Partial amendments to the restoration theory. 

II. Value & values

In recent times there have been more and more occasions when someone in a position of authority and prestige, or at least of a considerable age and following, has set forth a new theory regarding the restoration of monuments, which is tantamount to trying to oust Brandi's concepts; once the echo of such verbal artillery has died down and the memory of some well-chosen examples has faded away, the conclusion I draw from this criticism, or more ignorance or forgetfulness, is that there is no global alternative today that can take the place of the Italian artist's restoration theory first enunciated after the war and materialized in 1963, because the worst accusation they have against the theory is that it is incomplete or has been badly developed. One of Brandi's good points that I still find indisputable was to establish a basic element in the first three pages of his Restoration Theory, on which he constructs a whole framework of abstract ideas so that his reasoning can be followed step by step until we come to the methodological proposal that his Carta del Restauro constitutes. I think it is worth examining these pages carefully, since it will enable us to reorganize the bulk of Brandi's thinking. That is why this text is intended as a "partial amendment" and not a rejection of the whole work.

4. Industry and art

So I shall start with a quotation from Brandi himself which, as a corollary to the first three pages, provides a surprising definition: "il restauro costituisce il momento metodologico del riconoscimento dell'opera d'arte, nella sua complessità, nella sua duplice potenza estetica e storica, in vista della sua trasmissione al futuro:" these words, together with the foregoing reasonings which justify them, make up the contemporary of modern restoration theory, so that they deserve a detailed commentary. The first point refers to the nature of the object to which the concept is to be applied ("l'opera d'arte"), regarding which Brandi makes several exceptions at the beginning of his text. One of them is not to consider industrial constructions, works of art, a distinction that, although it may be operative in certain fields, is rather worrying as regards works of art obtained by industrial means, or at least in series. In the same way, he is bewildered to find himself before methods capable of producing identical works of art, and quite different from the matrix they come from. It is not clear either what side of the frontier to place industrial objects that are later granted the status of works of art, or what to do conceptually with objects that are not typically industrial or the usual works of art. There is not such a clear division as Brandi sustained between these concepts, and even less so in the case of certain artistic fields such as music, where the concept of restoration seems to have no possible application, or where at least the implications involved for the other "arts" are missing.

These hesitant considerations do not seek to disqualify his reasoning by means of providing more or less capacious examples, but to question the existence of any separation at all and, basically, to express the conviction that the nature of the concept "work of art" must be clearly defined in this context, in order to determine whether the Teoria del Restauro is to be applied only in state museums of fine arts or in a broader sense including architecture with all its values. We shall, however, return to this issue later on, because it is of crucial importance. Brandi himself, perhaps aware that the matter was far from settled, provided an evasive answer when he said: "No si crede perché è stata, e non per una concezione idealistica, perché anche alla collocandosi al suo posto opposto, ad un punto di partenza pragmatica, risulta ugualmente l'esenzialità, per l'opera d'arte, del suo riconoscimento come opera d'arte." Be it as it may, the necessary condition for a "repair work" to be given the status of "restoration" is that it be performed on an object that has previously been granted the qualification of a work of art, independently of what kind of work of art it may be, whether it defends Hegelian idealism or corresponds to a pragmatic explanation of empirical naturalism.

The doubt has not been cleared up, as it is not only a question of dispelling merely theoretical doubts without art practical consequences, because at the end of the examination process the restoration will only be carried out if it is an object of art and simply recognized as such is not the point. The point is to know what edition of the Goya Almanach to consult to discover the artistic pedigree of an object, since neither art manuals nor official lists of monuments are trustworthy sources as they are obsolete before they begin; the important thing is to know where to look for what can guarantee that a thing is a work of art, whether the artist's patronage or the connections and influences of those who promote him - as so often occurs - is not the reason for the object, as Art History often includes artefacts of old with no other merit but its vocation to survive, etc. In a nutshell, I think there is no point in making a Giordani knot out of the artistry of an artist who uses external value which only materializes when it is so obvious to everyone that its recognition as such is useless.

Brandi was apparently coherent in his decisive conceptual restriction when dealing with the methodological aspect, as in the first article of the 1972 edition of his Carta del Restauro, he pointed out the following limitations for restoration: "All works of art from all periods, in the broadest sense of the word, from architectural monuments to painting and sculpture, although they be only fragments, and from paleolithic findings to figurative expressions of popular culture and contemporary art [...]". It is a clear requirement, coming, as was to be expected, from the concept of work of art, but as this concept is so narrow and elitist and there are so many things that deserve to be conserved, the concept "work of art" decreed a generous conceptual amnity, without very much theoretical basis but with enormous practical transcendence to save important plebiscite populations from the danger of extinction, in which all individuals do not belong to accredited artistic races: "[...] assimilating, to ensure their survival and restoration, the groups of buildings with a monumental, historic or environmental interest, particularly historic town centres, art collections and farms - conceived historically and gardens and parks considered of special importance." It should be noticed that the pardon list is made up of categories closely linked to architecture: almost all urban ensembles of a certain age, the material expression of their functional content and the traditional manifestation of architectural nature, that is to say, gardens. In a word: as the administrative definition of the system did not work, because it left outside the restoration territory almost everything worthwhile and alive, it became necessary to save it by extension, by opening up a list that can always be expanded according to the advance of historiography, ecology, nationalism, etc.

The 1987 edition of the Carta del Restauro contributed a sensible novelty at the very start. These [the considerations and instructions in the Carta] are applied to all objects of every period and geographical area with a significant artistic, historic or cultural interest [...]". The team led by the architect Paolo Marconi put paid immediately with one stroke of the pen although, perhaps out of respect for Brandi, the soul of the Istituto Centrale del Restauro from Mussolini's time until the days of the Christian Democrats, they placed the most aristocratic concept, that of the work of art, in the first place. Therefore, thirty-four years after the formulation of Brandi's definition, the first norm was published that respectfully contradicted the first corollary of the Teoria del Restauro, stating in fact: "il restauro costituisce il momento metodologico del riconoscimento dell'opera culturale [...]".

5. Methodological process

Before analysing another part of the definition, I would like to say a few words about the expression momento metodologico; it could be a mere literary formula to designate the act of examination, without implying anything but the fact that it is necessary, as Brandi does not explain it at all beforehand, as his bone of contention is the "riconoscimento". The most direct translation into Spanish, without changing a single letter, ignores the fact that the Dictionary of the Real Academia de la Lengua Española does not include the word metodologico although the term metodología does figure; therefore, if we translate the words literally we obtain one of the great ethnologismos, so popular in Spain, that merely add a more intellectual air to a word that hides the useful meaning of the term. I think we should understand, then, that Brandi wanted to underline the fact that the process that should be carried out in an orderly way within an orderly procedure, leaving nothing to chance, and so based upon logical rules. It is indeed ironical that the most degenerated version of a methodical act thus conceived should be the administrative process that state regulations stipulate for an object to be endowed with the category of an official "commodity." Only then would it reach the greatest heights of the sublime artefacts protected by governments of the past, even without limiting certain Sunday rights, although that means the establishment acquires the obligation to provide funds to conserve it. But it would be absurd if this administrative definition of "method" were the only possibility of putting into practice the "methodical moment," so I am almost certain that what Brandi meant was that the examination is not a "moment," a fleeting, personal instant, but the methodical beginning.
probably lengthy and collective, of a laborious, systematic process. In other words certainly not just a moment, but a real consensual process; therefore "restoration constitutes the methodical process of examining the cultural value [...]"

This methodical act is very vaguely defined by Brandi: "Per questa consistenza materiale dovranno farsi tutti gli sforzi e le richercche perché possa derivare la maggiore possibile. Ma sia altresì, resistiamo al riguardo, il solo caso legittimo e imperativo: il solo che debba esemplificarsi col più vasta gamma di sussidi scientifici [...]"; it is clear that only imperative mandate: to try everything possible to guarantee the survival, the material consistency, of the artistic object for as long as possible. Any religion would support this mandate, which I shall carefully analyse below. However I shall continue now with an analysis of the means to use.

It is clear that Brandi refers to the most modern methods of intervention, but also to their equivalent in research, placing an apparently unlimited role to research possibilities: the 1972 Carta del Restauro did not display so much faith in the "modern". In article 9, it showed a healthy precaution about materials and methods, either new or old, whose results were harmful or not tested: full of wise advice and warnings, he sets out the types of analysis he considers necessary or most recommendable, and although the Carta is in favour of research, it is completely against experimentation of any kind.

The 1987 Carta has very clear tactics. "All kinds of preliminary cognitive inquiries" are considered necessary; and also those that relate the properties of the material with everyday and seasonal positive and negative "environmental factors, taking into account its physico-chemical, geological, biological and human characters". The recommendations contain many warnings against modern methods and means and a large number in favour of traditional means, and materials, so that what they are actually saying is the same as Eugenio D'Ors said: "Experiments should be made with care and not Chapman bottles. By reading carefully, a calculated ambiguity can be detected as regards the means. No limit is put on the means to be used to investigate the nature and state of the object to be conserved, because the conservation must not be limited. But the same does not apply to the means to be used in the actual intervention, since conserving is, in essence, an entirely conservative activity, in which no risks must be run. Therefore the Carta does not display any stupid confidence in "our current technology", which is a total illusion as this technology has no application in restoration, where it is only worth while in order to enhance the investigative power of the examination."

This does not mean that all possible methods must always be used in the methodical process of the examination, or that there should be an inexorable chain of investigations, whose repetition and inevitability could turn them into a fetish or a ritual. This attitude would only be justifiable in a monographic process, but not in the whole process, because research is something like the exploration of an unknown territory that can have natural action patterns closely linked to the experience and the context, and which cannot guarantee success a priori. Proper restoration research should be oriented precisely in the opposite way, that is to say, starting from the possibilities of discovering concrete information derived from the different options for interventions, which is not pure, university-style research, but the application of norms based on one's own experience to resolve plausible hypotheses. In restoration as in nearly everything else, it seems that the most useful system is to adopt Popper's paradigm about verifying the hypothesis and not follow the fallacy of the 70's that was called "the methodologies," a kind of pseudocreative mania among the followers of the Modern Movement. In his in vend, I think Brandi preferred the use of the best and most modern research techniques to decide on the intervention, which should aim at prolonging the material life of the object to be restored, but this does not imply that he defended the life use of research methods in order to maintain the lifestyle of the experts. The end does not justify the means, and still less the tyranny of the latter. In this context, it is important to remember that I called the "Ensennada syndrome" on one occasion, in reference to the enlightened minister who had a survey held in the kingdoms of Spain in order to make a profound reformation on many aspects of the life the state, as perhaps the first great modern reformation. From the very beginning, the enormous effort involved did not bear the ambitious fruits intended. The mere gathering of information, like so much information is to about Popper's paradigm today, did not serve to modify anything; it was not used as an instrument of the project. However, it is of great interest for historians today, as will be the future so many current plans, whose only virtue lies in maintaining the life of those who developed them. Therefore I believe the application of a non-Popperian methodology, based on pure research criteria, is only useful for giving work to methodologists and their laboratories, accumulating merits in the civil service or the university and spending money on extremely complicated tasks which, after all, do not pave the way for the ideal solution.

6. Exclusions

The rest of Brandi's definition establishes clear consequences that inexorably arise from the concept of the work of art that is fundamental for him. It is explicitly clear that "[...] dalam sua consistenza fisica e nella sua duplice polarità estetica e storica [...]", he is pointing out what things must be examined. On the one hand, the "physical consistency" and, on the other, two opposing values, historic and aesthetic, now synonyms of artistic. The most interesting thing about the definition is the explicit exclusion of two aspects: the functional aspect, characterized by the already eliminated industrial products, apt only for repairs, and all non-material aspects, as he says in the second part of his categorical statements: "si restaura solo la materia dell'opera d'arte".

He dedicates a certain amount of space to the first exclusion: as not to exclude functionality altogether, although he puts it in a secondary position; he recognizes its existence in two different categories, architecture and "the applied arts," but he scorns it further on because, through materiality, the aesthetic-historic polarity covers all that is necessary to approach restoration works. I think that this is precisely the greatest shortcoming of the Teoria del Restauro, from which stem, as if it were Original Sin, the conceptual problems of the Charters. Needless to say the matter of functionality, scorned by Raskin and his followers, almost everybody, was differently treated by A. Riegli, who called it "an instrumental value".

The 1972 Charter included a very peculiar way out of Brandi's limitation, by defining in article 4: "perception, like any other quality, must be maintained efficaciously [...];" in other words, although it does not mention utility as a value to be taken into account, at least considers that efficacy is something to be desired. Fifteen years later the dimension has changed accordingly; to begin with, it says "conservation [is] ensuring a supposedly unlimited duration of the material configuration of the object in consideration" and aesthetic character as a non-material value: "restoration [... respecting the principles of conservation [... as restoring to the object as far as possible its relative legibility and, if it is feasible, its use."

It is very clear that Brandi's administrative and academic children, out of respect for his memory, as regards norms define a field for restoration that admits, even though in the second term, the maintenance of functionality, an absolutely basic issue for architecture's future.

The second exclusion, which consists of eliminating from restoration everything that is not material, is hardly even explained by Brandi, as he considers that in all works of art what is not "perception" is simply the sacred principle of artistry, unique, unfragmentable and unrepairable, which subsists whole as long as the matter of the work of art exists, although it may be broken into a thousand fragments. It is rather later the definition has changed accordingly to materialist theories, which exists as long as the body remains alive. From these considerations, we can deduce that, according to Brandi, the artistic character is a non-material value deposited and recognized in certain material objects and characterizing them absolutely. It is therefore necessary to preserve it totally from the sinning hands of restorers, even though this makes it necessary to affirm that only "productive" work of art is restored, and not its character as a work of art. If we continue with the analogy to humans, the restorer could be an army surgeon on campaign working intensively and expediently on the structure of the art matter, while the "artistic soul", created by an act of that minor god we call an author, remains intact. In the same way, the restorer of human beings that we call a doctor, transplants organs from one person to another, he inserts mechanical valves in them, he transduces litres of more or less artificial blood in them... and the soul does not suffer for it, nor does the personality alter. The analogy is so literary and so primary that it is surprising it can calm so many consciences and authorize the intervention on works of art; if the metaphor were to be radical and logical, going to the root of rationalism, it would take us straight to John Raskin and, through him, to paralyse, just as certain religious cults forbid their members to have blood transfusions as a manifestation of their respectful desire not to interfere in divine plans.

Brandi's intention on so radically eliminating non-material issues seems quite clear from the restorer's point of view: the role of the creator is reserved for the artist, or in any case for his prophet, the historian, since when the latter...
recognizes artistic value he is in fact “re-
creating” it for others; so that the restorer is
saved from this possibility and will not commit
the mortal sin of falsification, according to the
famous definition of Viollet-le-Duc himself;
“Restaurer un edifice, ce n’est pas l’entretenir, le
réparer ou le refaire, c’est rétablir dans un état
complet que peut n’avoir jamais existé à un
monument délabré. Il a déjà examiné, et si anti-Viollet
precaution had more circumstantial uselessness
than conceptual basis, especially since it was
stated at a time when Viollet’s followers were
still very numerous and scientific restoration
was not yet much linked to the formation of a very
precise ideology. What seems to be too radical is
to exclude all non-material instances from the
restoration process, because the very fact of the
existence of the works which the restoration
activities are carried out has a great deal of
significance, whether we like it or not: we shall
make a point of going back over these aspects.

7. System of values; a tyrannical value
When one reads the little book by A. Rieg that I
have so often mentioned, the first surprise
appears in the wording of the index, in which of
the twelve entries, ten contain the word “value”,
excepting one, marked “antiquity,” “historic,”
“intentional reminders,” “contemporary...,” “artistic,”
“narrative,” and “relative artistic
value”; as opposed to this variety, whose
considerable share have already examined, the
Spanish rigour of Brandi’s implicit mention of
only two values (“duplication”), the historic and
the aesthetic, leads him to the contradictions
detected. After all, the important thing is for the
restorer to decide in which examination of a very
possible value, a view to saving the largest
possible number of them for the future”
Examination in order to value, valuing in order
to intervene, that is the essence of restoration at
the end of the day. Let us have a look at the
values, then, but from an architectural point of
view, with the conviction that the constructed
reality we call architecture has great complexity in
this regard.

The first type of values we should examine
within an orthodox Brandian line is the
crystal historicity of any object or situation, be
it architectural or urban, constituting the substance
of a term that, although it is not in fashion, is
very expressive; I mean “antiquity,” because
absolutely anything is old one second after its
birth. The conceptual origin of this section is
quite simple: for the mere, inevitable fact of
being artefacts produced by human culture at
a certain place and time, buildings acquire historic
category, manifested in different ways and to
greater or lesser degree; nevertheless, in spite of
the variability of the parameter will always
come into the equation, although it will be
affected by different indexes but, I insist, it will
always have to be taken into account; that is
why it is wise to call our interests “historic
heritage” as in fact it is the large group of values
concerning which there is consensus.

Although they clearly respond to the description
of “historic,” they are usually given other names
depending on the interest of the moment; I shall
3.7.2 go into the specializations of the historic in
some detail in order to complete what I have
already said in a roundabout manner. In some
cases, history will have an important
anthropological or ethnographical aspect and the
object in question will be a manifestation of the
material culture of a period, a trade, a technique,
a function, an ethnic group or a region so that
the supreme value will be the “documentary”
value, as it is a record of something that was.
Many times the building can only be valued
historically because of its character as a unique
or rare document, for having survived historic
catastrophes, so we shall classify it as
“architectural.” This is a very elastic term so
sometimes its use distiguishes irrelevant
valuations, especially when the focus of
attention has regional or, worse still, nationalist
character.

At other times its historic value may consist
basically of being an excuse for evoking a
character or event, real or mythical, that is to
say, the etimologically correct application of the
term “monument,” corresponding to A. Rieg’s “intentional
reminders” mentioned above: this type of values
usually lead to spectacular interventions that try
to magnify what is no more than a popular
traditional localisation of the perhaps apocryphal
memory of the circumstances of a character; to
find very good examples of this type of
restoration, we can mention the “monuments” of
the “historic” Jesus all over Israel.
As is obvious, the monumentality is limited to
the actual time of the original construction but
includes everything that has happened to the
building since as long as it is perceptible, so we
can value all the traces of the passage of time be
they additional or subtractive, damages or
simple patina. Needless to say, although we
think we have “the last word”, whether we like
it or not, our interventions will be subjected to
the same consideration as historic material
added to the existing forms, even though for
the simple fact of being alive today we are sharply
aware of our specificity. But there is no need to
worry, things will change sooner or later when
death comes inclusive, that inevitable moment our
proud explanations about the profound
epistemological originality of our interventions
will occupy the place they deserve.
It is obvious to me that this group of historic
d values tend towards a posteriori insubstantial
as its∙

8. Value of use, an outlawed value
I have already pointed out on several occasions
that Brandi, comfortably installed in a
nineteenth century idealism, after mentioning
in passing the possible functionality of a building
under restoration, did not take into account the
possibility of analysing the subject in detail.
We have also seen that the Charters do mention
utilitarian aspects, at least in the second term. It
is clear that for those who consider artisanship
the supreme quality of an object in which the
bureaucracy involved and which, to a lesser degree, depends on the results or the iortiginal values. The cost depends on the means, as to be expected, but it is very much out of proportion.

It is clear that this viewpoint, taken in an excluding way, theoretically authorizes any type of intervention as long as it is performed with economic criteria seen in terms of social profitability, as no intervention that is justified as being to the best advantage of a person or group can be seen as such by the rest of society. At the end of the day if economy, use and consumerism constitute parts of the life of a monument. If all monuments have some economic or functional value, it seems absurd to go on analysing them as if they were unmarketable museum pieces capable of justifying any type of restoration however expensive and lengthy it may be.

If this is so, we must not forget that economic issues have a bearing on the theory. This is one of the reasons why I criticize European highbrow architectural intelligentsia, who paternalistically dismiss the Third World Restorations of Hispanic countries, a product of societies with a very low standard of living that prefer to use a castle as a hotel than carry out a methodologically correct intervention on it. In the same way I cannot understand how for years the ruins at Pompeii have been receiving fewer and fewer visitors because the brambles have closed up paths that were open a decade ago; the brambles are not the original plants but inform us that there is a certain incapacity on the part of the administration, which appears to be misguidedly awaiting funds for an impossible “methodologically correct” intervention.

Something similar is happening with the Alhambra, where a praiseworthy conservation policy advocates against the “use” of certain zones, which are no longer visited, so that the part of the Islamic building open to tourists is getting smaller and smaller. In a word, everything that exists in reality must be analysed by theory, including the functional support of reality and the economic aspect, which the most prosaic aspect of the practical values, but not the only ones.

9. Semantic value, hidden value

The references to the historic that we have mentioned in previous paragraphs address the most objective dimensions of the subject, the most scientific terms, as values based on rationality and universally accepted, but we have been unable to avoid using the concept “evocation of memory” referring to statistic groups of associations of ideas. So we enter into the badly defined terrain that separates general history from personal history, that is to say, the emotional and dimensional side of the use and consumerism of architecture inevitably introduce into these topics, which we have just referred to in the section on functional values, because, as Barthes says “because of the fact that society exists, any use becomes the sign of that use [...] to find an in-significant object we would have to imagine an absolutely improvised utensil totally unlike any existing model”. The non-material dimension of the historic inexorably must be considered, as must everything general and inevitable. Let us see some ideas about this matter.

It is widely known that the perception of the city and architecture in general is “innate”, but it is also true that it constitutes the basic frame of reference of our past, and therefore of our present, as individual citizens. It is also widely known that if we consider it globally, through social dimensions, it is the most substantial of the “identity marks” of a specific human community at a given moment, although it usually shows a remarkable inertia. This emotional and nostalgic referential dimension which every building founds on unarchitectural reasons, is suddenly apparent in extreme circumstances, when something alters the public image of the object in question. Popular reactions to the aftermath of an earthquake, the destruction caused by war or conservation works that modify the appearance of a building usually seem a little irrational, since they have nothing to do in most cases with the use or the direct knowledge of the building in question, whose “emblematic” character is usually a consequence of diffusion in the media or in books. In any case, I think it is very clear that all interventions must bear these values in mind, and not to lose their dimension, considering, besides, that the emotional proximity may not be strictly geographic in the strict sense or nationalistic in extreme cases, but it times can take the form of a historic closeness better than the physical borders of a community.

The semantic dimensions we have just mentioned are closely related even in their most popular aspect, the emotional, with everything that has to do with the meaning of architecture. If we say a restoration makes an object more dimension much more difficult to control than the others, the historic or functional aspects. An important example of how reality outdoes theory in this specific aspect is the evolution the Carta del Restauro has undergone in a very concrete point. The 1972 version, very directly inspired by Cesare Brandi, happens to condemn the following: “Stylistic or analogical complements, even in simplified forms and although there were graphic or plastic documents to indicate what the appearance of the complete work would have been”. The desire to parrostrate historicist, purely mimetic complements is quite clear, whether they are based on the formal methods like nearly all those added to Italian cathedrals during the 19th century. Whether the reasons were wholly preventive or perhaps based on theoretical principles, the fact is that this is a total, radical prohibition which marked a whole era of Italian restoration.

Fifteen years later, the rejection is qualified in the following way, prohibiting this series of possibilities: “style or analogical additions, even in simplified forms, in spite of the existence of graphic or plastic documents that might indicate what the appearance of the finished work was or should have been”. Up to this point, there is no change the novelty comes in the next paragraph: “There can be limited exceptions in the field of architectural restoration in cases where analogical complements, although they should be reduced to the essential, are necessary to protect the structure [...], which, taking into account the significance of a door opened in the anti-revival wall, is explained in quite a lot of detail: especially in seismic zones and to safeguard the remaining parts”. Finally, there is a picturesque addition that is rather incongruous: he finishes the article by saying: “And this is also valid for those elements that guarantee a normal, balanced drainage or egression (sic) of
rainwater". In other words, it is all right to follow Viollet moderately in the case of architectural elements affected by earthquakes and on roofs although "qui peut n'avoir jamais existé a moment dormant, as long as it is in places with heavy rainfall, but it is important to remember that it was still forbidden to restore Cimabue's frescoes in the upper church in Assisi destroyed some weeks ago by several earthquakes.

For such a sensitive change to be made, all that was needed was a natural phenomenon, like the earthquakes in the 70's, which totally destroyed more than Don Quixote's, and proof that traditional precautions like a traditional roof made by traditional craftsmen are better than using newfangled products of the asphalt industry or Carracedo-style metal roofs. Ignoring the anecdotic side of the case, the interesting thing is to note how reality tyrannically obliges us to change what is forbidden even very slightly, because this new version of the Carta del Restauro is much more hypocritical than the first in this sense, since it only gives permission to add forms in two explicit cases and ignores very un-Italian but quite real cases like the fires at Windsor Castle.

Ignaçio de Sola-Morales

Architectural heritage or theme park

On 29th August past in the pages of The International Herald Tribune there was an innocent article about the tourist attractions of Carcassonne under the following headline: "Beziere and Carcassonne, the Fortress on a Hill". It was a provocative headline: putting the tourist attraction of the great theme parks of post-modern leisure on the same level as one of the most perfect examples of restoration and conservation of historic monuments. Although everybody is familiar with the pontonic that arose about the propriety of the restoration of the medieval town of Carcassonne carried out in the middle of the 19th century by the young Viollet-le-Duc, it is less surprising to see a parallel drawn between the architectural urban authenticity of an important part of the walls and the buildings of the Catharist citadel and the deliberately fictional and sham set-up at Disneyland, Disneyworld or Eurodisney. But it is no less true, if we think of the Parthenon in Athens, the Alhambra in Granada, Carcassonne or Mont Saint Michel, of the Colosseum in Rome or the city of Venice, we can see that the perception and contemporary consumership of these places are not so far removed from the perception and contemporary consmumbership that is offered to the nomadic crowds of tourists who arrive en masse at these Theme Parks.

In a recent book, Jean-Louis Déotte detected a characteritic phenomenon of modernity: museumization. There is a ghost not only in Europe but all over the world provoking a common aesthetic phenomenon that is the disappearance of apparently real objects that belong within the imaginary boundaries of modern culture. Indeed the museum, under the pretext of safeguarding objects of artistic, historic, anthropological, natural, etc. interest, subjects them all to the same process of being exhibited that inevitably leads to a suspension of their original characteristics. Objects of liturgical worship, paintings intended to awaken the piety of the believers, warriors' weapons, the artefacts of daily living have shed their original cultural substance (liturgy, pictorial struggle, comfort) to between the all, images. Images that turn into the basis of art history, aesthetic experience, national identity, the idea of progress, cosmopolitanism, etc., etc.

Architecture is not free from this process. The museumization of architecture, in Déotte's sense also, in monuments (lighthouses of memory) or in ruins (testimony of the generic passage of time) is also subject to the same process of exhibition that will also daily lead to its disappearance as objects linked to specific situations and meanings. They are no longer everyday objects but gloriously enter into a universe where, thanks to the suspension of any particularities, they can be included in the Heaven of transhistorical values.

From the very instant the conscientious elaboration of the Catalogues for the Protection of monuments and the construction of our repertory, these objects, architectural in our case, must be stripped of their everyday market value and enter a new stock market: that of objects elevated to the abstract, universal, generic status of ruins, works of art, historic documents. In this new state those architectures honoured, or at least distinguished from common buildings, will enter in turn a particular system of consumership which, although not unique, will constitute its most important and a generous market. Indeed, as Scott Lash and John Urry have cleverly and precisely pointed out, in our present mobile society not only do we have the phenomenon of the so-called compression of the exhibition that will also daily lead to its disappearance as objects linked to specific situations and meanings. They are no longer everyday objects but gloriously enter into a universe where, thanks to the suspension of any particularities, they can be included in the Heaven of transhistorical values.

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Nevertheless it is very important to observe how this activity and the industry behind it are supported by cultural systems that are not explicit but decisive in establishing the dominant relationship that makes that tourism and leisure are directed at and the way of viewing them and rating them.

In her famous book on photography, Susan Sontag insists on the psychological value of the act of taking photographs in mass culture. On the one hand, tourist photographs, the main topic of photographic consumership, is above all an act of taking possession: the cheapest way of taking home the moment one discovers a landscape or a monument. But this possession is not spontaneous or the result of an ingenious gaze: it is likely to have been prepared long in advance through the repertoires of qualified pictures the tourist has already seen in brochures advertising to the tourist in guide books and in TV reports. Before the real gaze takes place in front of the monument, it has been prefigured by art historians and experts at moulding taste so as to soften the aesthetic or absolute incomprehension produced on seeing it. But this kind of photography (and of course video-film, purchase of illustrated books, etc.) constitutes a medium by means of which the amazement and/or incomprehension of referents, images and knowledge of the tourist are controlled, arranged and classified.

But the multiplication of the tourist gaze is not developed quickly without introducing remarkable changes at the same time. Once again it is Urry who analyses in a suggestive way what he calls the shift from organized tourism to service tourism. From the appearance of the first travel agencies in the middle of the 19th century with a view to avoiding the risky, adventurous condition of travel to the mass tourism for the working classes that arose at the same time as the phenomenon of paid holidays, whose great developments took place after World War II in the countries in the north of Europe, a whole culture of landscapes and monuments has been codified in the prestigious travel guides: Baedeker, Guide Bleu, Didierens, descriptive, organized into precise routes, these travellers' vademecums put academic learning and expertise taste within reach of the masses. With a greater or lesser degree of intensity, this approach was approached with a gazed fixed on the objects, their stylistic classification and the description of their most valuable sculptural and pictorial content. The way of seeing architecture proper to the culture of the modern movement was always excluded from these authentic manuals of artistic initiation.

Students of the tourist phenomenon today agree that since the '70s a new way of travelling and a new gaze have taken place not only in Western countries but also in developing countries in Asia. The new service tourism is giving up the system of packaged holidays to move on to offer the traveller as possible fusions with the rural and the urban, with social networks aero plane tickets, hotel rooms, universal credit-card money, guide books in the line of Discover, Lonely Planet, etc., landscapes, monuments, popular culture, cuisine, museums, atmospheres, etc., etc. The traveller, with the backing of international organizations, is invited to discover and therefore also to interpret the great range of possibilities. Supposedly authentic, that is really covered by the protective bubble of plural values that actually characterize the consumer's mental process.

From this situation we can infer at least two consequences. In the first place, the multiplication of gazes. Monuments and also picturesque, popular spots and local, vernacular remains are the object of a constant rerevaluation produced by the plurality of gazes. In the wake of the culture of canonical guide books for organized mass tourism we now have a new culture in which the multiplication of the circulation of all kinds of images destroys the well-elaborated orthodox vision of art objects as shown in classical tourist guide books of Malraux's imaginary museum is not only the beginning of an illustrated populism of culture but it opens the sacred ambit of the artistic to a multiplication of gazes, reportage books, magazines specialized in geography-tourism, anthropology-tourism, art-tourism. The canon of aesthetic values elaborated by high culture loses force when submerged and manipulated by the eclectic universe of the thousand and one visual proposals.

But this cultural change in the universal gaze of tourism is necessarily linked to the growing strength of the images themselves. This is the second aspect of the situation we are trying to
Intervention models for Catalan monuments (19th Century)

We do not intend to write a compendium of all the theories that have arisen about architectural restoration in Catalonia throughout the 19th century but, by analysing the intentions on specific examples, to deduce what restoring practice and the attitude and criteria towards the theoretical debate adopted by professionals in Europe contributed to it.

It is true that after 1844, when the Provincial Committees of Historic and Artistic Monuments were constituted, the interventions on the architectural heritage of Catalonia became more and more frequent, although we cannot always speak strictly of restoration works in the sense in which we use the term today. Many of the works materialized at the end of the 19th century and the beginning of the 20th, and in most cases they were carried out privately (be it by the diocese or the bourgeoisie), as in those days very few buildings were classified as monuments (in 1914 there were only 14 in the whole of Catalonia) and so the public administration did not pay for them. The interventions that were carried out during this period do not correspond to a single conceptual or methodological criterion, so they can be classified according to different intervention models; they indicated partial anastylosis in buildings of classical antiquity, rediscovered and revalued after an archaeological study; stylistic reconstructions with a greater or lesser degree of fidelity to the original monument; the shifting and reconstruction of architectural elements from buildings knocked down or dismantled due to urban development; remodellings with historicist amplifications; repairs to architectural elements destroyed in catastrophes; interventions completing unfinished buildings and, finally, restorations and/or consolidations. Some of these interventions were the object of polemic among architects and public opinion. The polemic often arose because of formal or stylistic approaches rather than for conceptual criteria. We must not forget that in the middle of the 19th century, the debate was centred on the continuity of academic architecture and what was in fashion among young professionals based on the reinterpretation of medieval historic styles, considered the most innovative at the time.

The recovery of classical architecture
The interest in recovering the monuments of classical antiquity arose at a time when the taste for neoclassical architecture was at its height, thanks to the findings at Pompeii and Herculaneum. The general attitude towards intervention on these monuments responded to an anastylosis criterion, based on the recuperation and replacement of the original materials found at the excavations and on the
consolidation and cleaning of the structures without the addition of any new elements or materials.

Among the first examples of partial anastylosis we can mention the Roman aqueduct de les Ferreres in Tarragona, also known as Puente del Diablo (Devil’s bridge). It was the Tarragona Provincial Monument Committee that called the historian and archaeologist Buenaventura Hernández Sanahuja in 1854 to direct the restoration works, completed in 1856.

Hernández Sanahuja concentrated the restoration in putting back fallen blocks of stone, replacing or substituting the missing ashlers and consolidating the most damaged zones of the building. The restoration was well received in scientific circles, with famous personalities like Emili H. i Planer and Prosper Mérimée.

Another two examples of partial anastylosis were the Roman temples in Barcelona and Vic. The first, located at no. 10 Paradís street, was scientifically studied by the academicist architect Antonio Celles in 1835. He drew up a complete series of plans with a reconstruction hypothesis commissioned by the Junta de Comunidades de Barcelona. There were still six columns standing at the time, and three of them disappeared when the two houses containing them were knocked down in Llibreteria street, and another one was reconstructed with the remaining and situated in the plaza del Rey in Barcelona. The house that contained the three columns saved from ruin were purchased in public auction by Ramon de Montaner, who had the attic floor, where the shafts and capitals were restored and housed. From there, the Catalan Association of Scientific Expeditions, created in 1876. The complete restoration of the columns took place during the first decade of the 20th century, when Montaner, who commissioned his nephew the architect Lluís Domènech i Montaner to carry out the refurbishing project of the whole house. The new building followed the language of modern architecture, inspired by medieval style and neo-classicism. The inner courtyard, which conserved the structure of the original Gothic house, was also rehabilitated, giving rise to a closed space like a large glass case covered by a glass skylight, making it possible for the three columns of the temple to stand free and totally visible, illuminated by light from above. The fourth column was added around 1956, bringing about a new reformulation of the building.

Perhaps a clearer example of anastylosis is to be seen in the restoration in Vic of the Roman Temple that had been hidden between the walls of the medieval castle of los Montesinos until it was knocked down in 1832. Two years later, master builder Josep Anton Torner Vilaseca carried out a survey with a suggestion for the ideal reconstruction of the temple. With the elements recovered it was possible to reconstruct the cella. The main drawback of the structure was a fragment of a shaft still in existence and many years later (between 1957 and 1959), the coping pediment was completed.

Stylistic reconstructions

Some authors have considered the monastery of Santa Maria de Ripoll as one of the most important examples of stylistic reconstruction carried out in Spain in the last decades of the 19th century. The medieval monastery had been abandoned by the monks in 1805, as a consequence of a fire that destroyed a great deal of the building. After 1851, the Gerona Provincial Monument Committee was responsible for the conservation of the remains and got the government to invest money in the most urgent repairs.

In 1861, the Barcelona Fine Arts Academy appointed architects Eliàs Regent and Claudio Lorenzale to inspect the works. Regent later drew up plans of the ruins and prepared an initial reconstruction project, which was not presented by him before his death in 1870. The Monument Committee continued practising partial consolidation works at the same time. The definitive impulse for its reconstruction came when the monastery was handed over to the Vic diocese in 1885, with Josep M. Morgades as bishop. From that time on, the restoration, according to Antoni Gonzalez, "stopped being an artistic fact and became a singular patriotic reconstruction, a symbol of the national reconstruction that Catalonia wanted to carry out".

Regent made a second project, which was passed by the Barcelona Fine Arts Academy in 1886. In March of the same year the works were started and the new church was consecrated in 1893. The most outstanding differences with the 1865 project resided in the solutions given to the main façade and the cupola and the way of supporting the arcades of the lateral naves, that were again covered by a sort of entablature (in 1850 they had been reduced to three). After reading Viaje literario por las iglesias de España by Father Villanuwa, he affirmed that there had been pillars and columns holding up the arcades between the double side naves, he modified his initial project where he had only drawn columns. He found inspiration for the cupola in Sant Jaume de Pontanyà, after analysing several dozen. After the direct study of the sources and applying a rationalist criterion, he concluded that the most traditional solution in the area was an octagonal form held up by pendentives in its chamfers. As regards the bell tower on the main façade, the 1865 project contemplated completing the north tower following the model of the south tower. The studies made him reach the conclusion that Catalan Romanesque towers followed the Latin tradition of successive square prismatic bodies with battlements crowning the four faces. That is the way it was planned in the 1886 project. His sources of inspiration were the bell towers of Sant Martí de Canyó and Sant Miguel de... Finally, only the south tower was completed, while the north tower was stopped at the level of the second storey and later crowned with a pyramidal body of gables with tiered arcades and a pavilion roof. The criteria Eliàs Regent applied to Ripoll, so that the "restoration should not be based on rationalist theories or born of the artist’s fantasy", were subject to three parameters: the reconstruction of what had ceased before the year of the church; the reconstruction of what was damaged and the projection of what had disappeared, according to trustworthy data or by analogy.

Errant monuments

A separate chapter must be dedicated to the transferral and reconstruction in a different place from the original of buildings or part of them dismantled because of urban development in spite of the fact that a great deal of the original character of the building would be lost in the new building. These transferrals were brought about by the provincial committees and the institutions dedicated to the protection and safeguarding of architectural heritage.

As an example of a transferral we have part of the Casa Gralla in Barcelona, a Renaissance building knocked down when the Duque de la Victoria street was opened, whose plans had been drawn up by Eliàs Regent before demolition. The only part saved was the patio with its Gothic arcade, which was moved to the building the Maqués de Casa Brusi had commissioned in the San Gregorio square so as to recuperate and conserve it. In 1995 the patio was dismantled again and set up in an old nave in Hospitalet de Llobregat by the architects Octavio Mestre and José Marta Viñas.

The dismantling of religious buildings after the Disentailment in 1835 also created expectation of urban reform and the formation of public spaces. But the buildings affected were usually large medieval monuments that contained important sculptural groups, so that they tried to shift and reconstruct them. The San Miguel church, which had been situated in what is currently the plaza San Miguel in Barcelona, contained a Gothic portal that was dismantled when the church was knocked down in 1866, to be included two years later in the side façade of the church of la Merced, built in the 18th century. The bell tower ended up in another errant building, the old convent of Santa Maria de Jonqueres. The cloister and church were shifted, thanks to the negotiations of the Monument Committee, to a site between Aragón street and Roger de Llinars street, in the new Barcelona expansion, in works carried out by master builder Jeroni Granell between 1871 and 1888. In the reconstruction of the new building, the author was guided more by medievalist fashion than spatial and structural restitution. The door, which had originally been in a side wall, was placed at the foot of the nave. The windows and the decoration of the cornice were not from the old church either. The cloister conserved its structure but the four wings had to be shortened to make it fit in the new space.

Historicist reforms and enlargements

Another type of intervention was the reform of emblematic buildings partly demolished or destroyed, some of them purchased by the 19th century bourgeoisie. There were several solutions: from historicist reconstructions or finishes of the most varied origin, more or less in keeping with the existing architecture, to radical transformations based on medievalist fantasies, the result of misinterpretations of Viollet-le-Duc’s spirit.

An example of this type of intervention was Casteldefels’ castle. Its owner, the banker Manuel Girona Agraefel, commissioned Enric Sagnier Vilavecchia to perform the reconstruction and reforms. The solution adopted is based on the eclecticism of the time, in which elements from medieval or Renaissance archetypes can be found with new ones. Sagnier restored the crowning of the walls by reconstructing or inventing battlements and towers; he opened neo-Gothic windows, he reformatted reception rooms and covered the outer walls with stuccos imitating the lay-out of ashlars as in a medieval fortress, copying the ones that had existed in the same building in the 17th century. His intervention, however, respected the ground plan and the general volumetric physiology of the ensemble, so that the constructive evolution of
Xifré in Barcelona, built between 1836 and 1840), whose first floor directly communicated with the garden by means of a double staircase. In those years there were also some academicist contributions in some interventions on medieval architecture. A good example is the Palacio de la Fabería de Lérida, a Romanesque building housing the City Hall. In 1868, the architect, Agapit Lamarca remodelled the top floor of the main facade and the back facade that gives on to the Segre river, using a neo-classical language for both (this floor was remodelled once more and medievalized in 1929 by the architect Ramon Argilés).

Utilitarian repairs

Many buildings and public works suffered the effects of fire or other misfortunes, they had to be restored or repaired so that they could continue to be used. The Barceloneta Palace of the new construction burnt in 1861, was rebuilt by Oriol Mestre, who kept the general stylistic lines of the original building but did not hesitate to incorporate new materials, such as iron, to refurbish the roof structure and other load-bearing elements. The use of this new material, justified because it was fire-proof, produced an immediate reaction among music lovers, who criticized it and raised polemic in the press.

The repairs carried out in 1898 on the Puente Viejo (old bridge) of Roda de Ter, the utilitarian was given supremacy over the antiquity or artistic value of the element, although this did not impair it. The bridge had survived until the 19th century with six round arches with irregular spans. The restoration project introduced important reforms that greatly affected the medieval appearance of the construction. These reforms consisted of building arches on the top of the old ones so as to modify the original grade and reduce the steep slope that made it impossible for horses and carriages to pass at certain times of the year. The superimposition of the new construction on the old indicates, however, a clear awareness of the emblematic character this structure had for the people.

Complete interventions

The objective of this type of intervention was to complete the buildings whose construction had been interrupted for economic reasons, but which the people considered monuments. The most outstanding example was Barcelona cathedral, whose main facade was left unfinished in 1449. Master builder Carlí, of Norman extraction, was the author of the Gothic design of this facade, although he only actually worked on the foundation. The rest was closed with a plain, undecorated wall, only containing a few windows. The cupola, designed by the grand master Bartolomé Guell and the carpenter Juan Anyugués, who took Valencia cathedral as their model, was not completed either, and the little that was erected was protected with a pavilion roof with timber reinforcement and Arab tiles.

From 1870, people had been insisting on the idea of giving the facade a noble appearance. There were two initial proposals, one in 1831 that suggested neo-classical style, in accordance with the architecture in fashion at the time, and another from critic Pablo Pfeffer in 1839, in favour of Gothic architecture. Finally it was master builder Carlí's design, reproduced in an 1845 lithograph, that was used as a basis for the blueprint that Oriol Mestre was drawn to in 1860 under commission by Manuel Girona Agrafel, who had started to study architecture although he had not completed his studies. This was the first of a series of projects carried out on the facade and the cupola that caused great commotion in the press at the time. Oriol Mestres drew up a second project in 1864, in which the cupola appeared without a spire. In 1880, Manuel Girona, who eventually paid for the works, presented at the San Fernando Fine Arts Academy a project with two options for a cupola (one consisting of a drum crowned with a dome-shaped iron structure and the other of the previous one, but with the cupola on top). The cupola's construction, presented with a new project by Oriol Mestres and August Font Carreras, backed by Rogent, J. Torras and J. Artigas, and a project by Joan Martorell Montells, with two variants (the one without and the other with). These projects were presented at the San Fernando Fine Arts Academy in 1882 and the sculptural work on the facade and the cupola was awarded to Manuel Girona's project, that Mestres himself had authorized with his signature after being approved by the Academy of San Fernando. Since it "conserved the old, in 1882 the cupola was presented with the proposal of restoring the window and the existing windows and followed the medieval design". The works were completed in 1890, but the cupola was left untouched. In spite of the city's efforts.

Due to the criticism of the facade, the banker Girona Agrafel agreed to have it reformed and the works were undertaken by August Font, who succeeded Mestres as the architect for the cathedral after he died in 1895. Font added two windows at the ends of the facade and to the upper windows, closer to Joan Martorell's design. The works were completed in 1897. The final solution was also similar to Joan Martorell's project, the only difference being that it contained two drums and a spire whereas Font's had only one drum. The works were paid for by Manuel Girona's children and were definitively finished in 1912. The project by Elias Rogent and August Font to complete the facade and towers of Tarragona cathedral can also be considered a complete intervention, although it never actually materialized. It contemplated the conclusion of the existing tower on one side and the construction of a symmetrical one on the other side; it also foresee the completion of the main facade with the spires whose construction had been interrupted at the very beginning, and the crowning of the facades with a series of pinnacles erected on top of the buttresses of the naves and chapels, and that it was a solution that might well have been influenced by Rogent's knowledge of Norman medieval architecture.

The architectural historian and critic who had studied in detail for the restoration of Santa Maria de Ripoll...
Restorations and/or consolidations

Finally, we can cite many examples of actual restoration or consolidation works proper. In general, apart from the fact that more or less splendid projects like Santa María de Ripoll were carried out, the lack of funds often meant the interventions had to be limited to partial conservation works which were prolonged into the 20th century. One of the criteria that prospered was the elimination of coarse constructions that had been added on to the buildings over the centuries, thus adumbrating the monuments, and the recuperation of forms and constructive elements that had been hidden in some way. This was the attitude Elias Rogent adopted when he took on the restoration of the Real Cúpula de Sants; gata in Barcelona in 1856, which consisted of repairing the walls, vaults and bell tower, repainting the coffered ceiling and repainting the carpentry work, the stonework, etc.

Latterly, the importance of the monument on the one hand and the execution of the Plan de Reforma Interior (urban development plan) on the other, which involved the opening of Via Laietana, gave rise to proposals for the development of the area. Puig i Cadafalch’s proposal in 1914 entailed the separation of the temple from the buildings attached to it in Tapinería street and the main facade, placing a staircase over the courtyards, thus facilitating the plazo Rey and Tapinería street. Following in the same line of freeing the perimeter of the church, Joan Rubió Bellver presented another proposal in the project “Talber Monis Barcinoensis” (1927), which opted for monumentalizing the surroundings even more with neo-medieval towers.

A very different attitude was that of the Valencian architect Pascual Sanz Barrera in drafting his project for the restoration of the cathedral of the Sea d’Urgell in 1903, largely reflecting the 19th century stylistic intervention philosophy. The medieval building had been covered over in the 19th century with plaster and bricks. Side walls had also been added and superposed bodies, disfiguring the original outline, which had never been completed. After the “anatomical study” that Sanchez performed, he reached the conclusion that there was originally meant to be a portico in front of the main Romanesque facade. On the other hand, he deduced that the square towers of the same facade had been interrupted at the same time as they involved a complete transformation of the cathedral. Puig i Cadafalch, who also made a restoration proposal, actually stated, in blatant disagreement with Viellet-le-Duc, that “the architects of today, realizing that the medieval building had been denaturalize their works by trying to complete them”. Following Puig’s idea, in the restoration initiated in the second decade of the 20th century the additions were eliminated and the towers were left at the same level as they had been when their building was interrupted in medieval times, without trying to finish them.

With all this diversity of interventions with their very different methods, it is not easy to find those closest to nationalist movements to those trying to give the impression of a prosperous bourgeois socio-economic level, and from those inspired by an awareness of the importance of conservation or monuments to those based on functional needs, it is quite clear to see that interventions on monuments in the 19th century did not follow a single line of restoration criteria or methodology, although the formal language of the interventions was expressed in most cases under the common denominator of historicism, but rather the sensibility of each author and the nature of each monument and each commission - usually private - produced very different responses. However, both the institutions in charge of looking after and safeguarding the monuments and the architects and historians involved in the restoration took a great deal of care to ensure the monumentality of the buildings, maintaining an attitude we could include in the positivist philosophical movement.

As regards the attitude and the criteria adopted by the restorers, there is no question that beyond the preoccupation with getting to know the history of the architecture, there was a permanent debate in the 19th century about issues that are linked to whether or not to incorporate new building techniques and modern technology into existing monuments. In the examples we have mentioned, there does not seem to be an explicit debate (although it may be implicit) about the influence of Viellet-le-Duc’s Raskin, or Boito in the solutions chosen for each case, or at least the basic principles concerning the intervention on monuments defended by Viollet, Raskin or Boito do not seem to be taken as line of discussion ("restoring a building is restoring it to a complete static that perhaps it has never enjoyed"). “leave monuments alone”, “differentiate between new and old”, etc. This does not mean the restorers were unaware of the debate’s existence in Europe about the intervention on monuments in publications and international architectural conferences held at the end of the 19th century. We cannot forget either that the phenomenon of the Renaixença in Catalonia is part of the romantic trend invading Europe at that time and that the conscientiousness of Catalan professionals and artists in reviving and protecting their art of olden times runs parallel to the new European romanticism, although with its own peculiar political and nationalistic characteristics. In any case there is not a general rejection in Catalonia to the addition of new architectural elements to old architectures and everyone interprets and reinterprets historic styles according to more or less grandiloquent discourses, more or less faithful to the past, without fear of adopting eclectic solutions.

Captions

Roman aqueduct at Tarragona. Drawing by F. Parcerisa. SCCM

Roman temple in Barcelona. Drawing by Antonio Casals. SCCM

Roman temple at Vandelx. Drawing by A.A. Torner. 1884. SCCM

Monastery of Santa Maria de Ripoll. Ground plan. Drawing by Mari Sureda. 1835. SCCM

Monastery of Santa Maria de Ripoll. Ground plan of the church before intervention. 1835. SCCM

Monastery of Santa Maria de Ripoll. Elias Rogent’s second project. 1886. SCCM

Main facade of the church of Santa Maria de Ripoll, before Elias Rogent’s restoration. SCCM

Main facade of the church of Santa Maria de Ripoll, after Elias Rogent’s intervention. SCCM

Barcelona. Patio of Casa Graña, reconstructed in Casa Bruni. SCCM

Barcelona. Cloister of Concepción convent, transferred in 1888. Cerdanya. Sant Marçal castle, before Buigas Monrós’s intervention. 1869. SCCM

Cerdanya. Sant Marçal castle, around 1895, after restoration. SCCM

Model of the church of Montserrat monastery, before Artigas Pla’s intervention, in which the apses built by Francisco del Villar can be seen. 1899. SCCM

Model of the restoration project for the church of Montserrat monastery, by Arcadi Pla, with the recuperation of the Renaissance roof. 1900. SCCM

Lérida. Palace of la Patheria. Main facade, after Agapít Lamarcas’s intervention in 1868. SCCM

Lérida. Palace de la Patheria. Back facade, after Agapít Lamarcas’s intervention in 1868. SCCM

Barcelona. Teatro del Liceo, after the fire in 1861, according to a drawing by Tapirol. SCCM

Roda de Ter. El Puente Viejo (The old bridge), in 1813. SCCM

Roda de Ter. El Puente Viejo (The old bridge). after 1898 reforms. SCCM

Main facade of Barcelona cathedral. Engraving by F. Parcerisa, in a lithograph by J. Bonon. SCCM

Project for the facade of Barcelona cathedral, by Oriol Mestres, 1860. Project for the facade of Barcelona cathedral, by Manuel Giróna. 1880. SCCM

Project for the facade of Barcelona cathedral, by Manuel Giróna. 1880.

Project for the facade of Barcelona cathedral, by Joan Martorell Montells. 1882. Facade of Barcelona cathedral, around 1895. SCCM

Project for the cupola of Barcelona cathedral, by August Font. 1896. Tarragona cathedral. SCCM

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traces have appeared in numerous archaeological findings. After Fernando III conquered it between 1250 and 1255, its importance as a border line in the 14th and 15th centuries. There are reports of the existence of a fort that began to crumble after the frontier disappeared in the 16th century until it was totally dismantled by Cabafia, the proprietor of the village since the reign of Carlos II, in order to build his palace there. In the 18th century, while still in the hands of the Conde de Càfete, the church we are dealing with was built, according to the inscription on a tablet: "The building of this temple was started 29th June 1762 under Pope Clement XIII, Archbishop of Seville Cardinal de Solis and King of Spain Carlos III and it was completed in 1777.

The church has its place in the history of Spain because it was here that the Pronunciamiento de Riego took place. On 1st January 1820, General Rafael Río Núñez, in charge of the Asturias battalion, started a rebellion for freedom and pronounced the 1812 Constitution of the uprising was followed in other places and eventually triumphed. Thanks to this event, the town was granted privileges, a coat-of-arms and a motto that was used as a symbol and adopted at the time of the return of the absolutist regime.

Until the 18th century the town had a church with three naves separated by round archways on coarse columns covered by simple rafios and decorated at the sides and a small presbytery absorbed by the parish quarters. It had three entrances, and the main one at the end was crowned by a double-bay belfry. The total dimensions of the church could be more than thirty metres wide by twenty-two metres long and its location was where the current temple is to be found, at the top of a promontory, in the centre of the town and closely surrounded by little town houses.

The church was completed in late 1762 to replace the old church that, as we explained above, was obviously unable to hold the growing population of the city, not to mention the inadequacy of its facilities, as there were very few burials in extremely unhealthy conditions. We must not forget that the population, which was growing not only in number but also in prosperity, wanted a temple more in keeping with its requirements, with the pomp and circumstance that religious worship demanded in their daily life, so that the unpretentious modest earlier church did not satisfy the inhabitants’ desires. It was not only a question of capacity, then, but also of show and power.

The church was completed in September 1777, not without great problems during its construction. Historians have traditionally adjudicated its authorship chronologically to Lucas Cintorra Llaguno, Pedro de Silva, Sancho Corbacho and T. Falcón, and finally to Ambrosio de Burgos. The plinth was in the last supervision and management that the works were carried out. It is true that Pedro de Silva is the one who responds to the appeal for a new temple and submits a design for it and the demolition and rebuilding are actually started under his orders, but a discrepancy between the plans and the foundations laid by the master builder, who seemed to be following plans of his own, gives rise to the request for a third opinion. The discussion between de Figueroa and de Figueroa gives rise to the conclusion that offer alternative plans and conditions. Finally on 26th October the order was given to build an arch according to ‘...el nuevo plano, Apoexistia y Alsidios practicados por el dicho Figueroa nuevamente...’ (the new plans, assessments and elevations also submitted by said Figueroa...).'

The sole architects’ intervention has been the Main Portal, which we shall now describe. The works had a budget of about 21 million pesetas and responded to an emergency transaction on the part of the Delegación Provincial de la Comisión de Cultura (Provincial Council of Culture) in Seville whose facilitative management was entrusted to me as an architect, Juan Luis Barón Cano as a technical architect and Juan José Hinojosa Torralbo as an art supervisor all within the Delegación de Conservación del Patrimonio Histórico (Heritage Conservation Department) of this Council. Two parallel actions were developed as methodological support for the works and the documentation of the Portal itself. Since the bibliography did not afford much information, a historic investigation was carried out by Mr Hinojosa, and it yielded very rich, interesting results, part of which was already been set down and the rest of which we shall not go into as they are shortly to be published. The other is a thorough survey of the elements of the Portal in general - scale 1:20 / and details - scale 1/5 - with the assistance of draughtsman Asunción Muñoz Alcaide, as a member of the Department. The amazing Portal belongs to the pure Baroque style which master builders maintain with great craftsmanship in parts of the province and which begins to be mixed with classical styles that come into fashion little by little, a situation that is reflected in the battle between the grand masters - architects who are more and more academicians - and the master builders - who supervise the works and are more traditional in their trade.

It is built of cut-brick masonry and is made up of two bodies. The lower one holds the door beneath a round arch in the columns of the channel and partly embedded in the wall, which support a movida cornice; in the spandrels some mixed-line fascias made of beautifully fashioned brickwork float. In the second body is an Outline niche with a semi-octagonal ground plan richly adorned with pilasters on an unbroken plinth, supporting an Ionic entablature and covered by a semidome. The niche is flanked by freestanding columns and Ionic pilasters with an entablature of a???. On either side of the attic there are pinnacles on pedstals. Crowning the composition there is a large oculus surrounded by a decorative frieze.

This magnificent construction is on the main facade, with a balanced composition, where the two bodies stand that make up the nave of the church, leaving a gap between them resolved with a large vousoir arch which frames the Portal and accents with. In fact this is precisely the area of our intervention. The masonry was absolutely decayed mainly because of the rusting of the wrought iron rods that had been used to support the wall in the presence of humic acids; the latter can expand to between 10 and 12 times their initial volume. The case of those situated in the columns of the body of the niche and those supporting the lateral pilasters is spectacular; generating tension that crack the brickwork that hold it, which is usually fragile which is why the iron is added because it is needed to make the piece resistant enough. These cracks let in more water little by little, starting a vicious circle without any solution - more water; greater volume: more cracks and breakages: more water. We also come across zones where the lime mortar was in a very bad condition and its decay gave rise to the germination of many vegetable elements of small dimension but wide-spreading roots which, in their function of taking water, colonize wider and wider areas and thus continuing to feed the mortar and the masonry. The case of the powerful cornice over the arch at the entrance is surprising, since the part of the bricks with a greater projection - about 40 cm - that served as a base for the upper ones were quite loose and absolutionist on modillions on which the large bricks we referred to above rested. This has been going on for a very long time because some of these gaps had been filled up and painted over. Altogether the portal and the details of the modillion arch was blackened, especially the most southern half, by the lichens that had spread over the mortar decayed due to the humidity which, when later dried by the strong dominant wind, had formed the typical concentric spiral shapes on the surface.

The works were based on the structural consolidation of each of the elements and the rebuilding of an efficient protection against the action of the elements so they were carried from top to bottom and first the left side and afterwards the right, since the symmetry always makes it possible to use the symmetrical element as a guideline, first the unrestored part and then the restored. The consolidation task consisted mainly of disassembling the damaged elements, one brick at a time, until we found a zone where the masonry was still strong and work on it from there with lime mortar alone or substituting the iron reinforcement with stainless steel. The protection from the elements was entrusted, initially, to the good solid consistency of the brick masonry.

First the upper cornice and the vousoir arch were tackled, by chipping all the mortar in the upper left quarter, as we explained above. The polychromy was detected right from the start and we shall discuss it in greater detail below. At this stage we were able to appreciate the great quality of the keystone of the vousoir arch made up of five large pieces of carved brick placed sideways. The small missing parts were replaced, the masonry was put back and a large coat was applied as a preparation for the finish. The disassembly of the lateral pinnacle of the high body revealed the first iron rod and another two small pinnacles whose presence was unsuspected were discovered at its base beside the wall. The reinforcement was then replaced, stainless steel this time, and the masonry was replaced reconstructing the pinnacles, as we shall explain below.

The body of the niche was the most spectacular and the one that gave us the most satisfaction. The upper entablature was dismantled and the two central rods were eliminated, as we could see no justification for replacing them, as they must have responded to an unforeseen safety measure or an idea of decoration that we did not
consider opportune to restore. The dismantling of the columns revealed a square inner rod one inch wide, attached to the masonry by means of rending plates at base and cyma level that were in a terrible condition, and beside the effect of the divided column tidily arranged on the scaffolding was somewhere between suggestive and disturbing. Naturally we restored it all on the new reinforcement and put it back in place. Apart from the logical cleaning process, the niche required little intervention as it only showed deterioration on the upper part of the pilasters at the corner, where there was only iron reinforcement, which was removed as it was considered unnecessary. What was found in the niche was some exquisite carvings work both on the interior as carvings of the pilasters and the mouldings of the entablature.

As we mentioned above, what we found to be in greatest danger of disappearing was the lower cornice over the entrance because of the problems of the mortar and the loss of several mouldings. The intervention here was special. Once it had been dismantled, an intermediate slab of reinforced concrete was placed following all the curves to support the lower brickwork and the cornice, which, by means of a sort of orthodontic operation, were provided with wires that were embedded in this slab, so that this cornice is now endowed with a rigid structure inside to reinforce the solid brick and improve its resistance. A Y-shaped iron reinforcement also had to be removed from the large cymas of the columns; it was built into the masonry and directed its ends to the angles of the cornice over three mouldings that were situated there, that is to say, the missing entirely. These reinforcements were not replaced, but the whole area was connected to the slab mentioned above.

The restoration work of the mosaic was restricted to cleaning with a root brush, replacing some unsavable parts or geometrically rebuilding small areas such as holes or scratches and other projections with mortar.

Throughout the development of the works we discovered the data concealed in the construction. There is very good masonry work in the building, from the wall of mixed materials with some ripples and layers of brick, all probably salvaged from the demolition of the old church, to the carving of the bricks which gives the name to "cut brick" fabric, which have marks corresponding to designs for their cutting and carving and also for their position regarding other already in place. The way of placing them can also distinguish the "side by side" fabric, because there does not seem to be any mortar between them so that it was necessary to chip and make canals on the faces to provide them with a larger contact surface. We consider the recuperation of the crests of the pinnacles situated to the sides of the attic of special interest; they had disappeared and we were able to rebuild them thanks to the loose pieces handed in by the parish, where they had been kept: the old photographs of 1936 and 1940, provided by the Art Laboratory of Seville University, whose extensive collection they belong to, and the dimensional mastery of the fabric which we managed to achieve. It all leads us to think that there was a workshop at the site where the pieces were made and assembled before taking them up the scaffolding to be definitely put in place. We forward this hypothesis after seeing the pieces disassembled and from our experience of having to make the crests of the pinnacles which we reproduced with the tools of today by means of design stencils, selecting the bricks to cut, assembling them and finally putting them in place. This placement was also carried out in a special way, because while disassembling them we found that the red had been introduced in two phases: the first hole was made by means of a cylindrical stick bigger than the rod, which left a large enough gap to fit the rod in and the gap was then filled up with white lime.

The colour turned out to be a surprising, fundamental issue. This building has always more or less conserved its original colour scheme; we understand that nobody dared to alter it underneath the archetypal coat of whitewash because of its important position on top of a hill and the golden effect of the evening light on the architectural object. In spite of this, during the dismantling of the scaffolding, a few centimetres away, we discovered the real presence of the colour of the Portal. This led us to the complex and complicated process of choosing the most suitable colour, taking into account that the ochres and reds we discovered are not in all cases authentic, and so we chose from among those in existence today those we considered expressive enough without breaking away from the image people have of the church. However, even after we forwarded part of the compositional structure of the building have been replaced, such as the upper cornice surrounding and framing the profile of the Portal and, although the colour had almost completely disappeared, the ochre marks were still there and permitted us to reproduce it. The final finish was applied by means of a grout whitewash of lime with pigments of mineral colours and so ineluctable on a basis of lime mortar, both on internal and external decoration and which can therefore give better results than the original treatments of the facade, which can still be detected in areas that have not been touched. This treatment is quite spectacular due to the transparency of the colour, which makes it very difficult to choose it since the shades vary as much with the atmospheric conditions as the support; the temperature, the degree of humidity, the angle of incidence of light, etc. all affect them. As regards the use of the distinctive red, applied to the cornice and the voussoir arch, as we have already mentioned, ochre on the avilochado giving it a golden general tone and a poler red on the naked banded to hide its texture, all on a background of very pale cream, which makes the other colours stand out in a spectacular way on the magnificant Portal. This finish is considered sufficient to protect the fabric from the effect of the elements, since the lime makes it undergo a strong carbonization that increases in time.

The last operation was to renew completely all the planks of the door, very deteriorated and separated with mortar, the tiling to the level of the wickets, and the nails of engraved bronze, which had been substituted by a peculiar mixture of steel welded to iron horseshoe nails in the last repair works, were replaced. The holes and gaps in the steps were also filled in.

We must say that the building company Emilio Suárez Hermida, to whom the works were adjudicated, contributed greatly with their magnificent collaboration in the persons of the supervisors Manuel and Luis Suárez and very specially the brothers Manuel and Ignacio Marín. The latter are wonderful professional bricklayers from Broadwalk, in Ireland, to whom we owe part of the knowledge acquired during these works and whose almost exclusive presence at the works is a criterion of their proven efficiency in restoration processes of craftsmanship. The schedule of the works was governed by caution, as we mentioned above. The works were performed from top to bottom and from left to right, and only at the end for the application of the plasters and finishes were there two teams of workmen operating at the same time. This can explain the length of time the works will take to complete, from the beginning of March 1996 to the end of December 1997.

Notwithstanding all said above, some other interventions are still needed, as can be seen from the graphic part, basically in the finish and above all in the tower. The organ, as old as the temple, also needs to be repaired and installed over the choir in the central nave. At the Departamento de Conservación del Patrimonio Histórico de la Delegación de Cultura we realize the restoration function will not end with these works, but will be prolonged until the complete integrity of the monument is restored and maintenance with greater care and appreciation. Although the town of Las Cabezás has already shown signs of interest, we are determined that the work described here should be issued in a special publication to tell the story of the construction and restoration of the monument, together with another account of the processes and results of the works that we consider interesting to make known.

Salvador Pérez Arroyo

Cuenca science and technology museum

"Ruins represent the builder’s fear and fascination at the same time. We would like a history of architecture told from this propagatory and fascinated point of view. The idea of destruction would illuminate the idea of construction."

Cyrille Simonet in “De la forme à l’informe”.

I have often referred to the possibility of understanding footsteps from their ruins. Thus for example the Caracalla thermal baths in Rome are to us what we see today, an architecture stripped of accessory elements concentrated in the essential. If we observe in detail the drawings of these baths published by Viollet-le-Duc in “Entrées sur l’architecture” in 1864 and his proposals for the reconstruction of the fragmentarium, we realize to what extent the disappearance of the decoration up to the breakage of certain structural elements permit us to enjoy this Roman space with a new vision, in all its purity. I think that Viollet-le-Duc was aware of the interest of expressing architecture in this way, and before him few had been concerned with separating the framework from the complements, thus dividing the perception of the building into different parts. This is perhaps one of the reasons why the world of engineering in general has shown interest in Viollet’s work.
considering him to be one of the discoverers of the role of structure in modern architecture. Classic texts of introduction to contemporary architecture such as those of Giedion, Richard Bénévolet, Collins, etc., mention him in the same terms. It is really difficult not to find a mention of that author in many presentation texts for projects or lectures about the roots of the modern movement. Viollet undoubtedly constitutes today one of the architects who have most contributed to laying down the foundations of modern architecture although in his day he was paradoxically dismissed from the school of history.

Roman concrete buildings have a character of continuity the Viollet interprets in constructive terms, describing them without decoration. It is an honest play which permits us to isolate the most characteristic structures of the building we are erecting when we think of its destruction at the same time. This might well be the meaning of the sentence by Cyrille Simonet that I quoted at the beginning of this article. None of this has anything to do with the romantic vision of the passage of time. In this case the ruins do not open the doors of a dreamy complacency regarding long-past life or cultures, but rises up rather as a positive element of the provision of new more transcendental information.

In this way, thinking of ruins does not imply visualizing them with mysterious lightning and disorderly vegetation as in the paintings of 19th century poets, but with the harsh realism of their construction. Hatfield's engraving of the building of San Lorenzo de El Escorial has this fascination, as does Pieter Brueghelt the Elder's painting of the Tower of Babel, studied with more learning than emotion by Juan Benet. The open buildings show the process of their conception, the mind of the creator, architect or prince.

This interpretation of architecture can be related not only to an understanding more preoccupied with inner organization or the relationship between structure and skin or the relationship between the idea and the structure of growth and superposition, but also with a vision of immutability and permanence although the idea of breaking up into constructive elements that appears in Viollet's drawings or in Choisy's classic studies of Roman and Byzantine architecture are more of a door into the concept of an architecture that is divisible, transportable in its constructive formulas, arrangeable. Only in these authors is it possible to find three-dimensional representations of buildings: for the first time architecture is analysed with a new spatial vision born of the need to explain the constructive system.

Today we find ourselves submerged in a culture in which the ephemeral, the virtual are fundamental aspects for us to work on. Science is carrying out more and more research on other scales, on molecular worlds, on a mutable, changing universe that can only be understood in its representation, a cosmos it is impossible to see.

Students of architecture often learn thinking of an unlimited duration of their buildings, although the aesthetic, dynamic and changing aspects are extended and constitute a fundamental quality of contemporary culture that they accept in their daily life. This is one of the main contradictions in the pedagogy of our obsolete schools of architecture in which the project lecturers seldom show an interest in contemporary culture and its manifestations. Their students are condemned to go from the watchful images of great architectural buildings to the passing of the everyday that becomes for them “another being” they have to live with, taking an interest also in communication, international fashion, the differentiated homogeneity of blue jeans or the front of a home computer with parts chosen from a catalogue.

Many works of art only exist in our memory or they shine with a limited life although they are architecture that it can be said that a reader, a film needs to be projected and its existence lasts the same length of time as its projection. Only works of art that use a matter support like painting, sculpture or architecture, a support that is both a means and an end, are always open and only require the physical proximity of the observer. The stone of cathedrals forms part of the very message of their architecture, but it is not so in the case of celluloid or vinyl or the paper or text of books, when it is not painting. We cannot forget what Benjamin wrote about the art object and its reproduction. There are supports suitable for reproduction and this is a main characteristic.

On the other hand, a sculpture and a painting can usually be transported. A building seems to be born in the conventional architecture linked to the place as something fixed and unchangeable. The fact that a building has to be opened and to be painted, that a sculpture or a painting can easily be moved from one place to another makes architecture something different. It is also a characteristic of architecture that it can be said that it has a function independent of its artistic value. It is true that there is also a less conventional sort of architecture, transportable, that can be confused with cars and aeroplanes, or a folding architecture, which appears and disappears and a virtual architecture that only exists in the projection of beams of light, or a painted architecture that never existed and a useless architecture, without a function, and also an architecture suitable to be reproduced industrially.

Our culture can integrate everything and today before the presence of light, flexible artistic manifestations is more common than ever. That is why the value of ruins represents something different for our culture than when each civilization could replace the previous one with its own ruins. We are approaching a culture without ruins. Today’s technology moves in a medium of changes and recycling. There are many art objects or artistic manifestations that live a short life and disappear without a trace. Science and technology are moving in that direction. A world of communication where social relationships and art as their manifestation are changeable and perishable and appear linked to the media.

This concept of society acquires sense with movement, like a bicycle that falls if it stops moving. The medium is transformed without leaving any traces. It offers pleasure and happiness by means of an art that disappears quickly, like an actor in the theatre that can only be canned in a recording, always imperfect however perfect it may be. This characteristic is interesting because it opens doors to an extension of a limitless artistic production. The artist must no longer hang his dead bodies on the walls of a museum. Cables and waves transport millions of works of art in all possible directions. We are faced with an authentic revolution that will change political, national and social balance.

The vision of construction born with Viollet's Dictionnaire and his other works takes its material value from ruins but it uses them for the first time as a launching pad towards a future vision of architecture where the pleasure of the material comes second to language and its composability. The miracle of this interpretation is materialized in the tightness achieved with the Gothic. Gothic architecture conveys dynamism. A cathedral with its buttresses like giant scaffolding, its light, transparent walls, its ceilings often falling like cloth on the heads of the visitors narrates its growth, its connection with time. But it is made of stone. The same is not the case of Roman architecture, heavy and mysterious. Nevertheless, its ruins manage to put architecture within our reach. Only the care of things on the edges, the lack of decoration brings it closer to us and makes it easier to understand.

To construct explaining the essence of the construction, to house the vertiginous of contemporary science, but above all to contribute to establishing a bridge between the unchangeable and the changeable has been, in my opinion, one of the objectives of the Cuenca Science Museum. It was the conception of the project, the difficulty of the task where the practice and the initial ideas that configured its current aspect and the solutions adopted.

When drawing up the plans for this museum, I always bore in mind the contradiction between the receptacle and the contents. The place and the ruins that existed demanded a connection with the past. And also the custom in our societies to establish a similar language and the forms to do so. The museum is always arises in this type of intervention pushed in the same direction. In recent times in a society like our European one, preserved by aged populations, there are few opportunities to experiment with new architectural forms. The result is a series of solutions that reflect the contradictions I referred to above. There is a play between heaviness and lightness, mutability and immutability, the stable and the perishable. Between light and heavy, between what shows its growth and what appears closed and inaccessible. The above-mentioned references to Viollet will undoubtedly help us understand the result of a work like that of the museum that has had heavy elements in the hands of architects whose career, that of our architecture, is generally more dedicated to light materials, dry, visible joints, reversibility...

For this project we have worked with concrete. With heavy walls that could remind us of cell walls or Arab defence walls. The whole building is a rigid box that encloses a dynamic structure of apparent instability. The structure is also made of concrete with 7.5 m bays between the pillars. These are double
pills so as to permit installations to pass. On them articulated capitals are placed made up of concrete gussets joined at the pier base and trussed at the top.

The tiering of the roof made it possible to insert little skylights that give the interior a level lighting permitting the space to be recognized and the independent character of the loadbearing structure and the exterior covering. The light enters between the gussets of the capitals and the roof plane is separated by four neoprene pieces.

The building establishes this relationship between the structure and the skin. Two independent elements, different colours and with a total separation of functions, although they always depend on each other. The capitals would fall without the roof and vice versa.

The interior space is organized with the same spirit, a rational space with three levels of platforms where different exhibition combinations can be organized. The outer box of the building fragments and adapts to the place, to Cuenci architecture.

The images must speak for themselves

I often think of the similarity between the museum space and others. I think old medieval exchange buildings have a certain similarity that I had not been aware of until recently. References were in fashion in the pedagogic explanations we are given today. This mania about buildings looking like others and not themselves is really rather silly.

The advantage of this space is that it can be used for other purposes, including as a museum. Its height and fluency allow it to house the Science Museum, with its objects and experiments lying in this silent cathedral.

I imagine the building open like other ruins, with a few capitals standing where the roof still remains.

The whole museum ensemble consists of a series of already existing buildings to which a new main body has been added, resting on the remains of old buildings of the old Jewish quarters in Cuenci and buildings from later periods, until the 18th or 19th century. Among these buildings there is a unique late medieval house built into the city wall and connecting the upper part of the museum with the lower part of the adjacent monastic buildings. This wall is in the whole base of the building situated in the place of the old Alcázar (fortress) and with the same volumetric value. To understand the architecture of Cuenci it is necessary to think of these great differences of level, the complicated heights and the difficulty of appreciating the buildings from their drawn elevations. A fortified city like this is seen from partial, always forced viewpoints, due to the closeness of the facades in the narrow streets and the great differences in height between the streets. Cuenci's greatest asset is its topography and its geology which undoubtedly constitute an even more important feature than the architecture. This serves it as an adaptation of itself to it in a modern, popular sense. The beauty of a city like Cuencà, with few buildings of great quality, lies in this symbiosis.

The programme is divided among these buildings already in existence and the new building that houses the main exhibition rooms. The other buildings are used for management, conferences, catering, etc.

The new building establishes total communication with all the spaces by means of ramps. The main entrance is through what was a simple church at the beginning of the century. There is another new volume, the Planetarium, which, instead of forming part of conventional architecture, constitutes an object without scale. This piece, the most mysterious and probably the most suggestive of the whole ensemble, takes on a special character thanks to its independence and the gaudy, somewhat ridiculous, style of the facade which, with lead and has the peculiar appearance of a scientific object deposited there. It was professor Morachiuelo who said to me one day that it looks like the imprisoned moon in Fellini's film.

The intervention criteria in the existing areas were the same ones as I have followed throughout my career as regards exteriors: light and clearly differentiated. The colour and texture of the concrete in the new part were carefully endowed with an earthy colour like the examples in the surroundings. The surface treatment imitates an old cob wall with different patinas. The medieval house has been restored in an indigo shade found in small samples of the wall undoubtedly marking the street which transformed its polychrome in a short time.

The blue tower is the most interesting document from the conservation point of view. Its old inhabitants were not very well off, which favoured the conservation of the building. Our intervention was reduced to a freezing of the walls and textures. It is a very beautiful example full of evidence of their presence. It is lined with an abstract painting at the Abstract Art Museum in the city and, above all, an invaluable chronicle of an indigenous way of life. It leans on the city walls and its tipology includes a central staircase and a door carved from Cuencà dolomite. Its timber structure is attached to the wall but quite independent from it.

There is little more to be said that cannot be seen in the reproductions.

Captions

1. & 2. General axonometric views. Interior perspective.
Perspective of the first idea.
5. & 6. General views of the building during works.

Astronomy courtyard.

Planetarium.

View of the Medieval Tower from Alfonso VIII street.

11. & 12. Entrance from the Observatory from the Astronomy courtyard.

Interior of Medieval Tower.
Assembly of a roof capital.
16. & 17. Interior of exhibition gallery, during works.

List of slides by Javier Azurueñ. Archaeological remains in the basement of the museum.

General view from the Mangana Tower.
3. & 5. View from Santa Maria street.
4. View from Alcázar street.

Interior of the exhibition gallery, during works.

Note: All the photographs were actually taken during the works, as these have not yet been completed.

Juan Ignacio Traver de Juan
Restoration of the gothic portals of the church of Santa María de Castellón

In this article we are going to deal with the restoration of the Gothic portals of the High Church of Castellón, a 15th century Gothic temple demolished in the 18th century by order of the City Council and rescued by the author of the plan of the current church by the architect Vicente Traver Tomás, who restored it in 1940, integrating it into the new building. These restoration works were carried out at the end of 1995 and the beginning of 1996 under the supervision of the Dirección General de Patrimonio Artístico del Conselleria de Cultura, Educación y Ciencia of the Generalitat Valenciana, which subsidized the works through the agreement between the Generalitat Valenciana and the Foundation for the completion of the works on the church of Santa María de Castellón, created with a view to coordinating the intervention to complete the church that had been raised to the rank of cathedral church in 1960, interrupted several times since 1939. These works were first directed by the author of the general project, the architect Vicente Traver Tomás, until he died in 1966. He was succeeded by his son, Vicente Traver González-Respessati, who drew up a completion plan in 1977, leaving the temple unchanged but modifying the annexes of the parish offices and reception rooms, the dwellings of the clergy, the chapter body and the cloister. He directed the works on the offices, reception rooms and dwellings until the completion of the building in 1988.

In 1986 I started to work with my father, Vicente Traver González-Respessati, on the project for the cross aisle whose works were directed between 1988 and 1990. Then, after my father's retirement, I took on the task of completing the whole building, first drawing up and directing a project for the apse and the dome, works carried out between 1991 and 1994 that involved closing the temple. Then in 1995 the restoration of the Gothic portals started. We are currently completing the interior of the whole church with the introduction, at the request of Bishop Juan Antonio Reig Pla, of a new element not included in my grandfather Vicente Traver Tomás's project: the crip in the form of a Greek cross underneath the cross aisle. These works were started in the summer of 1996 and are expected to finish in April 1999, with the exception of the stained glass windows, which will require a longer period of time.

The Gothic portals that were rescued from the demolition of the temple were restored in the course of the historic recuperation of the whole cathedral church of Santa María de Castellón, understanding this recuperation as the "existence" in the same place where the "High Church" of the city was (this is the fourth time it has been built throughout the history of Castellón). The High Church, declared a National Historic Artistic Monument on 3rd June 1931, was demolished, as we mentioned above, at the end of 1936 and the beginning of 1937, and only the base of the walls of the facade and the part of the three portals were left standing, in fairly poor condition (fig. 1). The remains were dismantled at the beginning of the building of the new temple under the direction
of the architect Vicente Traver Tomás, the author of the project at the end of 1939 and the beginning of 1940, and later reassembled (fig. 2) to be totally integrated into the new building. With the passage of time, the portals suffered progressive degradation, already visible in the 1919 photographs at the Mas Archives at the Instituto Amatller de Arte Hispánico, getting worse and worse in recent years (figs. 3, 4 & 5).

This deterioration stems from a combination of factors, including exposed stone, surface erosion, dirt and damp in the surface of the stonework and the sculptural reliefs. However, the pathologies do not affect the structure or the constructive layout of the elements forming it, in which there are no problems whatsoever.

South portal

The oldest of the portals conserved today and probably made by Guillen Coll as the main doorway of the church that was rebuilt after the fire that destroyed it in the decade of the 30s in the 14th century; it was the first church in Castellón originally built in the first half of the previous century. There are documentary records of a payment of twenty gold florins to Guillen Coll in 1382 for making the church doorway (1).

The two archivolts are constructive complications and the simplicity of the spayed profiles of the arch mouldings stand out, as does the monotony of the poorly decorated capitals (with a trefoil design). The first external arch or small round moulding springs from a relief representing an animal, and only the right hand side is preserved, quite worn due to the action of water falling on it and mutilated, probably deliberately in the 1936 demolition. The four archivolts lean on the shafts and the leaves, in an apparently good state of repair. Knocked down in 1936, it was later reconstructed and currently forms a projecting body with five steps leading up to it (fig. 6), the furthest of the three portals from its original position.

North portal or portada de la placeta de L’herba

Built in the 15th century, there is a record of its transformation or reform in 1420 to accommodate the seated figure of the Virgin Mary. It forms a Gothic-Romanic group of personal inspiration, enhanced by the beautiful image of the Madonna and the graceful late player who serves as a pedestal, all with a marked orientalist accent, due to the arábic surrounding it.

It is slightly spayed, with two archivolts and a segmental arch springing from capitals decorated with bunches of grapes and leaves, birds, snakes and a female face. The upper part is surrounded by the round moulding over the outer arch and an arábic with the moulding of two consoles situated on either side at the height of the capitals and decorated with a more complicated figure, more deteriorated on the right hand side. In the alabaster around the arábic there are three bas-relief cloths-of-arms. The central arch, flat with circular ends, is crowned by a basement defining the square, where we can see two rosettes the same size on either side of a sitting figure of the Virgin and Child now recuperated (it was destroyed in 1936), hanging from the face and held up by a console with a troubadour playing the lute, mutilated on the same occasion as the Virgin. Like the south portal, it was damaged and partly demolished in 1936 and later reconstructed almost identically to the original. It currently forms a projecting body with five steps leading up to it (fig. 8).

Due to its important symbolic significance, the image that had disappeared was to be replaced in a later intervention, reproducing it according to a 1919 photograph in the Mas Archives (fig. 7). This was possible thanks to the events described below.

During the restoration of the portals and after several years of meetings and conversations with history professor Francisco Esteve Gálvez in search of data on which to base the restoration, he told me that when the image had been destroyed, as at his life, it had picked up from the ground six pieces, which he still conserved. Having carried out the necessary steps, we held a meeting on 17th October 1995 in Professor Esteve’s office at the Provincial Fine Arts Museum in Castellón with the attendance of Professor Esteve himself, the parish priest of Santa María, Vicente Bengochea, technical architect Manuel Gufa and myself as initiators of the restoration work and the negotiations leading to this important event, the historian Ramón Codes, the curator of the museum, Ferrán Olucha, and the curator of the Ethnological Museum of the Diputación, José Antonio Alonso. After explaining the facts and the reasons he was in possession of the remains of the image, he handed them over to the parish priest as the representative of the legitimate proprietor.

A month later, on 17th November, a solemn ceremony, attended by various authorities, was held in the Assembly Room at Castellón City Hall. During this ceremony the Councillor for Culture, Education and Science, Fernando Vial from the neighbouring city of Valencia, declared the purposes for the restoration. Another citizen of Castellón who prefers to remain anonymous later handed over two more pieces of the statue.

Finally those eight pieces were given by the Dirección General de Patrimonio Artístico to the Head of the Department of Conservation and Restoration of Cultural Property, José Luis Roig Salom, who proceeded to perform anamlysis on the image that is once again conserved in the church; this analysis is described in another article in this same issue of LOGGIA. The sculptor Jesús Castelló made a reproduction in white Carrara marble which was patinated by restorers Reyes Silvestre and Rafael Bernabéus and finally placed in the original niche in the north portal. The goldsmith firm Hijos de Antonio Píro in Valencia was commissioned by the Dirección General to make the crown for the reproduction.

West portal or portada de la plaza Mayor

Of the three entrances in the west facade, only one belongs to the temple knocked down in 1936 which only has one doorway in the centre of the facade as it was made up of only one nave. As the temple is now made up of three naves, two smaller doors have been placed on either side of the main door, corresponding to the side naves, and a larger shaft and capitals (two of which have been placed in the new portal leading into the Communion Chapel, as the west portal was rebuilt with one archivolt less than the original) and the old portal are conserved, and also some vases of the archivolts, of which very few remain.

The door must have been built before 1435, since the 1936 demolition showed that the vault of the first panel rested on the wall of the main facade and not on a transversal arch. Therefore it would be logical to deduce that the west facade, or at least the lower part of it, and its main portal, like the rest of the church, was built by master builder Miguel García. The large spayed arch of the doorway and the complicated capitals with scenes from the Old Testament, the olive arch surrounding it, finished with the carved cross at the level of the crenelated balustrade crowning the little terrace between the staircase turrets and the large rosettes decorated with thistle leaves must all have been designed by him and carried out with the help of good stone masons. This does not detract from the north doorway, reflects a greater harmony of line, a more serene and less personal composition in spite of its modernity. The main facade with its main portal, designed by Vicente Traver in 1938, currently follow the design of the church knocked down in 1936, incorporating the fragments that were saved from destruction, even though they are not in the same position as they were originally (fig. 11).

State of repair

South portal or portada de mediolia

From the conservation point of view, the main problem was the constructive deficiencies affecting the two main water access routes: On the one hand, the water that runs from the upper surface to the projecting body and reaches the outer moulding that does not have a channel, so that it falls on the consoles producing damp in the archivolts (fig. 12).

On the other hand, the naked joints (probably left deliberately so by the author of the assembly, Vicente Traver Tomás), which in places show how this is due to decay, lawsuit more than the north doorway, permits water to leak into the masonry provoking a unidirectional outward movement that accumulates the saltpet dissolved in the evaporation surface, thus generating the erosion of the sandstone surface and the detachment of the visible patina in many areas (fig. 13).

Water has been responsible directly or indirectly for the different pathologies present listed below, whose importance can be seen in the graphs.

Detachment of stone with the loss of reliefs and the presence of salts.

Black crust (sulphated stone).

Naked joints or with a loss of mortar.

Cracks and fissures.

Remains of patinas with occasional blisters.

Biological colonies.

Loss of stone due to breakage.

The importance of the reintegrations with new blocks of sandstone carried out during rebuilding in the 40s can also be seen in the graphs.

North facade or portada de la placeta de L’herba

From the conservation point of view, the essential task on this portal consisted of collecting and evacuating the rainwater efficiently by the sloping surface of the upper part of the projecting body. It was then necessary to treat the joints, replastering and caulking them thoroughly, thus protecting them adequately from the penetration of water into the wall (figs. 15 & 16).

As in the case of the south portal, water was directly or indirectly responsible for the pathologies present listed below, most of whose
importance is displayed in the graphs. Detachment of stone with the loss of reliefs and the presence of salts. Flaking and scaling with a partial loss of volume. Black crust (sulfated stone). Cauling of joints and rejections with grey Portland cement. Naked joints or with a loss of mortar. Cracks and fissures. Remains of patinas with occasional blisters. Biological colonies. Loss of stone due to breakage. The smaller scale of rejections with new blocks of sandstone performed during the rebuilding in the 1940s can also be seen in the graphs. Zones with remains of polychromy or monochromy also appear.

West portal or portada de la plaza Mayor
This portal, assembled with a large number of new elements, is splayed and has not undergone visible deterioration for that reason. It does not apply to the rescued elements of the original portal, which were the ones with the greatest artistic value: bases, shafts, and, above all, capitals, where the process of erosion, scaling and even detachment, with a large number of fissures was very intense, with a significant loss of sculptural elements in the capitals (figs. 16 & 17).

Portal of the communion chapel
This portal is entirely new, except for the two capitals that are from the old west portal. As this portal was covered by a porch, although the capitals are badly damaged, they are not as deteriorated as the other portal. The rest of the portal, dating from the first half of the 1960s, does not present any deterioration except for the accumulation of dust.

Intervention criteria
The intervention adopted started from the excellent anastylosis works carried out during the assembly. In this way, all the measures taken were directed at:
\- Arresting the deterioration of the elements.
\- Correcting earlier interventions that were discordant with the rest (additions in grey Portland cement for the north portal) (fig. 20).
\- Eliminating dirt, concretions or biological elements that appeared in the course of time. Applying all suitable and compatible protection measures to stop the penetration of rainwater (fig. 21).

A wise step taken by Vicente Traver Tomás in the 1940 reconstruction was the replacement of the first line of the bases that were in contact with the ground, very deteriorated from the effect of rising capillary damp, with the measures available at the time it must have been almost impossible to repair them so they were substituted by a socle of very hard, compact and non-porous grey limestone, which put an end to the problems of rising damp. This socle is clearly distinguishable from the original portals, as can be seen in figures 6, 8 & 11, and it is common to the whole building establishing the plane of the interior pavement.

From the restoration point of view, it is interesting to point out the image sought by giving continuity to the stonework with a sensitive, painstaking joining of the ashlar blocks. The suitability of reintegrating the more obvious flaws in the archivolt lines was also contemplated, especially in the innermost where the gaps stand out clearly against the smooth background of the door (south portal), making the architectural reading difficult.

The sculptural elements were treated with the greatest delicacy and caution, not replacing or completing any of the missing decorative elements, due to a lack of documentation. The same line was followed as regards the patina covering the stone in different areas, which the cleaning procedures respected at all times. To this end samples were taken so as to carry out stratigraphic studies so as to identify the composition and the products compatible with them (figs. 22 & 23).

To restore the image of the building it was necessary to practise a careful cleaning process to eliminate all the biological concretions of algae and lichen and dirt. The operations and treatment performed are reversible, using materials and products compatible with the stone without altering its physical or aesthetic characteristics. When the need to vary any of the treatments arose during the works, the alternative was studied by the whole team of restorers and the facilitative directors before deciding on the course to follow.

Intervention Preconsolidation
During the intervention, temporary protection measures were put into practice in order to avoid damage to the ornamental elements in relief in places where fissures, cracks or scaling with a risk of detachment were detected. These measures consisted of greasing them with hydrophobic cotton gauze or tarlatan and a nitrocellulose adhesive dissolved in amyl acetate (fig. 24).

Concrete consolidation processes were carried out on the areas where the stone was loosened or reduced to dust with acrylic resin highly diluted in an organic solvent, in order to allow the stone to breathe.

Cleaning
The cleaning was performed by hand by expert specialized professionals. They used dry treatment techniques, soft brushes (fig. 25) of laser photonic energy projection (figs. 26 & 27), scalpels, alumina, silicate and silt microexploration (fig. 28), etc., according to restoration methodology.

Treatment of soluble salts
Superficial: by cleaning with brushes of soft natural bristles, dry whenever possible. When damp cleaning was necessary, a solution of 30% water and 50% alcohol was used (fig. 30). Saline efflorescence: clay poultries were used to convey humidity to the inside of the stone and remove the soluble salts in the sandstone on drying. Depending on the extension of the presence of salts, local (fig. 29) or general (figs. 31 & 32) applications were used. Oxide stains were eliminated by means of poultices of papier pulp and demineralized water. In places where the stains were most resistant, 2% oxalic acid dissolved in demineralized water was used and all acid residues were then neutralized and removed. Cement: in some moulings and reliefs in the north there were rejections and joint seal of grey Portland cement that were eliminated by mechanical processes with a hammer and chisel.

Iron spikes: in some places there were iron spikes without any definite use today, so they were extracted, the oxide removed and the holes sealed up.

Treatment of insoluble salts
Black sulphate crust: was eliminated by means of applying poultices of EDTA and ammonium bicarbonate thickened with cellulose and carboximetil to an appropriate phlororoxy, adding small quantities of Dessogen and Trianolamina to eliminate any possible greasy residues in the crust. The residues of this poultice were removed by washing with demineralized water.

Removal of algae
Solutions of a suitable proportion of formalin in water were used, never more than 5%, and applied with a spray; once dry, the colonies were removed with soft brushes and a gentle aspirator (fig. 33).

Cleaning and caulking of joints
The joints were cleaned by mechanical procedures, removing as much of the detached material as necessary to reach the healthy material. Dist was eliminated by low-pressure aspiration. Grease was removed from the interior faces with triacetinetrifluor solvent.

Rectangular ornament that frames the arches of doors and windows in Arabic architecture. Squared.

Vicente Traver Tomás
Architect
Biographical data
23.1.1888 Born in Castellón de la Plana. Studies Bachillerato at the Instituto Viejo in Castellón.
At the age of 24 he completes the studies of architecture at the Escuela Técnica Superior in Madrid that he has initiated in Barcelona.
Second prize in the competition for a monument to Miguel de Cervantes in the Plaza de España in Madrid.
Appointed architect of the Comisaría Regia. Transfer and restoration of the Portal of the palace of the Duques de Arcos from Marchena to the gardens of the Alcázar in Seville. 1917 First prize in the competition at the Fine Arts department of the Ateneo in Seville with a preliminary project for a hotel in the Eslava gardens.
Appointed Caballero de la Real Orden de Isabel la Católica in recognition of his works. Decorated Comendador de la Real Orden de Isabel la Católica. 1915 - 1917 Restoration of the Casa de Cervantes in Vallabolid and the castle of Layos in Toledo. 1917 Second prize, one vote behind the winner, in the competition of the Committee of the Ibero-American Exhibition in Seville for the project for the hotel Alfonso XIII.
Co-founder of the Castellón Cultural Society. 1925 - Now After the resignation of Aníbal González, he was appointed general architect and artistic director of the Ibero-American Trade Fair in Seville, where he designed and directed the building of several pavilions, among others those of Tourism, Extremadura, the Royal Navy, Agricultural and Cattle Breeding Industries and the best-known: the Seville Pavilion or Exhibition Casino. He also designed the central fountain for Aníbal
González’s Plaza de España and the main entrance to the fair grounds in San Diego square.

Awarded a gold medal at the Exhibition of Decorative Arts in Paris.

First prize in the Inbero-American Exhibition in Seville.

Appointed Caballero and Comendador de la Orden del Santo Cristo in Portugal.

First prize in the national competition for the project for the Monumental Temple of the Virgin of the Helpless in Valencia.

1934 - 42Headquarters of the Banco de Valencia in that city with the collaboration of Goerlich, Almenar and Gómez Davó.

1938 - 66Project and management of the church of Santa María de Castellón, Cathedral church since 1889.

Architect for the diocese of Valencia; among many other religious works, he carried out the total reconstruction of the Archbishop’s Palace (1941 - 42); works on the cathedral (1940); the elimination of the choir in the centre of the temple, the transfer of the altar to the cross aisle and construction of the baldachin (in the church of Liria today); restoration of the Chapter Room, the Chapel of Relics and the Chapel of the Holy Chalice; the Diocesan Seminary in Moncada (1946 - 66).

He was first appointed Architect for the diocese of Tortosa, where he performed, among other works, repairs to war damage and the transfer of the choir in the Cathedral (1943); Diocesan Seminary (1945 - 60) and the parish church of the Camarles quarter (1952).

1939 - 42Lord Mayor of Castellón de la Plana, promoting a great deal of urban development under the auspices of the 1932 "Ordinance and Development Plan for Castellón".

1946 - 50Headquarters of the Banco Central in Murcia and Seville.

Chairman of the Provincial Monument Committee in Castellón.

Vice-chairman of the Castellón Cultural Society, 15.5.1966 Died of a heart attack during a professional trip to Alicante.

He was the author of innumerable projects, his works can be found in the cities of Castellón, Valencia and Alicante; Gerona, Barcelona, Lérida and Tarragona; Mallorca and Menorca; Murcia; Cádiz, Huelva and Seville; Guadalajara and Toledo; Badajoz and Valladolid.

He also wrote a great deal of varied and interesting bibiographic historic and artistic work, mainly concerning Castellón.

He was a member of the Royal Academies of History and Fine Arts of San Fernando, Santa Isabel de Hungria and San Carlos.

**José Luis Roca Salam**

**Restoration of the statue of the virgin on the north portal of the church of Santa María in Castellón**

**Historic reference**

On 17th November 1936 the Church of Santa María in Castellón (which had already been appointed a national monument) was knocked down by the Castellón City Council with municipal consent.

The statue of the Virgin and Child situated on the tympanum of the North Portal was probably completely smashed on being knocked to the ground.

Several fragments of it were picked up and conserved by the professor and historian Francisco Esteve.

On 17th November 1995, exactly 50 years later, Don Francisco Esteve handed over these fragments to Don Fernando Villalonga, Councillor for Culture, Education and Science of the Valencian Community to be restored, coinciding with the reconstruction of the church supervised by the architect Joan Ignacio Traver.

**The fragments conserved**

The fragments conserved, eight in all and very different sizes, belonged to different parts of the general structure of the statue. The sculptural configuration permitted its location with regard to the rest of the missing volumetry thanks to the photographic documentation provided by the Mas Archives in Barcelona.

The description and situation corresponding to the fragments is as follows, in sequence and from top to bottom:

- The smallest fragment of all, belonging to the upper part of the hand of the head. Part of the cylindrical orifice corresponding to the anchor of the crown can be seen.
- Fragment of the mantle covering the head and a small portion of hair and forehead, from the upper left-hand side.
- Fragment of the upper face with portions of hair and mantle on either side. There is a superficial discontinuity in the left eye, peeling of the lower right-hand eyelid and volumetric loss in the nose.
- Fragment of lower face and neck. Portions of the mantle and hair on the left and serious peeling of the chin.
- Fragment of the torso with the gown of the figure of the statue, it is the largest fragment. Its sculptural configuration corresponds to the upper and lower volumetry of the girdle, and part of the mantle on the right shoulder and the broken surface with anchor orifices for the right arm.
- Shoulder and fragment of the right-hand side of the torso of the statue of the Child. The broken edge of the right arm can be seen.
- Fragment of the left-hand side of the throne or seat with a small portion of mantle.
- Fragment of gown and the right foot with footwear, badly worn at the front. Small portion of the scar of the pedestal.

All the fragments present polychromy remains.

**Photographic documentation**

As we have already pointed out, the Mas Archive in Barcelona fortunately conserves a negative of a photograph of the statue on the tympanum of the portal before it was destroyed. This Archive supplied us with several photographic enlargements of the statue and different parts of it, allowing us to see it in greater detail.

The statue is seated Virgin and Child (whose head is missing). It is Gothic style, and the volumetric arrangement of the clothing is particularly interesting.

It is curious to notice in the photograph the blurriness of the features due to the thickness of the stucco layer, which can be appreciated in the clipping, giving it a coarse expression more in keeping with Romanesque style. Nevertheless, in the fragments conserved, from which almost all the stucco has disappeared, the features are more typical of Prenovelti Gothic.

**Intervention process**

In the first place, the frame was constructed to anchor the largest fragment. Then the volumetry of the statue was made in clay, situating in sequence each of the other fragments in its corresponding place according to the modelling process advanced. As regards the head of the Child, as there was no graphic documentation about it, it was based on similar Gothic statues of the Virgin and Child.

The fragments that were badly peeled or had parts missing were reconstructed by adjusting the volumetric level of the modelling according to the fragments conserved.

Once this was done, a plaster mould was made of the modelled statue and the fragments, which were impregnated with fiberglass, rationalizing the chance of impregnation, it was based on similar Gothic statues of the Virgin and Child.

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Once this was done, a plaster mould was made of the modelled statue and the fragments, which were impregnated with fiberglass, rationalizing the chance of impregnation, it was based on similar Gothic statues of the Virgin and Child.

Once the mould was removed, a plaster reproduction of the stave was made without the fragments. These were carefully cleaned and all traces of clay were removed from them.

All the typical superficial imperfections of this plaster reproduction were filed down, and the sculptural details were optimized and a texture similar to a polished stone finish was achieved.

Then the surface of the polychromy was prepared with shellac and an impregnation of microcrystalline wax and an elastomer mould was made by casting, with support bases of polyester reinforced with fiberglass. Rationalizing the dismantling of both the elastomer membrane and the support boxes. This was done so as to be able to handle the whole cast area of the membrane so that all the conserved fragments could be placed in the corresponding position.

Once this operation had been performed, a mortar was prepared with a Gel-Coat type thermo-hardening resin with tintoxycral characteristics and powdered alabaster.

The white of the mortar was slightly modified by means of adding ochre paste, thus achieving a less aggressive visual contrast with the original fragments. This ensured a normalized reading of the ensemble, considered the most suitable according to a criterion of iconographic respect for the statue’s double function as a museum piece and a religious object.

This type of mortar is characterized by being totally waterproof, thus guaranteeing the exactness of the reproduction, its durability and good behaviour under any kind of physico-chemical phenomenon that could alter stone materials.

Once the mortar was polymerized, the replica formed by the replaced volumetry and the
fragments conserved was taken out of the mould. Then the perimetric joints between the mortar and the fragments were perfected. Finally the volumetric part of the sculptural reintegration was polished and a slight patina was applied, and the dirt was removed from the polychrome remains.

Captions
5. Photograph of the original statue before it was destroyed. (Mas Archive).
6. Image of the eight fragments conserved with traces of polychromy.
1. Fragment belonging to the upper part of the back of the head.
2. Fragment of the mantle covering the head and a small portion of hair and forehead, from the upper left-hand side.
3. Fragment of the upper. There is peeling in the right eye and volumetric loss in the nose.
4. Fragment of lower face and neck. Serious pitting on the chin.
5. Fragment of the torso with the gown of the image of the Virgin. There are anchor orifices for the right arm.
6. Shoulder and fragment of the right-hand side of the torso of the statue of the Child.
7. Moulded fragment of the upper left-hand side of the throne or seat with a small portion of mantle.
8. Fragment of gown and the right foot with footwear. Small portion of the sole of the pedestal.
7. Secondary electron microphotography showing details of the textural characteristics of the broken surface of one of the fragments of the statue.
8. The X-ray energy spectrum obtained in this zone presents an intense signal corresponding to the lines of emission of sulphur and calcium, confirming the large content of calcium sulphate (CaSO₄), in other words, the material known as alabaster.
9. Image achieved by means of a binocular magnifying glass on a broken surface of alabaster, showing the crystalline texture of gypsum.
10. Fractures and anchors of two of the fragments (the two largest).
11. Finished statue with the eight fragments in place.
12. Plaster mould made on the model with the fragments so as to obtain a plaster reproduction.
13. Finished plaster reproduction with mapping of fragments.
14. Plaster reproduction covered with plasticine. Separation borders due to the rationalization of the dismantling of the silicone mould and support boxes.
15. Image where the separation joint of plasticine with adjustment canal and the support box (polyester reinforced with fiberglass) at the back.
16. Open mould and its different parts. The separation borders can be seen and also the elastomer membrane.
17. Finished statue, right profile. The fragments have been integrated with Gel-Coat resin mortar and powdered alabaster.
18. Finished statue, left profile. A slight patina was applied to the polished surface.
19. Finished statue, front view. The polychromy remains can be seen in the fragments conserved.

Marco Albini, Fransca Helg & Antonio Piva
Restoration of Masnago castle

Near Verese, a few kilometres from Milan, stands the Masnago "castle," famous for the double series of late Gothic frescoes that decorate the main rooms of the ground and first floor. These frescoes represent the life of a small court revolving around the lady of the house, who can be seen playing the organ. The "castle" must have been fortified in the Middle Ages: the square tower and the proximity of a second tower absorbed by a nucleus of nearby houses are typical of this type of building (13th - 14th century).

"Without dismissing the above-mentioned possibility of the existence of a primitive castle, of which the tower was undoubtedly the citadel, it was not until the 15th century that a masonry body of quite an irregular trapezoidal shape was attached to the east facade of the tower. In this way the two bodies formed a castle proper (or at least a fort) conserving - in a building suitable as the residence of a gentleman, his family, his servants and -in all probability- armed guards. This was the case, at least in Western countries, in a social organization still essentially feudal. "The walls of the second masonry body are notably less thick than those of the tower, more or less half. The current plaster covers the joint of the walls of the medieval tower and the attached body and confirms the obviously different construction dates. The two constructions must have been planned to each other to form a fairly unified L-shaped ensemble. On the other hand the two components -the tower and the body- probably not yet planned by Michelozzi or at least not yet planned by Michelozzi, have clearly revealed the different construction dates and each part had its own clearly-defined function: military, the tower and residential, or civil, the attached masonry body" (Carlo Perogalli: El Castello di Masnago, Ed. Lativa, 1984).

The original intention of the restoration and restructuring project is to conserve the existing building and prepare the spaces to be used as a museum. The simplicity of the action implies, however, a series of slight maintenance and innovation interventions combined, which enable the castle to develop a precise function without interfering in the history of stylistic and typological superpositions. The concept of purity of style, absent in this case and impossible to attain, contrasts with the peculiar stylistic heterogeneity of the building, which nevertheless forms a coherent whole. The restoration tradition in Lombardy has the theoretical contributions of Boito and Beltrami as intermediaries references between the radical positions of Viollet-le-Duc and Ruskin. Over a hundred years after Boito's text was written Restaurare e ristrutturare (Ricci di Belle Arti, Milan 1893 and the 4th National Congress of Engineers and Architects in 1883, where Boito proposed a restoration theory based on the need to preserve the authenticity of the monument, the ambiguity about the concept of restoration is still alive, so that for the sake of the unity and purity of the monument still today additions and other impairments are removed. It is my opinion that in restoration it is impossible to establish universal rules, let alone principles capable of justifying partial demolitions or renovating the vitality of the monument that will suffer, in any case, the results of the intervention techniques adopted.

the "air" of the time the intervention was performed and the effects induced. The reactions of architecture are like those of the human body when subjected to prosthetics, cures, medicines and all that is required to recover the activity impaired by the passage of time. It is impossible to establish universal rules to guarantee anything, but merely guidelines, generic indications to follow a course whose end can surely be reached by acting in the proper way, in the desire to prolong the life of the monument with its peculiarities, weaknesses and mysteries. In these years a new project, carried out by some authors on "intelligent imperfection" has represented a new line of experimentation about minimal interventions, not destructive but coherent with the recovery of plasters, materials and works that are according to the existing imperfection and richness.

The different typologies and constructive systems of each place are precisely articulated between one historic centre and another in Lombardy, Veneto, Liguria and we could go on mentioning zones forever. The differences between them represent the richness of the infinite variables that make up both a network of civilizations and an isolated construction. The complexity of the various devices that represent the expressive device that contemporaneity can reconquer where the inconsistency of the modern process has failed with the elimination of those decisive details that only the rules of art can turn into an integrative language. The simple metal frames are made up of metal brackets, the doors are made with metal plates nailed to them in imitation of the existing doors in that part of Lombardy, frugal land little given to ostentation and competition. Colour has been used with caution: shades of grey to match the Beola stone, the oak girders of the framework have been restored with all their imperfections and defects but according to the inimitable patina of time. The walls jealously guard their sagging so that they exalt their three-dimensional geometry in the interior, their irregularities and flaws. The concept of reversibility is present in the vertical communication constructed in steel: the possibility of introducing modifications without interfering in the structure of the walls. The discretion put into practice for this project does not entail a position of renunciation of contemporary architecture and its active role. It is more a way that seeks to recover the details of the little things that have the virtue of evoking the traces of time and reorder them gently with the delicacy of the poetry and the music that was once heard in these frescoed rooms and can still be heard many centuries later.