

Documentation for Carolingian Style Illumination

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Components

Scope of endeavor: This entry, besides displaying the “Blessing Christ” full-page illumination from the Godescalc Evangelistary, is an experiment in the use and consequences of selected period pigments. I also planned to use the directions offered by Theophilus Presbyter in the translation of his treatise *On Diverse Arts* to paint the human form.

Size: My illumination is 16.5x25 cm (6.5x9.75 in); the original is 21x31 cm.

Detail: The work includes gilding, full-length seated human form, Celtic knotwork, drapery, experimentation with period pigments.

Identification: Between 781 and 783 CE at the beginning of Charlemagne’s Court School, one of several styles of Carolingian art, created the Godescalc Evangelistary (Gospel readings for a mass) (Mutherich and Gaedhe 7, 10; Walther 76, 77) The term “Carolingian” refers to the reigns of Charlemagne and his successors. Carolingian power promoted a revival of classical texts, style, and imagery of ancient art. (Brown 33-34)

Style characteristics: Michelle Brown in her book *Understanding Illuminated Manuscripts* describes Carolingian illumination as

avored heavily painted works with a naturalistic rendering of figures and an opulent use of gold, silver and purple (redolent of imperial Roman and Byzantine influence)... During the ninth century the Franco-Saxon style also emerged, showing Insular influence in its zoomorphic and interlace. (Brown 35, 36).

Color and layout: This full-page illumination displays an iconic frontal human form with gilding and the use of purple in keeping with the style’s characteristics and pigment application described by Theophilus.

Motifs: The rounded face and large eyes of the Godescalc Christ are recognizable from sixth century ivory carvings, Ravenna mosaics, and eighth century Italian frescoes. The frescoes were themselves influenced by Byzantine works (Mutherich and Gaedhe 32). The border includes geometric, floral, and interlace patterns; the background includes letters, architectural and floral designs.

Style of rendering: Mutherich and Gaedhe describe this miniature of Christ as forming a consistent pattern of lines and sonorous colors. Vestiges of landscape and architecture join with purely ornamental fields, lettering, and frame, into a carpet-like ground from which the figure is set off by its contours, by the formalized lines of mantle and tunic, and above all, by the luminous flesh tones of head, hands, and feet which are given substance by modeling with light and shade. (p. 32)

Aesthetic effect/appeal: The deep, warm colors and immobile frontal visage give its human form authority. Christ’s haunting direct gaze appears to look out of the work directly at the viewer (Mutherich and Gaedhe 32).

Personal interpretation: To me this work is an icon, even though it was in a book and not on a board. I chose this work to recreate because of the pigment colors included and their application manner. I planned to do

this illumination as an experiment, my first foray into period pigment use. Most colors of this work are in the Rubelev™ Introductory Pigment Set and their placement is similar to Theophilus' directions.

Rationale

Materials and Tools

Support: I used white Pergamenata™ text weight, a modern product that takes gouache well and gives the period effect of vellum. In addition, as with vellum, scraping removes any unfortunate mishaps. A 19.5 x 27 inch single sheet sells for \$3.25, plus shipping, compared to over \$200 for a similar amount of vellum.

Gilding: To apply gold-leaf I used a new product I had seen demonstrated on, of all places, YouTube™, modestly labeled “Gold Size, Gilding Adhesive” by Jerry Tresser. Theophilus describes glair’s use in flat gilding (Theophilus 31).

I also used almost three sheets of 23 K loose gold leaf. I substituted PearlEx™ gold mica in a gum Arabic binder for shell gold. This product looks like shell gold when it is painted like shell gold and is much cheaper than the \$25 I paid for 1/8 teaspoon of shell gold. I’m saving the real stuff for a more period project.

Pigments: I used Rubelev™ historic and natural mineral dry pigments: vine black, Italian umber, Verona green earth, Venetian red, Italian burnt Sienna, Italian raw Sienna, and Italian yellow earth. Because I did not want to spend money for more dry pigment, at this time, I used Windsor and Newton™ ultramarine blue gouache to mix with the Rubelev™ pigments to make purple. I also used Windsor and Newton™ permanent white gouache since the period white ceruse is white lead and very poisonous.

Media: I used Natural Pigments™ watercolor medium as a binder for the dry pigments. It is a liquid gum Arabic with honey, glycerin, and a small amount of preservative. Theophilus, in his 12th century manuscript, describes a type of gum resin used to bind pigments for books. He wrote that “all pigments and their mixtures can be ground and laid on with this gum resin, except minium, ceruse, and carmine ...”(Theophilus 33). Daniel Thompson, in his *Materials and Techniques of Medieval Painting*, describes both gum Arabic and the addition of honey to reduce brittleness. Thompson also writes that gum Arabic produces a more transparent effect than glair (p. 57, 58). Both the original and my entry show this, especially in the green.

Inks: For the base outline, I used a black .005 Micron™ pen because layers of pigment would cover it. The original scribe could have used a metal or bone hardpoint to make narrow line-like grooves in the vellum. These were then inked over to make them more visible (Alexander 38, 39; Brown 65). Cennini writing later describes how small sticks of charcoal could be used for the underdrawing and erased with a feather. He also expects these to later be fixed with ink (Cennini 75).

Brushes: I used common small sable brushes, and one old, skuzzy pointed brush to apply glue. My good brushes were Renaissance™ size 1 and Loew-Cornell™ Comfort 3000-1. The Comfort has the larger brush head and a large grip to reduce muscle strain.

Palette knife and marble slab: Because the psmall quantity of pigment needed to paint a full-page illumination, I chose to mix and smooth pigments using a marble slab (which I already owned) and a palette knife (about \$5 compared to a glass muller, \$25.)

Light Box: I use this to help me transfer the pattern to the support. In period, several transfer methods for this were available: pricking and pouncing with charcoal, tracing “paper” made from glue painted on an oiled slab

then dried called, sketching and later in period fixing the vellum over a design held on glass placed in front of a light source (research paper by entrant, see appendix).

Methods, Techniques, and Skills

Composition: Since I planned to use medieval pigments, I spent a large amount of time looking for a suitable image to recreate. This work seemed to include the rendering of the face and purple robe as described by Theophilus. Most of its colors were similar to the pigments I acquired, except for purple. The layout, proportion and balance were straight forward, because I was adapting a single work by reducing its size. (I used my computer for this.) On the printout, I straightened the borderlines with a ruler and Micron™ pen and made the knotwork more distinct by painting over it. I then used this as my exemplar. I traced the corrected pattern on the Pergamenata™ with a Micron™ pen.

Gold leaf: I tried Tresser's gilding adhesive applying this directly to the areas to receive gold leaf with an old brush. I waited about five minutes, then laid a sheet of loose gold leaf over the glue. It worked immediately and well. This was the easiest gilding adhesive I had ever used. (Before these attempts, I had used the adhesive from the Mon Lisa™ gilding company and Kohler Instacoll™, glass gilding adhesive. Both were harder to apply, spread errantly, and difficult to correct.) The thin modern gold leaf does not allow burnishing, so I rub it gently with my finger to make it shine. Theophilus does recommend three layers of gold (Theophilus 31), but this would triple the expense as well.

Pigment Test: Initially, I mixed the dry pigments with the gum Arabic binder on a marble slab using a palette knife. I used a tiny scoop to measure the same amount of pigment of each color and a dropper to measure the same amount of water. After mixing these, I added the gum Arabic and mixed more. I would spread the paste with the palette knife and fold it to the middle of the blob.

I made swatches of each color on a piece of Pergamenata™ I had prepared for that purpose, making notes on mixing as I went. I began with the lightest color, Italian yellow earth. To get it thick like pudding I used equal amounts of water and gum. The yellow earth turned out smooth. I used this as my basis for comparison and worked with the others in a similar manner, going from lightest to darkest.

From this, I learned I needed more gum Arabic with some pigments than I did with others to make the paint the consistency I preferred to use. Vine black and Verona green earth needed more gum. Vine black was also lumpy and needed more "mulling" to remove them. Burnt Sienna and raw Sienna were a little coarse. Verona red mixed similar to the Italian yellow earth, nice and smooth. Raw umber was a littler dryer, took a little more gum, but was not lumpy.

I wanted to compare my gouache paints with the prepared pigments. I painted swatches of gouache colors near similar hues of dry pigments. The blacks were the closest match, with burnt Sienna and raw umber being somewhat close (personal, non-technical opinion) and Italian raw Sienna being off the most. I did not have anything close to Verona red or Italian yellow earth. My gouache yellow ocher fell between the Italian yellow earth and the raw Sienna. Because of the black line I drew with a Sharpie™ marker prior to painting the swatches, I also learned which pigments covered the best. I have included my swatches for display.

Pigment Application: I blocked in the **under painting** with the pigments I mixed previously, matching them to the original painting as best I could. I reserved the human form for last. To make purple I combined tube gouache ultramarine blue with prepared burnt Sienna (for the red), about 2:1. Theophilus described the steps to lay in a purple robe on a panel, combining the unidentified vegetable pigment *menesc* with a little red (p. 15n, 20). The authorities have debated over whether this applied to vellum as well. I feel that there are so many guesses as to what terms and colors names meant that panel painting used techniques close enough to work for me. Cennini comments: "It is true that you may use on parchment any of the colors which you use on panel; but they must be ground very fine (Cennini 102).

The flesh areas now remained empty. To paint them I adapted Theophilus' very detailed directions for painting **nude bodies** (Theophilus 14-20).

Below are my interpretations and adaptations of Theophilus' directions to paint, highlight and shade flesh.

- First, Theophilus mixed the **base color** combining burnt ceruse, plain ceruse, prasinus, and cinnabar. I used tube gouache permanent white, prepared Verona green earth, some Italian raw Sienna, and burnt Sienna. I used Verona green earth for Theophilus' prasinus because the description implies it is black-green. A note indicates one authority, Dodwell, even thought it was green earth. Burnt Sienna was my substitute for the minium and cinnabar. Minium was a roasted ceruse (vermilion), and poisonous. Apparently, roasted ceruse could become either tan or red. This combined pigment calls for both (Theophilus 14-16).
- The **first shadow pigment** mixed the base flesh-color with more prasinus and cinnabar and some burnt ocher, which could be a red earth. To the base flesh color I added more Verona Green and even more Burnt Sienna, since I did not have any burnt ocher. This turned out to look like chocolate mousse. With this I delineated the eyebrows, eyes, nostrils, mouth, chin, temples, and beard. I also outlined the hands and feet (Theophilus 17).
- The **first rose pigment** mixed the base flesh-color with minium. I kept using burnt Sienna as a substitute for the minium, adding it to the flesh-color. With this I reddened both cheeks, the mouth, the lower part of the chin, the upper temples, the length of the nose, above the nostrils on each side, the fingers and toes (Theophilus 17).
- Next, I **highlighted** areas with the base flesh-color combined with more ceruse substitute, permanent white gouache. I used this over the eyebrows, the length of the nose, above the nostrils, fine lines around the eyes, lower part of the temples, upper part of the chin, each side of the mouth, forehead under the hairline, middle neck and roundness of the hands, feet, and areas of the fingers and toes (Theophilus 17).
- Theophilus directs one to mix "**veneda**" for the eyes from black and a little white to paint the irises. Then add still more white to use for the pupils, and even more white to fill in the corners of the eyes. Then paint plain white in the area below the iris (Theophilus 28).
- To make the second **darker shadow pigment** Theophilus adds even more prasinus and cinnabar. I painted this between the eyebrows and eyes, center below the eyes, close to the nose, between mouth and chin, and above the smaller toes (Theophilus 18).
- The second **darker rose pigment**, mixes in even more cinnabar. This is painted in the middle of the mouth, allowing the lighter rose to show above and below it (Theophilus 18).
- Because the face did not appear too dark, I did not use the second highlighting Theophilus describes as optional (Theophilus 18).
- Next, I made the pigment Theophilus called "**exudra**" mixing burnt Sienna with black. I used this to outline the pupils, the middle of the mouth, and between the mouth and chin (Theophilus 19, 20).
- I then used straight Italian burnt Sienna for the fine lines of eyelashes, a line below the eyes, on each side of the nose, above the nostrils, and just below the mouth (Theophilus 20).
- Using plain vine black I painted over the red of the eyebrow so that a little of it showed through. I used this on the edge of the upper eyelid, the holes of the nostrils, each side of the mouth, around the ear, and the hands, fingers, and toes (Theophilus 20).
- Finally I went around the nude body area with red and painted light rose pigment on the nails (Theophilus

Next, I painted the **hair**. Continuing to follow Theophilus' directions I added a little vine black to Italian yellow earth, my choice of substitute for yellow ochre. I underpainted the area with this. I then outlined the hair

with vine black. Then, I used the previously combined “first highlighting pigment” to paint some lighter strands. I added more vine black and painted more strands. To make even lighter hair strands, I added more permanent white to the “first highlighting pigment (Theophilus 19).

For the **beard**, I painted strokes of burnt Sienna, and then used the previous black and yellow earth combination to paint darker strokes. Last, I added strokes of black. (Theophilus 19)

To **finish the robe** I mixed a little vine black with the previously combined purple made from ultramarine blue and burnt Sienna. I outlined the deep folds of the purple robe with this, and then used straight ultramarine blue for highlight. Next, I added a little permanent white gouache to the blue to make the few light blue lines. Theophilus described this in a section on panel painting. While more remains to be painted, this is the end of Theophilus’ suggestions that apply to this work (Theophilus 20, 21).

Next, I painted the folds of the reddish wrap using vine black lines as in the picture. OOPs, later I found the section in the book on how to paint a red robe. Well, I wasn’t too far off. Instead of black, I should have used a black/red combination. I redid the lines using the mixed red/black pigment called “exudra”. Then, I used burnt Sienna mixed with Venetian red to highlight the folds. I used this same technique on the large cushion (Theophilus 21). I think this is finally it for Theo.

To complete the picture I painted my way around the border and the background directly above it. This is fundamental, but detailed, work. I used the pigments with which I had been working and matched them to those in the picture. I used vine black to outline the sections and give the picture continuity. There were areas where I could only guess at the original intent of the design due to the wear the picture had received over its long history or the resolution of the photograph. I saved those for last, so I could use the “feel” of the whole picture to help me decide how to paint them.

Conclusions

Besides working for the first time with historic, dry pigments, I also used different gilding adhesive. Trying the pigments out in a manner that paralleled the directions of Theophilus was tricky at times, because the names for the pigments did not agree with the ones used in the book. Doing this taught me to be a better observer when I look at pictures of original illuminations. As the oops indicated, I saw the delineation of the folds of the red wrap as being black, but after reading Theophilus’ directions on painting a red robe I could see the lines included some red as well. Theophilus’ color choices sometimes surprised me, such as burnt Sienna for “eye lashes”. Historic pigments applied with gum Arabic react in a different way from gouache. They are rougher and harder to remoisten. The vine black does not cover the edge of gold leaf fully. I found stroking backward as well as forward along the edge of the gold seemed to help this. Comparing the purple, a blend of period pigment and modern gouache, with the pigment of the red wrap, a well covering period pigment, the gouache-blend appears smoother and more even in texture. The even, fine particles of modern pigments give them better coverage than those of period pigments. This evenness may also account for the difference in their appearance (O’Hanlon).

What Would I Do Different (Sure, shoot myself in the foot. ☺)

While I truly liked working with Tresser’s gilding adhesive, next time I use it I would under paint with either Verona red or Italian raw Sienna. The red would give the gold warmth and the raw

Sienna would mask the hairline cracks. On a work with much less gilding I will use three layers to see if there is a dramatic difference and whether it could be burnished.

If I were to remake this same picture with the same materials, I would use a brighter blue or less ultramarine blue to the red when combining pigments to make purple. I would also add more Italian raw Sienna to the basic flesh pigment combination. It looks a little too pink to me now.

When I again use this method of painting a face, which I think turned out well, I will read the directions through several times, as they are puzzling.

Sources

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