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THE ARTIST'S FINGERPRINT.
THE MANUFACTURING TECHNIQUE IN
JOHANN KÖLER'S FRESCO
COME UNTO ME, ALL...

*“Recently a work of art has been made by an Estonian man in Tallinn, which will become a permanent remembrance and testimony of love for the congregation of the Estonian Doompää Kaarli Church. If dear reader you wish to find out what work of art this is, then go to the Estonian Doompää Kaarli Church, where, as you walk in the door, you will find painted on the wall above the Communion table the figure of Christ in the clouds with outstretched hands, emotionally moved and teary-eyed calling to you: **“Come unto me, all ye that labour and are heavy laden, and I will give you rest ...”***

A.E (inwald), “Tallinna Doom-Kaarli kiriku altari-pilt,” *Eesti Postimees*, 22 August 1879, no. 34

Johann Köler's apse painting in Kaarli Church is a chrestomathic work of art for Estonians. Its symbolic status is based not only on the artistic quality of the work, but also on its historical, national, site-specific and contextual identity. Therefore the work has also been studied extensively; it has been written about in popular and scientific literature; and the work's visual figure and image have become embedded in every Estonian's memory. So, what motivated a re-examination of this work?

In 2013, a technical examination was made and conservation-restoration work carried out on the altarpiece by Johan Köler in the apse of

Kaarli Church, which was executed in the fresco technique.¹ This was the first complete conservation of the painting since its completion.² In order to conduct the conservation work, scaffolding was installed in front of the painting, which is located at a height that is normally inaccessible. In addition to making the conservation work possible, this also made it possible to conduct a thorough technical examination of the work. The goal of this analysis of the painting's technical structure was to supplement the knowledge related to (art) history with additional information based directly on the primary source, i.e. the work itself. Since, in the local context, this is a unique painting in fresco technique, the wet layer of plaster had stored a large amount of information while it was executed. "Reading" this information provides insight into the artist's work methods and an interpretation of the marks left by the author. The fact that the technical side of the painting was important to both Köler himself and to his contemporaries is proven by the numerous written and published materials from the time when the work was created, which are astonishing in their technical competence.

This article focuses on the technical aspects of Köler's apse painting, and combines information published at the time with new research. The materials are partially based on the texts that were exhibited at Kaarli Church during the restoration work.³

ABOUT THE HISTORICAL BACKGROUND OF THE APSE PAINTING⁴

Johann Köler was the first professional Estonian painter, who established the national school of painting. Born in a low-ceiled peasant house in Viljandi County in 1826, Köler went on to achieve a brilliant career in Tsarist Russia. He was art teacher to the daughter of Tsar Alexander II and a respected portraitist in the tsar's court. He was a man who had

1 The conservation work was carried out between 20.05 and 21.06.2013 by H&M Restuudio OÜ under the direction of Hilkka Hiiop and Merike Kallas.

2 The only documented work was carried out in 2002, when AS KAR-Grupp conducted an examination of the technical condition of the painting – *Uurimistööd aruanne*, compiled by Sirje Sorok, Annaly Miil, Tallinn Culture and Heritage Department Archive, AF: I, S: 16 (Tallinn, 2002).

3 The exhibition that accompanied the conservation work in Kaarli Church (June–October 2013); curator Hilkka Hiiop, texts Tiina-Mall Kreem, designer Villu Plink.

4 Information is based on a monograph on Kaarli Church: Egle Tamm, Tiina-Mall Kreem, *Tallinna Kaarli kirik. Eesti kirikud II* (Tallinn: Muinsuskaitseamet, 2007), 67–91, unless indicated otherwise.

studied at the St. Petersburg Academy Arts, and furthered his studies in Paris, Rome and the other art centres of Europe.⁵

In 1875, when Köler was at the peak of his career, the Kaarli Church congregation commissioned the artist to paint the altarpiece for the church, which was designed by Otto Pius Hippius and consecrated in 1870. Although the possibility of an altarpiece painted on canvas was also considered, it was decided to commission a fresco for the architectural apse. *"This picture is not painted on cloth, as in other churches, but on the wall of the church."*⁶ However, the tradition of fresco painting had supposedly been discontinued in Tsarist Russia by this time, and Köler travelled to Germany in the summer of 1878 in order to familiarise himself with the technique of fresco, which was unknown to him.⁷

It is known that the Kaarli Church congregation only had 1,000 roubles at its disposal for the painting, which barely covered the painting's execution costs; this meant that Köler essentially painted the work as gift for the Estonian people. *"It [the congregation] has spent almost 1,000 roubles and it is considered that the painting is worth 7 thousand roubles."*⁸

In 1879, the artist completed a preliminary plaster model of the work⁹, which he used to work out the spatial placement of the three-dimensional work (*"Painting on a curved wall is even more laborious than painting on an ordinary wall, because the edges of a painting on curved wall do not seem as large to the viewer as they really are"*¹⁰) and introduced it to the congregation – namely, Köler had decided that instead of painting Christ blessing the congregation above the Kaarli Church altar as the church benefactors had requested, he would paint Christ calling the poor and the heavy laden to come unto him.

As the prototype for Christ, Köler chose an Estonian man named Villem Tamm, whose portrait he had painted in Kassari, Hiiumaa in

5 Tiina-Mall Kreem, excerpt from the texts of the exhibition accompanying the conservation work.

6 "Teadus ja kunst" *Oleviku lisalet*, 1882, no. 1.

7 Although all the articles from that time talk about the uniqueness of the fresco technique in the Tsarist state at that time (see below), Fritz Matt dares to doubt this. He assumes that Köler has studied the fresco technique at the St. Petersburg Academy of Arts and that it was still used in Russia at the time. – See Fritz Matt, "Eesti esimene fresco," *Õhtuleht*, 4.9.1980, no. 203.

8 B., "Uus altari pilt Tallinna Kaarle kirrikus," *Ristrahwa pühhapäeva leht*, 19. 8.1879, no. 34.

9 The model is stored in the Sculpture Collection of the Art Museum of Estonia. In connection with the exhibition at Kaarli Church, it was displayed for the first time along with the completed work.

10 "Teadus ja kunst," *Oleviku lisalet*, 1882, no. 1.

1863.¹¹ Later, however, when the Kaarli Church painting was completed, Villem had become a brutal manor overseer – Köler’s inner conflict regarding the suitability of this prototype for Christ inspired Jaan Kross’s historical novel *The Third Range of Hills*.

Based on written sources, the giant apse painting was completed in ten days and its completion date is July 23rd; the painting was consecrated on 29 July 1879. “*The size of the altarpiece, which is painted directly on the wall, is 400 feet; the wall itself is half-curved; the height of the picture is 11 arshins, the width is 15 arshins, Christ’s head from the forehead to beard is 2 arshins and hands are more than 8 arshins apart.*”¹²

The completion of the painting was hailed as a great success, and many publications published articles about it at the time. “*Every stroke of colour on the picture bears witness to a skilful master’s work and Kaarli Church has gained an adornment with this beautiful picture that many large German churches futilely wish to have for a dear price...*”¹³; “*This great work of art deserves to be seen by every man who ever gets to Tallinn. Here, the masterful hand of academician Köler has shown what painting has been able to achieve in our time and right here among us Estonians.*”¹⁴

Köler himself was also apparently satisfied with the composition, and repeated the motif several times in later works.¹⁵

TECHNICAL STRUCTURE OF THE APSE PAINTING

Technical information about the painting based on written sources

In Köler’s own reception, and those of his contemporaries and later authors¹⁶, unexpectedly great attention has been paid to the technical aspects of the Kaarli Church’s apse painting. Based on the historical source materials – primarily Köler’s own texts and the media reporting of the day – the painting’s technical nature and its structure can be quite easily reconstructed.

11 Voldemar Erm, “Peterburis töötanud Eesti kunstnikud. Maal ja graafika”, *Eesti kunsti ajalugu*, 1, eds. Boriss Bernstein, Ea Jansen, Juhan Kahk et al (Tallinn: Kunst, 1977), 20; Aino Kallas, “Köleri Kristuse algkuju”, *Olion*, 8 (1930), p. 31

12 A.E. (August Einwald), “Tallinna Doom-Kaarli kiriku altari-pilt”, *Eesti Postimees*, 22.8.1879, no. 34.

13 Johann Voldemar Jannsen, “Uuemad sõnumed. Tallinnast”, *Eesti Postimees*, 1.09.1879, no. 35.

14 “Teadus ja kunst”, *Oleviku lisalet*, 1882, no. 1.

15 For example, one of the duplicate paintings is located in the Art Museum of Estonia (1897, oil on canvas), another in St. Peter’s Church in Tartu (1895–1897, oil on canvas).

16 E.g. Fritz Matt, Ravo Reidna, Voldemar Erm.

The support

The structure of plaster surface that forms the support for the fresco was executed with the carefully considered aim of ensuring the long-term survival of the painting in the church that was unheated at one time – it is not applied directly to the outside wall, but onto wire netting that protrudes off the wall. In this way, Köler justifiably hoped to ensure air circulation behind the plaster surface and to prevent damage to the painting that might be caused by moisture from the exterior wall.

Based on written source materials, the base for the painting was built as follows: *“Based on the master’s plan, a week before Pentecost (1879), the construction of a cornice on top of the altar wall was started. When this was completed, about 5,000 foot-long nails were hammered into the altar wall; they had been greased with asphalt several times and their heads had been soldered, so that they would not be ruined by rust. A netting woven of wire that was greased with asphalt was attached to the nail heads, and a 1–2-inch layer of plaster was applied, onto which the picture was painted. This work was undertaken based on the advice of the smartest, expert professors from St. Petersburg, so that the air could pass between the old wall and the picture’s plaster and to prevent the new picture from being ruined by moisture.”*¹⁷

Although in the course of this examination it was not possible to check the description against the actual situation (the number and density of the nails, the nature of the wire netting, thickness of the bitumen layer)¹⁸, the execution of the so-called “buffer zone” is visible through the ventilation holes that surround the painting: supporting screws with threads that are about 2 centimetres in diameter are visible, on which the shell under the painting, which protrudes a few dozen centimetres from the wall, is constructed. A net of relatively thick wire is woven onto the protruding supporting nails and this is covered by a layer of bitumen.

The origins of this solution, which is unique in the European painting tradition, have not been identified. Since this construction is a technically quite complicated, it is probable that Köler relied on the earlier practice and experience. Experts that are familiar with both the practices in the Western cultural space and the painting do not see any analogues on the Western side; whether the source of this solution can be found in

¹⁷ B. (Johann Heinrich Brasche), “Uus altari pilt Tallinna Kaarle kirrikus,” *Ristrahwa pühhapäwa leht*, 19.8.1879, no. 34.

¹⁸ There is no direct access to the back of the painting.

Russian tradition¹⁹ is an assignment for subsequent research. The only sliver of information is a comment that appeared in the newspaper *Eesti Postimees* in 1879: *Finally, following the advice of several smart men, a partition was made which air could pass through at any time and keep the front wall dry.*²⁰

This preparatory surface was first plastered repeatedly with coarse plaster, or an *arriccio*²¹ layer, which had already dried when the painting was executed. During the plastering, which, in the case of frescos, is a decisive factor in determining the quality and aesthetics of the finished work, Köler was helped by plastering specialist Jüri Kilkohv from Kullamaa Parish in Lääne County.²²

The paint layer

In his letters, Köler repeatedly emphasises that his aim was to execute the painting in the “true” *buon fresco* technique, in the spirit of the Renaissance²³:

*“This work is a fresco, not a so-called one, but a real one, i.e. a painting with pure watercolours without any glutinous binding agents, on fresh plaster, which excretes a glaze-like substance when it dries and thereby binds the painting to itself. (...) I painted the fresco from cartoons in ten days, on plaster that was applied every day, using pure watercolours without any lime mixture, and this is why the painting will survive with its full freshness and power, and why it shines a bit when drying, something that cannot be achieved by adding lime in the usual manner.”*²⁴

This means that the pigments were mixed only with water, without any binder, and were applied to a layer of wet lime plaster prepared for

19 Ravo Reidna states that Köler had this structure created expressly upon the “recommendation of specialists from St. Petersburg.” See Reidna, Ravo. “Johann Köleri tegevus freskomaalijana,” *Eesti maalikunstniku Johann Köleri loomingu probleeme*, ed. Ilmar Moss (Tallinn: Eesti NSV Kultuuriministeerium, 1983), p. 35.

20 A.E., “Tallinna Doom-Kaarli kiriku altari-pilt,” *Eesti Postimees*, 22.8.1879, no. 34.

21 Here and hereafter terminology from the Italian linguistic space has been used to describe the fresco technique, which is the international standard for the professional language.

22 Fritz Matt, “Köleri freskomaal 100-aastane,” *Kodumaa*, 22.8.1979, no. 34.

23 The term has been used since the technical solutions introduced by Giotto have been in use, whereby the work surface is divided into small *giornate* or “a day’s work”, with the aim of carrying out the entire painting process on surface covered with wet lime plaster. As opposed to earlier traditions, in this case, lime is not added to the pigment as a binding agent, but the pigments are mixed only with water, and they are bound to the lime plaster by the calcium carbonate layer that develops in the course of the drying process. In this way, the final shade of the pigments conforms to its powdered state.

24 J. Köler’s letter to P. Issejev, the conference secretary of the St. Petersburg Academy of Arts, dated 23 October 1880. Cited by Voldemar Erm, “Sada aastat Eesti monumentaalmaali sünnist,” *Lähtemeistrid. Artikleid ja uurimusi 19. saj. Eesti kunstist* (Tallinn: Kunst, 1984), 47.

that day, which, as it reacted to the oxygen in the air, formed a crystal-like layer of calcium carbonate that bound the pigment.

Since classical fresco techniques were no longer known in the Russian artistic practice, Köler made a special trip to Germany to learn it. Both the artist himself and the press of the day repeatedly emphasised the technical uniqueness of the painting in the context of the Tsarist state at that time:

*"The altarpiece of the Kaarli Church is the first [fresco], that has been made in Russia to date and therefore will be become very important."*²⁵

*"I believe that this is the first endeavour in Russia in our time. It was totally successful and has already survived a winter in the unheated church. The "fresco" is painted above the altar in the Estonian Kaarli Church and depicts Christ "Come unto me all, ye..."*²⁶

Based on the source materials, the fresco was painted very quickly, in only ten days: *"On 13 July, Professor Köler started painting his work in the church... The master painted the picture for ten days, 12 hours a day and finished it on 23 July."*²⁷

25 A. E., "Tallinna Doom-Kaarli kiriku altari-pilt," *Eesti Postimees*, 22.8.1879, no. 34.

26 Johann Köler's letter to P. Issejev, the conference secretary of the St. Petersburg Academy of Arts, dated 23 October 1880. Cited by Voldemar Erm, "Sada aastat Eesti monumentaalmaali sunniest," *Lähtemeistrid. Artikleid ja uurimusi 19.saj.Eesti kunstist* (Tallinn: Kunst, 1984), p. 47.

27 B., "Uus altari pilt Tallinna Kaarle kirikus," *Ristirahwa pühapäeva leht*, 19.8.1879, no. 34.

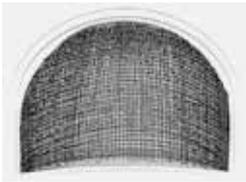
According to Köler and the descriptions of his contemporaries, the layered structure of the fresco is the following:



STEP 1. EXTERNAL WALL OF THE APSE
Limestone apse wall of the church designed by architect Otto Hippius.



STEP 2. PROJECTING NAILS
About five thousand nails of 30 cm were driven into the limestone wall, creating a ventilation space between the support wall and the underlying plaster of the painting.



STEP 3. WIRE MESH
A dense wire mesh was woven on the projecting nails to hold the underlying plaster of the painting.



STEP 4. LAYER OF BITUMEN or ASPHALT
The nails and the wire mesh were covered with a protective layer of bitumen to prevent rusting of the metal.



STEP 5. COARSE PLASTER or *ARRICCIO*
The entire base surface is covered with about 5 cm of coarse plaster, *arriccio*, which was allowed to dry.



STEP 6. WET LIME PLASTER or *INTONACO*
A layer of lime plaster, divided into daily work sections, *giornatas*, applied only to the surface to be painted on that day. This layer had to be wet during painting to facilitate bond between the moistened paint pigment and plaster.



STEP 7. CARTOON
Full-size preparatory drawing of the composition, cut into pieces corresponding to a day's work. The contours of the drawing were perforated and the image was applied to wet plaster by dabbing the holes with dry pigment. Another option was to use a sharp tool to press the image through the paper into wet plaster.



STEP 8. PAINTING
Pigments mixed with clean water were applied to wet lime plaster. Through chemical reaction with the oxygen in the air, the lime transformed into a glass-like coating, which bound the pigments and created a very strong crystalline layer, leaving the colours shine in the right tones.



STEP 9. FINISHED FRESCO
Köler's painting was completed in an exceptionally short period of time – only ten days. This could also have been the reason for deterioration of the condition of the fresco – the daily plaster patches were too large and had partially dried by the time when paint was applied. As a consequence, the bond with lime was not consistent and strong enough.

CONFORMITY OF THE KNOWN WRITTEN SOURCE
INFORMATION WITH THE INFORMATION OBTAINED
FROM THE PAINTING:

A day's work or *giornate*

Based on the overlapping of the plastered areas, it was possible to diagram the distribution of the areas painted by the artist in one day, or the *giornate*, as well as the sequence of the wet lime plaster areas utilised for fresco painting. The information on the pace of completing the painting, which was previously based on written sources, was confirmed – the painting process took nine “days of work”. The painting sequence corresponded to that of a classical fresco – moving from the top down (in order to prevent plaster and paint from spattering on the area that had already been painted) and starting in the upper left corner. The painting process ended in the middle of the lower edge. In order to visualise the sequence, it was mapped in a diagram:

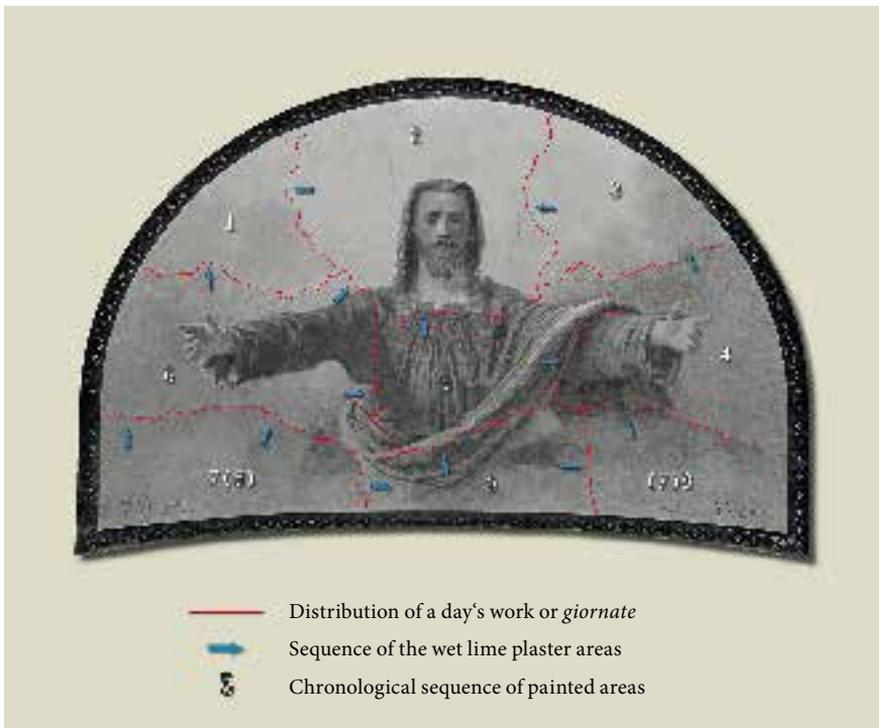


Fig. 1. Diagram of the working sequence

KÖLER'S TECHNICAL PAINTING ARSENAL, MARKS
MADE BY THE ARTIST AND THE STRUCTURE OF THE
COMPOSITION:

Since frescos are painted on wet plaster, the artist's handprints and marks resulting from the execution of the painting are preserved on the surface of the painting:

The artist's fingerprints and nail prints: probably in order to maintain his balance, the artist (or the plasterer assisting him) supported his fingers against the wet plaster surface, and therefore, several of the artist's fingerprints are visible when the surface is seen in raking light. In addition to individual fingerprints, an entire (left) handprint can be identified as a charming detail.



Fig. 2 a,b. Johann Köler's fingerprints in the wet layer of plaster. Photo: Peeter Säre

Artists have historically used the nail of the left-hand pinkie to support the hand holding the brush.²⁸ Köler also employed this technique when painting Christ's hands and face. An especially dense network of nail prints is visible on the area of Christ's face when seen in raking light. This area clearly required the greatest degree of detailed painting, i.e. the surest support for his hand.



Fig. 3. The network of prints of the left-hand pinkie's nail, which was used to support the hand holding the brush, and the vertical structural line that passes through the centre of Christ's face. Photo: Peeter Säre

Köler's brush: The large number of brush hairs that were found in the paint layer characterise the artist's technical arsenal: Köler used a surprisingly long-haired brush.

Structural grid of the composition: in order to mark off the initial structural lines of the giant composition, the artist pressed a straight vertical line into the plaster that passes through the centre of Christ's face and the arch connecting his outstretched hands, which is marked on the plaster surface as impressed lines and holes. The use of initial structural lines is a common practice in the case of such a large painting, since it is easy to lose track of the entire placement when one is close to the surface.

²⁸ Similar dense networks of nail prints can also be seen on paintings from Ancient Rome.

Cartoon: Köler probably prepared 1:1 base drawings on paper only for the more complicated areas of the composition, i.e. the figure's hands and face.²⁹ Based on traditional fresco techniques, he used three methods to transfer the preparatory drawings:

For the finer details, the so-called "pouncing technique", i.e. the outlines on the paper were pounced and the image was transferred by



Fig. 4. The preparatory vertical axis that passes through the centre of the composition.
Photo: Peeter Säre

dabbing the holes with dry pigment dust. This method is visible under the pigment layer in the area of Christ's face. The artist probably chose the pouncing method for this area because the subsequent layer of paint hides the pigmented row of dots of the preparatory drawing.

²⁹ Although earlier authors (see, for example Matt, Fritz. "Eesti esimene fresko," *Õhtuleht*, 4.9.1980, no. 203) have expressed the opinion that the entire composition was transferred from 1:1 cartoons, no trace was found of any transfer markings in the area of Christ's body. This is logical since such a concise composition, a detailed preparatory drawing is not definitely necessary; smaller scale sketches can suffice.

To better visual the impression (row of dots) created by the pouncing, infrared reflectography was used to highlight it. Unexpectedly, it revealed a much denser network of dots that was visible to the naked eye.

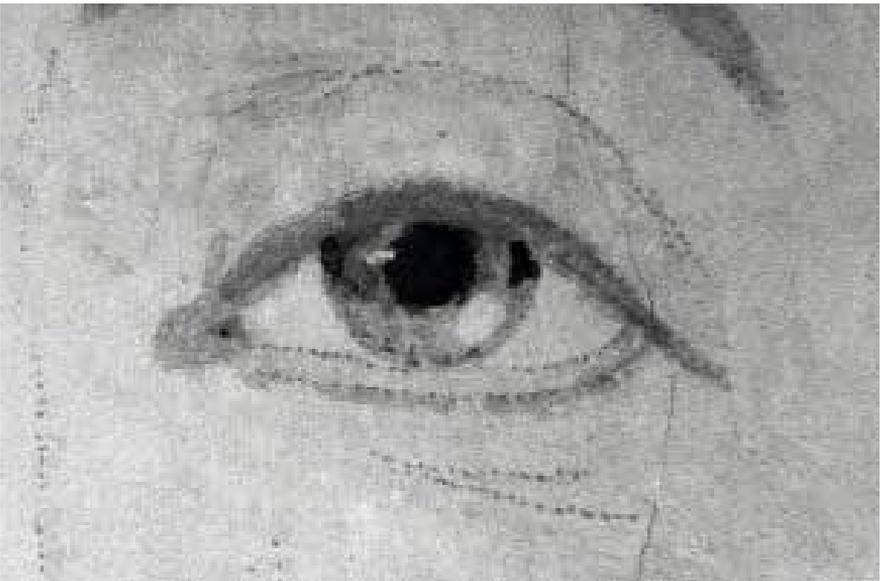


Fig. 5 a,b. The pigmented row of dots that was created by transferring the 1:1 cartoon using the pouncing technique, which is visible through the paint layer (photo a), but is very clearly visible with the help of infrared reflectography (photo b)

Photo a: Peeter Säre

Photo b: Mati Möttus

Transfer of the cartoon with the help of an outline pressed into the wet plaster. This method takes considerably less time than pouncing, and leaves an imprint that is visible until the end of the painting process. Köler used this method to transfer the contours of the hands.

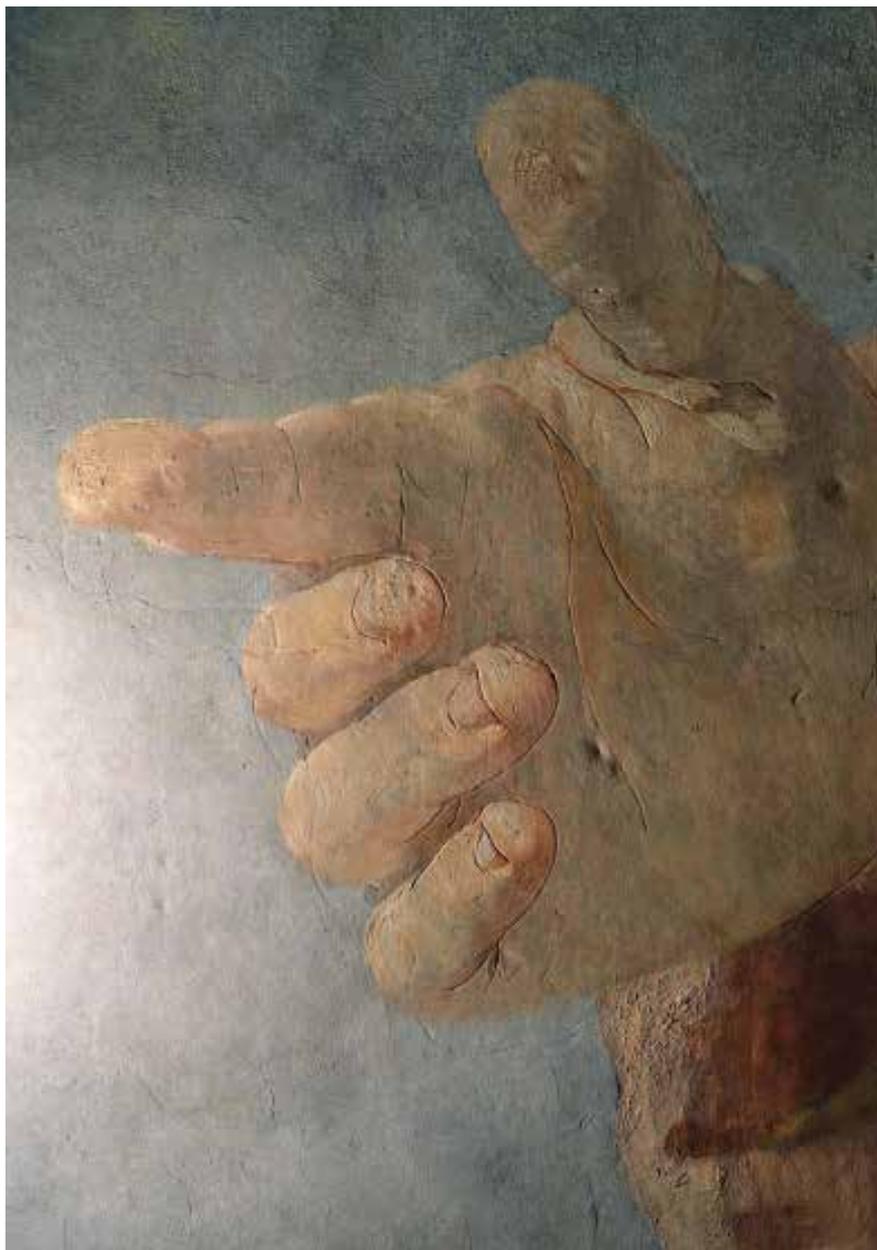


Fig. 6. The 1:1 transfer of the cartoon with the help of an imprint pressed into the wet plaster. The photo also shows the *pentimenti*, or artist's own alterations, of the composition – the imprint of the preparatory drawing is located several centimetres away from the final painting. Photo: Peeter Säre

Preparatory outlines that are pressed directly into the wet plaster without a cartoon paper. These lines can be identified by their sharp edges and differ from the lines with soft edges that are pressed through the cartoon. Köler used this method to indicate the locks of Christ's hair, the contours of the yellow badge on his chest and other simpler geometric details.

Pentimenti or alterations to the composition made by the artist: The position of Christ's right hand was changed in the course of the painting process by the artist – the initial imprint of the underdrawing is located several centimetres away from the final painted hand.

Impasto versus smooth surface: an interesting technical solution is the artist's combined work in the central area of the painting – the contrasting effect between the impasto and smooth base surface around Christ's face. The bright area around Christ's face is executed as a highly textured surface, while the face, which is located in the area of the same day's work, is perfectly smooth. The use of this impasto plaster layer was not seen in any other area of the painting – apparently the aim was to emphasise the central position of the face.

ABOUT THE TECHNICAL QUALITY AND DURABILITY OF THE PAINTING THROUGH THE PRISM OF THE ARTIST'S TECHNIQUE

Fresco by nature is an extremely durable painting technique: a crystal-like inorganic layer of calcium carbonate forms a vitreous mass around the pigment particles, which endures even under the most difficult microclimatic conditions. For this reason, the majority of architectural paintings in the European cultural space since the Etruscan era have been painted as frescos. In the case of Köler's work, the technical durability of the painting has also been emphasised since its completion: *"It is totally successful and has already survived a winter in the unheated church."*³⁰; *"The correct technological calculation has ensured the durability of the fresco painting and its endurance to the destructive forces of time for 100 years already."*³¹

30 Johann Köler's letter to P. Issejev, the conference-secretary of the St. Petersburg Academy of Arts, 23.10.1880.

31 Fritz Matt, "Köleri freskomaal 100-aastane," *Kodumaa*, 22.8.1979, no. 34.

Already during the preliminary examination in 2002, it was noticed that, untypically of a fresco, the pigment had lost its binding agent in places and it came loose from the surface if slight mechanical pressure was applied. In the course of the conservation work carried out in 2013, the areas with loose pigment were mapped and compared to the distribution of the *giornate* in order to identify the reason for the lack of binding agent.

Although the artist was proud of the extraordinary pace of his painting (according to documentary information, the painting was executed in 10 days; the mapping of the *giornata* areas confirmed the data based on the written sources, alluding to nine *giornata* areas: see above), this is also the reason for the lack of binding agent and the durability problems. It is probable that the area prepared for one day's work was so large that by the end of the day's painting process, the plaster had already started to dry and lost its ability to bind the pigment. Therefore, the calcium carbonate layer on the surface is uneven and corresponds very closely to the *giornata* distribution.

The lack of binder has also been noticed in the area with the impasto brushstrokes, for instance in the area of Christ's beard and hair. The reason for this can also be found in the artist's technique – Köler repeatedly emphasised that he used only the TRUE fresco technique, i.e. he did not use any organic binding agents (traditionally the last details were added, when the plaster is dry or drying, by binding the pigment with egg tempera) or by mixing the lime mass with pigment. The quantity of pigment that was applied to the surface with only water or lime water was probably too thick to bind with the plaster that was already drying.

Another durability problem resulting from the artist's technique is obviously the massive network of cracks in the painting layer that is visible to everyone. Based on the information published to date, it was assumed that the cracks were partly caused by the walls sinking over time.³² Some sources also dated the cracks to the period of World War II and were assumed to have been caused by vibrations from individual shifts of earth (e.g. bombings).³³ Another version, which circulated among the public, was that the cracks might be caused by vibrations from the roadwork done when the traffic network around Kaarli Church was

32 Fritz Matt, "Köleri freskomaal 100-aastane," *Kodumaa*, 22.8.1979, no. 34.

33 Egle Tamm & Tiina-Mall Kreem, *Tallinna Kaarli kirik. Eesti kirikud II* (Tallinn, Muinsuskaitseamet, 2007), 75.

built in the late 1970s. In order to check the facts, all the photographic documentation reaching as far back in history as possible was collected. Surprisingly a crack was found to the left of Christ's face on a glass negative that dates from before 1923.³⁴ This alludes to a considerably earlier period for the development of the cracks than had been supposed until now. The engineering survey³⁵ that was conducted confirmed the hypothesis that it is more likely that we are dealing with shrinkage cracks that developed in the course of the plaster drying, i.e. they have accompanied the work since its birth.

CONCEPT OF THE CONSERVATION WORK

Considering its location in a densely polluted environment and the fact that the church had been heated with coal for a long time,³⁶ the painting had become very soiled during the 135 years since it was painted. However, while removing the pollution dirt, an attempt was made to find a cleaning state that would leave a homogeneous patina across the entire surface of the painting. The veil of dirt on the painting had become part of the historical value of the work and if the cleaning resulted in a very contrasting result it would dim its historical authenticity. Simultaneously, the powdered pigment was fixed to make it considerably safer to clean the painting in the future.

The cracks that cover the painting were dealt with based on a similar principle. The expert opinion did not believe that the cracks posed any danger to the painting's stability and therefore they were treated as part of the painting's story. The cracks have acquired almost symbolic value; become a part of the whole painting and are a sign of its history. The conservation concept called for the reduction of their dominance with the help of optical shading, whereby the cracks are still perceivable but less predominant.

34 The photo was dated based on the gas lamps that are part of the church furnishings, which were removed in 1923.

35 Silvia Ränd, *Tallinna Kaarli kiriku Johann Köleri fresko tehnilise seisundi ekperdiinnang ja ettepanekud* (Tallinn, 2013).

36 Until the 1970s, the church was heated by the local boiler house, which was heated with coal.



Fig. 7. Köler's signature on the lower right hand corner of the work: *Wiliandi J. Köler*; and an example of the removal of the surface dirt. Photo: Peeter Säre

SUMMARY

"Wherever you stand in the Kaarli Church, be it in the middle of the church, toward the rear, on the right or left side – everywhere your Saviour's eyes look upon you..."

B. (Johann Heinrich Brasche, pastor of the Kaarli Church), "Uus altari pilt Tallinna Kaarle kirrikus" *Ristrahwa pühhapäwa leht*, 19 August 1879, no. 34.

The conservation of Köler's painting *Come unto Me, All...* turned into a broader research story than was essential for improving the technical conditions of the painting. This information will definitely become a part of the painting's future reception, brings us closer to the author's technique, and adds the "touch of the artist's hand" to a painting which continues to be important to the addressees of the work of art. And in this case, Köler's personal touch is not just a metaphor, but an actual fingerprint in a layer of plaster.

HILKKA HIIOP: THE ARTIST'S FINGERPRINT. *THE CONSERVATION AND TECHNICAL EXAMINATION OF JOHANN KÖLER'S FRESCO COME UNTO ME, ALL...*

KEYWORDS: FRESCO PAINTING, ARTIST'S TECHNIQUE, ARTISTIC PRACTICE, TECHNICAL CONDITIONS OF THE PAINTING, CONSERVATION

SUMMARY:

The article focuses on the artist's technique in Johann Köler's apse painting in the fresco technique, and the resulting conservation problems. In 2013, a technical examination was made and conservation-restoration work carried out on the altarpiece by Johan Köler in the apse of Kaarli Church in Tallinn. This was the first complete conservation of the painting since its completion. In order to conduct the conservation work, scaffolding was installed in front of the painting, which is located at a height that is normally inaccessible. In addition to making the conservation work possible, this also made it possible to conduct a thorough technical examination of the work. Since, in the local context, this is a unique painting in fresco technique, the wet layer of plaster had stored a large amount of information. "Reading" of this information provides insight into the artist's work methods and an interpretation of the marks left by the author. In the course of the research, the following features were identified: the artist's handprint pressed into the wet plaster, the time sequence of the execution of the painting, the number of individual plaster areas, the location of the structural lines used in the preparation of the work, the various methods used to transfer the outlines from the 1:1 cartoons, etc.

CV:

Hilkka Hiiop (PhD) is head of Conservation Department in Art Museum of Estonia and responsible of contemporary art conservation in Kumu Art Museum. She is also assistant professor and coordinator of the artefact conservation branch at the Estonian Academy of Art, Department of Conservation. 2003–2009 she was working as a conservator of mural paintings in Rome. She has supervised many conservation and technical investigation projects in Estonia, created exhibitions made scientific research on topic of conservation and technical art history. Hiiop's PhD theses (2012) treated the conservation management of contemporary art.

