

The statuary on the belfry portal of Brussels Town Hall: A colourful past retrieved

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ABSTRACT

The study and conservation treatment of the original statuary from the portal of the Brussels Town Hall belfry provided an opportunity to examine more closely the methods of carving, gilding and painting on stone sculpture practised in the Low Countries around 1400. The investigation of a large number of tool marks that are present on the surface of the sculptures reveals that the prophets can be attributed to several great sculptors. Comparison of the number and type of polychrome layers on the corbels and the prophets shows that the statuary on the town hall belfry is probably not contemporary but was created during three campaigns.

INTRODUCTION

The sculptures of eight prophets and nine corbels, currently in the Brussels City Museum, are the only statues surviving from the belfry (ca. 1401–05) of the Gothic Brussels Town Hall portal (Figure 1). They are attributed to several great sculptors, amongst whom Claus Sluter and the Master of Hakendover. Originally adorning the single-arch portal of the Brussels Town Hall belfry, the eight seated prophets, each set beneath an architectural canopy, were designed to fit in the curve of the archivolt. They provided a frame for the tympanum, which was divided into five niches, each occupying a corbel. One corbel was placed in the right jamb next to the entrance and three others were placed in the jambs of the pinnacles beside the portal (Figure 2). Although somewhat uneven in quality, the prophets and the five corbels of the tympanum were generally considered to be contemporary in style and belonging to the same sculptural programme.

Most of the records relating to the early history of Brussels Town Hall have perished, so any attempts to clarify the various phases of its construction

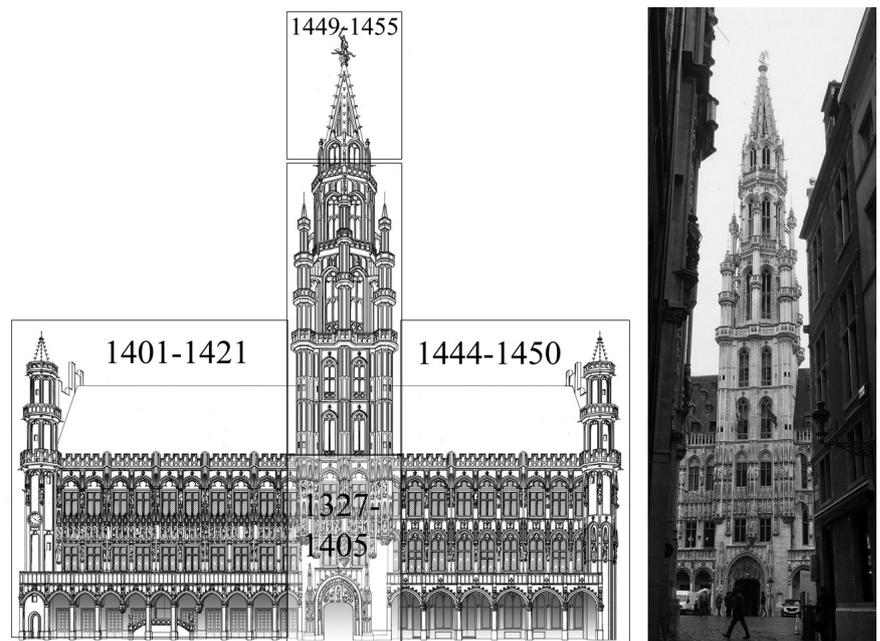


Figure 1. Construction phases of Brussels Town Hall and view of the belfry tower. Drawing by Atelier Perspective. © Brussels City Museum

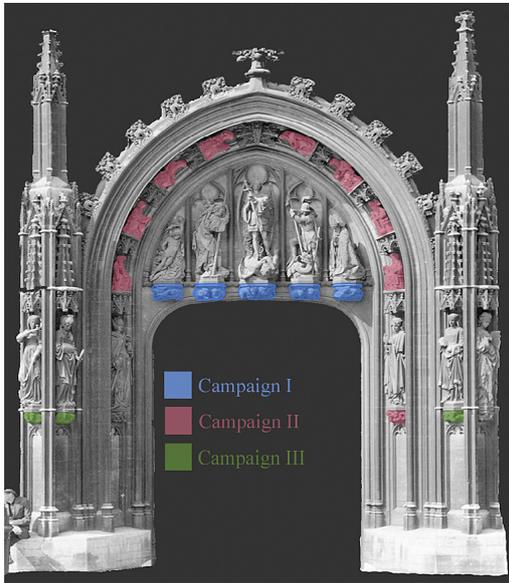


Figure 2. Original location of the statuary and polychromy campaigns. © KIK-IRPA Brussels

have to draw on a wide range of sources. This scantness of documentation only allows for a very broad estimate of the Town Hall's earliest building phase, which is situated around 1327–1405. The fact that the belfry does not seem to have been designed as an integral part of the Town Hall façade encouraged the assumption that a detached 14th-century belfry had existed prior to the construction of the Town Hall, into which it was later incorporated. Successive building campaigns¹ impinged upon the construction of the belfry tower, and although the portal decoration seems to have remained intact, it is probable that modifications were made.

The Town Hall suffered a major blow in 1695, when the savage bombardment of the city by Marshal de Villeroy left the market square where it was situated largely in ruins. Many works of art were destroyed, and only a few sculptures on the lower part of the façade survived. The small sculptures of the belfry portal can be included amongst these; they were removed from their original positions in 1860 when the Town Hall underwent major restoration and was embellished with modern statuary.

In order to carry out the conservation treatment, the statues of the prophets were moved from the museum to the stone conservation studio at the Royal Institute for Cultural Heritage (KIK-IRPA – Institut Royal du Patrimoine Artistique) in Brussels. This provided the opportunity to perform a material and technical study since they were now accessible from every side. The corbels, built into the museum wall, were studied and treated in situ.

THE WORKSHOP

Work on polychrome sculpture was generally split between two guilds in 14th- and 15th-century Brussels: the stoneworkers' guild, which represented sculptors, slaters, stonemasons and bricklayers, and the painters' guild, which included sculpture painters.

The accounts of 1405 mention a payment to the painter Heinric Breynart for his work in polychroming a star and cleaning sculptures on the belfry. No information is given as to the nature or number of these sculptures, nor of the positions they were to occupy in the decoration of the belfry.

THE STONE

Each statue and corbel is made from a single block of whitish-grey Avesnes stone² originating from the north of France, which was initially part of the Low Countries. This fine-grained and chalky limestone was very popular in the Southern Netherlands in the 15th century. Another example of the use of Avesnes stone in this region are the original sculptures and niches of the Leuven Town Hall built in 1448.

STUDY OF THE TOOL MARKS

The study of the tool marks was undertaken with raking light, microscopy and reflectance transformation imaging (RTI) photography. RTI is a computational photographic method that captures a subject's surface shape



Figure 3. Prophet DIIII. Detail of the shoulder: (left) visual light photography, (right) RTI photography, showing different marks. A: marks from the toothed rasp; B: hole used for the pointing technique; C: scrape marks.
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Figure 4. Prophet DIIII. Reverse showing the double original position marks: DIIII, X055312L.
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and colour and enables the interactive re-lighting of the subject from any direction. RTI also permits the mathematical enhancement of the subject's surface shape and colour attributes. The enhancement functions of RTI reveal surface information that is not disclosed under direct empirical examination of the physical object. Different types of tool marks were observed (Figure 3).

THE ORIGINAL SCULPTING TOOL MARKS

It is striking that the original tool marks visible on the statuary of the Town Hall belfry are very different from each other. This reveals differences in the way the sculptures were carved. The reverse sides of some sculptures were left very rough-hewn, with traces from chisels. Others are more finished with many parallel grooves in random directions left by toothed rasps rather than claw chisels.

Two sculptures, a beardless prophet (DIIII) and a prophet marked DIII, show the marks of a very finely grooved tool. These marks cannot simply result from an attempt to flatten the surface, nor were they applied to prevent the ground layer, which was originally applied on top, from flaking off. They were carved intentionally to display a variety of shapes so that the surface resembled woven textile. There is only one feature that is found on all the sculptures: the faces have no tool marks, they are all evened out.

THE ORIGINAL POSITION MARKS

The eight prophets have marks scored onto their backs. The marks take the form of two series of Roman inscriptions in additive form (the number 4 is IIII instead of IV). This variation in Roman numbering was common in the medieval period on carved Flemish altarpieces, for example.³ The Roman numeral is preceded by the letter G, representing the word *gauche* (French for 'left'), and by the letter D, representing the word *droite* (French for 'right'). These were used and understood by sculptors and builders to indicate where a sculpture should be located in relation to another.

On prophet DIIII, the mark was chiselled once more because the sculpture was hollowed out to fit the space (Figure 4). These marks were made prior to mounting.

Besides the original tool marks, there is evidence of scrape marks. It would seem that these were left by the 19th-century sculptors who scraped the polychrome layers away because they distorted the forms and concealed the sculpted details that had to be uncovered to adequately copy the sculptures.

Most of the sculptures have small holes scattered all over their surface. These indicate the use of a pointing machine, an instrument used by 19th-century sculptors to make one-to-one copies.

THE STUDY OF THE POLYCHROMY

To assess the polychromy technique, establish the chronology of the successive campaigns, specify its state of conservation and detect significant

repairs carried out throughout the history of the sculptures, the layers were examined with a binocular microscope and headband magnifiers (Zeiss head-worn K loupe). A number of minute polychromy samples were also taken for further study of the structure and composition of the layers (pigments and binders).

Before treatment, the sculptures were covered with a brown artificial layer. It must have been applied after the copies were made in the 19th century in order to cover the little holes left by the pointing machine. The brown patina was probably applied to unify the then stripped sculptures. The absence of the patina in deep areas like skin or the folds of garments nevertheless led to optical confusion.

The polychromy was confined to the zones that are visible when the sculptures are mounted in the portal. Observation of each individual statue and corbel revealed that three polychromy campaigns can be identified in the first intervention on the representative sculptures (Figure 2). The oldest campaign is only present on the five corbels of the tympanum. The colour palette roughly consisted of gold, except for the skin sections, the architectural background and specific details, such as the goblin beneath the women on the left corbel. On the limestone, a rather thick yellow ochre mordant was applied as an adhesive for the gold leaf. The second campaign was the first intervention on the prophets and the corbel from the jamb near the entrance. It was the second intervention on the corbels from the tympanum.

On the limestone statues of the prophets and the corbel at the entrance, three greyish preparatory layers were applied. These consist of lead white with calcium carbonate, silicon and carbon black. Along with their role as preparatory layers, applied to the entire polychromed stone surface, they also served as a sealer. On these layers, a thin and transparent brown organic layer of varying thickness was found. Its purpose is unknown. Onto these preparatory layers were applied the finishing layers. These showed considerable variation in their layer structure. The colours of the thrones and clothing of the figures (blue, green, gold on ochre mordant and some red details) vary in accordance with the coloured underlayers. Most of the finishing layers are applied onto a red lead underlayer. The skin sections, gilded borders on an ochre mordant, the hood of prophet DIII and the robes of prophets GIII and DII were, however, applied directly onto the greyish preparatory layer.

The prophets are therefore represented wearing layers of richly decorated vestments in gold, blue, green and a little bit of red. Different underlayers with finishing layers of the same colour were used to obtain different effects. There is also a deliberate contrast between the matt paint layers and the gold. It is clear that the polychromy's evocation of texture is one of its main roles: the colour of the polychromy further qualifies the volume already given by the sculpture. The digital reconstruction provides an approximate image of the original appearance of the statues, simulating the sumptuous effects of precious materials by the use of gilding and the layering of colours (Figure 5).



Figure 5. Second polychromy campaign. Reconstitution of the original polychromy of the statue of Prophet DIII. © KIK-IRPA Brussels



Figure 6. Left, statue after removing the artificial patina; middle, during the removal process; right, before treatment. © KIK-IRPA Brussels

It is obvious that the corbels from the tympanum were intensively cleaned and scrubbed before they were gilded once more, largely removing the work of the first polychromy campaign. It is possible to refer here to the accounts of 1405,⁴ where it is mentioned that Heinric Breynart was paid to clean the sculptures ('scone te makenen'), although there is no mention of which sculptures are concerned.

The first overpaint on the corbels of the tympanum consists of gold, except where applied to the carnations, hair and architectural background, applied directly onto the cleaned and scrubbed surface (no preparatory layer). The gilding consists of a red lead underlayer on top of which the gold leaf was applied with an ochre mordant. It seems this intervention was the same as the first applied on the prophets and the corbel from the jamb near the entrance.

The colour scheme of the third campaign is completely different. It was the first polychromy intervention on the three corbels from the jambs on the pinnacles side of the entrance. It is similar to the polychromy observed during a brief study of the corbels from the right wing of the Town Hall, built after 1449.

CONSERVATION TREATMENT

The study of the polychrome layers enabled a suitable conservation treatment to be selected. The sculptures were covered with an artificial patina that visually flattened the volumes and reliefs. The challenge for the conservators lay in finding a removal agent with which the artificial patina would react, but without affecting the layers to be preserved and without leaving any harmful residues. Good results were achieved with aromatic hydrocarbon solvents (white spirit). To reduce the capillary flow of the solvent and allow the cleaning agent to be applied with precise control so as not to dissolve the underlying layers, a solvent gel was formulated. It dramatically reduced the amount of solvent needed and minimised the conservator's exposure to hazardous fumes. The first solvent gels were made of Carbopol (polymer), Ethomeen C12 (surfactant), hydrocarbon solvent (white spirit) and a few drops of water. Later, another gel agent, Pemulen, a polyacrylic acid, was used because it is easier to apply on the surface and easier to remove after application.

RESULTS OF THE TREATMENT

The thorough surface cleaning and removal of the artificial patina rendered the volumes and reliefs of the sculptures more visible (Figure 6). These interventions have, moreover, facilitated a detailed stratigraphic study and analysis of the remains of the different polychromy campaigns.

The lacunae in the partially stripped polychromed sculptures nevertheless distort our impression of them and prevent us from grasping the integral relationship between sculpted form and coloured surface. Remains from subsequent polychromy campaigns were preserved, but after retouching with a 5% Paraloid B-72 solution and dry pigments, the high-quality sculpture group is once again clearly legible. The quality and variation of the original polychromy can thus be admired once again.

CONCLUSION

In the literature, the prophets and corbels have for a long time been considered contemporary. However, the study of the layer structure and materials reveals that three polychromy campaigns were undertaken on different parts of the belfry portal. On the basis of the colour scheme and analyses of the paint layers, it is possible to state that they match the polychromy palette used in these regions around the year 1400.

The work of the first polychromy campaign is only present on the corbels of the tympanum. The second campaign, which applied to the prophets, can be dated to around 1402–05. The third campaign is probably related to the building of the right wing of the Town Hall after 1449.

The different carving techniques used on the sculptures do not seem to be the work of a single artist but rather that of several and are of high quality. The portal of the town hall is described as an ‘icon of Brussels sculpture from around 1400’. Due to a number of radical interventions in the past, the current state of the statues gives but a glimpse of how they would have appeared in earlier times.

NOTES

- ¹ The wing to the left of the belfry was built by 1401, the foundations of the wing to the right of the belfry tower after 1444, and the elegantly carved tower that soars to a height of more than three hundred feet from the foundations of the original belfry structure was built in 1449.
- ² Approximate dimensions of the statues of the prophets: (H) 55 × (W) 35 × (D) 30 cm; the corbels: (H) 21–28 cm, (W) 40–55 cm.
- ³ Roman inscriptions in additive form were also observed during the conservation treatment on the altarpiece of Leonard of Noblac, in Zoutleeuw (1476–78)
- ⁴ This document, first quoted by G. Des Marez in his article ‘L’ancien beffroi de la ville de Bruxelles’ in the *Annales de la Société royale d’archéologie de Bruxelles* (vol. XXI, 1907, p. 465), has been cited in subsequent literature on the belfry sculpture. The reading by Maesschalck and Viaene (op. cit., p. 49) is as follows: ‘It. Heinrec Breynaert, vanden vanen ende appelle die steet opt torreken ieghen (de) Sterre te verguldenen, ende van vijfwerpen de beelden voere dbelfroot scone te makenen’.

MATERIALS LIST

Carbopol, Pemulen
CTS France
www.ctseurope.com/fr/

Ethomeen C12
Kremer Pigmente GmbH & Co.
www.kremer-pigmente.com/en/

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