos 13x24.

Sant Pere de Sorpe

Album No. 23: mural paintings, 42 b/w photos 13x24.

Sant Joan de Surp

Album No. 23: mural paintings 2 b/w photos 13x24.

Santa Eulàlia d'Estaon

Album No. 24: original location, calculation square palm, mural paintings, installations rooms, 51 b/w photos (2 in colour) 13x24.

Sant Miquel d'Engolasters

Album No. 25: illustration before detachment, mural paintings, calculation price square palm, original location, first installations, 23 b/w photos 9x13, 13x24. 21 colour photos 12x18.

Sant Romà de les Bons

Album No. 25: consecration document, mural paintings, 6 b/w photos 13x24, 10 colour photos 13x18.

Sant Esteve d'Andorra la Vella

Album No. 26: mural painting, 32 b/w photos 13x24. 17 colour photos 13x24.

Cardona Porch

Album No. 27: mural paintings, 10 b/w photos 13x24, 7 colour photos 13x24.

Sant Cristòfor de Tosses

Album No. 28: walls of the apse, 5 b/w photos 12x18. Paintings in the apse, 7 b/w photos 18x24.

Santa Caterina d'Isaverre

Album No. 28: mural paintings, 2 b/w photos 18x24.

Palau Berenguer d'Aguilar

Album No. 28-29: original location, mural paintings, previous installations, 20 b/w photos 18x24.

Mosoll

Album No. 28-29: original location, paintings, previous installations, 16 b/w photos 18x24.

Sant Pere d'Arlanza

Album No. 29: geographical locations, architecture church, mural paintings, previous installations, 37 b/w photos 18x24.

Album No. 30: illustrations before detachment, original state of the paintings, transfers, 26 b/w photos 18x24.

Sixena (historical)

Album No. 31: state chapter house before fire, mural paintings, 24 b/w photos 16x22, 11x17.

Album No. 32: lateral walls Sixena before fire, 28 b/w photos 18x24.

Album No. 33: genealogy of Christ according to Saint Matthew (I), 22 b/w photos 18x24.

Album No. 34: genealogy of Christ according to Saint Luke (II), 26 b/w photos 18x24.

Album No. 35: reportage state monastery after 1939, 1960 detachments of the mural paintings by the MAC's restoration team, 52 b/w photos (8 in colour) 18x24, 5.5x8, 25x20.5.

Album No. 36: lateral panels of the arches, 36 b/w photos 18x24. Water-colours by pupils of Lluís Domènech i Muntaner at the Escola d'Arquitectura, before the civil war, 16 colour photos 17x13.

Album No. 37: profane mural paintings Sixena, 34 b/w photos 18x24, 1 colour photo 20x25.

Album No. 38: previous installations, Sixena, Palau Nacional 1961, 11 b/w photos 18x24.

Sixena unidentified profane, 23 colour photos 18x24.

Montmagastre

Album No. 39: vault of the apse, mural painting, 2 colour photos 18x24.

1. In the book *Viatge a Olot*, published in 1994 by Barcelona City Council with the collaboration of the Museu Comarcal de la Garrotxa, the Arxiu Històric Comarcal d'Olot and the Fundació "la Caixa", the complete photographic reportage of the moves is dealt with, as well as the reportage of the Romanesque exhibition in Paris and that of the return of the items to Barcelona.

Audiovisual Collections

Alícia Cornet

The MNAC's Sound and Image Archives have an audiovisual collection of great value of the detachment, transportation and installation of the Romanesque mural paintings. This collection covers the history of the MNAC's mural paintings from the first campaigns, carried out in the twenties, to detach the paintings from the churches in the Catalan Pyrenees, such as those of Santa Maria de Taüll and Sant Climent de Taüll, Sant Joan de Boí and others. It also shows the installation of the collection in the Museu de la Ciutadella in 1924, the move to the Museu d'Art de Catalunya in 1932 and the 1973 mounting, which allowed a reorganisation of all the Romanesque mural paintings. Finally, this audiovisual collection tells us about the last move and installation in the permanent exhibition rooms, inaugurated in December 1995. This last period is docu-

ent in great detail, thanks to the film coverage by the MNAC's photographic department.

Arrancament de les pintures murals de Sant Joan de Boí, by Agustí Castellví and Antoni Benés, produced by Barcelona City Hall's MAV, 1970, 16mm film.

Museu d'Art de Catalunya. 100 anys (1891-1991), by Videografia, produced by Barcelona City Hall, 1991, VHS format.

Intura mural romànica. Gènesi d'una col·lecció única, by Videografia, produced by the

Museu Nacional d'Art de Catalunya, 1995, VHS format.

Documentació filmada de la rehabilitació del Palau Nacional i trasllat, muntatge i instal·lació del romànic, by the members of the MNAC's photographic department, 1992-1995, tapes 8 mm. Hi.

Més voltes pel Romànic, by Televisió de Catalunya S.A., 1995, Betacam format.

Documentació filmada del trasllat, muntatge i instal·lació del romànic, by Televisió de Catalunya, 1995, 16 tapes Betacam format.

Index of Annexes

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Neus Conte

Chronology of the Relocation of the Mural Painting during the Civil War, 1936-1939
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Brief Guide to the Collection of Romanesque Art

Section I

Introduction: the apse paintings from Sant Pere in La Seu d'Urgell

The decoration of the monumental apse from Sant Pere in La Seu d'Urgell presides over this section, as a sample of the Museum's most paradigmatic works: the mural groups. This miscellany of works, representative of the whole collection, is accompanied by examples of sculpture and panel painting. Next to them, a collection of coins and three tombstones serve as a reference to the historical context and to the presence of different cultures; that is, to the setting in which Romanesque art develops. The stone sculptures from the 6th to the 11th centuries –up to the beginning of Romanesque art, then– bear witness to this and they serve to create a formal comparison between two groups of works which are different in style and quality: art from Cordoba and Catalan sculpture from the 10th and 11th centuries.

1. APSE FROM SANT PERE IN LA SEU D'URGELL. First half of the 12th century. Fresco. 705 x 565 x 300 cm. From the Church of Sant Pere (now Sant Miquel), belonging to the episcopal group of La Seu d'Urgell (Alt Urgell). Acquisition, 1919-23. MNAC/MAC 15867

2. ALTAR FROM SANT SERNI DE TAVÈRNOLLES. 12th century. Tempera on wood. Frontal: 118 x 218 cm (MNAC/MAC 15786); sides: 120 x 95 cm (MNAC/MAC 64003) and 122 x 93 cm (MNAC/MAC 64006). From the Monastery of

Sant Serni de Tavèrnolles (Les Valls de Valira, Alt Urgell). Acquisition, 1907 and acquisition of the Muntadas Collection, 1956. MNAC/MAC 15786, 64003, 64006

3. ALTAR FRONTAL FROM LA SEU D'URGELL, ALSO KNOWN AS THE APOSTLES FRONTAL. First half of the 12th century. Tempera on wood. 102 x 151 cm. From a church belonging to the bishopric of La Seu d'Urgell. Acquisition, 1905. MNAC/MAC 15803

4. ALTAR FRONTAL FROM IX. First half of the 12th century. Tempera on wood. 92 x 157 cm. From the Church of Sant Martí in Ix/Hix (La Guingueta d'Ix/Bourg-Madame, Cerdagne). Acquisition of the Bosch i Barrau Collection, 1889. MNAC/MAC 15802

5. PRE-ROMANESQUE ALTAR. Reutilised as a holy water stoup. 10th century. Stone. 59 x 35 x 35 cm. From a church near Cardona (Bages). Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 10000

6. THE CUBELLS CHRIST. 13th century. Tempera on wood carving with polychromy in tempera (the current polychromy is later). 67 x 19 x 14.2 cm. From the Church of Santa Maria in Cubells Castle (Noguera). On permanent loan from the Ministry of Culture, 1985. MNAC/MAC 122672

7. THE PRUNERES VIRGIN. Second half of the 12th century. Wood carving with traces of polychromy in tempera. 153 x 23 x 19 cm. From the Hermitage of Santa Bàrbara de Pruner (Montagut de Fluvia, Garrotxa). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4386

8. THE MOROR CHRIST. c. 1180. Cast bronze, engraved and gilded. 19.3 x 19 x 3.5 cm. From the Church of Sant Miquel de Moror (Sant Esteve de la Sarga, Pallars Jussà). Acquisition, 1920. MNAC/MAC 12095

9. THE ORIGINS OF CATALAN COINAGE

9.1 Luis the Pious, *Diner* (814840). Silver. 1.62 g, 19 mm. MNAC/GNC 62805

9.2 *Diner* in imitation of a Carolingian *denier* with Charles' name, minted in Barcelona. 10th century. Silver. 1.25 g, 18 mm. MNAC/GNC 15145

9.3 *Diner* from the bishopric of Vic, attributed to the Bishop Guadimir (948-957). Silver. 1.01 g, 14 mm. MNAC/GNC 15254

9.4 Hisham II, *Dinar* (AH 366-403/AD 976-1013), minted in Al-Andalus. Gold. 3.34 g, 22 mm. MNAC/GNC 37925

9.5 Ramon Berenguer I, *Mancús* (1035-1076), minted in Barcelona. Gold.

3.42 g, 22 mm. MNAC/GNC 15150

10. ISLAMIC TOMBSTONE WITH AN EPITAPH FROM AMTA BEN HARUN BEN IAHDAAH. 1011. Marble. 91 x 43 x 5 cm. From Cordoba. Acquisition, 1972. MNAC/MAC 108260

11. CHRISTIAN TOMBSTONE WITH AN EPITAPH FROM LEVANTO. Probably by *Gomarellus*. 976. Marble. 34 x 40 x 8 cm. Probably from Barcelona. Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 14302

12. HEBREW TOMBSTONE WITH AN EPITAPH FROM ABRAHAM. 9th or 10th century. Marble. 36 x 32 x 10 cm. On loan from the Museu d'Història de la Ciutat in Barcelona (MHC 1094), 1995. MNAC/MAC 200816

13. VISIGOTHIC PLAQUE. Second half of the 6th century. Marble. 44.5 x 46.5 x 8 cm. Probably from the Cathedral of Barcelona. Gift of F. Torres to the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 9994

14. VISIGOTHIC CAPITAL. 7th century. Stone. 41 x 41 x 40 cm. From Cordoba. Admission, 1934. MNAC/MAC 22993



15. CALIPHAL CAPITAL. First half of the 10th century. Marble. 22 x 21.5 x 21.5 cm. From Madinat-al-Zahara (Cordoba). Gift of Manuel Trallero, 1982. MNAC/MAC 122203

16. ABACUS FROM A CALIPHAL CAPITAL. First half of the 10th century. Marble. 20 x 34 x 32 cm. From Madinat-al-Zahara (Cordoba). Acquisition, 1971. MNAC/MAC 108261

17. CALIPHAL CAPITAL. Second half of the 10th century. Marble. 28 x 23 x 24 cm. From Cordoba. Gift of Lluís Barbié, 1985. MNAC/MAC 122673

18. EMIRAL OR CALIPHAL CAPITAL. First third of the 10th century. Marble. 24 x 23 x 23 cm. From Cordoba. Gift of Artur Ramon, 1982. MNAC/MAC 122204

19. CALIPHAL CAPITAL. c. 964-65 (According to the inscription from the period of the Caliph Al-Hakam II [961-76]). Marble. 41.5 x 36 x 36 cm. From the Alcazar of Cordoba. Gift of the Claretian Fathers of Barcelona, 1977. MNAC/MAC 122001

20. CAPITAL FROM CASTELLTERÇOL. End of the 10th century. Stone. 32.8 x 32.5 x 32.5 cm. From Castellterçol (Vallès Oriental). Acquisition, 1974. MNAC/MAC 113731

21. ISLAMIC PLAQUE. 11th century. Alabaster. 20 x 22 x 5 cm. From a royal palace in Toledo. Acquisition, 1921. MNAC/MAC 24194

22. IMPOSTS FROM THE CATHEDRAL OF BARCELONA. 11th century. Stone. 27.5 x 70 x 43 cm (MNAC/MAC 14397) and 27.5 x 40 x 43 cm (MNAC/MAC 14398). From the Romanesque Cathedral of Barcelona. Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 14397, 14398

23. CAPITAL AND IMPOST FROM ÀGER. 11th century. Stone. 30 x 33 x 37 cm (MNAC/MAC 24002) and 12 x 43 x 43 cm (MNAC/MAC 49368). From the Church of Sant Pere in Àger (Noguera). Admission before 1926. MNAC/MAC 24002, 49368

24. IMPOST FRAGMENT. 11th or 12th century. Marble. 17 x 41.5 x 23 cm. Probably from Roussillon. On permanent loan, 1984. MNAC/MAC 122500

25. CAPITAL FROM SANT PERE DE RODES. 11th or 12th century. Stone. 25.5 x 25 x 33 cm. From the Abbey of Sant Pere de Rodes (El Port de la Selva, Alt Empordà). Gift of Macari Golferichs, 1921. MNAC/MAC 24114

Section II

The paintings from the Church of Sant Joan in Boí

In order to allow the paintings to be seen in their original location, this section evokes the inside of the church from which they were removed. The entrance to this section corresponds to what was once the central apse. The preserved paintings were concentrated on the aisles, where *The Stoning of St. Stephen* was originally sited; it must have formed part of a cycle devoted to various saints. The intradoses of the arches are also noteworthy, with portrayals of animals and fabulous beings. This is one of the earliest mural groups known, and it has been associated with the illumination of 11th-century Catalan Bibles, prior to the arrival of the Italian influence. An important example of exterior decoration is preserved from the north portal, although it is chronologically later than it.

26. PAINTINGS FROM THE CHURCH OF SANT JOAN IN BOÍ. c. 1100. Fresco. The Stoning of St. Steven: 184 x 353 cm (MNAC/MAC 15953); Paradise and Hell: 188 x 357 cm (MNAC/MAC 15951); Falconer: 142 x 146 cm (MNAC/MAC 15862). From the

Church of Sant Joan in Boí (La Vall de Boí, Alta Ribagorça). Acquisition, 1920-22. MNAC/MAC 15796, 15822, 15862, 15951-15956, 200423-200441, 200817

27. ALTAR STONE FROM CASTELLET, ALSO KNOWN AS LES MASUQUES ALTAR STONE. 10th century. Reutilised marble. 30 x 117 x 74 cm. From the Church of Sant Esteve in Castellet, near Les Masuques (Castellet i la Gornal, Alt Penedès). On permanent loan from the Museu Diocesà de Barcelona. MNAC/MAC 122012

28. CERDANYA CHRIST. 12th century. Wood carving. 64 x 67 x 10 cm. From Cerdanya. Former collection of the Barcelona Museums. MNAC/MAC 113157

29. THE ESCALÓ CHRIST. 12th century. Wood carving with traces of polychromy in tempera. 74 x 71 x 14 cm. From Escaló (La Guingueta d'Àneu, Pallars Sobirà). On permanent loan, 1958 (body) and acquisition, 1958 (head). MNAC/MAC 64960

Section III

The Pedret Circle paintings

The paintings linked to the circle of the so-called Master of Pedret mark one of the most significant trends of Romanesque painting in Catalonia. They are determined by the Italian influence –more specifically, from Lombardy–, meaning that they are characterized by a classicism. All these mural groups have been dated from the end of the 11th century to the beginning of the 12th. Aside from the paintings from Pedret, the Apostles from Àger and the apses from the churches of Santa Maria d'Àneu and Sant Pere in El Burgal are noteworthy. The latter presents a depiction of Llúcia, Countess of Pallars, in the role of donor. The metalwork and the coins are precisely a reference to the role of the Church and the power of the counts.

30. SIDE APSES FROM PEDRET. End of the 11th century. Fresco. South apse: 325 x 315 x 325 cm (MNAC/MAC 15973); north apse: 300 x 275 x 250 cm (MNAC/MAC 22991-22992). From the apsidioles of the Church of Sant Quirze in Pedret (Cercs, Berguedà). Acquisition, 1922. MNAC/MAC 15973, 22991-22992

31. APOSTLES FROM ÀGER: THADDAEUS AND JAMES. c. 1100. Fresco. 280 x 145 cm. From the central apse of the Church of Sant Pere in Àger (Noguera). On permanent loan, 1958. MNAC/MAC 65467

32. COINAGE OF THE COUNTS AND BISHOPS

A. COUNTY COINAGE

32.1 Berenguer Ramon I *Diner*, (1018-35), minted in Barcelona. Silver. 0.33 g, 13 mm. MNAC/GNC 302277

32.2 Ramón Berenguer IV *Diner*, (1131-62), minted in Girona. Silver. 0.37 g, 15 mm. MNAC/GNC 15191

32.3 *Diner* from the county of Besalú, attributed to Guillem I (1020-52). Silver. 0.88 g, 14 mm. MNAC/GNC 11153

B. EPISCOPAL COINAGE

32.4 *Diner* from the bishopric of Vic, attributed to Bishop Oliba (1017-46). Silver. 0.99 g, 15 mm. MNAC/GNC 10730

32.5 & 32.6 *Diner* from the bishopric of Vic, attributed to Bishop Berenguer Sunifred (1073-99). Silver. 0.96 g, 15 mm. (MNAC/GNC 10732) and 1.03 g, 16 mm. (MNAC/GNC 15263)

32.7 *Diner* from the bishopric of Vic, Girona. 11th century. Silver. 0.30 g, 13 mm. MNAC/GNC 15183

32.8 *Diner* from the bishopric of Girona. 11th century. Silver. 0.40 g, 12 mm. MNAC/GNC 15177

33. CROZIER: St. Michael Killing the Dragon. Limoges, c. 1230-40. *Champlevé* enamelling on gilded and engraved cast copper. Cast figures in full relief. 33 x 7 cm (volute diameter) and 3.5 cm (knob diameter). Bequest of Santiago Espona, 1958. MNAC/MAC 65523

34. CROZIER. Limoges, c. 1230-40. *Champlevé* enamelling on gilded cast copper. 34 x 11 cm (volute diameter) and 8 cm (knob diameter). Bequest of Santiago Espona, 1958. MNAC/MAC 65522

35. CROZIER. The Annunciation. Limoges, c. 1240. *Champlevé* enamelling on gilded and engraved cast copper. Cast figures in full relief. 37.5 x 14 cm (volute diameter) and 11 cm (knob diameter). Bequest of Santiago Espona, 1958. MNAC/MAC 65524

36. ENAMELLED PLAQUE: Sanctified Bishop. 13th century. Embossed copper with *champlevé* enamelling. 22 x 11.4 x 2 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4568

37. APSE FROM SANTA MARIA D'ÀNEU. End of the 11th century. Fresco. 760 x 460 x 240 cm. From the Church of Santa Maria d'Àneu (La Guingueta d'Àneu, Àneu Valley, Pallars Sobirà). Acquisition, 1919-23. MNAC/MAC 15874

38. APSE FROM EL BURGAL. End of the 11th century. Fresco. 720 x 470 x 500 cm. From the Church of Sant Pere in El Burgal (La Guingueta d'Àneu, Àneu Valley, Pallars Sobirà). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 113138

39. THE DONORESS OF SANT PERE IN ESTERRI D'ÀNEU. Second half of the 12th century. Fresco. 165 x 67 x 28 cm. From the old church of Sant Pere in Esterri d'Àneu (Àneu Valley, Pallars Sobirà). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4530

40. THE ORCAU APOSTLES. First half of the 12th century. Fresco. 172 x 186 cm. From the apse of Santa Maria in Orcau Castle (Isona i Conca Dellà, Pallars Jussà). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4532

41. PAINTINGS FROM ARGOLELL. First half of the 12th century. Fresco. Mary: 70 x 135 cm (MNAC/MAC 4536); Apostles: 123 x 129 cm (MNAC/MAC 4537); window: 104 x 76 cm (MNAC/MAC 4538). From the apse of Santa Eugènia in Argolell (Les Valls de Valira, Alt Urgell). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4536, 4537, 4538

Section IV

Christ and Mary in iconography

Romanesque figurative compositions –on apses, altar frontals, baldachins, châsses, etc.– very often have in the centre an image of Christ or the Virgin in a majestic and frontal attitude. Although these compositions present different variants, they are almost always Theophanic visions. Among the commonest is the Christ in Majesty (*Maiestas Domini*), surrounded by the symbols of the Evangelists (the Tetramorph), and accompanied by apostles. Other themes such as the Ascension, the Crucifixion and the Virgin with Child are also relevant. The existing iconographic or compositional differences are basically linked to the will of the patron, as well as to the models used by the artists.



42. SOUTH APSE AND COLUMN OF THE CENTRAL APSE FROM MUR. c. 1150. Fresco. Apse: 440 x 490 x 165 cm (MNAC/MAC 68710) and column: 279 x 29 cm (MNAC/MAC 68711). From the Church of Santa Maria in Mur (Castell de Mur, Pallars Jussà). *Usucapio*, 1961. MNAC/MAC 68710, 68711

43. APSE FROM MARMELLAR. 11th or 12th century. Fresco. 480 x 355 x 300 cm. From the chapel of Sant Miquel in Marmellar Castle (El Montmell, Baix Penedès). Acquisition, 1962. MNAC/MAC 71998

44. APSE FROM ESTERRI DE CARDÓS. Second half of the 12th century. Fresco. 610 x 430 x 370 cm. From the Church of Sant Pau in Esterri de Cardós (Cardós Valley, Pallars Sobirà). Acquisition, 1919-23. MNAC/MAC 15970

45. ALTAR FRONTAL FROM ESTERRI DE CARDÓS. 1225 (according to the inscription). Stucco relief, formerly varnished with *colradura* and tempera on wood. 108 x 161 cm. From the Church of Sant Pau in Esterri de Cardós (Cardós Valley, Pallars Sobirà). Acquisition, 1911. MNAC/MAC 15889

46. APSE FROM GINESTARRE. Second half of the 12th century. Fresco. 580 x 365 x 250 cm. From the Church of Santa Maria in Ginestarre (Esterri de Cardós, Cardós Valley, Pallars Sobirà). Acquisition, 1919-23 and 1964. MNAC/MAC 15971

47. BALDACHIN FROM TOST. c. 1200. Tempera on wood. 177 x 175 cm. Probably from the Church of Sant Martí in Tost (Ribera d'Urgell, Alt Urgell). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3905

48. ALTAR FRONTAL FROM BENAVENT. End of the 13th century. Wood carving with polychromy in tempera (the current polychromy is later). 84 x 144 cm. From the Church of Santa Margarida in Benavent (Isona i Conca Dellà, Pallars Jussà). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3914

49. THE SO-CALLED ALTAR FRONTAL FROM ESQUIUS. Second half of the 12th century. Tempera on wood. 96 x 132 cm. Esquius has never been identified as a place name. Bequest of Santiago Espona, 1958. MNAC/MAC 65502

50. CHRIST FROM CABDELLA. 12th or 13th century. Wood carving. Christ: 218 x 180 x 25.5 cm and cross: 227 x 179 x 3.5 cm. From the Church of Sant Vicenç in Cabdella (La Torre de Cabdella, Pallars Jussà). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3936

51. CROSS FROM BAGERGUE. c. 1200. Tempera on wood. 126 x 98 cm. From the Church of Sant Feliu in Bagergue (Alt Aran, Val d'Aran). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3937

52. MAJESTY FROM ÉLLER. Second half of the 12th century (modern cross). Wood carving with polychromy in tempera. 83 x 85 x 15 cm. Probably from Éller (Bellver de Cerdanya, Baixa Cerdanya). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 49366

53. CALVARY FROM TRAGÓ DE NOGUERA. Second half of the 13th century. Wood carving with polychromy in tempera. Christ: 60 x 55.5 x 13.5 cm; cross: 148 x 81 x 9 cm. Probably from Tragó de Noguera (Os de Balaguer, Noguera). Acquisition, 1912. MNAC/MAC 15887

54. CHRIST IN MAJESTY FROM BASARÁN. 12th century. Wood carving with traces of polychromy in tempera. 56 x 20 x 10.5 cm. From Basarán (Huesca). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3927

55. FRAGMENT OF AN ITALIAN CROSS. Second half of the 13th century. Tempera on wood. 32 x 25 cm. Probably from the region of Las Marcas (Central Italy). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 5215

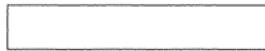
56. CHRIST. c. 1180. Cast bronze, engraved and gilded. 22 x 21.5 x 4 cm. Probably from Cerdanya. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4553

57. CHRIST ON THE CROSS. Limoges, c. 1190. *Champlevé* enamelling on gilded and engraved cast copper. 28.6 x 19 x 0.5 cm. Bequest of Santiago Espona, 1958. MNAC/MAC 65508

58. BOOKBINDING PLATE: Crucifixion. Limoges, c. 1190-1200. *Champlevé* enamelling on cast copper; the heads in relief. 23.5 x 10.5 cm. Bequest of Santiago Espona, 1958. MNAC/MAC 65558

59. CHÂSSE: Resurrection. Limoges, c. 1220. *Champlevé* enamelling on gilded cast copper over wood core. Heads in relief. 30 x 22 x 8 cm. Bequest of Santiago Espona, 1958. MNAC/MAC 65530

60. VIRGIN. Limoges, second third of the 13th century. Gilded cast copper. 22.5 x 8 x 4.8 cm. Bequest of Santiago Espona, 1958. MNAC/MAC 66057



61. VIRGIN FROM GER. Second half of the 12th. Wood carving with polychromy in tempera. 52.5 x 20.5 x 14.5 cm. From the Church of Santa Coloma in Ger (Baixa Cerdanya). Bequest of Santiago Espona, 1958. MNAC/MAC 65503

62. VIRGIN. 13th century. Wood carving with polychromy in tempera. 54 x 16 x 17.5 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3921

63. VIRGIN. 13th century. Wood carving with traces of polychromy in tempera. 64 x 20 x 14 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4397

64. VIRGIN FROM MATADARS. Second half of the 12th century. Wood carving with traces of polychromy in tempera. 60 x 33 x 28 cm. From the Church of Santa Maria in Matadars or El Marquet (El Pont de Vilomara, Bages). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4392

65. ALTAR FRONTAL FROM ALÓS D'ISIL. First quarter of the 13th century. Stucco relief and tempera on wood. 106 x 161 cm. Probably from Alós d'Isil (Alt Àneu, Pallars Sobirà). Acquisition, 1907. MNAC/MAC 15834

66. ALTAR FRONTAL FROM CARDET. Second half of the 13th century. Tempera on wood with stucco relief formerly varnished with *colradura*. 96 x 160 cm. From the Church of Santa Maria in Cardet (La Vall de Boí, Alta Ribagorça). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3903

67. ALTAR FRONTAL FROM MOSOLL. Middle of the 13th century. Tempera on wood. 100 x 168 cm. From the Church of Santa Maria in Mosoll (Das, Baixa Cerdanya). Acquisition, 1906. MNAC/MAC 15788

Section V

The paintings from Sant Climent in Taüll. Liturgical furnishings in the Romanesque church

The central apse of Sant Climent in Taüll, with its commanding figure of Christ in Majesty, one of the masterpieces of Romanesque painting, is one of the high points of this tour. The figure of Christ is one of the most convincingly realized portrayals we have of the estrangement of God and man, and it shows a marked anti-naturalistic intention and a subtle geometricisation of forms. The presence of an exceptional master in Taüll is possibly a reflection of the economic power of the Erills, the feudal lords of the Boí Valley, and of the character of Ramon, bishop of Roda, who consecrated the church in 1123. The north apse was the work of another artist, linked to the paintings from Santa Maria in Taüll. Completing this section are several examples of liturgical objects and church furnishings from the Romanesque period.

68. PAINTINGS FROM SANT CLIMENT IN TAÜLL. c. 1123. Fresco. Central apse: 770 x 420 x 590 cm (MNAC/MAC 15966); angel: 136 x 77 cm (MNAC/MAC 15860); seated figure: 131 x 116 cm (MNAC/MAC 200752); window: 68 x 33 cm (MNAC/MAC 113142). From the Church of Sant Climent in Taüll (La Vall de Boí, Alta Ribagorça). Acquisition, 1923 and 1960. MNAC/MAC 15806, 15860, 15966-15968, 22996, 113142, 200752

69. ALTAR FRONTAL FROM SANT CLIMENT IN TAÜLL. Second half of the 13th century. Tempera on wood with stucco relief formerly varnished with *colradura*. 93 x 169 cm. From the Church of Sant Climent in Taüll (La Vall de Boí, Alta Ribagorça). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3908

70. PRESBYTERIAL BENCH FROM SANT CLIMENT IN TAÜLL. 12th or 13th century. Carved and openworked wood. 260 x 160 x 62 cm. From the Church of Sant Climent in Taüll (La Vall de Boí, Alta Ribagorça). Acquisition, 1920. MNAC/MAC 15898

71. LIPSANOTHÈQUE FROM SANT CLIMENT IN TAÜLL. End of the 11th century. Wood with polychromy in tempera. 12.5 x 8.5 cm. From the Church of Sant Climent in Taüll (La Vall de Boí, Alta Ribagorça). Bequest of Martí Estany, 1937. MNAC/MAC 37927

72. 'DE PETRVS' CROSS. Castile or León, 1122 (according to the inscription). Bronze with encrusted rock crystals. 47 x 39 x 4 cm. Acquisition, 1906. MNAC/MAC 12180

73. CENSER. Catalonia, second quarter of the 12th century. *Champlevé* enamelling on gilded and engraved cast copper. 13 x 13.5 cm (diameter). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4581

74. CANDLESTICKS. Burgos or Silos, c. 1200. *Champlevé* enamelling on engraved and embossed cast copper. 18.5 x 12.4 cm (MNAC/MAC 65551); 17 x 11.4 cm (MNAC/MAC 65553). Bequest of Santiago Espona, 1958. MNAC/MAC 65551, 65553

75. CHÂSSE OF ST. STEPHEN. Limoges, c. 1210-20. *Champlevé* enamelling on gilded and engraved cast copper over a wood core. 16 x 13 x 5 cm. Bequest of Santiago Espona, 1958. MNAC/MAC 65526

76. CIBORIUM. Limoges, c. 1220-40. *Champlevé* enamelling on embossed, gilded and engraved cast copper. 31 x 14.5 cm (diameter). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4600



77. PYX. Limoges, c. 1220-40. *Champlevé* enamelling on gilded and engraved cast copper. 12.5 x 7.3 cm (diameter). Probably from the Church in Ars (Les Valls de Valira, Alt Urgell). Acquisition, 1906. MNAC/MAC 12107

78. INCENSE BOAT. Limoges, second half of the 13th century. *Champlevé* enamelling on gilded and engraved cast copper. 4.5 x 19 x 8.2 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4567

79. BOOKBINDING PLATE. Christ in Majesty. Limoges, c. 1190-1200. *Champlevé* enamelling on cast copper; cast heads. 24 x 11 cm. Bequest of Santiago Espona, 1958. MNAC/MAC 65560

80. HOLY WATER STOUP. 12th or 13th century. Stone. Base: 76 x 29 x 29 cm; receptacle: 28 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 5298

81. THE SO-CALLED BALDACHIN FROM TOSES. First third of the 13th century. Tempera on wood. 488 x 238 x 216 cm. According to the traditional version this comes from the Church of Sant Cristòfol in Toses (Ribes Valley, Ripollès). One of the capitals supporting the baldachin is from an unknown origin (33 x 29 x 29 cm). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4523-4525

82. ALTAR FROM SANT ROMÀ DE VILA. First half of the 13th century. Tempera on wood with stucco relief. 113 x 125 x 91 cm. From the Church of Sant Romà de Vila (Encamp, Andorra). Acquisition, 1922. MNAC/MAC 15875

83. LEAVES OF A DOOR. 12th century (modified in the 18th century.) Wood and wrought iron attached with spherical nails. 220 x 104 cm (MNAC/MAC 39164) and 220 x 79 cm (MNAC/MAC 39165). On permanent loan, 1942. MNAC/MAC 39164, 39165

87. CAPITAL. First third of the 13th century. Marble. 33 x 27 x 21 cm. Acquisition, 1906. MNAC/MAC 24028

88. CAPITALS FROM BESALÚ. Between 1137 and 1167/71. Stone. 66.5 x 69 x 49.5 cm (MNAC/MAC 200685); 64 x 60 x 55 cm (MNAC/MAC 200686); 66.5 x 65 x 36.5 cm (MNAC/MAC 200687); 64 x 56 x 56 cm (MNAC/MAC 200688) and 63 x 56.5 x 56.5 cm (MNAC/MAC 200689). From the Church of Santa Maria in Besalú (Garrotxa). On permanent loan from the Generalitat de Catalunya (Autonomous Government of Catalonia), Gòdida dation, 1994. MNAC/MAC 200685-200689

89. CAPITALS FROM TAVÈRNOLES. Second half of the 12th century. Granite. 38 x 37.5 x 37.5 cm (MNAC/MAC 22994); 37.5 x 39 x 39 cm (MNAC/MAC 22995); 33 x 37 x 29 cm (MNAC/MAC 24005); 39 x 39 x 30 cm (MNAC/MAC 24007) and 38 x 39 x 38 cm (MNAC/MAC 24008). From the cloister of the Monastery of Sant Serni de Tavèrnoles (Les Valls de Valira, Alt Urgell). Acquisition, 1906. MNAC/MAC 22994, 22995, 24005, 24007, 24008

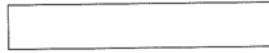
90. FRAGMENTS OF THE CLOISTER OF SANT PERE DE LES PUEL·LES. After 1187. Stone (the traces of polychromy are later.) 210 x 347 x 90 cm. From the old Monastery of Sant Pere de les Puel·les in Barcelona. Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 113143

91. THE SO-CALLED DOUBLE CAPITAL FROM ORPESA. Second half of the 12th century. Stone. 29 x 44 x 25 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 5289

84. VOUSSOIR FROM RIPOLL. Second half of the 12th century. Stone. 52.5 x 34.5 x 26 cm. From the Monastery of Santa Maria in Ripoll (Ripollès). Gift of Antoni Coll i Fort, 1935. MNAC/MAC 12264

85. CAPITAL. End of the 12th century. Stone. 26 x 23 x 23 cm. Probably from the area of Girona or Empordà. Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 14228

86. FRAGMENT OF A CAPITAL. Second half of the 12th century. Marble. 26 x 30 x 17.5 cm. Probably from Roussillon. On permanent loan, 1984. MNAC/MAC 122501



92.1 CAPITALS OF THE PILLAR FROM CAMARASA. First third of the 13th century. Stone. 55 x 47 x 43 cm (MNAC/MAC 17601); 55 x 56 x 59 cm (MNAC/MAC 17602); 55 x 56 x 50 cm (MNAC/MAC 17603); 55 x 45 x 51 cm (MNAC/MAC 17604) and 56 x 56 x 80 cm (MNAC/MAC 17605). From the transept of the Church of Sant Miquel, Camarasa Castle (Noguera). Acquisition, 1929. MNAC/MAC 17601-17605

92.2 CAPITALS FROM THE APSE AT CAMARASA. First third of the 13th century. Stone. 30 x 45 x 26 cm (MNAC/MAC 24010); 34 x 30 x 30 cm (MNAC/MAC 24011); 33 x 52 x 29 cm (MNAC/MAC 24014); 33 x 45 x 31 cm (MNAC/MAC 24020) and 31 x 51 x 32 cm (MNAC/MAC 24021). From the apse of the Church of Sant Miquel, Camarasa Castle (Noguera). Acquisition, 1929. MNAC/MAC 24010, 24011, 24014, 24020, 24021

93. CAPITAL. First half of the 13th century. Stone. 27 x 19 x 19 cm. Probably from Barcelona. Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 15995

94. CAPITALS FROM SANT PERE DE LES PUEL·LES. End of the 12th century. Stone (the traces of polychromy are later). 32.5 x 38.5 x 31.5 cm (MNAC/MAC 9867) and 32 x 35 x 26.5 cm (MNAC/MAC 9868). From a doorway of the Monastery of Sant Pere de les Puel·les in Barcelona. Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 9867, 9868

95. CAPITALS. 12th century. Stone. 32 x 37 x 39 cm (MNAC/MAC 24004) and 42 x 42 x 41 cm (MNAC/MAC 24018). Acquisition, 1906. MNAC/MAC 24004, 24018

96. CAPITALS FROM THE CONVENT OF SANT FRANCESC. c. 1200-20. Marble. 28 x 23 x 23.5 cm (MNAC/MAC 14202); 28 x 26 x 23.5 cm (MNAC/MAC 14203) and 30 x 19 x 19 cm (MNAC/MAC 14206). Discovered in Barcelona, on the former site of the Hospital of Sant Nicolau, subsequently the Convent of Sant Francesc. Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 14202, 14203, 14206

97. CAPITAL. First quarter of the 13th century. Marble. 28 x 25 x 24.5 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 5290

98. CAPITAL. Second third of the 12th century. Stone. 32 x 53 x 30 cm. Probably from Languedoc or Gascogne (France). Acquisition, 1907. MNAC/MAC 24109

99. CAPITAL. Reused as holy water stoup. First third of the 13th century. Marble. 26 x 28 x 16 cm. Probably from Tarragona. Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 24017

100. CAPITAL FROM BREDA. Beginning of the 13th century. Stone. 25.5 x 22 x 22 cm. From the cloister of the Monastery of Sant Salvador de Breda (Selva). Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 14097

101. CAPITAL FROM THE CATHEDRAL OF TARRAGONA. Second half of the 13th century. Marble. 34 x 24 x 24 cm. From the Cathedral of Tarragona. Acquisition, 1906. MNAC/MAC 24027

Section VII

The paintings from the Church of Santa Maria in Taüll

The Church of Santa Maria in Taüll, which was consecrated, like that of Sant Climent, in 1123, houses the other remarkable mural group from the Boí Valley, and it preserves most of its interior decoration. It develops an extensive iconographic programme, presided over by an Epiphany scene on the central apse. Some fragments of the paintings from the south and west walls are also preserved, as well as some architectural features that once separated the nave and the aisles. One of the most characteristic themes is that of the Last Judgment, which occupied the west wall, in accordance with Byzantine and Italian models. If we take into account the differences in style and quality between the central apse, the south apse and the walls, it seems clear that there were several painters working together on the paintings of Santa Maria. One of these painters is linked, as has been mentioned above, to the paintings from the Church of Sant Climent.

102. PAINTINGS FROM THE CHURCH OF SANTA MARIA IN TAÜLL. The east end paintings from c. 1123; the rest of the paintings were done later. Fresco. Central apse: 655 x 370 x 500 cm (MNAC/MAC 15863). From the Church of Santa Maria in Taüll (La Vall de Boí, Alta Ribagorça). Acquisition, 1919-23, 1960 and 1971. MNAC/MAC 15836, 15847, 15856, 15857, 15857b, 15859, 15859b, 15859c, 15861, 15863, 15864, 15958-15961, 15965, 15965b, 63924, 63925, 200413-200417, 200443, 200473

102.1 ALTAR FROM SANTA MARIA IN TAÜLL. c. 1123. Fresco. 98 x 175.5 x 99 cm. From the main apse of the Church of Santa Maria in Taüll (La Vall de Boí, Alta Ribagorça). Acquisition, 1960. MNAC/MAC 113141



103. ALTAR FRONTAL FROM SANTA MARIA IN TAÜLL. Second half of the 12th century. Wood carvings with polychromy in tempera, applied to the frontal (repainted in 1579). 135 x 98 cm. From the Church of Santa Maria in Taüll (La Vall de Boí, Alta Ribagorça). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3904

104. CHRIST FROM SANTA MARIA IN TAÜLL. 12th century (modern cross). Wood carving with traces of polychromy in tempera. 50 x 50 x 12.5 cm. From the Church of Santa Maria in Taüll (La Vall de Boí, Alta Ribagorça). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3930

Section VIII Religious imagery

Wood-carving is another of the artistic media characteristic of Catalan Romanesque. Although it was used in quite varied formats, the main ones are three groups of sacred images: the Virgin with Child, the Crucifixion and the Descent from the Cross. They were located in special places, often on the altar. The carvings may have been produced in workshops whose location is unknown to us, although it has occasionally been possible to define them as a result of their common features, as is the case with the so-called Erill Workshop, the name of which has been linked to the Descents from the Cross exhibited. The *Batlló Majesty*, an image of the victory of Christ over death, is another of the masterpieces of Catalan Romanesque; it still preserves most of its polychromy.

105. VIRGIN. c. 1200. Wood carving with traces of polychromy in tempera. 72 x 28 x 22 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3923

106. VIRGIN. First half of the 13th century. Wood carving with traces of polychromy in tempera. 80 x 30 x 22 cm. Probably from Castile. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3924

107. VIRGIN FROM ALL. c. 1200. Wood carving with polychromy in tempera varnished with *colradura*. 88 x 38 x 29 cm. From the Church of Santa Maria in All (Isòvol, Baixa Cerdanya). Acquisition, 1920. MNAC/MAC 15917

108 VIRGIN FROM COVET. 13th century. Wood carving with polychromy in tempera. 83 x 31 x 24 cm. From Santa Maria in Covet (Isona i Conca Dellà, Pallars Jussà). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4395

109. VIRGIN. 13th century. Wood carving with polychromy in tempera. 85 x 23 x 16 cm. Acquisition, 1950. MNAC/MAC 35740

110. VIRGIN OF THE DURRO DESCENT FROM THE CROSS. 12th century. Wood carving with traces of polychromy in tempera. 189 x 51 x 23 cm. From the Church of the Nativitat de Maria in Durro (La Vall de Boí, Alta Ribagorça). Acquisition, 1922. MNAC/MAC 15895

111. VIRGIN AND ST. JOHN OF THE ERILL-LA-VALL DESCENT FROM THE CROSS. 12th century. Wood carvings with traces of polychromy in tempera. 144 x 40 x 21 cm (each one). From the Church of Santa Eulàlia in Erill-la-Vall (La Vall de Boí, Alta Ribagorça). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3917, 3918

112. FIGURES OF THE SANTA MARIA IN TAÜLL DESCENT FROM THE CROSS. 12th or 13th century. Wood carvings with traces of polychromy in tempera. Christ:

122 x 168 x 22 cm; Joseph of Arimathea: 103 x 38 x 29 cm; Virgin: 110 x 29 x 17 cm; Dymas: 100 x 20 x 15 cm. From the Church of Santa Maria in Taüll (La Vall de Boí, Alta Ribagorça). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3915

113. THE CHRIST FROM 1147. Consecrated in the year 1147 (according to a parchment found in the rear of the piece). Wood carving (restored in the 17th century). Christ: 100 x 91 x 16 cm; cross: 187 x 118 x 4.5 cm. From the bishopric of Urgell. Acquisition, 1906. MNAC/MAC 15950

114. THE BATLLÓ MAJESTY. Middle of the 12th century. Wood carving with traces of polychromy in tempera. Christ: 94 x 96 x 17 cm; cross 156 x 120 x 4 cm. From Garrotxa. Gift of Enric Batlló, 1914. MNAC/MAC 15937

Section IX Paintings from the Church in Sorpe

Another example of the mural cycles that developed inside churches is the one from Sorpe. One remarkable image is the Virgin with the Holy Infant on her lap as the link between the Old and the New Law, or between the Synagogue and the Church. The former is portrayed as a withered tree, and the latter as a verdant one, both flanking the figure of the Virgin, which follows the model from the apse of Santa Maria in Taüll. In the Annunciation, a servant girl spying from behind a curtain appears. Several painters worked on the decoration of Sorpe: the more skilled one decorated the nave, which has been associated with the Pedret Circle. The different hands involved afford us a glimpse of the organisation of the itinerant workshops which decorated the churches.

115. PAINTINGS FROM SORPE. Middle of the 12th century. Fresco. 670 x 664 x 896 cm. From the Church of Sant Pere in Sorpe (Alt Àneu, Àneu Valley, Pallars Sobirà). Acquisition, 1946 and 1964. MNAC/MAC 113144

Section X

The saints in iconography.
The frontal from Durro

Images and scenes alluding to saints have a prominent place in the iconography of Romanesque art, since their lives and martyrdoms follow the example of Jesus Christ. The *Acts of the Apostles* already referred to Saint Stephen, the first martyr. In time, respect for him grew, and with it, his prominence. The *Frontal from Durro*, in which Saints Quirze and Julita are depicted, is an example of one such situation: the enthroned figures of these saints are placed in the centre of the piece, a place normally reserved for the Christ in Majesty or the Virgin with Child. The side compartments are devoted to their lives, with special emphasis on their martyrdom. The theme of the saints was to be further developed during the 13th century (see section XIX).

116. ALTAR FRONTAL FROM DURRO. 12th century. Tempera on wood. 100 x 120 cm. From the Hermitage of Sant Quirze i Santa Julita in Durro (La Vall de Boí, Alta Ribagorça). Acquisition, 1923. MNAC/MAC 15809

Section XI

The apse paintings from Estaon and Surp

The paintings from Estaon and Surp are another sample of the works derived from the most important workshops, and produced by generations of local artists. Thus, the apse from the Church in Estaon has been loosely linked to the Pedret Circle and Santa Maria in Taüll. The depiction of the Baptism of Christ and the image of Saint Eulàlia, after whom the church is named, are noteworthy. The fragment from Surp displayed here comes from the decoration of the apse, where there was also the portrayal of Christ in Majesty and the Apostles (partially preserved in other museums). The decoration is linked to the painter of the Last Judgment from Santa Maria in Taüll.

117. APSE FROM ESTAON. Second half of the 12th century. Fresco. 480 x 435 x 250 cm. From the Church of Santa Eulàlia in Estaon (Cardós Valley, Pallars Sobirà). Acquisition, 1919-1923. MNAC/MAC 15969

118. ST. JOHN OF SURP. Second third of the 12th century. Fresco. 128 x 52 cm. From the apse of the Church of Sant Iscle i Santa Victòria in Surp (Rialb de Noguera, Pallars Sobirà). Acquisition, 1963. MNAC/MAC 69492

Section XII

The paintings from the Santa Coloma Circle in Andorra

These two mural groups of Andorran origin –from the apses of Sant Romà in Les Bons and Sant Miquel in Engolasters– present stylistic features that link them to the artist of the paintings from Santa Coloma d'Andorra (conserved in the Staatliche Museen zu Berlin). Their iconography is characterised by the presence of the commonest subjects: the *Maiestas Domini* with the Tetramorph on the quadrantal part of the apse –although in Engolasters the angel of Matthew has been substituted by the Archangel Michael slaying the dragon–, and the figures of the Apostles on the semicircular wall.

119. PAINTINGS FROM SANT ROMÀ IN LES BONS. c. 1164. Fresco. The twelve Apostles and Mary: 166 x 342 cm (MNAC/MAC 15783); Christ in Majesty: 103 x 272 cm (MNAC/MAC 15787). From the apse of Sant Romà in Les Bons (Encamp, Andorra). Gift of Lluís Plandiura, 1932. MNAC/MAC 15783, 15787

120. APSE FROM ENGOLASTERS. c. 1160. Fresco. 360 x 305 x 195 cm. From the Church of Sant Miquel in Engolasters (Les Escaldes, Andorra). Acquisition, 1919-23. MNAC/MAC 15972



Section XIII Art around 1200

Most of the works in this section reflect the renewal that influenced Western art after the last decades of the 12th century. This involved a new Byzantine current –springing from the changes which took place in the era of the Comnenes– marked by a classical vein, and it influenced all art forms, especially metalwork and painting. A certain naturalism in the treatment of the figures, which are more corporeal and less rigid than in previous stages, defines the works of this period, as in the paintings from Sant Esteve in Andorra la Vella, the frontals from Baltarga and Avià, and the *Beam of the Passion*. Other works on display could be later, although they are indebted to this trend.

121. PAINTINGS FROM SANT ESTEVE IN ANDORRA LA VELLA. c. 1200-10. Fresco. Apsidiole: 255 x 185 x 85 cm (MNAC/MAC 35711); Luke's winged ox: 97 x 198 cm (MNAC/MAC 35706); Christ: 95 x 64 cm (MNAC/MAC 35707); architectural frieze: 55 x 156 cm (MNAC/MAC 35708); plant border: 41 x 463 cm (MNAC/MAC 35709, 35710). From the Church of Sant Esteve in Andorra la Vella (Andorra). Acquisition, 1950. MNAC/MAC 35706-35711

122. ALTAR FRONTAL FROM AVIÀ. c. 1170-90. Tempera on wood with stucco relief varnished with *colrada*. 105 x 176 cm. From the Church of Santa Maria in Avià (Berguedà). Acquisition, 1903. MNAC/MAC 15784

123. ALTAR FRONTAL FROM BALTARGA. c. 1200. Tempera on wood. 94 x 165 cm. From the Church of Sant Andreu in Baltarga (Bellver de Cerdanya, Baixa Cerdanya). Acquisition, 1911. MNAC/MAC 15804

124. THE TAVÈRNOLES BALDACHIN. First half of the 13th century. Tempera on wood with stucco relief. 170 x 216 cm. From the Monastery of Sant Serni de Tavèrnoles (Les Valls de Valira, Alt Urgell). Acquisition, 1906. MNAC/MAC 24060

125. THE PASSION BEAM. c. 1200-20. Tempera on wood. 20.5 x 230.5 cm. Acquisition, 1907. MNAC/MAC 15833

126. THE CARDET BEAM. Middle of the 13th century. Tempera on wood. 22 x 390 cm. From the Church of Santa Maria in Cardet (La Vall de Boí, Alta Ribagorça). Acquisition, 1962. MNAC/MAC 71999

Section XIV The atrium paintings from Sant Vicenç in Cardona

This section evokes the architectural setting from which the paintings were removed. Exhibited here are the three central sections of the five which made up the atrium of the Church of Sant Vicenç in Cardona, which was consecrated in 1040, and is one of the best examples of Lombardian architectural influence in 11th-century Catalonia. The decoration, however, is from a later date, not earlier than the second half of the 12th century. It subscribes to pictorial trends of French origin, also present in such mural groups as those from Sescorts, Polinyà and Barberà, which are often related to the paintings from Cardona. The group is remarkable for the presence of christological subjects (the Presentation in the Temple, the Flagellation). The fragment which alludes to the Defence of Girona, which took place in 1285, is obviously later.

127. ATRIUM FROM CARDONA. c. 1200. Fresco. 475 x 860 x 523 cm. From the Church of Sant Vicenç in Cardona (Bages). On permanent loan, 1953. MNAC/MAC 200715

Section XV Metalwork and enamelling

An important part of the objects used in the liturgy (images, châsses, candlesticks, covers of books, croziers, etc.) were made in bronze or copper, often over a wood core. These objects were gilded and decorated with enamel using the *champlevé* technique (which consists of making cavities in the metal and later filling them with enamel). These 12th and 13th-century artworks belong to a significant output from which manufactures as those in Limoges (or Silos, to a lesser extent) stand out, the works of which were very widespread. In all, other works may come from local workshops. Apart from floral and geometric decoration, themes such as the Christ in Majesty, figures of angels and apostles, or key scenes from the life of Christ and certain Saints also appear.

128. CENSER. c. 1220-50. Openwork on engraved cast copper. 13 x 12 cm (diameter). Gift of Enric Batlló, 1914. MNAC/MAC 12118

129. CENSER. 13th century. Openwork on engraved cast copper. 13.5 x 11 cm (diameter). Former collection of the Museo Provincial de Antigüedades in Barcelona. MNAC/MAC 9491

130. CENSER. Limoges, second half of the 13th century. *Champlevé* enamelling on gilded openwork cast copper. 13.5 x 11 cm (diameter). Bequest of Santiago Espona, 1958. MNAC/MAC 65548



131. CENSER. Limoges, second half of the 13th century. *Champlevé* enamelling on engraved and gilded openwork cast copper. 18.5 x 14 cm (diameter). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4550

132. INCENSE BOAT FROM ARS. Limoges, second half of the 13th century. *Champlevé* enamelling and cabuchons on engraved openwork cast copper. 3 x 15 x 85 cm. From the church in Ars (Les Valls de Valira, Alt Urgell). Acquisition, 1906. MNAC/MAC 12093

133. EUCHARISTIC DOVE. Limoges, first half of the 13th century. *Champlevé* enamelling on gilded cast copper. 18 x 21 x 7.3 cm (diameter of lower disc). Bequest of Santiago Espona, 1958. MNAC/MAC 65534

134. THE MONDOÑEDO CROZIER. Limoges, c. 1200. *Champlevé* enamelling on gilded engraved cast copper with cast figures in full relief. Volute diameter: 32 x 15 cm; knob diameter: 8 cm. From a sarcophagus said to have housed the body of the Bishop of Ribadeo, Pelayo de Cebeyra (Siveira) (1199-1218). Placed in the Cathedral of Mondoñedo c. 1855 (Lugo). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4544

135. CIBORIUM FROM CERDANYA. Limoges, c. 1195-1200. *Champlevé* enamelling on gilded and engraved cast copper. 13.5 x 14 cm (diameter). From a church in Cerdanya. Acquisition, 1918. MNAC/MAC 12106

136. CHRIST. c. 1180. Engraved gilded and cast bronze. 20 x 13.3 x 3.7 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4552

137. RELIQUARY CASKET. The Holy Innocents. Limoges, c. 1200-10. *Champlevé* enamelling on gilded cast copper over a wood core and heads in relief. 17.5 x 19.5 x 7.4 cm. Bequest of Santiago Espona, 1958. MNAC/MAC 65529

138. CHÂSSE. Limoges, c. 1250. *Champlevé* enamelling, figures and encrusted gems on gilded cast copper over a wood core. 27.5 x 22.5 x 9.3 cm. Bequest of Santiago Espona, 1958. MNAC/MAC 65527

139. CHÂSSE. Limoges, c. 1210-20. *Champlevé* enamelling on gilded cast copper. Cast heads. 21 x 18 x 8.5 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4573

140. CHRIST ON THE CROSS. Limoges, second half of the 13th century. Cast and gilded copper over a wood core with applied figures and plaques in *champlevé* enamel plus encrusted cabochons. 46.4 x 25.5 x 3.3 cm. Acquisition, 1914. MNAC/MAC 12110

153. PYX. Limoges, last quarter of the 13th century. *Champlevé* enamelling on gilded cast copper. 11 x 8.5 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 4590

Section XVI

The paintings from the apse of Toses

The paintings from Toses, only partially preserved, present a type of iconography which, in general terms, follows the most widespread patterns of Romanesque art which have seen in some of the previous examples. However, this mural group is an example of a far more advanced art, although it is the work of a master of discreet quality. On the intrados of the window are the offerings of Cain and Abel, where the lamb offered by the latter, which is continued outside the window area, predominates. When seen in apsidal decorations, this subject is an allusion to the Eucharist –celebrated on the altar–, and is an example of the typological relationship between Abel, the first righteous man, and Jesus Christ. Cain, in his turn, is the symbol of evil.

141. APSE FROM TOSES. 13th century. Fresco. 496 x 385 x 140 cm. From the Church of Sant Cristòfol in Toses (Ribes Valley, Ripollès). Acquisition, 1952. MNAC/MAC 47474

141.1 BEAM FROM THE APSE OF TOSES. 13th century. Tempera on wood. 18 x 14 x 325 cm. From the Church of Sant Cristòfol in Toses (Ribes Valley, Ripollès). Acquisition, 1952. MNAC/MAC 47475



Section XVII

Angels in iconography. The frontal of the Archangels

Angels occupy a distinct place in Romanesque iconography as intermediaries between God and man, and as agents and executors of the divine will. The archangels Michael, Gabriel and Raphael depicted on this altar frontal, are at the top of the angelic hierarchy. Michael is the most commonly portrayed, fighting a dragon, symbol of the devil, or in the scene of the weighing of the souls (*Psychostasis*), where the devil tries to trick him and unbalance the scales in his favour. This piece in particular is an example of the art after 1200, which in its turn is indebted to it, and it was produced by a master linked to the mural group from Sant Pau in Casserres and, up to a point, to the altar from Lluçà.

142. ALTAR FRONTAL OF THE ARCHANGELS. c. 1220-50. Tempera on wood with stucco relief varnished with *colradura*. 106 x 127 cm. Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3913

Section XVIII

Other works from the 13th century

The late Romanesque works exhibited in this section are from the 13th century, and thus quite close to the Gothic style; yet they are a further example of the diverse solutions adopted throughout that century. The two side panels from Orós are characterised by the use of flat colours and sharp outlines, in a similar way to the panel of the *Baldachin from Tost* (see section IV). The *Frontal from Farrera* is related to works from about 1200. The mural fragment from Isavarre was originally located over a window in the semicircular area of the apse, next to figures of saints and apostles that are currently conserved in different museums. Most of the

coins on display here belong to the era of King James I the Conqueror, who was in power approximately during this period.

143. SIDE PANELS FROM THE ALTAR OF ORÓS. First half of the 13th century. Tempera on wood. 80 x 80 cm (each one). From the Church of Sant Pere in Orós (La Guingueta d'Àneu, Pallars Sobirà). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3906, 3907

144. ALTAR FRONTAL FROM FARRERA DE PALLARS. Middle of the 13th century. Tempera on wood. 103 x 147 cm. Probably from the original Church in Farrera de Pallars (Ferrera Valley, Pallars Sobirà). Acquisition, 1911. MNAC/MAC 15808

145. ST. CATHERINE OF ISAVARRE. Second half of the 13th century. Fresco. 96 x 61 cm. From the apse of the Church of Sant Llorenç in Isavarre (Alt Àneu, Àneu Valley, Pallars Sobirà). Acquisition, 1963. MNAC/MAC 69507

146. ROYAL COINAGE

146.1 Alfons I the Chaste, *Diner de quatern* (1162-96), minted in Barcelona. Billon. 0.78 g, 19 mm. MNAC/GNC 109233

146.2 Alfons I the Chaste, *Diner* (1162-96), minted in Marseilles. Billon. 0.86 g, 18 mm. MNAC/GNC 12906

146.3 James I the Conqueror, *Diner de doblenc* (1213-76), minted in Barcelona. Billon. 0.91 g, 17 mm. MNAC/GNC 27857

146.4 and 146.5 James I the Conqueror, *Diner de tern* (1213-76), minted in Barcelona. Billon. 0.89 g, 18 mm. (MNAC/GNC 34121) y 1.01 g, 18 mm. (MNAC/GNC 15297)

146.6 James I the Conqueror, *Diner de tern* (1213-76), minted in Aragon. Billon. 0.83 g, 18 mm. MNAC/GNC 33351

146.7 James I the Conqueror, *Diner de tern* (1213-76), minted in Valencia. Billon. 1.21 g, 17 mm. MNAC/GNC 100064

146.8 *Diner melgorés* from the seigneur of Montpellier. 13th century. Billon. 1.02 g, 17 mm. MNAC/GNC 35162

Section XIX

The Ribagorça Workshop

The works attributed to the so-called Ribagorça Workshop (impossible to locate exactly) form one of the most homogeneous groups of panel painting in the 13th century. Despite the fact that one of the works, the *Frontal from Chía*, bears the signature of the painter, John (*«IOH[ANNE]S PINTOR ME FECIT»*), the rest present the styles of different artists. Characteristic of the group are the backgrounds, the frames with stucco relief-work which were then covered with silverleaf painted with yellow varnish (*colradura*), and the richness of the chromatic effects. At the more narrative and anecdotal level the iconography is often devoted to the saints, thus rendering it closer to the Gothic. The frontals from Cardet (section IV) and Sant Climent in Taüll also belong to this group.

147. ALTAR FRONTAL FROM CHÍA. Signed by John (IOH[ANNE]S PINTOR ME FECIT). Second half of the 13th century. Tempera on wood with stucco relief formerly varnished with *colradura*. 99 x 145 cm. From the Church of San Martín in Chía (Benasque Valley, Huesca). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3902



148. ALTAR FRONTAL FROM

RIGATELL. Second half of the 13th century. Tempera on wood with stucco relief formerly varnished with *colradura*. 104.6 x 112 cm.

From the Sanctuary of the Virgin de Rigatell (Areny de Noguera/Arén, Huesca). Guift of Julio Muñoz, 1950. MNAC/MAC 35701

149. ALTAR FRONTAL FROM SANT

PERE IN BOÍ. Second half of the 13th century. Tempera on wood with stucco relief formerly varnished with *colradura*. 88 x 158 cm. From the former Chapel of Sant Pere in Boí (La Vall de Boí, Alta Ribagorça). Acquisition of the Plandiura Collection, 1932. MNAC/MAC 3912

150. CROSS. Second half of the 13th century.

Tempera on wood with stucco relief formerly varnished with *colradura*. 120 x 56 cm. From the former collection of the Barcelona Museums. MNAC/MAC 17625

Section XX

The paintings from the palatine hall of San Pedro in Arlanza

The paintings from this monastery in Burgos, where the first independent Count of Castile, Fernán González, was buried, come from a palatine hall above the chapter house. The iconography is characterised by the presence of monumental mythical animals such as the griffin, which guarded either side of doors and windows. Other registers included figurative architectural structures and animals in different poses. This repertory has been linked to the English miniature from the end of the 12th century, and to the renewal which influenced European art around the year 1200 (see section XIII). In this respect, they bear certain resemblance with the paintings from Sigena on display in the next section.

151. PAINTINGS FROM SAN PEDRO IN

ARLANZA. c. 1210. Fresco. Griffin: 190 x 320 cm (MNAC/MAC 40142); castle: 139 x 189 cm (MNAC/MAC 40144); mythical animal: 106 x 84 cm (MNAC/MAC 40145). From a chamber in the Torre del Tesoro in the Monastery of San Pedro in Arlanza (Burgos). Acquisition, 1943. MNAC/MAC 40142, 40144, 40145

Section XXI

The paintings from the chapter house of Sigena

The Romanesque gallery is rounded off by what is one of the masterpieces of medieval painting in Aragon, a work that was seriously damaged by fire in 1936. It is a key example of the art of the year 1200 (see section XIII), produced by an outstanding artist –or artists– very closely linked to the English miniature and the Sicilian mosaics of the day. The iconographic programme, perfectly harmonised with the architecture, combines two biblical cycles related to the Old and New Testament; the former is depicted on the spandrels, the latter on the perimetral walls, and both are brought together by the genealogy of Christ on the intradoses of the arches. Thus, this programme is defined by the clear intention to illustrate man's road from Creation and Original Sin right up to Salvation.

152. CHAPTER HOUSE FROM SANTA

MARÍA IN SIGENA. c. 1190-94. Fresco. From the Nunnery of Santa María in Sigena (Villanueva de Sigena, Huesca). Admission, 1940. MNAC/MAC 68703-68709