

## NOTES ON CERAMIC REPAIRS IN RESTORATION WORK

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*"The artistic belief that a damaged object must be restored to its genuine original state is an error".*

GIL MIQUEL, Ramón: *Los límites de la Restauración en los objetos antiguos*, Museo Arqueológico Nacional, Madrid, 1936.

### GENERAL COMMENTS

If we accept as a principle, that the simple fact of restoring a certain artistic cultural object implies recognising its innate values, whose meaning and spatial language are established through correlation and dialogue between the parts and the whole, we must understand that altering, through hiding or elimination of some of these parts, in itself implies an aggression, or at least a transformation of the overall meaning.

Restoration is not, nor can it be, as many still seem to think, the work of some craftsmen devoted to restoring lustre to deteriorated objects, leaving them in a glorious state as if the passing of time had no effect on them. Even worse is the case of those who, without hesitation, allow themselves to rectify the signs of the past by eliminating them and starting all over again, as if the history that such signs bear were not an intrinsic part of their aesthetic value.

However, it was along those lines that went the train of thought of the men, who towards the end of the last century and early decades of this century, devoted themselves to the study and conservation of the ceramic heritage. They considered that the irregularities in making the composition and in the fabrication itself of

antique tiles were the result of inexperience or lack of resources. Therefore the right intervention would involve reproducing the motifs and original colours, *improving* the pattern and control of the glaze. That is the way it was done and can be seen in the reproductions of antique ceramics carried out by Juan Ruiz de Luna at the beginning of the century. He demonstrated on many occasions that he was capable of copying with total accuracy the ceramic pieces and tiles from Talavera of past centuries, but he chose however to make the motifs with a much sharper design, considering that this would give them greater perfection. This mindframe resulted from not understanding the indivisible aesthetic and formal conception of a given moment of the past, and that the transformations in aesthetic taste are part of a philosophical and moral evolution. How many times have we read the criticisms of contemporaries about certain authors who on introducing a new language were criticised for lack of skill. We are also reminded of Daniel Zuloaga, who, besides actual cases in which he tried to use clearly defective material (something rather a matter of trade than aesthetics), was frequently criticised for lack of skill when it appears proven that this formed part of his general aesthetic philosophy and the way of perceiving the great compositions, which were more concerned about the general effect than individual detail. A clear example are the "wild ducks" facing each other, which he made in 1887 for the Retiro Park Crystal Palace in Madrid. The dripping effect produced on the wild duck bodies was the result of having fired the tiles in a vertical position; the geniality of the painting and polychrome effects are not disguised or hidden, but serve to enhance it. In spite of this, there are some who remain reluctant to recognise this beauty, accusing him of having liked *defective* material.

We may remember, with regard to our capacity to alter and distort history and its manifestations even if it be unconsciously, how the opinion of the English, and practically the whole of Europe through them with regard to Spanish-Muslim Architecture and particularly tilings, was conditioned for a very long time by the images that painters and romantic artists transmitted through their journeys to Andalusia. This, for instance, happened to the pictures of the painter, carver and sculptor John Frederick Lewis on the Alhambra published in 1835-1836<sup>[1]</sup>. In these he simplified the most complicated wall tiles, replacing them by others of greater simplicity, and invented several models, such as those in the Sala de los Abencerrajes, in which a type of "rosette" replaced eight-pointed stars. The most significant point is that such alterations ended up taking over and satisfying new aesthetics of motifs and forms which with the passing of time continued to be identified with the Spanish Muslims, and were even included in the types of models produced in our factories.

Along the same lines, it seems nowadays strange to see how many illustrations show the tiled skirtings of the Alhambra and of the Reales Alcazares of Seville, which really belong to the reconstructions made at the beginning of the century, and not the remaining original fragments.

But returning to the reinterpretations of the past, we must accept that our starting point in the present has nothing in common with those of the second half of the last century. Let us not forget that a person such as Ricardo Velazquez Bosco, when he decides to intervene in monuments like the Mosque in Cordoba, demonstrates that one of the most important monuments in Muslim architecture

[1]. *Sketches and Drawings of the Alhambra*, 1835 and *Sketches of Spain and the Spanish Character*, 1836. Taken from RAQUEJO, Tonia: *El palacio encantado. La Alhambra en el arte británico*. Taurus, Madrid, 1989, p.28.

has practically disappeared, and it is precisely the action of recuperating the Muslim temple as opposed to the Christian one, that gave it its value. In fact, in the first intervention project in 1891, he himself admitted that "the restoration applied to the Ancient Mosque, today Cathedral of Cordoba, is of a completely different style from the restoration of monuments generally, whose objective is usually to avoid ruin<sup>[2]</sup>." In the restoration of the Mosque in Cordoba<sup>[3]</sup> he did not hesitate to eliminate the plaster arches from the 17th century, and in doing so discovered the original state of the arches, which he started to reconstruct, recovering fragments that were still conserved. Nowadays, fortunately, few people would subscribe to the elimination of an original element from the 17th century, and replace it by reconstruction. Moreover, we must admit that very possibly thanks to decisions such as these, the Mosque began to be appreciated as such. But if what has been said is true, it is equally certain that because of the interpretation of art values and the identity of the artistic work, many historical examples of great value have equally been lost. This led to the disappearance of the domes covered with glazed tiles in the Hospital de Santiago Ubeda done by Andrés de Vandelvira, and also the glazed domes of the side pavilions in the "Patio de Los Leones" in the Alhambra, as a result of an incorrect analysis, which considered them to be foreign to the original design. However we also remember buildings such as the Alhambra, preserved forever by Romantic English travellers or the Medina az-Azahra, completely obliterated from the collective memory until Velazquez Bosco started to



*Different stages in the restoration of the skirting in the Church of San Clemente in Seville. Backgrounds painted in the prevailing skirting colour. Linear replacement of the pattern. Pictorial reconstruction of the design.*

- [2]. General Administration Files, Leg 8836-3. Taken from BALDELLOU SANTOLARIA, Miguel Angel: *Ricardo Velazquez Bosco* (Catalogue from the exposition), Ministry of Culture, Madrid, 1990, p.120.
- [3]. Please refer to the work mentioned in the above note on pp. 120-153 and RUIZ CABRERO, Gabriel, "Dieciséis proyectos de Velazquez Bosco" in *Projects and Interventions of the Ministry of Culture 1981-1985*. Offprint from the magazine *Aquitectura*, Madrid 1986 p103-112.

excavate it and managed to show that indeed it was the mythical city created by Abd al-Rahman.

It seems moreover logical to think that the very fact of seeing themselves obliged to start practically from zero, and even from chaos led them to consider the formal reconstruction of space with a view to leaving them as they thought they were in their historical analysis, although time and subsequent studies have often shown their error

In any case, at present we have abundant information at our disposal which leads to us to hesitate in a methodical way in our actions, and even if we refuse to accept it time and time again, our capacity to alter and destroy signs of the past is proportionally equal to our capacity to intervene in our heritage. Given the impression of having learnt almost nothing from our ancestors, we feel in a great number of cases just like little Gods capable of altering the course of history, in this case art, by interpreting it without any hesitation, believing ourselves capable of discovering the only truth, as if this existed.

If restoration is basically work carried out to guarantee the conservation of a damaged object, reintegration is the stage which must form an indivisible part of the idea it contains, giving form to the language and message to be transmitted through the object. That is to say, that the final aim of repair is in short that of being able to transmit what we consider should emanate from the object. Doubtless many one will think (and this is an illusion) that objects are capable of containing and transmitting their own messages, without being subject to interpretation, as if they guarded within themselves a changeless message. And it is in spite of this evidence, or perhaps because of it, that when we approach the way of carrying out a of restoration, that we should look for the highest degree of veracity, while recognising that this does not mean including more information than it really contains. However we should understand that others are also capable of interpreting the existing evidence with the least number of alterations.

This is not a futile discussion with little to do with the subject of restoration. We can only balance our steps in the full knowledge of the fact that any type of intervention in itself implies the alteration of an artistic fact.

There are some who think, and I also include myself on some occasions, that composing can be considered a different act from restoring in the proper sense of the word, as if conservation were something very neat, which has no connection whatsoever with the meaning and value of the object being restored, or with the work that these processes involve in the transformation, and the way of presenting and seeing it. Remember otherwise the notorious controversy that followed the decision to clean the frescos of Michelangelo in the Sistine Chapel.

To evaluate the importance that an intervention can have, which we could classify as a clean up, let us put forward as an example the case of a building of symmetrical form, which had groups of tilings preserved in one part whilst in the other part there was nothing left, as they had apparently disappeared with the passing of time. As it was a unique building, the decision was made to restore the part without any tiling. But it was not really known if these areas had ever really

been tiled. We evidently start off with the idea that this was the original intention, but if we do not reflect seriously on this doubt, we will introduce a contradictory element, which could lead future investigators to ignore or be unaware of the possibility that for some unknown reason, the building had never been totally completed.

I should like not to have to insist that the object of a process of restoration cannot under any circumstances be the substitution of an original by a reproduction, no matter how perfect it may seem. However, in a country such as ours, where day after day people continue to mutilate our heritage and particularly tiling, it seems necessary to repeat this point time and time again, until an awareness of preservation prevails in every sector of the population. There is no doubt that this is a cultural problem. There are obviously many factors to be taken into account when appraising such phenomena, and the complexity involved make these difficult to summarise in a written piece of compulsory brevity such as is this,



*Different stages in the restoration of the skirting in the Church of San Clemente in Seville. Backgrounds painted in the prevailing skirting colour. Linear replacement of the pattern. Pictorial reconstruction of the design.*

but let us remember a maxim which should be present in all our interventions: a ceramic piece no matter how deteriorated can always be restored, maintaining and transmitting at least part of the existential information and aesthetics of those who created it.

On the other hand there seems to be at present the feeling that in intervening in ensembles known as fragmented ceramics, it is almost an obligation to rebuild them by reconstructing lost areas as if we were not capable of standing back and admiring them as they are and using our imagination. Certainly this should not be taken as a principle that spoils the possibility of acting in such manner, maxim when occasions do occur in which this must be considered and quite rightly so, for overall interpretation. Although I myself have acted in this way on many occasions, I would like to insist that the presently prevailing feeling is that there is in principle no other option except reconstructing everything.

As to the repeated operations in which the original ceramic elements are eliminated by substituting them with reproductions, we must remember that these must never be considered as restorations - but more aptly as aberrations. Let us remember that there are always ways of repairing the damage that (in our case) affects a ceramic material, without destroying it. Besides, through strict needs of conservation, when this cannot be guaranteed in its place of origin for whatever reason, the original ceramic can be withdrawn and transferred to a museum, replacing it in cases where this is considered necessary by reproductions to maintain the original idea. These cases are actually quite seldom and only happen on limited occasions.

One example relating to what has been mentioned is the case of the reconstruction of the façade tower domes in the restoration process of the Hospital Santiago de Ubeda. The architect and director of the project Andrés Perea decided in 1987 on the reconstruction of the domes, which were demolished in the twenties and replaced by ridge tiles. In one of the storage rooms of the building about 1000 glazed tiles were found in the gabled-form that once covered the domes, but this number was clearly insufficient even to cover just one side of one of the domes. For this reason it was decided to reproduce the original tiles and different glazes without trying to imitate or falsify their age, so that there would be no doubt that it was just an interpretation. When it came to deciding on the chromatic composition of the tiles, they chose a new re-creation as it was not known, nor was it recorded how they had been originally placed. Although it was recommended that the original tiles should be preserved in a museum, unfortunately only a small part actually was<sup>[4]</sup>.

## TECHNICAL FOCUS

Having spoken about the points that should be taken into account in decision taking at the time of projecting an intervention as outlined above, I do not wish to establish a body of intentions but rather reflect on the significance that our actions could have. We shall go on to describe some of the existing possibilities when starting restoration or reintegration, by grouping these aspects

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[4]. A small-set up is found in the Pottery Museum in Ubeda.

under the headings pictorial reintegration, ceramic reintegration and other techniques.

### *Pictorial reintegration*

Obviously the type of reconstruction involved on each occasion will depend on multiple factors, among which are to be considered not only the interpretation of the work but also the surroundings where it is conceptually and formally to function. Then there are considerations relating to spatial conditions, character of the dwellers and of course those affecting the actual material preservation of the ensemble.

On considering the restoration of ceramic ensembles, it is obviously not necessary to reach a formal restoration of the lost surfaces. There is no doubt that this is a criterion that has to do with the training of the people in charge of the work, or more exactly those responsible for the conservation, even though it is also something that affects us all. Were this not so, we would often find ourselves considering formal restoration as the only alternative. Something similar happened in the restoration of the tiled wainscoting of the church of the monastery of San Clemente in Seville<sup>[5]</sup> when the final stage of the restoration was reached, taking the final decision after much thought. In searching for the most appropriate and suitable criteria, they worked through three progressive stages: from the reconstruction of the missing



*Composition of the east façade of the Escuela de Minas in Madrid. General view of the original state before the restoration, showing the missing white tiles. Restoration by "regattino" of the areas with larger missing parts.*

[5]. CONSUEGRA RODRÍGUEZ, SACRAMENTO, GARCÍA DOMÉNECH, VALERIANO and RIEGO RUIZ, M. DEL CARMEN ; "The recuperation of tilings of the Church of the Royal Monastery of San Clemente in Seville" in *Rehabilitación de la azulejería en la arquitectura*, Asociación de Ceramología, August 1995, p. 171-200.

tiles, to the reconstruction of the drawings, and finally complete chromatic reconstruction. The result proved that any of the three alternatives was perfectly coherent and suitable to the value of the ensemble<sup>[6]</sup>. In the final decision one thing weighed the balance in favour of full restoration: they were considerations of a cultural nature, taking into account the people who were ultimately to be in contact with this environment. These were the nuns of the convent, and for this reason, either of the other two alternatives would undoubtedly have seemed excessively distorting.

Also in the case of the restoration of the ceramics of Daniel Zuloaga in the "Escuela de Minas" in Madrid 1885-1893 the criterion of formal restoration of the missing pieces was adopted<sup>[7]</sup>. According to the damaged areas involved, two different criteria were chosen, although both had the same aim: to rebuild the overall image. In the large compositions of the sides and in particular of the façade of the east wing, in which great figurative scenes were depicted, an artistic reconstruction was chosen whilst in the pillars and detailing of the main façade, which involved more or less mass-produced elements, ceramic reconstruction was chosen. But for the moment the artistic reconstruction is what interests us, later we shall touch on the ceramic reconstruction. For the large parts of the compositions containing minor missing pieces (in two cases a surface of more than a square metre), the reconstruction option chosen was "reggatino", with mineral pigments bonded in silicates applied onto a stucco surface. Using this technique a perfect reconstruction of the missing parts was carried out. On looking at them these are not immediately noticeable, although a magnifying glass shows perfectly visible differences. In the same manner a chromatic integration of a composition which presented special complications was achieved, eliminating the problem of providing glaze gloss by using reggatino, which made any polishing application to the surface unnecessary, as these always tend to cause problems on ageing.

On occasions when the missing pieces are small and affect a *carpet-like* background, it is quite unnecessary to follow the design, as a uniform background itself perfectly absorbs a monochrome plain composition. This is what was done in the skirting of the 17th century in the Salon Real de la Casa de la Panaderia de Madrid<sup>[8]</sup>. In spite of being a place exposed to use, with an important emblematic role, the proposal was accepted on seeing how the reconstruction passed unnoticed, even when the volume of small damaged parts was extremely high. It is certain that in more important compositions such as the royal coat of arms or those of the Villa, the reconstruction was done by polychrome staining imitating the original design. As the most singular elements of the skirting, they undoubtedly struck the attention. On using acrylics on very hard plaster (we are referring to interior skirting) without applying any varnish coating to the surface, the reconstruction is easily

[6]. The restoration of the pieces was done in plaster and the paintings in water colours. By using multi-colour lines, with a water-colour pencil, a perfect restoration was obtained with the tile gloss.

[7]. Cristobal Vallhonrat was in charge of the work in restoring the façades and roofs of the building employed by the Comunidad de Madrid (1989); for the restoration of the ceramics a technical assistant was appointed and the work was carried out by Pia Rodriguez Frade and Silvia Portela Aranguren.

[8]. The restoration was carried out during 1997, included in the project of restoring the Salon Real headed by the architect Joaquín Roldán, employed by the Empresa Municipal de la Vivienda, sponsored by the Obra Cultural de Caja de Madrid. I was given the job of leading the restoration of the tiles, and the work was carried out by Restauradores de Obras de Arte Asociados, employed by the construction company José Fernández. Molina. María Collar, Ana García Gonzalez, Antonio Sama, and Blanca Vargués worked on the restoration.



*Composition of the east façade of the Escuela de Minas in Madrid. General view of the original state before the restoration, showing the missing white tiles. Restoration by "regattino" of the areas with larger missing parts.*

detected with low light, even though when observed face on it has a shiny surface.

#### *Ceramic reintegration*

A possible technique that can be used when carrying out repairs is to reproduce the missing tiles, replacing them by new ones. Although the basic principles of restoration tend to advise against incorporating materials that could be considered imitations of the originals, there are many occasions on which integrating new tiling could be fully justified, especially in cases where the tiles should have technical characteristics of resistance and homogeneity. If we look for a moment at other areas of restoration, we can see how in the restoration of oil paintings for example the use of water colour is commonly accepted in chromatic reconstruction (generalising greatly). However, it is not less certain that in restoring missing ligneous elements in architecture, wood is often

used, which goes to show once again how the use of these materials is fundamentally a question of common sense, and the materials used for each particular case should be chosen as seen fit, provided they do not affect the original material.

But we will continue with ceramic examples and see what is said about the restoration work on the tile skirting and stairway of the old Hospital de Jornaleros de Maudes in Madrid<sup>[9]</sup>. In this case the loss of a great number of tiles produced by the factory of Ramos Rejano in Seville in about 1914, and the intention of maintaining such skirting in the renovated building, led to the decision to reproduce them so that copies could fill in the missing parts. This decision was endorsed by both of the following two points: first, as part of a skirting and a stairway was involved in a building in full use, it was necessary for the material behaviour to be correct and appropriate. The second point was that faced with a damaged skirting it would have been very difficult to fully conserve and protect it.

There must always be a way of distinguishing new tiles from the old ones, but the criteria of identification never justify a bad piece. For these very reasons, the type of ceramic body used is of minor importance, as long as it has no negative effect on the final result. Priority should rather be attached to the fact that the quality involved should make it perfectly suitable for placement.

Any of the principles that are used in the different restoration options can in principle be applied to the ceramic body. Therefore, on certain occasions it could be practical to use monochrome tiles in the empty gaps. For example this could be the case with a white compositional covering in which the tin background stands out. It would also be possible to outline the motifs with a line of manganese without having to reproduce the colour. However, I am not aware if any of these options have been put into practice, so I am unable to provide any examples. An example I can speak about, is the case of the restoration work done on the tiling of Daniel Zuloaga in the Crystal Palace in the Retiro Park Madrid<sup>[10]</sup>. When we approached the task we decided to reproduce the missing ceramic pieces by screen-printing. The number of pieces to be made was more or less the same as the existing number. The craftsmanship of Zuloaga, to be observed in most of his pieces, and the richness of design, led us to opt for screen-printing. The intention was also that differences were not to be obvious, though close up they could be detected. Unfortunately, the difficulties that we came up against in making the tiles through this technique, in spite of running a great number of tests, made us drop this idea and the reproductions were finally made in the traditional way.

#### *Other techniques*

Apart from the processes mentioned above, other restoration techniques also exist, consisting of imitating the traditional methods by employing non-ceramic methods. These are usually practical in cases where the quantity of tiles to be replaced is so small that ceramic production is not viable, especially in the case of border tiles. This was the

[9]. The architect Andrés Perea was in charge of the project, and the building was renovated, after many years of abandonment, to serve as Head Office of the Consejería de Política Territorial de la Comunidad de Madrid. The project was carried out in the period from 1983 until 1986 and during the last two years I was a technical assistant for the restoration of the ceramic tiles. See: *Un Monumento Recuperado. Antiguo Hospital para Jornaleros de Madrid*, Consejería de Política Territorial, Comunidad de Madrid, Madrid 1990.

[10]. The project depends on the Ministry of Education and Culture and the Executive Management was headed by José de la Dehesa with the cooperation of Carlos Jimenez Cuenca, Federico Prieto and myself. The building contractors are Agroman; the restoration work is being done by María Ruiz and Cristina Villar.



*Composition of the east façade of the Escuela de Minas in Madrid. General view of the original state before the restoration, showing the missing white tiles. Restoration by "regattino" of the areas with larger missing parts.*

case of tiles made by Carmen Rallo in the Monastery of San Isidoro de Campo in Seville<sup>[11]</sup> using coloured polyester resin and mineral pigments in an acrylic binder.

This is also a suitable method of reconstructing borders located in exteriors, of which large fragments are missing, thus reconstructing the missing volumes. This was done with damaged tile borders exhibiting partial losses in the Palace of Velazquez in the Retiro, Madrid<sup>[12]</sup>, although in this case an epoxy resin was used with a static filler and mineral pigments bonded in the resin itself, with a higher degree of flowability.

[11]. RALLO GRUSS; CARMEN "The tiles of the 16th century in the Monastery of San Isidoro del Campo: their restoration." In: *Rehabilitación de la azulejería en la arquitectura*, opus cit. pp 159-169.

[12]. The team in charge was the same as in the Crystal Palace, with the exception of Carlos Jimenez Cuenca. The restoring of the façades was done by the renovation specialists CORESAL. See PERLA, ANTONIO: "The restoration of the façades of the Velázquez Palace in Madrid" *Qualicer* 96, Castellón 1996 p 493-508.

To conclude, I would like to say that nothing has been further from my mind than to try and formulate a list of repair and replacement options for ceramic restoration. From these modest pages I have only tried to focus on some cultural values and reflections, which we should take into account on intervening in our ceramic heritage. I have tried to show some of the possibilities that might be considered when setting out to compose a piece, choosing from very concrete examples of work. I am also fully aware that there are other methods as well which could illustrate these and other ways of carrying out the restoration.

I should like to close with a quotation from Velazquez Bosco, taken from the Report on the Restoration Project of the Mosque in Cordoba 1908, in which he refers to the *"Principle followed rigorously in the restoration work of this temple, to wholly conserve the ornamented elements that have reached us, no matter how deteriorated they might be, making again only the parts that have totally disappeared."*