

Use of Conservation Experience When Making Scientific Examination of an Art Work

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Conservation of a work of art involves a wide range of measures undertaken with the aim to study the object in the greatest detail possible. The conservators thoroughly analyze and classify the data obtained, identify the cause-and-effect relations, determine the sequence of conservation processes, etc. Additional data are obtained in the course of the work, which refine the conclusions and complement the overall picture. As a result, a complex logical chain of patterns of relationship, a peculiar reference frame emerges, which may be of help in the search for the necessary proofs in the scientific examination of works of art.

As an example, let us consider the results of the examination of the icon “St. Demetrius” (106x40) submitted for restoration to The Grabar Art Conservation Center, Moscow, Russia, as a purportedly 16th century painting.

The icon exhibits well-defined signs of the style of commercial restoration of the turn of the 19/20th centuries. Visual inspection already raised suspicions concerning the possible dating of the icon. We performed a complex examination and analyzed each layer of the icon in detail in order to determine whether the technological features, nature of damages, renovative and restoring interventions, and stylistic features match those of the paintings attributed to the 16th century.

The board. The panel is made of two parts of very different width. Strong deformation of the narrow part is immediately apparent. The 4.5-cm wide plank is bent in two planes, strong bungs barely hold it in the common panel. The examination revealed three attempts to additionally reinforce the bar undertaken at different times: wooden dowels, additional superposed connectors (lost), and, finally, factory-made metal nails. However, because of its persistent tendency to deform, the bar would bend spalling sizeable fragments of wood from the back side. A deep split has formed in this bar starting from the lower end. At the same time, the base board exhibits moderate horizontal creasing. The difference in the shade and colour of the boards is apparent despite the careful toning of the back side of the board, and soiling on both sides of the junction does not match. Both upper corners of the bigger board are identically worn?! On the front face, different techniques were used for making of the kovcheg (the central deep area of the panel). The loozga (the slant from the edges of the panel to its central deep area) of the main plank has a clear and rather even contour and consistent slope. The narrow plank has loozga with a curved outer edge and the depth of the kovcheg strongly varies. This is especially apparent on an x-ray image and also under visual inspection under side lighting.

An examination of a number of the 16th - 17th century icons shows that masters used single planks to make even wider panels. In the case considered, the appearance of the panel and the pattern of its deformation indicate that the panel of the icon was assembled from different elements of old panels.

Canvas support. Old linen tissue. It consists of fragments lying along the upper and lower margins, separated at the junction, but has a common section. A comparative analysis showed the tissue to be

identical on both parts of the support. The canvas support was put at the same time as the panel was made.

The ground is also of certain interest. It is chalk based, with porous structure and appreciable caverns at the surface. It resides directly on the canvas support and the panel, and is identical on both parts of the panel. Analysis revealed large amounts of medium (of animal origin) in the ground in the form of dense clumps, i.e., the paste appears to have been insufficiently mixed. Craquelure grid differs strongly in different parts of the surface. It is medium-meshed at the top with areas of so-called “unripe craquelure”, gradually changing to fine horizontal craquelure at the middle of the icon. Finally, in some areas craquelure is barely visible. And however strange it may appear, these areas are located in the bottom part of the icon where wood is usually more damaged. Ground losses are considerable along the perimeter of the icon, along the board joints. The gesso ground is strongly etched over the background areas. Losses date to different epochs, but there are no signs of gesso ground having been renewed. I.e., repeated renewals of the board (examination revealed that the upper bung was at one time removed from the slot, and the slot underwent toning treatment) were not followed by the restoration of ground losses.

Paint layer. Unlike the ground, the paint layer on the icon is represented by three isolated and stylistically distinct fragments.

Fragment I – The image of the Saint and of the earthy surface. Examination revealed only one painting layer resting directly on the ground. The paint layer is in good state of preservation with no major losses. Minor local losses do not mar the general impression of the painting. The craquelure pattern is common with that of the ground. The image is accurately delineated along the contour by an even 1-mm

wide white-color strip. The delineation is in the same paint layer as the painting. No traces of background have been found on the surface. The stretched outline of the nimbus is deliberately archaic, hand drawn, and goes beyond the flesh paint. The fine drawing of the face is excellently preserved. Particularly striking is the image of the right arm. Such minimalism of damage of the painting proper contrasts sharply with the extent of losses and damage of the surrounding ground and board. The paint layer owes its extraordinary fastness to the casein medium. Analysis of the paint medium revealed large amounts of medium. The colours are made of primitive-composition pigments. Thus, e.g., the green cloak is painted by lead white and glauconit. The chiton - by charcoal, cinnabar, and lead white, with copper green in parts of the image. The image of the Saint and of the earthy surface appear applique, the surrounding areas serve only to provide ruined entourage.

Fragment II – a layer of gold with gold-size resting on the background. It is not stylistically associated with the image of the Saint as evidenced by another stretched outline of the modified silhouette of the robes. The stretched outline, gold, and gold-size nowhere overlap with the image of the Saint. Gold rests along craquelure, whereas gold-size tints craquelure all the way through. Such a renovation implies overpaint. However, in this case the ground must have been renewed, which had suffered strong damaged and losses due to persistent deformation of the panel. However, no ground was added. No traces of gold-background painting found, except for the cinnabar side panels lying on gold.

Fragment III. The reddish brown panel of the upper margin. It rests directly on the ground inside the stretched outline. The craquelure pattern is common with that of the ground.

Thus all three fragments are in no way related to each other. There is no logical connection between the state of preservation of the ground, that of the main image of the Saint, and the appearance of the so-called overpaintings. It is unlikely that a 16th - century master would have used casein medium and primitive-composition colours. The technique of painting also does not match the level of 16th - century samples. First and foremost, the icon considered lacks multilayer flesh paint. Instead, we see simplified imitation with no proper modeling of volume. We see transparent painting being imitated by reducing the number of layers and increasing the amount of medium in colours. The flesh paint lies above the lead-white parts of robes.

The painting and coating are interfaced by an additional layer of dark-cherry varnish. We could not determine the composition of the varnish. We found varnish in all relief losses on the image. In some areas of the background and robes varnish is located in craquelures forming additional false craquelure on the surface. The same varnish was used to tone some of the fragments of the surface of the panel. Examination of the craquelure showed the ground to be painted all way down. In addition, the craquelure at the background is coloured by gold-size. No oil traces have been found either on the surface or in the craquelure, which is impossible for ancient paintings repeatedly covered by oil-based varnishes and boiled oils. The aim of this layer was to antique the appearance of the ground and painting losses.

Coating. The coating of the icon has the form of a strong multilayer film of synthetic varnish coloured by charcoal pigment (the so-called

“antiquary” coating). The same varnish was used to produce additional modellings of the shadow areas of flesh paint and robes and to tone the back side. We removed the toned coating to get a clearer idea of the painting. We preserved two coating areas for eventual further studies.

Conclusions

1. The technology of the painting of the icon was not maintained consistently throughout all stages of work. There are serious deviations from and conflicts with the traditional technique of icon painting.
2. There is no logical connection between the cause of damages and the process of subsequent renovation works (except for the museum reinforcement of the ground and modern metal nail in the panel).
3. The panel, ground, painting layer, and coating bear well-defined signs of antiquary restoration of the turn of the 19/20th century and were made at the same time. The icon can be dated to no earlier than the second half of the 19th century.

Brief analysis of the artistic and stylistic features of the painting

The icon shows “St. Demetrius”, which is paired to “St. George” in the Deesis row of the Iconostasis. The Saint is shown in full length, half-turned, and slightly inclined forward. The arms are in the position of prayer.

Compositionally, the image appears to be too cramped. The image of the Saint is actually pressed against the right margin. The overall plastic solution is inexpressive, and this is especially true of the position of the feet.

The flesh paint and robes differ stylistically. The graphics of the flesh paint and especially that of the face is finer, more fractional, whereas the robes are drawn in sweeping lines. However, in both cases the painting appears abstract and, in places, not exactly to shape (one can easily see the magnitude of error on the close-up image of the face). Gaps in the chiton destroy rather than emphasize the impression of the shape. The entire image consists as though of individual elements popular at different epochs in Novgorod and Moscow paintings. A peculiar combination of styles lacking the necessary integrity. The coloristic solution is dull. The inexpressive colour of the earthy level is immediately apparent and contrasts with the transparence of the robes. This painting, which was made with a certain degree of skill, meets perfectly well the criteria of imitation.



Photo 1. The icon “St. Demetrius”, the second half of the 19th century.
Wood, tempera. 106 x 40

Photo 2. The icon “St. Demetrius”. A fragment.

Physicochemical analyses have been performed by the staff members
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