

HENRY MAGUIRE, ANN TERRY

**THE WALL MOSAICS IN THE CATHEDRAL AT POREČ:  
ISSUES OF RESTORATION**

**RÉSUMÉ**

*Cet article est le compte rendu d'une étude faite en collaboration, des mosaïques murales dans la cathédrale d'Eufrasius à Poreč en Croatie. Les mosaïques ont été réalisées au sixième siècle et restaurées au dix-neuvième siècle. La première partie porte les interventions sur les mosaïques pendant les dix-huitième et dix-neuvième siècles. La seconde partie examine des détails choisis des mosaïques pour déterminer ce qui est d'origine, et ce qui est du dix-neuvième siècle. Bien que plusieurs parties de la surface des mosaïques ont exigé quelque intervention, la plupart des détails iconographiques sont authentiques.*

This paper reports on a collaborative study of the wall mosaics of the cathedral in Poreč (fig. 1). These mosaics date to the mid-sixth century, but were restored in the late nineteenth century. Our study is based both on recently found restoration documents (Terry and Muhlstein 1998; Muhlstein 2002), and on examinations of the mosaics from scaffolding during three campaigns (1997, 1999, 2000). Our method was to make tessera by tessera studies of small, selected areas, or sondages, involving minute examinations of cubes, setting beds and setting techniques. We identified five phases of work in the mosaics (sixth century, eighteenth century, two in the late nineteenth century, and twentieth century repairs), and we also made discoveries about the mosaic making of these phases. We published three preliminary reports, and are currently producing a final report (Terry and Maguire 1998, 2000, 2001).

This paper focuses on selected aspects of the restorations: interventions of the eighteenth century, the general range of restoration procedures in the

19<sup>th</sup> century, the trial restoration by the Neuhauser Institute in 1887, and finally, the comprehensive restoration by Pietro Bornia from 1890 to 1900. Though we have no direct records, several sources suggest that the mosaics were repaired in the 18<sup>th</sup> century, evidently in conjunction with documented renovations of the cathedral. The best example of mosaic from this period is the head of Damian from the north apse (fig. 2), which was refurbished probably in 1748-1749. This head is easily differentiated from its halo, both by the suture that separates them, and also because the face lies along a different surface than the halo, one which is recessed and less planar. The face of the saint is a composite of settings, but here we call attention to the centre of the face and neck. These areas are not original, nor are they from the hands of the 19<sup>th</sup> century restorers, but instead have the trademarks of 18<sup>th</sup> century mosaics. The setting pattern is haphazard in the extreme, as seen especially at the base of the saint's nose, where erratically set cubes lie in an inconsistent and gritty plaster. Other repairs may have been carried out in the 18<sup>th</sup> century as well. According to the documents and pre-restoration descriptions, the mosaics of the main apse were considerably patched with painted plaster in areas of damage or loss. One conspicuous patch was in the central medallion at the top of the triumphal arch (fig. 1), which now holds a lamb. Prior to the restoration, the medallion had a Christogram which written descriptions date to sometime between 1741 and 1858. Finally, patches of old and worn painted plaster still survive in the north apse, which was never fully restored, and where areas of a painted border can still be seen to cover original tesserae *in situ* (Terry and Maguire 2001: figs. 26-27).

The late 19<sup>th</sup> century restorations, unlike those of the 18<sup>th</sup> century, are copiously documented. The documents, found in the state archives of Austria, are from the *Ministerium für Kultus und Unterricht* (Ministry for Church Affairs and Education) and related agencies. Tom Muhlstein transcribed them from their original *Kurrentschrift* into modern German, and a CD of the transcriptions has been published (Muhlstein 2002). Gabriella Bernardi has also worked with and published some of the restoration documents (Bernardi 1997). The documents discuss a range of procedures used to repair and consolidate the mosaics. As a result, in any given area it is usually impossible to make a simple dichotomy between "unrestored" and "restored", or between "old" and "new". In each case the degree of intervention lies on a continuum, somewhere between completely untouched at one extreme, and totally fabricated at the other. At the less intrusive end of this spectrum was the patching of small holes, either with the original cubes that had become loose, or with new ones. Both appear in combination on the face of Zacharias' box,

where several original old gold cubes are patched into the surface on the lower right, while three patches nearby use new gold cubes (Terry and Maguire, 1998: fig. 35). Copper nails used to affix the mosaics back onto the wall required the removal of a few tesserae. More seriously, we encounter the removal of whole sections of varying size from the wall surface in order to repair them and reset them in new plaster. This technique preserved the original design, and sometimes original tesserae, but it also flattened and denatured the fabric of the mosaic. Most radically, entirely new tesserae were set on entirely new beds. We see both of the last-named procedures on the triumphal arch (fig. 1). The areas above the red line were removed and restored on the basis of partly ruinous originals, as pre-restoration photos demonstrate (Muhlstein and Terry: figs. 18-19). Areas beneath the red line, which were fully lost, are a complete confection. All of these practices were employed by the late nineteenth-century restorers in the Eufrasiana, in varying degrees and combinations and with varying levels of skill. For them, restoration was more of an art than a science, involving the practitioner's experience, judgement, instincts and budget.

We turn now to examine the trial restoration of 1887, by the Albert Neuhauser Firm of Innsbruck. The mosaicist, Luigi Solerti, used various procedures, as sketched out by the documents (Terry and Muhlstein 1998: 1049-1050; Terry and Maguire 2000: 160-162). In a number of places, he lifted sections of mosaic completely off the wall, cleaned them, removed the decomposed setting bed away from the wall, and then reset the tesserae onto a new bed. Elsewhere, he filled in areas of missing or poorly preserved cubes, by scraping the original setting bed off the wall and applying a new bed of Portland cement in which he arranged tesserae according to his sense of the existing design. Solerti's restoration, ultimately, was not well received, as noted in the records of the Ministry. The conservator Count Franz Coronini was frank, reporting in a letter that Solerti's work was "painful to behold". The documents are not fully explicit as to why; we learn indirectly that the technique and colours, particularly blue and gold were at issue (Bernardi 1997: 1013-1026). Some areas restored by Solerti were subsequently worked on by Bornia. The left foot of the angel Gabriel (fig. 3) is exceptionally complex, since Solerti remade it twice and then Bornia reworked it. From examining the tesserae and setting beds, we know that Bornia also replaced much of Solerti's gold.

But in spite of Bornia's re-restoration, enough of Solerti's work remains to fill in the gaps left in the documents. The following characteristics of Solerti's work are distinct both from the original work of the 6<sup>th</sup> century and

also from Bornia's later restoration. In addition to leaving very obvious sutures in inappropriate places (Terry and Maguire 1998: fig. 12), a large percentage of the colours of tesserae used by Solerti are found nowhere else in the mosaics, particularly the greens (fig. 3). Moreover, the type of glass used was more opaque, dense and much more highly glossed than most of the glasses used in the later restoration. Solerti also cut tesserae into long rectilinear shapes, which, when grouped tightly, mimic the look of brickwork. Solerti set tesserae together very closely, so that one does not always see very much of the setting bed (fig. 3). Other tell-tale clues involve cutting tesserae into shapes to fit a design, rather than fitting pre-cut cubes into a design. In the north acanthus cup, Solerti fashioned the beige tips of the leaves into claw-like points by curving one side of a triangular cube. As the acanthus cup on the south side demonstrates, the original mosaicist used either triangular cubes set on end at the tip of a leaf, or square cubes placed obliquely. Furthermore, Solerti also cut tiny triangular cubes and fit them in intricate patterns to fill interstices, where the sixth-century mosaicist would have used a square cube at an angle, or a simple triangular cube.

The restoration documents, though voluminous, reveal less than expected about precisely which parts of the mosaics were restored in what way. Only close examination from scaffolding can determine the authenticity of the mosaics, as well as reveal the practices used by both the original mosaicists and the restorers.

The second part of this paper will look at selected details of the mosaics to see how much is original and how much is nineteenth century work. This is the puzzle set to us by the clever late nineteenth-century restorer. First, we will explain briefly how we were able to distinguish the two phases, sixth and nineteenth century. The clearest indicators were the tesserae themselves. We can see the distinctions in fig. 4, which reproduces a section of the jeweled band beneath the Visitation. The space between the jewels is punctuated by two discs of white marble. Nearly all of the tesserae in the red jewelled band to the left of the white discs are old, while nearly all those to the right are new. The old cubes are irregular in shape, have uneven surfaces, and are more varied in hue. The new red tesserae, on the other hand, are more evenly cut, have crisper edges, and show less variety in hue.

Two other means of distinguishing between the sixth and the nineteenth century phases are the setting bed and the setting technique. Generally speaking, the hallmark of Bornia's restoration is a pinkish setting bed and a highly regular setting technique. The original setting bed, on the other hand, has a grey or greyish white plaster, perhaps having accumulated more dirt over

time. The old setting technique is markedly irregular. The tesserae vary in height, giving the mosaic fabric a pronounced rippling surface. The cubes are often set askew, or at slight angles to each other, which, together with the odd shapes of many original tesserae, can create a jumbled appearance. Another distinctive feature of the old tesserae is that they now project well above the surface of the mortar. Many of these features can be seen in fig. 4, at the left side of the jeweled band, where the setting of the cubes is comparatively irregular. The right side, by contrast, is much more even. We can also see, especially in the greens making up the rectangular jewel, how the original tesserae project a good deal above the level of the setting bed.

Our study of the mosaics showed that both the restorers and the original sixth-century mosaicists could make "mistakes" - that is, create anomalous compositions. This was apparent, for example, in the case of the twelve busts of female saints on the intrados of the apse arch. Some of these portraits are extremely well preserved. For example, the face and hair of Agathe are set entirely with original cubes in the original grey-white setting bed (fig. 5). There is only one small patch of restoration, on the right side of her hair, where Bornia reset old tesserae in a new pink plaster. Agathe's veil, collar, and robe are also set with old cubes in the old grey plaster, except for some cubes of new purple glass and some patches of new gold tesserae, especially in her robe. The least well preserved saints are Filicitas and Basilissa, who were extensively restored by the firm of Neuhauser.

Most of the female saints have a halo of white light running along the length of their shoulder, in some cases on both sides, but in other cases on the left side only (as in the case of Agathe, fig. 5). Sometimes the light is rendered by two or more rows of white tesserae, the inner ones continuous, and the outer one broken to suggest the effect of rays. In other saints, the light is rendered by one to three lines of unbroken tesserae (as seen in Agathe, fig. 5). One of the saints, however, presents an exception. In the case of Tecla (Terry and Maguire 2000: fig. 20), the halo on her left shoulder has been attached to her veil, so that a line of grey-white cubes flows continuously from her hair to her sleeve. Examination of this portrait showed that the representation of the halo on Tecla's left shoulder as a continuation of her veil is probably a misunderstanding introduced by the restorers, for in this section the tesserae are all cubes of newly cut marble set in a fresh pink plaster.

The portrait of Agathe presents another anomaly, in that the line of pearls at the top of her collar continues up the left-hand side of her neck, as far as her necklace (fig. 5). Since she is the only one of the female saints to have this feature, we examined this area closely and discovered that the strip of jeweled

collar that goes up the side of her neck is made up of original tesserae set in the original grey plaster. Therefore, this feature is a "mistake" of the sixth-century artists, rather than of the nineteenth-century restorers.

One of the most anomalous features of the present mosaics is found in the Annunciation which, as we have found from the documents, was located in one of the most extensively remade sections of the apse mosaics. In the mosaic of the Annunciation as it is now, the Virgin wears a long purple robe decorated with two broad gold bands that descend from her shoulders to her feet (fig. 6). Over this garment, she wears a curious light blue, diaphanous veil that covers the top and the back of her head and also the upper part of her body as far down as her waist. The question is, did the restorers invent this strange-looking veil, or is it authentic?

On examination, we found that the Virgin's hair contains mostly old tesserae set in a bed that is predominantly composed of the original poorly preserved grey plaster, except for a new patch at the upper right side. The blue tesserae that delineate the veil in this area are entirely old. The gold halo, on the other hand, is one hundred percent new, both in the cubes and the setting. The restorers often had to replace the old gold cubes, because these were especially subject to deterioration. The old gold cubes were a sandwich, with a layer of amber coloured glass beneath, a layer of gold leaf in the middle, and thin layer of translucent glass on top. In the course of time, most of the old gold cubes had lost their translucent top layers and their gilding, leaving only the brownish glass that had originally supported the gold leaf. So these old gold cubes were often replaced. The Virgin's robe is set with a mixture of old and new cubes, but once again the gold in the bands is entirely new. We also discovered that most of the pale blue glass cubes used to delineate the diaphanous veil in this region are original; there are also sections of the original plaster bed under the veil on the right side of her chest.

It appears, then, that the distinctive diaphanous veil is authentic, even though it is an unusual feature in depictions of the Virgin. It is tempting to see this garment as a reference to the famous veil of the Virgin that had been kept as a relic in the shrine of the Blachernai at Constantinople since the fifth century.

In general, it can be said that the Bornia restoration was painstaking. In most of the areas that we examined, he proceeded by patching rather than by wholesale replacement. Even in those areas that belong to the rejected Neuhauser restoration, such as the Annunciation, up to 50 per cent of the tesserae are original, although they were reset. For the most part, the fabric of

the mosaics is a careful mixture of the old and the new, but with the old generally predominating. Only in the case of the gold tesserae, which, as we have seen, deteriorated more than the other colours, did the restorers go in for wholesale replacement. It is the visual prominence of this replaced gold that gives to the mosaics their new and mirror-like appearance today. But most of the iconographic details that are framed by this gleaming gold ground are authentic.

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**FIGURES**



1. Main apse, basilica of Eufrasius.



2. Head of Damian, north apse.



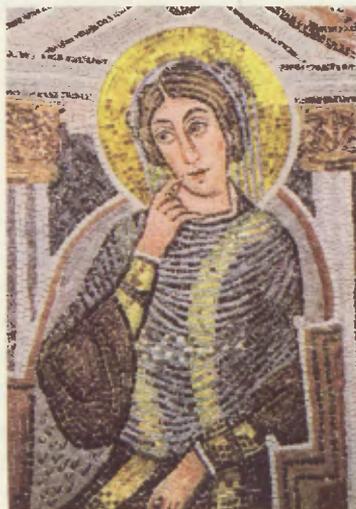
3. Left foot of Gabriel from the Annunciation.



4. Red border beneath the Visitation, detail.



5. Agathe.



6. Virgin of the Annunciation.