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RESTORATION OF GILDED FRAMES - CHALLENGE AND SATISFACTION. A CASE STUDY

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Abstract:
The paper presents a case study of restoration of a gilded frame from the beginning of the XXth century. The frame presented a serious damage of the ornaments (gildings) that are missing, which made difficult their reconstruction. A corner was visible eroded and the joints were fragile. A visible biological attack was observed and nails interventions. The initial destination as a mirror frame was changed into a photo frame. The restoration was a challenging, very delicate and difficult work including: consolidation of the flaking gesso and gilding, cleaning, curative treatment, structural consolidation and gluing, replicating missing decorative elements, refinishing. After restoration the result was remarkable and the frame was displayed at the Faculty of Wood Engineering within the Restoration 2016 and the Researchers's Night 2016 exhibitions.

Key words: *wood; restoration; gilded frame; gesso; conservation.*

INTRODUCTION

Wooden frames have been recognised, in recent decades, as work of value that should be conserved to the same standard as other cultural material. Frame conservation has its roots in the traditional crafts of frame making and repair, shaped by modern conservation ethics and methodology. Frame conservation is part of the broader conservation field of gilded, polychrome and wooden objects conservation, and has close links to furniture conservation (McGowan-Jackson 2008). The concern for frame damages that occur during exhibitions, storage, travel, handling, adverse environment has inspired the development of the field of frames conservation, and in 1996 was established the Gilded Objects Conservation Special Interest Group of the AICCM, Australia. In Europe the concern for frame conservation lead to organisation of different meetings, presentations and exhibitions about history, materials and conservations of frames. An example is the conference: **Frames: The Northern European Tradition** (2005) held in Dresden at the Gemäldegalerie and organised by Lisa Koenigsberg through her organization Initiatives in Art and Culture, in association with New York University. In 2008, the symposium *Frames: past, present and future* has been held in Australia (McGowan-Jackson 2008). Another preoccupation in this field were pointed out in United Stated by Susan Jackson, the founder and owner of Harvard Art's, a Professional Associate of the American Institute for Conservation of Historic and Artistic Works that serve as a board member of the New England Conservation Association and the Society of Gilders. http://harvardart.com/about-us. Every museum of the world has in the conservation departments a section for wood restoration including different types of frames (simple, profiled, carved, gilded, gold leaf coated or other variety of coatings). In Chicago the Frame and Gilding Department from the Conservation Centre, the largest and most comprehensive private art conservation laboratory in the USA, specialises in the preservation and restoration of frames and objects with gold, silver, and metal leaf applied on the surface. The Center's conservators focus on objects that include period frames, gilded antiques, and furniture (http://www.theconservationcenter.com/frames-gilding). The concern for frame restoration came toghether with pictures restoration. At the National Gallery of Art (USA), the Frame Conservation Department studied the techniques and materials used on period frames (Ravenel 1994). The nomenclature and the development of popular styles and constructions of the XIXth century frames in America were presented by Glover (2006). Publications providing technical data on individual frames, including materials and methods of construction and profile drawings, are particularly useful (Thorn 1987, Glover 2006, Lizun 2012, Sandu et al. 2014, Bjorneberg 2017, Reynolds 2017). In the UK, at The Institute of Conservation, the Gilding and Decorative Surfaces Group is a forum for conservators of a wide range of objects, from wood carving to stuccowork (https://icon.org.uk/groups/gilding-decorative-surfaces/committee).

During the history the frame evolved, from Egyptians (http://www.frameusa.com/pages/early-history-of-picture-frames), to wood multi-panel paintings from 1200s-1300s and to the Renaissance when the frame became a separate entity apart from a painting http://lauramorelli.com/history-of-picture-frames/.

The role of the frame in the presentation of a picture is very important: to protect and support an artwork and to enhance the work it surrounds. As any wooden object, the frame is vulnerable to damages: wear, biological degradation, lack of ornaments, etc. Uneven relative humidity and temperature can affect wood substrates and lead to swelling and shrinkage. The result is often a cracked and flaking gesso. Sometimes, over-gildings and over-paintings not only destroy the original details, but they make the conservation-restoration process more difficult and laborious.

A good example of case-study for restoration of gilded frame, that has a personal value for the restorer and a very interesting history, is presented in the present paper.

RESTORATION OF GILDED FRAME. A CASE-STUDY

A short presentation of the object

The object is a mirror frame, originated from a small village Pădureni, near the city Târgu-Mureş and dated about 120 years ago. The frame was a gift for the great-grandmother of the owner (Levente Majos), received from her mother-in-law at her wedding. In the 1970's the mirror was replaced with a family photo.

The rectangular gilded frame with dimensions of (600x450) mm is made of four mouldings: two horizontal and two vertical fixed together by a mitred butt joint. All four sections were assembled before the gesso and gilding were applied. On the backside there are four fillets that form a rebate to fit the mirror, the picture or the photo inside. The frame is made of spruce wood, in transition style Rococo-Neoclassic. Acanthus leaf appears to be Rococo, and the rest of the ornaments are Neoclassical. The small round ornaments that surround the inner and the outer areas of the frame are called "pearls". Surface coating seems to be gold or silver leaf with a colour transition from silver-gold in the central parts of the frame to the brown colour towards the corners.

The initial conservation state

When the frame was bringing into the restoration laboratory from Wood Engineering Faculty it presented a visible degradation. The surfaces were differently deteriorated (face in contrast with the back side, as illustrated in Fig. 1A,B).

A B

Fig. 1.
Initial conservation state for the gilded frame (A-surface view, B- back view).

On the surface of the object the lack of gildings until the gesso layer or until the wood substrate generated lacunar areas (Fig 2a, b). The most severe damages to the gilding finish were observed on the corners. Acanthus leaves situated in the central part of the frame were much degraded and were missing, which made difficult their reconstruction (Fig. 2b, c). The environmental conditions probably broke the decorations or completely detached them from the frame. The right upper corner was visible eroded (Fig.2a). The joints were fragile and unstable (Fig 2c). A more recent brown finishing layer seems to be applied on the original because the areas with lack of ornaments were covered without completion the gaps.

On the backside, a visible biological attack was observed and nails interventions (Fig. 2h). The surface was covered with an adherent dirty and smoky layer (Fig 2f). A horizontal narrow wooden strip to fit the photo into the frame was added during a not professional intervention (see Fig. 2g). The photo was fixed on a paperboard and covered with a transparent plastic foil. The initial destination as a mirror frame was changed into a photo frame.

Some details illustrating the initial conservation state of the frame are presented in Fig. 2.

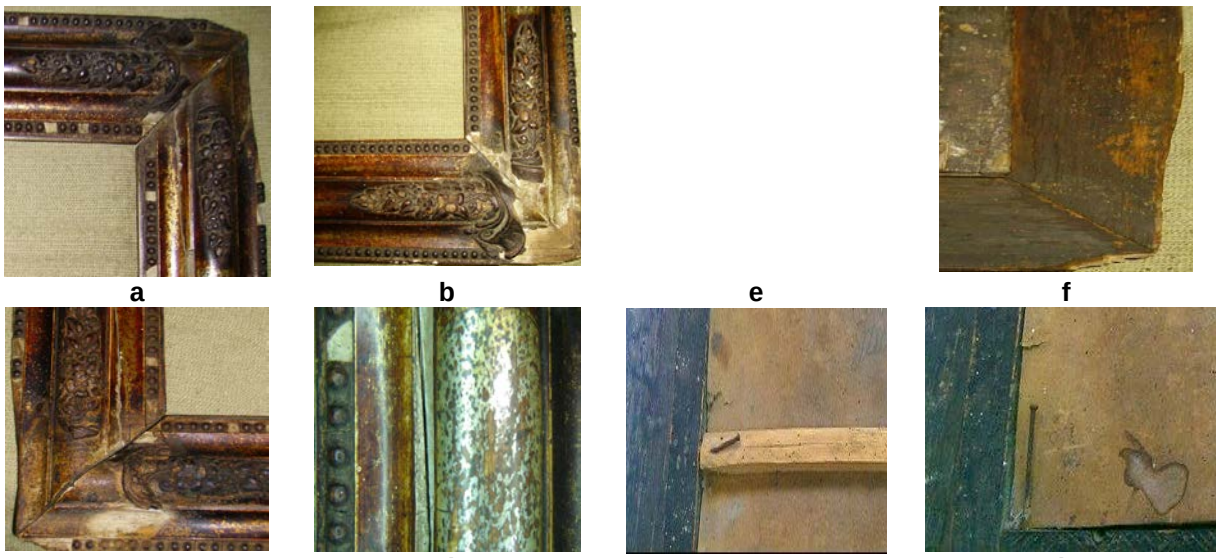


Fig. 2.
Details with initial defects of the frame: a - lack of gildings, eroded corner, b - gesso layer missing on the corner, c - fragile joint, d - finishing detail, e - visible insect attack, f - dirt and lose of material, g, h - nails interventions.

Investigation and Conservation-Restoration

Prior any interventions the frame was examined and pictures were taken to document its initial conservation state and the obvious previous interventions. The conservation - restoration concept took into consideration the preservation of authenticity. A short schedule of conservation-restoration include: consolidation of the flaking gesso and gilding, frame structural reinforcement and gluing, surface cleaning, replicating missing decorative elements, gilding, finishing.

Small gilded samples, with the flaking tendency were extracted for microscopic investigation of surface coatings. The samples were observed at different magnifications with a stereomicroscope Optika SZM fitted with a camera for image capture. The microscopic images revealed a multilayer finish consisting of white gesso, then a primer, probably bole, the silver or gold leaf layer and finally a brown film above gold leaf (Fig. 3).

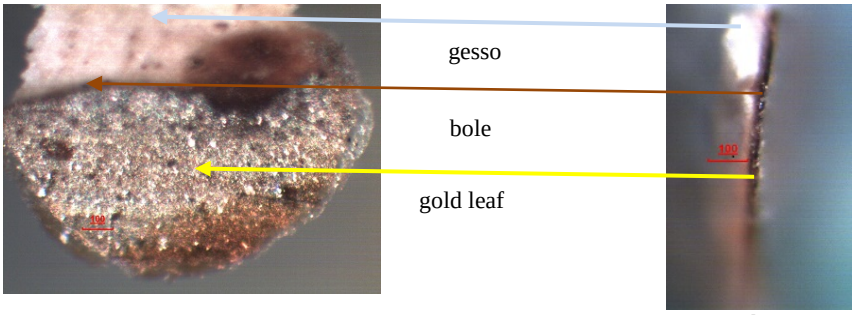


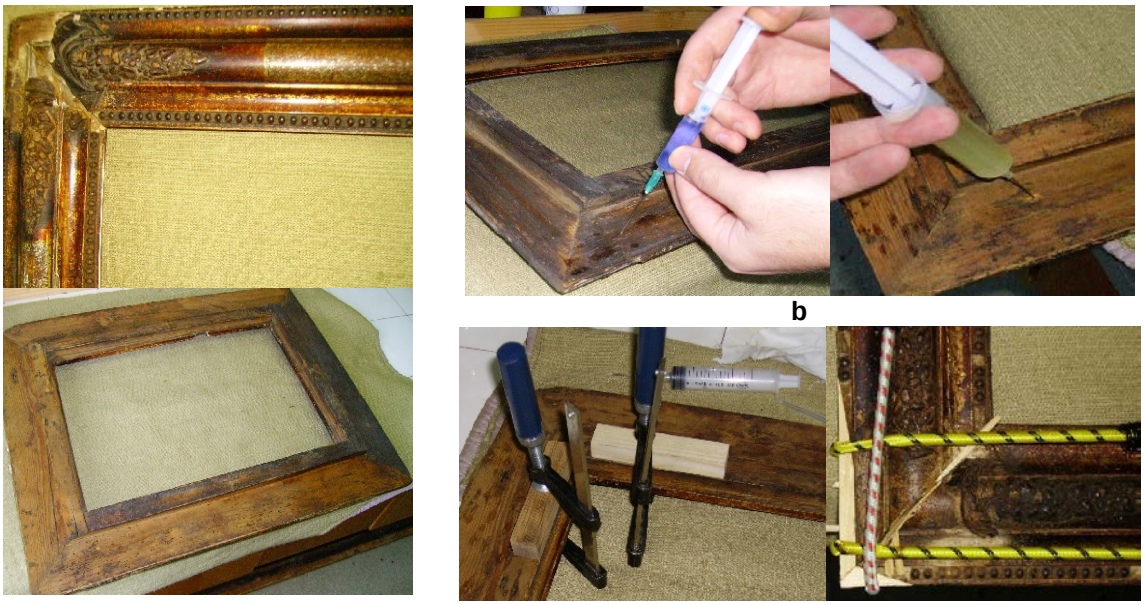
Fig. 3.
Microscopic appearance of the surface - magnification 80x (a- successive finishing layers, b- cross section of finishing layers).

Before cleaning the backside wooden strip and the nails were removed and photo and paperboard were preserved. An initial, gentle, dry cleaning with soft brushes for dust removing was done. The unsound gesso was removed and the flaking gesso was saved to be later on consolidated. Areas of detached gesso were stabilised with 3% solution of fish bone. Afterward, tests were performed to establish the best option for cleaning of the surface and the backside.

The backside was cleaned with Pronto solution for wood by brushing and wiping with soft cloth in 4-5 repeated phases until the cloth remained clean. The same cleaning solution was employed for the frame surface. A special attention was given to gildings to not flaking off.

The next step in conservation was the curative preservation against insects attack. A repeated treatment with solution of Decis was employed by injecting into the galleries. After conditioning the frail wood was consolidated with Paraloid B72 (solution of 5% in toluene) and repeated until wood saturation and strengthening.

The gluing of cracks or completion the missing wooden parts were made using bone glue 30%. Wooden strips were used to fill the large cracks (especially on the corners of the frame) after a previous cleaning of surfaces by sanding and wiping out with ethyl alcohol. Similar operation was done for gluing the backside fillets that form the rebate for mirror fitting (Fig. 4). Attention was given to an appropriate “pressing” of elements to ensure adequate contact until adhesive film formation. The excess of cured adhesive was further cleaned by moistening and scrapping away.



a b c

Fig. 4.
Sequences of the restoration before gilding (a - surfaces after cleaning, b - curative treatment and consolidation, c - gluing of wood, cracks, completion of missing parts).

After the frame was consolidated and structural reinforced, the successive gesso layers were added and the missing decorative elements were replicated according to existing models.

The gesso primer was prepared as a mixture of calcium carbonate and fish glue 6% until an appropriate viscosity (“sour cream” consistency). It fills the irregularities and other imperfections in the surface of the wood. It was applied warm to the surface to be gilded. Several coats of gesso were applied and allowed to dry before the gesso surface are worked to create detailing or to smooth the surface. After that, the surface was sanded; the dust was removed by soft brush under blowing air and fast wiping out with diluted ethyl alcohol (1:1 in water). Gesso was also the primer layer before other decorative surface treatments. Prior, a fish bone 3% was used as a primer for new gesso layer and to consolidate the old gesso.

Missing ornaments were completed in three distinct phases:

a) Replicating the “pearls” by mould technique

A former negative “pearl” mould of 10cm was made using commercial clay (Fig. 5a). After clay hardening it was sealed with shellac to create an impermeable surface. The positive gildings (Fig. 5b) were manufactured by mixing the bone glue 30%, calcium carbonate, soft paper strips (corresponding of A4 format) previously moistened and water until a plasticine consistency. It was fixed and pressed into the oiled negative form, and carefully removed after jellification of the adhesive. The positive moulding was put on the flat and rigid surface to final drying (Fig. 5c). Small, sectioned pieces containing 2-3 pearls were then gentle sanded, dusted off and glued on the frame with fish bone 10% (Fig.5d). Small clamps were used for fixing the pearls.

b) Carving in gesso layers the acanthus leaf according to the principle of existing model (Fig 5e) - by hand, using metallic spatula, wooden sticks or paintbrushes.

c) Re-gluing of the existing ornaments (Fig.5f, g).

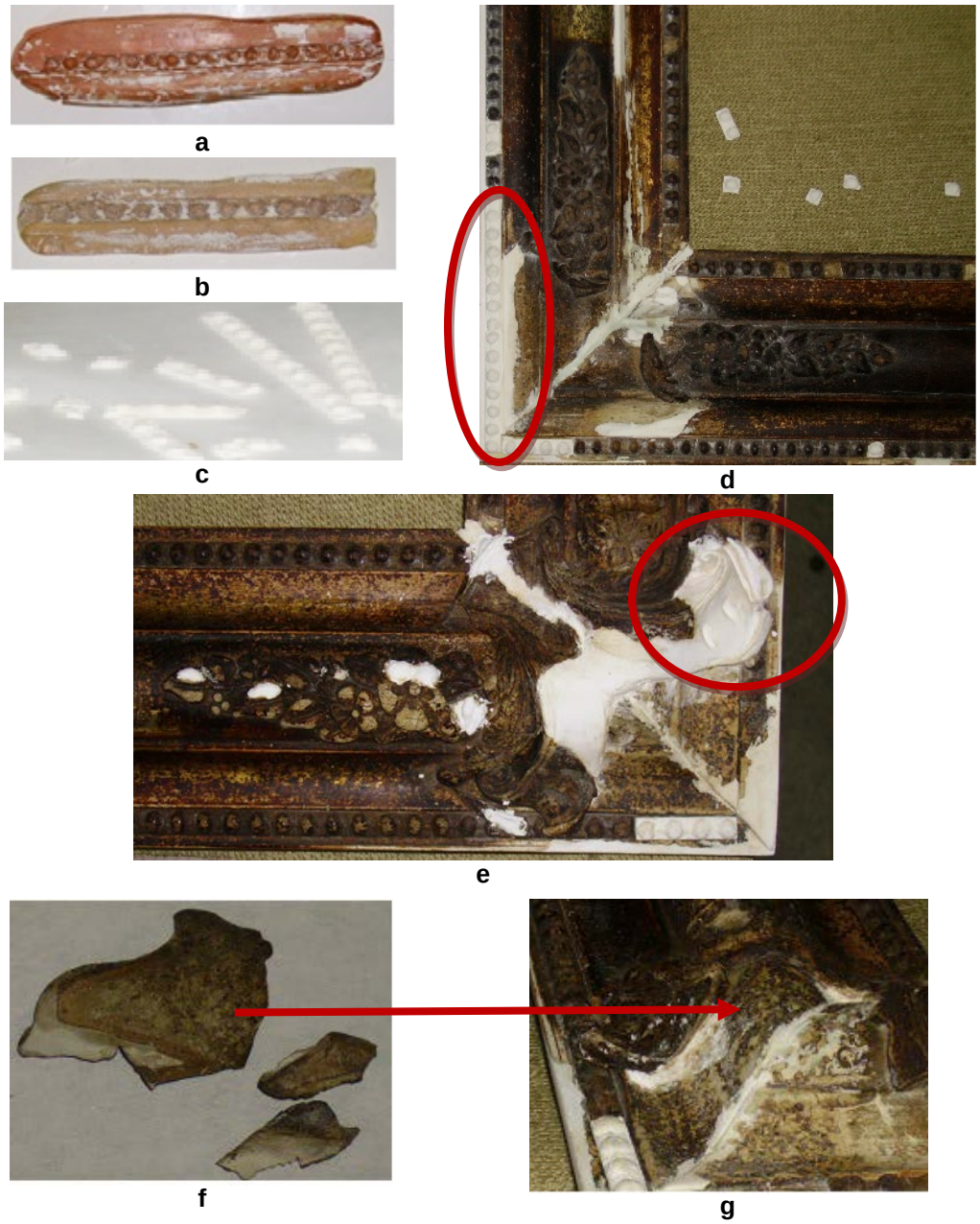


Fig. 5.
Re-gilding of missing areas
(a - negative mould, b - positive mould, c - "pearl" mouldings, d - completion of missing pearls and gesso, e - carving of acanthus leaf in gesso layer, f - flaking ornaments, g - re-gluing of the existing ornaments).

Finally, after several tests, colour reintegration was done with a brown patina in one or two layers, depending on the type of surface: one layer on the old surfaces and 2 or more layers on the new gesso and mouldings. The concave or profiled areas of the frame were then covered with a gold Liquid Leaf applied by gentle and discontinuous wiping to imitate the patina. The surface of the frame in contact with gold liquid was no more than 0.5cm^2. After 24h drying the whole object was finished with shellac (Fig. 6).

A preventive treatment with an insecticide-fungicide primer Proxilin was applied on the backside of the frame.

a

b

Fig. 6.
The gilded frame after restoration (a- chromatic integration, b-final state).

CONCLUSIONS

The conservation-restoration treatments have greatly enhanced the frame's appearance and the final result was remarkable. This case-study was a challenge for the restorer, which is also the owner of the gilded frame. Even though there was a very difficult case, it was documented and well approached, according to the basic principles of restoration.

The restored frame was displayed in different exhibitions: *Restoration 2016* - Faculty of Wood Engineering, *Researchers's Night 2016* - Transilvania University.

It must be noticed that gilded surfaces require very little maintenance other than careful dusting. For longevity of the gilded frame is compulsory to maintain stable environmental conditions. The gildings are still fragile and ongoing inspections are important. Always any surface elements that become detached must be saved.

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