

## CURATOR'S COLLECTION

## Technical Research on the Old Master Collection of the Städel Museum, Frankfurt

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Infrared reflectography, X-radiography and dendrochronology – these are part of the standard arsenal of analytical methods that have long been used to carry out technical research on the paintings listed in the scholarly collection catalogues of the [Städel Museum](#). In exceptional cases, of course, additional – sometimes even invasive – research methods may prove necessary in order to answer particular questions. Intensive research on our own Old

Master holdings was begun more than twenty-five years ago.

Thanks in large part to the generous financial support of a whole string of institutions – such as the Getty Grant Program, the Deutsche Forschungsgemeinschaft, the Fritz Thyssen-Stiftung and the Städel'scher Museums-Verein – we have meanwhile succeeded in publishing ten volumes that present the Städel's complete holdings of early Netherlandish (1993), early German (2002, 2005) and early Italian painting (2004), as well as Dutch (2005, 2010) and Flemish Baroque painting (2009). At present, concrete preparations are underway for the collection catalogue of German Baroque painting, and the catalogue of Romanesque Baroque painting is in the planning stage. The publication of these two volumes of the Städel's Old Masters will bring to a successful conclusion the cataloguing of our entire holdings of paintings produced before 1800 – nearly 1,000 worksaltogether. Also in preparation is the digitized version of the updated collection catalogue of early Netherlandish paintings, which are unquestionably the “crown jewels” of the Städel's Old Master holdings and formed the subject of the first volume in the series of scholarly collection catalogues that was launched in 1993.

The special strength of the scientific research undertaken at the museum is its proximity to the objects of study. Provided that all of the study material belongs to the institution carrying out the research – as is the case with a scholarly collection catalogue – the intensity of examination is limited only by issues of content and/or financial considerations. In 1987, just after completing my doctoral dissertation at the Ruhr-Universität Bochum on the work of Hugo van der Goes (published in book form in 1992), I was given the opportunity to develop the conceptual framework for the collection catalogue of early Netherlandish painting in the Städel Museum and finally to bring it to fruition. At the time, there were neither substantive nor financial obstacles, which in retrospect I can hardly believe. With the natural naivety of someone new at the job, who at the time was – and actually still is – firmly convinced that a museum can also be a top-class place of research, I proceeded to conceive a catalogue for Frankfurt that was patterned, in particular, after the Early Netherlandish Corpus series published by the research center in Brussels that was then still called the Centre national de recherches “Primitifs flamands” at the Royal Institute for Cultural Heritage (Koninklijk Instituut voor het Kunstpatrimonium/Institut royal du Patrimoine artistique [[KIK/IRPA](#)]). It was here that I discovered the importance of scrutinizing the genesis and usage history of the works in question, through both personal observation and, in particular, the systematic application of modern methods of technical research. In contrast to the approach customary in those Corpus volumes, the Frankfurt collection catalogue of early Netherlandish painting strove to complement a completely neutral account of the findings (not only the results of technical research but also the history of that research) with a clear, concluding statement in which the researcher treats all the relevant questions raised by the work under study.

When the catalogue – cast in this mold – of early Netherlandish painting in the Städel Museum was published in 1993, its nearly five hundred pages included twenty-nine catalogue entries that had grown into substantial essays, which was certainly not excessive, considering that Frankfurt's stock of paintings by such artists as Jan van Eyck, the Master of Flémalle, Rogier van der Weyden, Petrus Christus, Dieric Bouts, Hugo van der Goes, Hans Memling, Gerard David, Hieronymus Bosch, Joos van Cleve and Quentin Massys had never been subjected to systematic technical research. In fact, the collection catalogue of the early Netherlandish paintings in the Städel was received very positively and even became – until the appearance of the more recent Corpus volumes – a highly respected standard reference work. For that matter, the digitized version of the 1993 collection catalogue will be available from the summer of 2015 on the Städel's home page, in connection with

the virtual reconstruction of the nineteenth-century presentation of the paintings in the museum.

I readily confess that if I had known in 1988 that I would be working on a permanent basis at the Städel until the completion of the catalogue of early Netherlandish painting and would also take responsibility for the following collection catalogues of Old Masters as author and/or co-editor, I might have devised less ambitious plans for these publications. However, the catalogue conceived in the late 1980s was adopted, with only minor changes, as the definitive example for Frankfurt's entire series of collection catalogues of Old Master paintings. The invariably high quality of the Städel's holdings – which are, at the same time, manageable in number – made this endeavor both meaningful and feasible.

Particularly in the sphere of research conducted with X-radiography and infrared reflectography, the Städel Museum, too, has repeatedly updated its equipment – progressing from analogue (fig. 1) to digital X-radiography and photographically documented infrared reflectography carried out with a Hamamatsu camera (figs. 2-3) to the digital recording and processing of Hamamatsu signals and the use of OSIRIS-A1. Comparison of the infrared reflectograms (consisting of an assemblage of numerous photographic images) published in the 1993 collection catalogue of early Netherlandish paintings with the current high-resolution digital photographs shows that technological advancements have not only reduced the time needed for research and made the collection catalogue much more comprehensible to its users, but have also considerably improved the quality and therefore the informative value of the visual documentation. This is one reason why, in this jubilee year (the Städel is celebrating its 200th anniversary), the museum will launch digitized versions of its out-of-print Old Master collection catalogues (beginning with early Netherlandish painting).

A glance at the documentation of the technical research carried out on Jan van Eyck's "[Lucca Madonna](#)" – cf. the high-resolution reproduction in the Google Art Project and, very soon, on "[Closer to Van Eyck](#)" – elucidates not only this technological success story but also the great gains in knowledge conveyed by these imaging methods with regard

to both the genesis of the painting and our understanding of its meaning. Older studies repeatedly emphasized the thoroughgoing integration of the viewer into the pictorial space of the "Lucca Madonna." Yet it was not until the infrared reflectograms and X-radiographs were made in conjunction with the collection catalogue of early Netherlandish paintings that it became clear how Jan van Eyck went about structuring the composition (figs. 1-3) and how he devised this clever connection between the pictorial space and the sphere inhabited by the viewer. Initially, the painting had shown a simple box-like space, into which the viewer looked, much as one peers into a doll's house. The painter adhered to this idea in his first layer of paint.

It was not until the further execution of the painting that a modification – as simple in conception as it was far-reaching in its consequences – was made to the space surrounding the enthroned Madonna and Child. The room's previously flat ceiling was replaced by a ribbed vault, only half of which is visible; the wall, hitherto articulated only by a simple arched window or corresponding niche, was almost quantifiably extended into the viewer's space by the addition of a round window cut off by the edge of the picture; and instead of two steps leading up to the throne, a carpet, seemingly arbitrarily truncated by the lower edge of the picture, lies on the blue-and-white tiled floor. Whereas Jan van Eyck initially intended to give us a glimpse of a dollhouse-like interior, his composition now allows the Madonna's throne room to continue onto this side of the picture plane by defining it as part of the viewer's space. And as though Jan van Eyck himself wished to allay all doubts as to the correctness of this interpretation, he painted the tiny but razor-sharp reflection of the double window on the surface of the glass carafe on the shelf at the right. Here the reflection of the double window shows not only the half visible in the painting, but also the undepicted half, which appears to be in front of the picture plane and thus already part of the viewer's space: the viewer is literally put in the picture.

Whereas the infrared assemblages of 1993 could only reproduce either the figural group or the space surrounding them, owing to the great differences in contrast of the individual passages, the high-resolution infrared reflectogram produced by the OSIRIS-A1 shows the aggregate findings in all their detail. This image finally revealed a detail that was first pointed out by Hugh Hudson in 2003 (Hugh Hudson, "Shedding Light on an Eyckian Virgin and Child: The Infrared Reflectography of the Ince Hall Virgin and Child," in Helene Verougstraete, Roger van Schoute [eds.], *Jérôme Bosch et son entourage et autres études*, Leuven 2003, p. 263), namely the overpainted figure of a bearded man on the left-hand side of the throne's backrest, immediately below the upper lion. In fact, this figure has become visible to the naked eye when seen in the high-

resolution image in the above-mentioned Google Art Project, owing to the age-related loss of opacity of the paint layer. The figure is only fragmentarily visible,

because the man seems to be peering out from behind the cloth of honor that obscures the rest of his body. Because the cloth of honor and the entire area around the back of the throne were originally narrower, the figure was apparently not part of Van Eyck's first concept, but was introduced only after he had decided on the wider version of the cloth of honor. No comparable *pentimento* can be detected on the opposite side of the throne, so it seems that the decoration of the left-hand side was a short-lived experiment, which Van Eyck rejected in the subsequent execution of the painting.

This is why it is all the more remarkable that the decoration on the upper right-hand side of the throne in Petrus Christus's *Madonna and Child Enthroned with Saints Jerome and Francis* of 1475, likewise in the Städel Museum (fig. 4), is the figure of a bearded man whose pose and attire display close similarities to the bearded figure of the "Lucca Madonna." Both paintings may well portray prophets, intended to clarify these figures' typological reference to the Old Testament. In the painting by Petrus Christus, this is emphasized by the sculptures of Adam and Eve set in niches carved into the front ends of the sides of the throne; in Jan van Eyck's painting this function is fulfilled by the lions, who allude to the throne of Solomon (1 Kings 10:19-20).

The dependence of Petrus Christus's Frankfurt Madonna on Jan van Eyck's "Lucca Madonna" has been postulated repeatedly; however, the overpainted figure of the prophet in the "Lucca Madonna" makes the connection between these two works even more complex.

Petrus Christus arrived in Bruges only in 1444, by which time Jan van Eyck was long dead and the "Lucca Madonna" was in its present state, i.e. the bearded man had already been overpainted. It seems, therefore, that Petrus Christus had access to preparatory drawings by Jan van Eyck, which showed the "Lucca Madonna"

– or another, closely related Madonna picture – with the planned figure of the prophet. Happily, the "Lucca Madonna" is in better-than-average condition; the slightly yellowed varnish lends it a patina that is not aesthetically disturbing. Unfortunately, this does not hold true for all the early Netherlandish paintings in the Städel. Indeed, measures have been implemented in recent years in the paintings conservation workshop of the museum. For example, since the cautious cleaning several years ago of Rogier van der Weyden's "Medici Madonna" (fig. 5), the painting's excellent state of preservation again shows to best advantage. Moreover, the painting from which the Master of the Tiburtine Sibyl took his name (fig. 6) has improved considerably in appearance since its recent restoration. The fragment of the right wing – depicting the Bad Thief crucified on Christ's left – of the Master of Flémalle's large Deposition altarpiece is currently in the restoration workshop. Not only will restorers remove the remnants of black overpainting applied to what was formerly the exterior of the wing – this was inadequately dealt with during a previous conservation treatment – but they will also clean the heavily damaged pressed brocade, which has been very unevenly handled in the past. The rehangings of the picture in the gallery, planned to take place in early 2016, will be accompanied by the posting on our home page of the documentation specifying the measures taken to conserve the painting.

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