

Le policromie e le dorature del dossale d'altare marmoreo dell'antica Cattedrale di Orte

Polychromes and gilding of the marble altar altarpiece of the Orte Cathedral

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The subject of the present study is a group of marble sculptures preserved at the Diocesan museum of Orte. This group has been dated to the beginning of the 16th century and they are currently under restoration.

The statues belonged to an altarpiece of the ancient Cathedral of Orte, before being split up as the Cathedral was dismantled. The same statues also underwent several rearrangements, readjustments and modifications in place and function, affecting their conservation status.

Macroscopic observation and documentation coupled with scientific investigation, led to a deeper knowledge of raw materials and execution technique, in order to finally have a graphical model of the ancient monument. In particular, it was found that the altarpiece is made of reused marbles and every statue has finishing paintings and gildings, made using different work tools.

Scientific analyses (optical microscope, SEM-EDS, XRF and FTIR analysis) and observations by the conservators documented the existence of several blue and red layers, painted with the tempera technique, and gildings. In a following decorative phase a new gilding extensively covered the original ones and also the painted layers.

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Nota tecnica sulla *Pala del Noviziato* di Filippo Lippi

Note on Filippo Lippi's "Pala del Noviziato"

Andrea Dori, Lucia Dori, Claudio Seccaroni

The "Pala del Noviziato", painted for the Santa Croce Basilica and now at the Uffizi, is one of the most significant works of Filippo Lippi's maturity. His in-depth technical study makes it possible to focus on the evolution of the project, starting from the underdrawing up to the final changes, some of which were particularly important for his client, the Medici family.

With respect to a rigorous use of perspective, as was his style, the painter resorted to empirical solutions, basing the cohesion of the composition mainly on detailed chromatic schemes.

The technical study also included the predella (the altar's base), including the two Pesellino scenes held in the Louvre and not returned to the Uffizi galleries, whose executive workmanship and background have been closely examined.

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ABSTRACT

Deacidificazione delle tele con nanoparticelle di idrossido di calcio. Interazioni con le pellicole pittoriche moderne e contemporanee
De-acidifying canvases with nano-particles of calcium hydroxide: study of the interactions with contemporary paint films

Alice Tognoni, Grazia De Cesare, Marcella Ioele, Mauro Torre

This research focuses on the possibility of applying calcium hydroxide nano-particles dispersed in cyclohexane and ethanol, developed by the CSGI of Florence, for de-acidifying cellulose-based supports and examining their interaction with the industrial paint films most widespread in the art world such as oil, acrylic and vinyl resins in emulsion.

De-acidification as an operation capable of eliminating one of the causes of de-polymerizing textile supports, could prevent invasive restoration work on the supports such as lining. This function appears even more important in the case of contemporary art, where often the constituent materials – or the very conformation of the works – do not allow such treatments.

In this context, we wondered what consequences the industrial oil, acrylic and vinyl paint films on modern paintings might suffer after treatment with nano-dispersions, composed of potentially highly alkaline nano-particles but which do not perform their activity as they are prepared in organic solvents.

The formulation in cyclohexane, characterized by a high apolarity, is of particular interest for carrying out de-acidification of the supports without affecting the paint layers.

The positive results of the tests on specimens enabled us to evaluate the suitability of applying nano-dispersions to a real work of art. The work chosen was an oil painting on canvas depicting fishermen at play created by the painter Raffaello Gambogi in 1903, held by the Gallery of Modern Art in Rome.

Una grande tela di Tiziano danneggiata dall'acqua. Opportunità di ricerca e innovazione in un restauro complesso

“David and Goliath”, a large canvas by Titian, damaged by water: structural aspects of a complex restoration project

Antonio Iaccarino Idelson, Carlo Serino, Sandra Pesso, Gloria Tranquilli

The painting “David and Goliath” by Tiziano Vecellio, located in the ceiling of the sacristy of the Basilica della Salute in Venice, was flooded with about 500 liters of alkaline solution (water and ash) while extinguishing a fire in 2010. Water caused flaking of the paint layers, severe deterioration of protein adhesives and the deformation of the textile support. The painting, measuring approx. 3 x 3 meters, was protected with an emergency facing and brought to the “Laboratorio della Misericordia” for conservation treatment. The 1990 paste glue lining was removed and sturgeon glue was used locally for the adhesion of flaked paint. The deteriorated original canvas and preparatory layers needed consolidation by impregnation and a new lining. For both treatments, preliminary research was carried out. The consolidating solution was

chosen with tests on mockups in environmental chamber, aiming at increasing the dimensional stability with the high relative humidity and temperatures values expected in Venice. The lining method was studied in order to perform a treatment not requiring the use of moisture nor that of heat, compatible with the environmental conditions and reversible with a minimal stress for the painting. Lining was performed on a light-weight, breathable and inextensible carbon fiber canvas.

The need to roll the painting several times before the final installation, suggested to use a thin and flexible filling material for the losses, obtained with the addition of kaolin powder to a gesso bound with animal glue. The inpainting was mainly intended as a reduction to a “ground” color of the majority of the losses; only a few lacunas were treated with color glazes to reconstruct the missing image. The painting was mounted with elastic tension on a new aluminum stretcher with rolling profiles on the perimeter to minimize friction. The even distribution of elastic tension and the inextensible support allowed to obtain a negligible sagging when hanging in the ceiling of the Sacrestia. Together with the other two paintings by Titian, which make up a triptych in the ceiling, the painting was relocated with a system of miniature chain hoists which enable precise control of the position while operating from a mobile scaffolding. Lifting them and connecting them to the ceiling has now become a safe and relatively simple operation.

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L'integrazione formale di manufatti ceramici con impasti a base acrilica: valutazioni su materiali, metodi e casi applicativi

An acrylic-based gap filler for ceramic artefacts: evaluating materials, methods and applications through case studies

Martina Patriarca, Roberta Bollati, Maurizio Coladonato

The study is focused on the development of an acrylic-based mixture that could be used as a filling material for ceramic artefacts as an alternative to plaster based fillers. Restorers in the United States have been using Paraloid-based mixtures for years and many related technical publications are available. The already published acrylic mixtures were first tested on broken pots with no archeological value in order to identify the properties required for the mixture that was being developed. Firstly, seven types of inert were individually mixed with two different acrylic solutions to test their specific properties and to define the best components for the desired mixture. The subsequent samples involved the combination of two inert fillers in equal volumes – tested again with the two acrylic solutions – in order to identify the best performing mixture. Various samples of the selected acrylic mixture were subjected to artificial aging, as well as mechanical and biological tests; the promising results of these tests made it possible to use the AG-4 mixture on three archaeological ceramics restored as part of a SAF-ICR diploma thesis. The use of acrylic mixtures as gap filler on archaeological ceramics is an appropriate choice for porous, low fired and heavily decayed artefacts and, generally speaking, for fragile and water-sensitive ceramics.

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