

# **BRVKENTHAL. ACTA MVSEI**

**X. 4**



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**MUZEUL NAȚIONAL BRUKENTHAL**

**BRVKENTHAL**  
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**X. 4**

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**WHITE PALACE – DARK STORY**  
**AN AWARENESS-RAISING CAMPAIGN FOR BRUKENTHAL PALACE RESTORATION**

**Dana Roxana HRIB, Maria BARNA\***

**Abstract:** *The present study aims towards a detailed presentation of campaigning on a restoration cause. Being awareness-raising oriented, the “White Palace – Dark Story” Campaign presents a good opportunity in emphasizing the communication methods and possibilities in regards to the restoration topic and the related subjects.*

**Keywords:** *campaign on causes, restoration, Brukenthal Palace, awareness-raising.*

**Rezumat:** *Articolul de față își propune o prezentare detaliată a unei campanii pentru restaurare. Orientată spre conștientizare, Campania „White Palace – Dark Story” prezintă oportunitatea sublinierii metodelor și posibilităților de comunicare în privința temei restaurării și a subiectelor conexe.*

**Cuvinte cheie:** *campanie pentru o cauză, restaurare, Palatul Brukenthal, conștientizare.*

When dealing with restoration problems that concern a historical monument, a building in our case, campaigning could be challenging in regards to the communication approach. It proceeds from emphasizing the importance given to the subject, it struggles with the need for audience and it has to level with a great many number of standards from the educational ones to its up-to-date messages (texts, graphics, use of media channels, the sequential communication, the primary and secondary activities and so on and so forth).

### 1. Historical background

#### a. A very important historical monument

Brukenthal Palace (Fig.1) is one of the most important Baroque historical-monuments in Romania. It is located in the Grand Square of Sibiu city, its construction being completed in late 18<sup>th</sup> c. (1788). The building displays architectural and decorative influences from baroque, rococo and neoclassicism and served as the residence of Samuel von Brukenthal – the Governor of the Great Principality of Transylvania (Fig. 2). (Avram 1996, 3 – 4)

The first storey of the palace initially adjoined,

besides the reception rooms (a music parlour, two drawing rooms and two oriental rooms), apartments and guests rooms accommodating the everyday living in those times. The second storey was built especially for displaying von Brukenthal’s collections of European painting, numismatics, engravings, minerals and antiquities. (Dâmboiu 2007, 31 – 37)

#### b. The first museum in Romania

Through his testament of 12.04.1803, Samuel von Brukenthal left all his possessions (the palace and collections included) to one male descendant of the family at the time. In the case that the family line went extinct (and so it happened few years after his death), the entire fortune was to be trusted to the Evangelical Gymnasium in Sibiu on the condition to opening a public museum in Brukenthal Palace and continuing the addition of new pieces in the collections. (Ittu 2008, 34 – 38)

In 1817, the first museum on today’s Romanian territories was inaugurated in Brukenthal Palace. (Ittu 2008, 39)

#### c. Different administrations

In early 19<sup>th</sup> c., the Evangelical Gymnasium

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functioned within the German patterns that had been the same at least since the Protestant Reformation in the 16<sup>th</sup> century, which is to say that implied preparatory formation for university under ecclesiastical supervision. The precise structure of the Gymnasium in the 19<sup>th</sup> century is not known but what it is considered for sure is that only Evangelical Church survived as juridical entity up to the post-communist period.

After the fall of the communist regime, in the benefit of Evangelical Parish in Sibiu, the Evangelical Consistorium (Bishopric) claimed the Brukenthal Palace and von Brukenthal's original collections from the Romanian State. Due to the fact that today the building and the collections are part of a more complex structure – Brukenthal National Museum under the direct supervision of Romanian Ministry of Culture, an agreement on shared ownership (State & Evangelical Parish) was issued in December 2005. (Ittu 2008, 75)

d. A building never completely restored

Having been witness to many administrations, the building was never completely restored since its construction. Although many reparations and rearrangement of the spaces have been endeavored mostly in the last 9 years, there are still important restoration issues to be address, especially those concerning the stone structures and architectural features, the conservation status of the decorative elements in the reception rooms at the first storey and the rear facade.

**2. Imperative conservation and restoration aspects**

a. Stone structures and architectural features

Made from calcareous stone, the portals (facade and between inner courtyards), the framework of passage ways, windows, doors and dorms manifest specific deterioration due to their over 200 years history, the physical and chemical causes and the interventions improperly done during previous administrations. All these led to granular disintegration at the surface and cleave, the surfaces showing quantitative and qualitative material loose and decementation (Fig. 3).

At the present the degradations are accelerated and the stone doesn't present anymore the mechanical resistance for the material fragment carrying the information; in some of the cases it leaves the only possibility for a replica restoration, without a witness area in situ and without the authentic patina.

Shortly, a large percentage of the entire architectural stone program in Brukenthal Palace will undergo irreversible losses and the building will be deprived of its architectural identity (Brukenthal Laboratories 2015).

b. The oriental rooms

Of the two oriental rooms at the first storey in Brukenthal Palace, one it is closed to visitors due to severe deteriorations happened during its transformation into treasury from the 50' until 2007 (Fig. 4).

In both rooms the Chinese wall tapestry painted on paper glued unto cardboard is the only 18<sup>th</sup> c. one still preserved on the wall in entire Europe. It presents adherent and clogged dirt, a fragile support and support loss, rifts, perforations, paper detachments, wax, adhesive and wall paint stains, colour fading, etc. (Brukenthal Laboratories 2015).

The wood work (especially over-door medallions and wainscot) presents fissures, fractures, material loss, detachments, adherent dirt, stains, improper painting, etc. (Brukenthal Laboratories 2015).

c. The rear facade

Presenting plaster detachments on large areas, partial or complete deteriorations of the stucco, rusty and incomplete window hardware and inappropriate modifications, the conservation status of the rear facade it is directly related to the microclimate in the rooms in the back of the building (Fig. 5).

**3. Why an awareness-raising campaign?**

There is always a first step made by acknowledging that there is a problem to be solved – a historical building falling apart, in our case.

As a common practice, the communication stages emerge from inside the institution to the authorities in charge for appropriate resolutions.

If the issues addressed meet with responses directly related with inexistent financial resources, the next step is not campaigning for the money but for general public information.

**4. How to measure the degree of awareness? Goals and expectations.**

Every campaign endeavors based on an action that at the end may reveal the outcome in the form of certain results. For "White Palace – Dark Story" the action of choice was the petition and the aim

set before the campaign launch was 10.000 signatures.

## 5. A public appealing concept – the story

### a. Campaign short description

Genre: Campaign for causes

Title: “White Palace – Dark Story”

Organized by: Brukenthal National Museum and Brukenthalia Association

Unique Partner: Deine Lakaïen, Germany

Action: Petition

Duration: 1.03 – 30.05.2015

Aim: Awareness-raising on the advance degradation state of Brukenthal Palace and the imperative necessity for restoration works.

Means of information: the official website of Brukenthal National Museum, the official Facebook Brukenthal National Museum / Muzeul Național Brukenthal, other (via mail, via media).

Language: Romanian and English (brukenthalmuseum.ro 2015)

### b. Concept

Campaign’s concept and title were shaped into a story-like communication pattern (Fig. 6), a more friendly approach when dealing with dramatic aspects, allowing space for easy-to-digest education materials. The psychological emphasis fell on the fact that Brukenthal Palace is a public heritage, no matter the administration:

“A sad story ... not only a story, though.

Brukenthal National Museum launches the *White Palace – Dark Story* Campaign for the Brukenthal Palace restoration.

*White Palace – Dark Story* is a Transylvanian tell; not about a castle and a count, but about a palace and a baron; not about a mysterious legacy, but about a public one. It is the story of a centuries old dream that sees its light fading away in our days.

Brukenthal Palace and the collections of Baron Samuel von Brukenthal were testamentary destined to a public life. Due to the aggravating conservation state of the building, the partial restriction of the visitor access is imminent, the palace getting step by step closer to locking its gates.

Brukenthal National Museum has grown from the Palace’s roots, sharing its identity. For each of us,

Brukenthal National Museum will continue to exist. Brukenthal Palace will exist only for those prone to consciousness.

In the 18<sup>th</sup> century, Samuel von Brukenthal wrote: *I don’t believe that the spirit of things will change thanks to the few, but I am rather convinced that the good will rise and erupt soon, with all its force, from this disorder.*

Between 1<sup>st</sup> of March and 31<sup>st</sup> of May 2015, the *White Palace – Dark Story Campaign* aims to raise the awareness of the visiting public community beyond local, national or even European borders.

Prove that the world of ignorance and indifference is a small one!

Join the campaign! Sign the petition!

The cultural world of Brukenthal Palace is your legacy too!” (brukenthalmuseum.ro 2015)

The story pattern was use not only as a main frame but also in approaching historical presentation or events related with the ongoing of the campaign.

## 6. The making of – text, image and music

### a. Structure

The campaign was structured in three stages in accordance with the three main restoration issues: March – the stone (the degradation of architectural elements and structures in stone as portals, dormer and window stone frames and wall-base), April – the reception rooms (the degradation of parquet, silk tapestry, paper tapestry and the oriental room in the north wing) and May – the rear facade of the Brukenthal Palace.

### b. Documentation

Developed during the year previous to the campaign launching, the materials related to overall concept, the official documentation and the historical and technical information were in a percentage of more than 50% in readiness; they implied texts, documentation and artistic photography, short films, Power Point presentations, thematic photo albums, electronic banners and electronic booklets.

### c. Narrative

The campaign made use of two different categories of texts: more extensive presentations of the conservation issues and restoration imperatives (for the use of the media or grouped

in pdf. booklets posted on the Museum's website) and short texts emphasizing the importance of Brukenthal Palace through the subjects related to its construction stages, the original owners, political and social functions in the early days and its unique cultural importance at the present (Facebook daily postings).

#### d. Graphics

Campaign's ready-on graphic materials, printed (posters, roll-up banners, flyers and informative meshes in Romanian and English languages) as well as electronic (official website and Facebook) were thought in a black & white/shades of grey approach with red touches for an emphasized dramatic effect through the means of chromatic contrast, also following a general trend consecrated in the visual aesthetics of the last decade (Fig. 7).

Moreover, the restrictive chromatic concept left room for colourful presentations when dealing with the events comprised by the campaign's agenda.

#### e. Music as empathic factor

Each of the three stages of the campaign was introduced by a short film presenting the theme of the month. A forth film was released at the end of the campaign; it aimed at describing the public feedback on the restoration problems. Following the same chromatic approach as in the case of the photos, the films' concept evolved from black & white (films 1 and 2) to several coloured captures (film 3) and full colour (film 4). The same gradual emergence was attempted in the case of human presence in films from none (film 1) to faceless individuals (films 2 and 3) and large groups of people (film 4).

Representing a further step in meeting with the public, the films added to image and movement a complex endearment message with the help of the music also involving a non-profit partner active in media and social media (Edelstein 2010).

The soundtrack of the films was given by the unique partner of the campaign – the German duo *Deine Lakaien*, who performed a concert in 2013 under the ruined inner portal of Brukenthal Palace.

Through the means of the partnership, the music came not only as an aid but also as a statement from artists having first-hand knowledge on the restoration subject (Fig. 8).

### 7. Education and creativity

The campaign focused largely on the educational information. The weekly Facebook postings comprised "Did you know?" information and story-like albums on architectural features in view for restoration (the story of the urns – Fig. 9), the recent history (reparation works during 2006 – 2012 – Fig. 10), the first owners and the beginnings of Brukenthal Palace (ex. Sophia von Brukenthal – Fig.11) or its functions in the 18<sup>th</sup> c. (Breakfast at Brukenthal's – Fig.12).

Also, two education projects were organized on the duration of the campaign in cooperation with the Art High School in Sibiu, Graphic Section – teacher Anca Ioana Serfözö and with the Journalism Department of Socio-Humanist Studies Faculty, "Lucian Blaga" University Sibiu – Lecturer Dr. Ioana Bărbulescu.

After a documentation stage in Brukenthal Palace, the art students opened a poster exhibition that aimed at illustrating the "White Palace Dark Story" thematic. The students in journalism took part in press conferences and the activities part of the campaign for Brukenthal Palace restoration, putting together the photo, film and text documentation.

### 8. Events

The events comprised in the campaign were grouped in the third part of its timeline in order to allow general public to get familiar with the topics and have a full perception of the reality. The events targeted well defined audience (Edelstein 2010); according to each event, the target group encompassed:

a. The national public/international event – participation in European Castle Fair (Corvin Castle, Hunedoara, 1 – 3.05, Fig. 13)

The Museum's participation focused on White Palace-Dark Story Campaign; the visitors to the fair were given information on the restoration issues and the opportunity to sign the petition for Brukenthal Palace restoration. Introduced by two replica costumes (Sophia and Samuel von Brukenthal) donated by the fashion designer Alexandru Nicolae, the Museum's stand was visited by Mircea Diaconu (member of the European Parliament) and by Dacre Stocker, great-grandnephew of Irish author Bram Stoker. Other 20 participants from Romania, Czech Republic, Spain, Hungary and Macedonia took part in the event.

b. The youth – the poster exhibition *Keep it young. Keep it alive* (Brukenthal Palace, Cartography Cabinet, 5 – 31.05.2015)

Brukenthal National Museum and the Art High School in Sibiu enjoy a 7 year old cooperation during which the educational projects and the opening of 13 exhibitions determined the active implication of the art school in the life of the museum. It was only natural that the students joined into the campaign for Brukenthal Palace restoration through the means of one of the most illustrative art form for an awareness-raising endeavor – the poster (Fig. 14).

The 50 posters displayed at the Cartography Cabinet were made by students in different stages of training, from the 9<sup>th</sup> to the 12<sup>th</sup> grade, all using a large variety of techniques: acrylic and pastel colour, pencil, Indian ink and charcoal, linocut and collage, mixt technique and digital print.

It was to be noticed especially how the graphic thematic and the message of the campaign (learned during the documentation stage in Brukenthal Palace) emerged in the creative approach of young artists and their perception of the future.

c. The local public/national and European event – *Last Night in Brukenthal Palace* (Long Night of the Museums, Brukenthal Palace, 16.05 – Fig. 15).

The project was entitled “Last Night in Brukenthal Palace” for emphasizing and alternative – if there will be no restoration works in the future, the Long Night of the Museum in Brukenthal Palace will not be held again; on the other hand, there is still hope that the ignorance and the lack of audience meeting the building’s situation at the present will be surpassed and Palace will emerge from night and darkness into the light.

The visitors were welcomed by Samuel and Sophia von Brukenthal (replica costumes donated by fashion designer Alexandru Nicolae) and were given access for the first time to the oriental room of the north wing, closed to the public for more than 60 years.

d. The public to the Brukenthal Palace – *White Palace – Dark Story* photo exhibition (artists: Alexandru Olănescu, Gabriela Cuzepan and Adrian Luca, Brukenthal Palace, front inner courtyard, 16.05 – 31.12.2015)

From the beginning to its conclusion, the campaign for Brukenthal Palace restoration has used hundreds of photos for graphic and dissemination materials. Focused on restoration objectives or events inside the campaign, the images were the very soul of the story told every day by the Museum to the public.

From among the Museum employees came also the photographers who captures with documentary accuracy, artistic sensibility and, especially, with love the Brukenthal Palace story in images: Alexandru Olănescu – photographer inside Restoration Laboratories, Gabriela Cuzepan – curator inside the Museum of Natural History and Adrian Luca – curator inside the Art Galleries.

The exhibition opened in the inner courtyard of Brukenthal Palace presents a selection of 27 photos out of the extensive photography album put together during “White Palace – Dark Story” campaign (Fig. 16).

## 9. Dissemination

There were 4 large segments in disseminating information on the campaign: the museum official website, mass-media, social media and emailing.

The museum website was the official channel for online communication, providing information related to the concept, stages and documentation of the campaign. Moreover, the online petition was hosted here.

The mass-media dissemination was developed in press-conferences, press releases and interviews. There were organized 4 press conferences, with the participation of local and national mass-media, representatives of print and online newspapers, radio and TV stations. The first three conferences had informative purpose about the campaign development, while the final one was meant to deliver results and conclusions. A special attention was granted to Romanian mass-media language from abroad, so information was disseminated to 34 such institutions. Press releases were also sent to the first 40 most read newspapers in Europe.

The official Facebook page of the Museum was the means to distribute the largest and most varied quantity of information. Thus, during the campaign there were 248 status updates and 496 photos posted. The highest impact was reached by the four films and the status updates urging people to sign the petition. The information and photos having a great impact on the Museum Facebook

page were also posted (with links) on 51 other Facebook pages and groups. These pages and groups had either a cultural, touristic and educational theme, or they were dedicated to Romanian communities living abroad.

Two other important social media tools were YouTube and blogs. The four films were posted on YouTube, which facilitated their reposting by thirds on about 10 other video-channels. A special attention was accorded to blogs, so there were sent 28 collaboration proposals for several thematic blogs: travel, art, cultural heritage, national attractions.

Emailing was used in order to disseminate information in cultural institutions and NGOs from Romania and abroad. There were sent informative emails to: 569 associations of Romanians living abroad, 72 museums from Romania, 74 museums and cultural institutions from Europe, the United States of America and Mexico. In cultural and scientific institutions, information was also distributed by means of newsletters and presentations. Thus, newsletters were sent in the network of Romanian museums, the network of European museums (museums.eu) and the network of I-Locate project (undergoing with financing of the European Commission). Also, in April 2015, the campaign was presented by Dr. Dana Hrib to 64 participants, from 9 European countries, who took part at the I-Locate meeting in Sibiu.

#### 10. Petition signing

The campaign offered the public two ways of signing the petition for Brukenthal Palace restoration – in written (Fig. 17), at the Museum locations and events, or online on the Museum's website (Fig. 18).

#### 11. Audience hooks

Besides endeavoring in the dissemination of the restoration cause, the campaign made also use of a teasing period before the launching, "sign the petition" targeted Facebook graphic materials (Fig. 19 and 20), links to the most important press articles and victory updates (Fig. 21).

#### 12. Results

During three months of campaign, the petition was signed by 17.520 people, of which 4.113 signatures online and 13.437 at the Museum's locations and events.

The campaign's press file comprised over 300 articles published online, in printed mass-media or

broadcast on TV and radio; further, much information propagated to news websites, blogs, yahoo and Facebook groups.

On the official Facebook page Brukenthal National Museum / Muzeul Național Brukenthal, the statistics show the following results: 126.798 unique users saw the information posted and 51.176 unique users shared stories about the campaign. Moreover, during the three month, the numbers of Likes of the Facebook page was half the number of likes registered during the whole 2014 year. Likewise, the number of visits on the website brukenthalmuseum.ro was three times larger than the one registered in the same period of 2014.

Inside the campaign developed 5 media partnership with: the most important local newspaper – Tribuna, with the blog lumeamare.ro, winner of several national blogging competitions, with two local news blogs and a blog with Saxon theme – povestisasesti.ro.

As a result, a research on google after the key phrase <campanie restaurare Palat Brukenthal > (campaign for Brukenthal Palace restoration) generates 8720 results on web.

In terms of public's involvement, the campaign was supported by Romanian personalities and professional categories. Thus, information on the campaign was disseminated on personal websites by: Mircea Diaconu, actor and European Parliament representative, and by Radu Tudor, journalist and TV personality. Also, the Education Union from Bucharest, Sector 1, gathered over 1800 petition signatures from teachers and education staff all over the country.

#### 13. The contrast effect – conclusions on restoration topics

In Brukenthal Museum's experience, restoration topics are appealing to the public and the media due to the contrast effect that adjoins an object in its hypostases before and after restoration. The image of a depreciated state alongside its fully restored appearance draws the attention in a "happy end" sort of approach.

This is not the case with the *cause* of restoration – the reality of depreciation with no happy outcome. How to draw the public attention on this?

The answer resides in using different kinds of contrasts.

Primarily it is the striking difference between the glamorous past and the sad present. In this



respect photo documentation and the story pattern of the campaign's narrative are the instruments to rely on.

There is also the important contrast between the cultural, artistic, historical importance of the heritage item to be restored (Brukenthal Palace in our case) and the ignorance surrounding its conservation status, directly affecting its valuable qualities.

Empathy also offers means of understanding the unicity of works of art as similar to the unicity of human being and the entire emotional contrasts that derive from that: being ignored vs. being helped, being sick vs. being healthy and being dead vs. being alive. For the third category, image and film are instrumental and creativity plays a major part.

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7. Copertă album pentru prezentare tematică secvențială online.
8. Prezentare partener.
9. Prezentare documentară.
10. Prezentare istorie recentă.
11. Prezentarea trecutului Palatului Brukenthal: fondatorii (Sophia von Brukenthal).
12. Prezentarea trecutului Palatului Brukenthal: funcționalitate.
13. Participare la Târgul European al Castelelor.
14. Expoziția de afișe a elevilor Liceului de Artă.
15. Noaptea Muzeelor în Palatul Brukenthal 2015.
16. Expoziție foto-documentară în Palatul Brukenthal.
17. Petiția semnată la sediile Muzeului.
18. Petiția online.
19. Materiale grafice – grup țintă femeile.
20. Materiale grafice – grup țintă bărbații.
21. „Victory update” în timpul campaniei (număr semnături după Noaptea Muzeelor).
22. „Victory update” la sfârșitul campaniei.



Figure 1 and 2

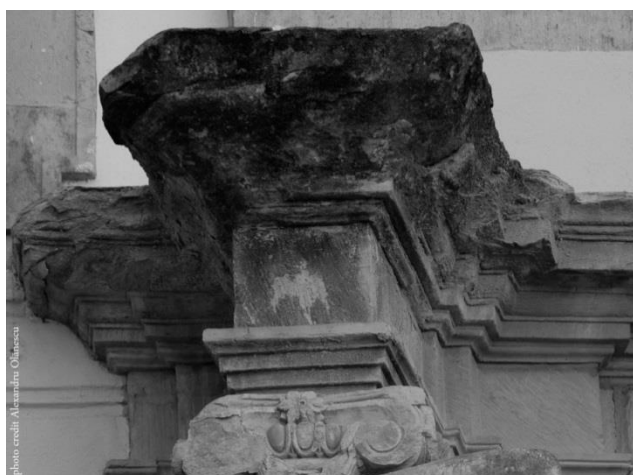


Figure 3 and 4



Figure 5 and 6

**Brukenthal. Acta Musei, X. 4, 2015**  
**White Palace – Dark Story**  
 An Awareness-Raising Campaign for Brukenthal Palace Restoration

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**Figure 7 and 8**



**Figure 9 and 10**



**Figure 11 and 12**





Figure 13 and 14



Figure 15 and 16

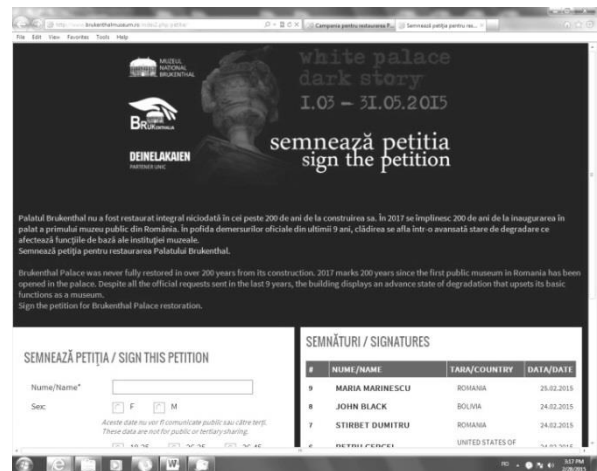
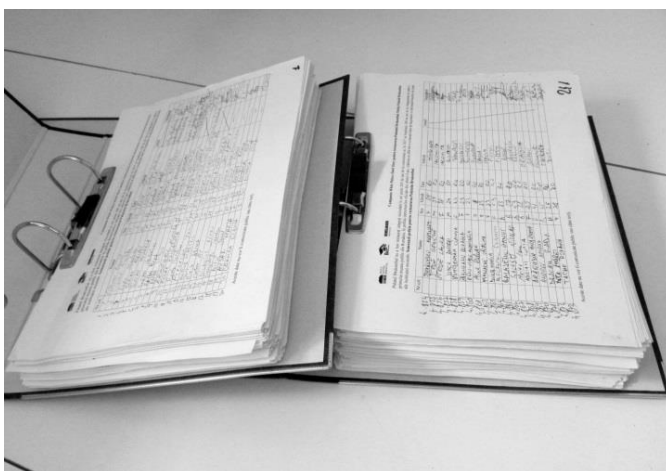


Figure 17 and 18



**Figure 19 and 20**



**Figure 21 and 22**





## RESTORING METAL PARTS WITHIN THE PREVENTIVE YARDS OF BRUKENTHAL NATIONAL MUSEUM

Dr. Dorin BARBU\*

**Abstract:** *The work presents differentiated methods of restoration for archaeological pieces of iron, bronze and silver depending on their state of preservation, the most difficult piece was the votive chariot found at Miercurea Sibiu.*

**Key-words:** *restoration, metal, votive chariot.*

**Abstract:** *Lucrarea prezintă metodele diferențiate de restaurare a pieselor arheologice din fier, bronz și argint în funcție de starea lor de conservare, piesa cea mai dificilă fiind carul votiv descoperit la Miercurea Sibului.*

**Cuvinte-cheie:** *restaurare, metal, car votiv.*

As a result of the 2012 diggings on the preventive sites of the Brukenthal National Museum, some 642 metal parts have been restored, of which 295 were made of iron (knife blades, nails, rings, spurs, horseshoes, spears and arrow tips, sickles, chisels, etc.), 59 were made of cuprous alloy (fibulae fragments, sickles, pins, bracelets, etc.) and 288 were coins (285 silver and 3 bronze). Given that large amount of objects brought for restoration, we've established 3 technological streams covering all issues:

1. For the cuprous alloy parts, where preserving their initial aspect was particularly pursued, we've conducted a mechanical cleaning, passivation with alcoholic solution of benzotriazol 3% by vacuum impregnation, protection skinning with Paraloid B72, 6% in toluene. The methods of mechanical cleaning varied, depending on the type of corrosion, determined by the preservation condition; so, for instance, coarse deposits have been removed by an ultrasound cleaner<sup>1</sup> followed by brushings with fiber glass brushes. The cavities and hard-to-reach places of the parts have been cleaned using a laser<sup>2</sup> and fiber glass brushes.

2. The bronze coins have been cleaned up to their metal core to better identify them, the corrosion products preventing this. They have been immersed in a 20% solution of ortho-phosphoric acid without corrosion inhibitor, they underwent mechanical brushings under running water, they've been neutralized by repeated washings in distilled water, then they followed the same technology of passivation and skinning.

The silver coins have also been cleaned in a 20% ortho-phosphoric acid solution combined with mechanical brushings under running water, neutralized by repeated washings in distilled water and after drying, they have been protected by polishing them with a special silver polishing cloth.

3. For the iron parts a mechanical cleaning with ultrasounds has been applied, micro-sandblasting with glass pearls, passivation by tannic acid application treatment with Fertan (Barbu 2007, 108), and after 48 hours protection skinning with Paraloid B72, 6% in toluene.

Where we had fragmented parts we've glued them with bi-component Devcon epoxy resin.

The artefact with complex problems both in terms of conservation status and the applied restoration methods was a miniature votiv chariot, an unique artefact in our geographical area, dated in the 2nd century BC.

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<sup>1</sup> Source: 230V, 50/60Hz; power output: from 20 VA to 30 kHz; cooling air pressure: 2 - 6 bar; size: 250x200x110 mm

<sup>2</sup> Laser: Nd-YAG; emission: pulse; wavelength: 1064 nm; power: 0,150 Joule; pulse duration: 8ns; pulse rate:

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20 Hz; diversion: 5mrad; beam diameter: 4 mm; observation: direct light; diversion of fiber: 220 nmrاد.

The manufacturing technique: the chariot was made out of 3 strips of cast iron riveted together with 8 rivets, wheel hubs being cast in bronze.

Dimensions: Height 13.5 cm., length 42 cm., width 25.5 cm.

Conservation status: the artefact has been brought in from the archaeological site imbued with the earth in which it was discovered. Because of the ground the pressure and the advanced state of degradation of the iron parts, it was fragmented in approximately 60 pieces. All fragments displayed a continuous, thick layer of mechanical products and iron oxyhydroxides. The bronze wheel hubs, displayed both mechanical and specific copper alloy corrosion products.

Applied restoration procedures: earth was mechanically removed by using a scalpel and a

rough brush. The coarse corrosion products were removed with the help of the ultrasound device, the fine corrosion products were removed by sand-blasting with glass pearls. The fragments were stabilized by tannic acid application treatment with Fertan, and after 48 hours skinnig with 5 % Paraloid B72 followed. Fragments were identified and glued together with Devcon epoxy resin, with the help of which the filling of missing parts was achieved. By measuring the curvature of the wheel fragments it was possible to determine their exact size. The wheel spokes have been remade of iron wire because the originals have not been preserved. The graphitizing of the whole chariot in order to render a metal appearance was done with graphite in Aracetal B40L.

## REFERENCE

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## LIST OF ILLUSTRATIONS

1. Bronze ornament before restoration
2. Bronze ornament after restoration
3. Bronze coin before restoration
4. Bronze coin after restoration
5. Chariot before restoration
6. Chariot fragments
7. Wheel axles before restoration
8. Wheel fragments
9. Chariot during restoration
10. Chariot after restoration

## LISTA ILUSTRAȚILOR

1. Ornament bronz înainte de restaurare
2. Ornament bronz după restaurare
3. Monedă bronz înainte de restaurare
4. Monedă bronz după restaurare
5. Car înainte de restaurare
6. Fragmente din car
7. Osiile roților înainte de restaurare
8. Fragmente roți
9. Car în timpul restaurării
10. Car după restaurare



1. Bronze ornament before restoration



2. Bronze ornament after restoration



3. Bronze coin before restoration



4. Bronze coin after restoration



5. Chariot before restoration



6. Chariot fragments



7. Wheel axles before restoration



8. Wheel fragments



9. Chariot during restoration



10. Chariot after restoration



## THE PORTRAIT OF THE QUEEN

### OIL PAINTING TECHNIQUE AND PROBLEMS CONCERNING THE RESTORATION AND PRESERVATION OF THE VOTIVE PAINTING – THE PRINCELY' CHURCH OF BUȘTENI

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Diana Iuliana BARBU\*\*\*

**Abstract:** *The study tries to offer new pieces of information regarding the oil painting in the 19th century. It offers for analysis the votive painting representing Queen Elisabeth of the Princely Church of Bușteni. In the first part, the paper makes draws a short historical presentation of the “Birth of the Holy Theotokos” Church, founded by the royal family on the Crown Estate near to Peleş Castle; then is presented the worship place from the artistic and architectural point of view, and, in the end, the study shall dwell on the votive painting – a dynamic element in the iconographic program of an Orthodox church. Considering the preserving status of the Queen Elisabeth painting, after having gained new date offered by restoration , it can be opened a new chapter of discussions concerning regarding the technical novelties brought by a foreign artist – Aage Exner of Denmark – summoned by the royal family in order to embellish the Princely Church, who also performed the church painting, also concerning the collective mentality of the 19th century, being well-known that by portrait “it is underlined the strength of character, the model’s dignity and the social rank”, as well as the historical significance of the traditional elements. The analysis of the artistic and technical ways of expression offers extra information for a historical period which witnesses a dynamic and a diversity hardly equalled by another stage. So that, within this time interval, we find in the Romanian artistic expressions related or related to the Post-Byzantine Art blended with new elements brought by the Western wave and in which can be observed as well local ideas and motives. It is interesting to see which are the elements specific to these artistic lines, in order to better understand each contribution and the ability of the native painters to blend and transpose them in works of art, which ultimately make up a Romanian style.*

**Keywords:** *Princely' Church of Bușteni, wall painting, preservation status, chromatic, canvas, frame.*

**Rezumat:** *Studiul Portretul reginei – tehnica uleiului și probleme de conservare și restaurare a tabloului votiv de la Biserica Domnească din Bușteni urmărește să ofere informații noi privind tehnica picturii în ulei în secolul al XIX-lea. Acesta propune spre analiză tabloul votiv în care este reprezentată Regina Elisabeta din Biserica Domnească de la Bușteni. În prima parte, lucrarea face o scurtă prezentare istorică a Bisericii cu hramul “Nașterea Maicii Domnului”, ctitorită de familia regală pe Domeniul Coroanei în apropierea Palatului Peleş, apoi este analizat locașul de cult din punct de vedere artistic și arhitectural, ca în cele din urmă studiul să se oprească asupra tabloului votiv – element dinamic în programul iconografic al unei biserici ortodoxe. Analizând starea de conservare a tabloului cu Regina Elisabeta și beneficiind de date noi oferite de restaurarea acestuia se poate deschide un capitol de discuții asupra noutăților tehnice introduse de un artist străin – pictorul danez Aage Exner – adus de familia regală pentru a împodobi Biserica Domnească, cel care a executat și pictura bisericii, dar și asupra mentalității colective a secolului XIX-lea, știut fiind că prin portret se subliniază tăria de caracter, demnitatea modelului și poziția socială, dar și semnificația istorică a elementelor tradiționale.*

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**Cuvinte cheie:** *Biserica Domnească din Bușteni, picture murală, starea de conservare, cromatică, pânză, ramă.*

## 1. General representation of the Church

King Carol I, of his expense and on the royal domains,<sup>1</sup> charges I. Kalinderu, its administrator, to build between 1884 and 1889, the Civic Centre of the Village of Bușteni, Predeal township. Civils' Centre was located between the railway station (CFR) and the CFR's barrier and was composed of the Royal Church, Presbyterium, the school, the hotel, the town hall and the park. King Carol I (Giurescu, Giurescu 1975, 631-675; Constantiniu 1997, 237- 257; Kremnitz 1995, 15-30; Lindenberg 1906, 21-98; Văcărescu 2004, 8-47) and Queen Elisabeth were the ones who founded this church. (Lindenberg 1906, 21-98) The building was finished in 1889, and on the 8<sup>th</sup> September of the same year was consecrated on the Feast of the Birth of the Blessed Virgin Mary (*Treizeci de ani de domnie ai Regelui Carol* 1897, 217). The Royal family used to come very often to participate in the Divine Liturgy, when they came to Peleş Castle (Zamfirache et al. 1998, 7). After the service, the monarch, together with his family, rested a little in then precincts of the Presbyterium from whose porch, before leaving, they could admire one of the most beautiful landscapes of the Bucegi Mountains.

Often times, the Royal family came to Bușteni accompanied by foreign guests while visiting our country. In the park that surrounded the church were laid tables on which the tea was served, while the children choir of the local elementary school entertained the guest with some national choral songs. The Royal family built this holy place in remembrance of Princess Maria (MNIR 2009, 13), (their only daughter, who died in early babyhood. As founders of the place, they asked that, every time the Divine Liturgy is celebrated, they must be mentioned into the ages of ages.

The Princely church of Bușteni was not endowed with any property. All that was necessary for the church maintenance, personnel and the church park were entrusted to the care of the Administration of the Crowns' Domain.

### 1.1. Description of the Church - Architecture

The church is located in the middle of a beautiful park and is surrounded by two all alleys located

on the north and south sides of it. On the right of the church, at the park entrance, the parish house, that was built along with the church. The architecture of the church was scheduled by the architect I. M. Socolescu, who also made the plans for the Central CEC Bank from Bucharest, situated on Victory Avenue. In its present state, the church has a three-apse, with 20.30 m long and 7.4 m wide, has a cupola in the nave and another in the pronaos (narthex) and is organized function of needs of the orthodox worship: altar, nave and pronaos.

The altar is circular on both sides, which form is present also in the vaulting, is enlarged by means of a pentagonal recess functioning as Proskomidi (Prothesis). In the southern part behind the altar there is a door which leads outside.

The nave is a rectangular space enlarged on the northern and southern sides by semicircular apses each having one window on their axle. It is vaulted as a spherical calotte on pendants. On the calotte, it raises a slim dome, hidden inside from the viewers' eyes. The pronaos is also covered by a spherical calotte on pendants, and above it, a steeple is rising. The plan has a rectangular form.

The plan of the building is rectangular. On the western upper side is located the choir place, that can be accessed through a small entry located on the southern part. The vertical walls have each a single window on the northern and southern sides, and on the western side is the entrance door.

A big door, of pure oak, sculpted and framed by two pillars carved in stone, is guarding this entrance into the church.

The church's porch in 7.5 m length and is supported on columns curved in stone. At first, it was wide open, but later was closed with glass windowpane. On the slab of the front door is written a fragment taken from the Cherubim's Song: „Let us set aside the cares of life.” The windowpanes contain stained glass windows, highlighted by the light that comes through them.

### 1.2. Wall painting

The original painting was performed by Aage Exner, of Danish origin. In 1934, the original painting was entirely scaled and repainted by the painter Gheorghe Belizarie, in oil as well. The iconostasis was adorned with icons painted by the disciples of the maestro Gh. Tattarescu.

Among the indoor furniture pieces, it is worth mentioning two royal chairs or thrones having the

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<sup>1</sup> On 4/16 of June 1884, for the princely family to be strongly linked to the „country's envoy” in *Istoria românilor* (2003), 224, it has been established the Crown Estate, done by 12 domains, with an area of 132,110 ha (see also *Dotațiunea Coroanei*).



Country's Emblem; the two princely thrones, the hierarchs' throne, chanters and nave's lecterns, as well as the whole adornment made entirely of oak. All these were performed by Viennese maestros.

## 2. The restoration and conservation of the portrait of Queen Elisabeth present in the votive painting

In the narthex, on the western wall, are present two votive paintings, displaying King Carol (*Istoria românilor* 2003, 227) and Queen Elisabeth, in life-size (Fig. 1). There are not signed, but can be inferred that they are made by the painter Exner, the same on who realized the original painting of the church. Moreover, this painter was brought into country by King Carol, in order to adorn with painting the Crowns' churches.

On the right side, King Carol I, in the suit of a commander of the Romanian Army, with the peaked cap in his right hand and with left put on swords' hilt; on the left side, Queen Elisabeth dressed in national costume and with the princely tiara on her head.

### 2.1. The description of the portrait of Queen Elisabeth

The portrait of Queen Elisabeth is a well-elaborated work (Fig. 2). One can notice a conscious selection of the outer physiognomy and of the inner characteristics, a selection which contributed to a deeper disclosure of the character's individuality. The artist built a portrait model function of the Queen's view of life and world. The portrait underlines the models' strong character and dignity, social position and also the figure's attachment to the autochthonous, national elements.

The artist had the ability to individualize the model, to realize a composition in which the character is surrounded with plainness, using an elegant chromatics, which sometimes slips in nuances of great delicateness.

The chromatics, dominated by brown, is enlightened by the raw silk head dress vestment's whiteness, underlining the model's personality, an aspect that leads to a high visibility and sensibility of the display.

The character that is subject to our analysis is located in the centre, having a slight feminine but also aristocratic mood; the picture's background consists only in a colour vibrating in brownish tones.

The Queen is represented on her feet, in life-size. She wears a dress containing elements of national influence. On her head she wears a floss silk veil, with the royal crown on the top, adorned with coloured stones made of five fleurons. The Queen keeps with delicacy in her right hand a down flower of her dress, and with the left the raw sold head dress. Worthy of noticing are a significant number of details sensibly and minutely performed, as for instance is the ring from her right hand, the bracelet, the necklace, as well as the vestment's décor, consisting in flowers made of quill feathers.

### 2.2. The frame

The portraits of Queen Elisabeth and King Carol I located in the narthex of the Princely Church of Bușteni and the votive paintings respectively are delimited by a sculpted oak wood frame, having a fine artistic composition. The aesthetic analysis of the frame makes us think that, in the manner of the sculpted entrance door, the wooden elements were performed by the same sculptors that worked at Peleş Castle.

On the lower side of the two paintings' frame were made of sculpted wainscoting.

Also in the upper side of the frame there is an encased ceiling, adorned with a sober decoration.

### 2.3. The wooden chassis

The wooden chassis that supports the cloth on which the votive painting of Queen Elisabeth of the Princely Church of Bușteni was painted, is made of oak wood having H = 2.30 m, L = 1.18 m, the thickness and width of the clock pattern being 18.50/6.50 cm, has the corners fixed with clay and nailed and does not have wedges for tensioning the canvas.

The chassis with wedges, though optimal – no matter the dimensions – appeared in the 18<sup>th</sup> century; they permit later stretching, but with one mention: at the beginning, the wedges should not be totally introduced in their places, instead, they should be spiked only later, if any loosening up happens; the chassis of this painting is mediocre, having nevertheless a few qualities: is flat, with no decays or knurls, having fibres parallel among each other and parallel with the margins at the same time.

Because of the drying of wood, the chassis displays minor damages, which do not put in danger the resistance of the painted canvas, scratches due to some faulty handling, sticky filth and traces of a label laid.

#### 2.4. The cloth

The cloth on which the votive painting of the Queen Elisabeth of the Princely Church from Bușteni is laid on an oak wood chassis. According to an analysis made on it, this cloth is made of linen fibre, is industrially woven, with fine squall, a filling of 20 fibres and a warp of 17 fibres/square centimetres. It is a well-known fact that the squall of the cloth depends of the staples' thickness and the distance between them; it could be big and dense, big and sparse or fine. Anyhow, the squall plays an important role in expressing the painted layer. A fine squall seems generally more suitable for small-scale work and vice versa: for a big work, the harsh and visible squall will "fill" even the non-important areas through vibrations of light, caused by the alternation of the small protuberances of the canvas, those tiny accents of shadow and light that appear function of incidence angle of the rays that lighten the picture.

A more evident, pronounced squall seems more suitable for landscape themes or still life or other, instead, a finer one is more suitable to a nude theme or, even better, to works in which are used glazes. The taste of the painter can expand the squall in many ways.

The painting resistance is somehow related to the squall. Thus, a canvas with a big squall – that consequently has a thick staple – if it's dense as well, shall be a more rigid support; in other words, it will assure a better protection of the colour layer than a piece with a big squall, but sparse and closer to the "bag" type. The latter one should be loaded with too much ground colour for the big "eyes" to be filled, and the thick ground would easily crack. Always the best canvases are the dense canvases, either thick or less thick. If we work only with thin canvases and little sparse, we shouldn't forget that, through cloth backing, they can enhance their rigidity and lessen the level of ground colour, both gaining a definite technical benefit.

#### 2.5. The ground

According to some physical and chemical analyses, the Queen Elisabeth votive painting contains a ground colour based on chalk and protean bond – the glue. The ground is not coloured. The painting was performed on a foundation made of white-coloured ground.

The ground colour determines the texture, the final level of absorption of the painting layer and its colour. In fact, it is the intermediary stratum, of binding, between the ground and pigments. The

layer was painted in the late 19<sup>th</sup> century, in oil painting technique.

### 3. The preservation status of the Queen Elisabeth painting (fig. 4)

From the artistic point of view, the author of the painting performed, toward the end of the 19<sup>th</sup> century, in oil on canvas, a portrait standing up, dressed in garment proper to superior, princely, orders. Worthy of mentioning is the composition, that abounds in decorative elements and that the social position is highlighted by jewels – ring, necklace, bracelet, diadem and clothes, represented by the painter by using the template, merged with elements of Romanian traditional costumes like silk head dress or veil.

#### 3.1. The research and inquiry – preliminary research

Prior to all operation that were to be performed, the painting's surface was visually analysed with the help of the guided light. In this way, the whole surface of the colour coat was studied and, by direct observations, were identified a series of degradations.

Under direct light were identified background zones of the lower side of the work, having signs of corrosion of the colour layer. The areas of interest were observed with the help of a magnifying glass. In the next stage, a series of photos were performed – generally, details, macrophotographies. In the first phase these photos aimed at tracing the deterioration specific to this painting on canvas. Other photos were made while the restoration works were being made, as well as in the end.

It is one of the most complex methods and most often used for tracing out forgeries in art and archaeology. The method consists in taking photos by using ultraviolet rays in order to study the execution phases, the composition of the dyestuffs used for carrying out the paintings and the manner in which they were applied on the stand.

#### 3.2. Drawing assays for physical - chemical analysis (Fig. 3)

For the preservation-restoring process, as in any preliminary stage regarding the introduction of a work in the research laboratory, it is mandatory to have a scientific research of the pieces. The first stages in this research consist in the work examination from physical, chemical and biological point of view. On the basis of the

results drawn by the researchers, we set up ourselves a complete image with conclusive date regarding: the nature of the materials, their structure and composition and the existence of some structural modifications, caused by the passing of time and the using of low quality materials, establishing also the execution technique.

### 3.3. The painting layers

The painting suffered evolutionary flaws, which in time can lead to the painting's destruction and devaluating, so that the object of research was to discover, to hinder and remove the factors that led to the painting's degradation. Besides the mark which the time leaves on the painting, this can also suffer also from the frequent exposure and inadequate manoeuvring and other kind of deterioration, due to the lack of protection, without a reliable safe-keeping and a special effort to preserve and make it valuable.

The portrait on Queen Elisabeth displays the following damages:

- sediments of superficial and viscous dirt, a fact that modifies the chromatics of the artistic image;
- cracks. The lack of flexibility of a very dry painting paste, which makes it breakable, for this reason cracks are present on the whole surface;
- oil leakages, cause by some previous intervention, when the final glaze modifies its initial tonality, inevitably influencing the chromatic harmony.
- the varnish pellicle displays a natural browning caused especially by the its oldness, being well-known that, in time, the linseed oil changes its colour, becoming black.

In the next stage, there were performed some cleaning tests for different areas of the painting. Firstly, there was a try to remove the old varnish, the superficial sediments and the ones fouled in the background. This stratum varnish layer easily removed; because it can be easily melted by using a numerous range.

The cleaning and fixing tests aimed basically at finding a method for removing the viscous sediments from the painting's surface.

There were performed the following cleaning tests:

### 4. Interventions on the painting's background level

In the first phase was cleaned the canvas's verso using soft brushes and a vacuum cleaner.

#### 4.1. Interventions on level of colour coat – the cleaning of the painted surface

The cleaning methods were chosen function of the materials that should be removed:

By cleaning, there were removed:

- The viscous sediments
- The varnish coat, which, by the passing of time, lost its qualities (transparency, elasticity) and hence, caused misrepresentations (distortions) in the in the chromatic structure (**fig. 5**).

Following the tests, people involved in the work came to the conclusion that the viscous sediments from the coat's surface are not uniform, and for both its removal and the degraded glaze, the no. 1 Filatov solution was generally the best effective one. The work's cleaning consisted in the removal of the background's fouled sediments, in polishing, making thinner the varnish level and its homogenizing by means of a swab soaked in this solution and returns with cotton-wool rolled over some small sticks.

### 5. Aesthetic presentation

The operation has in view the restoration to a feasible extent of the painting structure without producing a historical or aesthetic forgery. In this sense, function of the nature of the gap, the operation aims at reduction of the image disjointedness.

Having in mind that the original painting was done in oil colours, the chromatic integration is performed tone in tone, using a technique similar to the original one. The coat with original colour was isolated by means of a retouch of lime green, which also has the role of facilitating a chromatic intervention and of refreshing the colours.

The chromatic intervention complied with the style and chromatics of the original painting.

The oil colours that were used were degreased on a filter paper with 24 hours before, blended with varnish for retouch, proper to the oil painting.

The composition of the glaze for retouch: white spirit 2 parts, pine tar oil 1 part and Dammar resin 1 part.

It was performed an imitative retouch using varnish based colours, through mixed techniques, function of the size and character of the superficial gap (canvas and *ritocco* for the smaller areas). The intervention can be easily noticed with the help of UV light.

#### 5.1. Protection treatment – final varnishing (**fig. 6**)

The final varnishing is the last preservation-restoring operation, focused on the direct contact with the work.

The general varnishing of the work with Dammar glaze 10% was applied in a thin layer by using a harsh brushing.

The composition of the final glaze: white spirit 90ml, pine tar oil and Dammar resin 10g part.

The glazes are used for protecting a dry work.

The work should be left to dry for six months. The varnishing was performed in a warm room, with no dust or draught; to be added that the work was kept a few hours in the same room together with materials before applying the varnish, in order to avoid the condensation effect.

The varnish gets dry simply by dehydration (evaporation) of the contained solvent; and depending of the temperature; it gets dry in a few hours (the superficial layer, dry when touched).

Because the varnish glistening was insufficient or lacked uniformity, we applied a second layer of varnish in the same manner, after 24 hours. After the varnishing process came to an end, the brushes and the other tools were cleaned using a solvent.

### **Conclusions**

The feminine presence from the end of the 19<sup>th</sup> century Romanian fine-arts, by its frequency, scope and artistic level, brought a valuable and modern contribution to our fine-arts. The value of this work can resist comparison with the famous creation of the century, strengthening the international prestige of the Romanian culture and spirituality.

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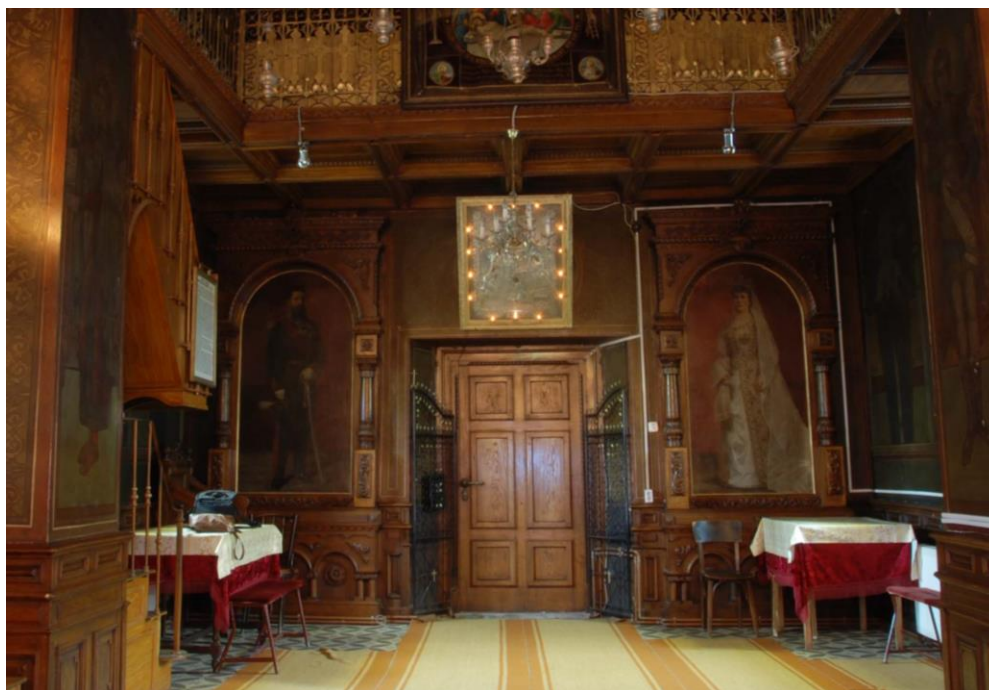
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5. Queen Elisabeth portrait after restoration



6. Queen Elisabeth after restoration



## ALTERNATIVES FOR LINING. THREAD WELDING AND THREAD BRIDGES

Radu Constantin TĂTARU\*

**Abstract:** Due to the lack of alternatives, up until the start of the 20th century, weakened or damaged canvases were treated by applying fabric patches, edge lining or lining the whole painting. Lining was the universal treatment for damages, regardless the type or the nature of these. Recently, a new approach of restoring damaged textile supports, corroborated with the use of newly discovered synthetic adhesives, has brought about a series of techniques for treating old canvases. Tear mending, although often extremely time consuming, can be a rewarding alternative to lining. The article is aimed at the interventions made on three portraits of historical personalities from the Braşov Art Museum's heritage.

**Keywords:** restoration, oil painting, textile support, thread welding, thread bridges, Beva 371, Polyamid.

**Rezumat:** Din lipsă de alternative, până la începutul secolului XX, suporturile textile picturale fragile sau degradate erau tratate prin aplicarea de petice de pânză, dublarea marginilor sau dublarea totală a pânzei. Dublarea reprezenta metoda universal aplicată tuturor tipurilor de deteriorări, fie ele minore sau majore. Recent, o nouă atitudine în restaurare, coroborată cu descoperirea adezivilor sintetici cu aplicație în domeniul restaurării, au dus la apariția a noi tehnici de tratament pentru pânzele tablourilor. Adeseori mare consumatoare de timp, tratarea rupturilor reprezintă o alternativă a dublării pânzei, de natură să ofere rezultate remarcabile. Articolul vizează intervenții asupra unor portrete ale personalităților istorice din patrimoniul Muzeului de Artă Braşov.

**Cuvinte cheie:** restaurare, pictură în ulei, sudarea pânzei, consolidarea pânzei, punți de fire, Beva 371, Polyamid textil.

### The types of deteriorations

There are several types of damage that can occur to a painting's textile support: tears, cuts, holes and punctures. Their nature differs as they are generated by particular agents that produce distinct effects. A tear is a linear perforation of the fabric resulting from tension and overstretching. Tears are often cited as the reason for lining and indeed major tears equivalent to half a painting dimension or more, need extra support. But most small or medium tears can frequently be repaired "in situ" and does not involve lining. In some cases, overpressure can cause them to "gape". A cut is a "clean" perforation of the canvas, caused by

lack of care or by an act of vandalism. The holes are "glitches" in the structure of the textile support and they are caused by oxidation. Finally, the punctures are produced by a plunging sharp object that exerted a great amount of pressure over a small area. These also may be caused intentionally or by negligence. Punctures subsequently evolve into tears or holes that should be treated in a similar way.

Other manifestations of damage will depend on the type and quality of fabric, strenght of the yarn, age of the canvas, the effect of catalyzing substances (drying oils, metalliferous ground qmaterials), the type of mechanical influence

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present, the nature of the relevant means of destruction, the degree of tension in the support and the way the painting was since the damage first occurred (Nicolaus 1999).

### **The methodology**

In most cases, the edge of the tear will be stretched and deformed, as a direct result of the released tension. Thus, before reinforcing the wave, the whole area needs to be flattened. After establishing the proper temperature and pressure for flattening, the ironing will be applied by means of electric spatula and compulsory alternated with the cold marble slab weights and/or sand pouches. Consecutive to this, a facing should be applied to keep the tear margins aligned. If the frayed threads keep overlapping, a scalpel may be used to shorten the excess so the ends can fit together perfectly. The tear repair must be restricted to the plane and level of the canvas and the adjacent area of the tear, so to provide a rigid structural joint, with the yarns aligned (Bracht 1951). The next step is to solder the two edges - on the verso - by means of an appropriate binding agent. If the damaged area is extensive, further reinforcement is necessary, by using "thread bridges".

Even if the textile support is so frail that it needs lining, it is necessary to weld the damaged area prior to doubling, to prevent bulging.

### **"Thread gluing" and "Thread welding"**

A general description of the historical evolution of this procedure was the subject of A.-S. Roux's dissertation *Traitement des déchirures de support toile* (Roux, 1993). The operation appears under the name of "thread gluing", "thread welding" and cauterization. Since then, the old manner of approaching the broken tears was to cluster and twirl the threads through the verso of the painting then to affix them with fish glue, dammar, colophonium or mastic (Kudrjawzew 1945).

Since the beginning of the 60's, newly discovered synthetic adhesives like: polyamide textile, polyvinyl acetate, epoxy resins, threads of Mowilith 30, threads of Paraloid B72, polyacrylate, Beva 371, Araldite Standard, Lascaux Acrylic 498-2X, Plextol D 541 (Ketnah 1977) provided new bonding materials for mending tears.

The technique of "thread gluing" was first described by W. Gabler in the 80's (Gabler 1980/81); in 1996, W. Heiber published an extended work regarding it (Heiber 1996). The method involved flattening the tear and bringing together the matching ends so they can be "woven" together again. The thread's ends were then glued with a water based glue, by means of soldering needle. The heat drove off the water based solvent and the adherence was assured. The technique of "thread welding", on the other hand, implicates sprinkling a powdered form adhesive like polyamide textile over the pre-secured gap then heating it with the soldering needle over the conjoined margins; once cooled, the adhesive creates a powerful bond. The adhesive may also be used for weaving or lengthening the threads in the same manner. Although, if the gaps are too large and cannot be stretched, fabric inlays must be fitted. These should be made from a similar to the original canvas, ungrounded and cut to shape. If needed, the soldering strength can be increased by fastening "bridges" of threads made from similar to the original threads, soaked in adhesive.

### **The case study**

The three works on which was intervened are part of the Art Museum Brasov the heritage (Fig. 1, 2, 3): Fridrich Miess's *Portrait of Ottokar Czernin* (Inv. No. 1231) and Coca Romano's portraits of *Queen Mary* (Inv. No. 2503) and *King Ferdinand* (Inv. No. 2504).

Each suffered similar damages that did not required lining; their tension bearing capacity had not been impaired. It was therefore concluded that alternative treatments may be applied, namely welding and subsequent reinforcement of the affected areas. Of the three works, the most notably affected was Inv. No. 1231. It revealed traces of mechanical impact over the face of the character represented, namely a linear cut (Fig. 4), made presumably with a nail and a "punched" hole (Fig. 4), resulting in serious physical weakening of the support and loss of anatomical details - part of the left supra-orbital ridge, eye, cheek and jaw. A similar damage effect was found on the portrait of *Queen Mary* a "T"- shaped perforation (Fig. 5), also on the supra-orbital ridge - between the right

eye and the nose. The third work presented the least problematic condition, located on the left arm of the character, namely a deep abrasion that led to the canvas texture tearing (Fig. 6). Interventions debuted with the stabilization and strengthening of the affected areas by applying Japanese paper impregnated with sturgeon glue facings. On the verso, after flattening the damaged areas (by dampening and ironing with the heated spatula, alternating with cold weights), the procedure was continued with the scraping of the affected areas with the scalpel (Fig. 7), to ensure good adhesion of the bonding agents. After welding the threads with Paraloid B72 (on Inv. No. 1231 – due to the canvas thickness and the amount of stresses that the weld was supposed to sustain) and polyamide textile (on Inv. No. 2503 and 2504), (Fig. 8, 9, 10), additional strengthening was gained by using thread bridges (Fig. 11, 12). To achieve this, threads of linen were impregnated with BEVA 371; after drying, the yarn was run on a spool and used for consolidation by thermal reactivation, by means of thermal spatula. The next steps were the filling (Fig. 13, 14, 15), isolation, retouching (Fig. 16, 17, 18), and finally varnishing. The restored ensembles showed good results, good ten-

sion and unaltered levelling of the paintings front sides (Fig. 19, 20, 21).

### **Conclusion**

Degraded oil paintings canvases raised major concerns about the right structural treatment in the field of restoration. Often challenging, both methodologically and ethically, the intervention must preserve as much as possible the original state and aspect of the painting. "Thread welding" is a less invasive approach that offers the advantage of intervening without dismantling the canvas from the stretcher and it tends to replace the lining technique that once was a universal practice, even when confronted with small damage of the textile support.

The quest for finding a better way to mend tears resides from seeing the unquestionable loss occurring to a painting that is lined or removed from the stretcher for structural work and then reattached: crumbling or cracking of the picture layer along the tacking fold, albeit all precautions. Also, some of the linings seem to take the element of originality from a painting even though they solve major structural problems. As W. Heiber asserted, "A painting that is lined becomes an extremely different painting; it loses its venerability".

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3. Coca Romano - "Portretul Regelui Ferdinand" - Nr. Inv. 2504 – înainte de restaurare
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14. Aplicarea chitului – Nr. Inv. 2503
15. Aplicarea chitului – Nr. Inv. 2504
16. Aplicarea retușului – Nr. Inv. 1231
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18. Aplicarea retușului – Nr. Inv. 2504
19. Nr. Inv. 1231 – Ansamblu după restaurare
20. Nr. Inv. 2503 – Ansamblu după restaurare
21. Nr. Inv. 2504 – Ansamblu după restaurare



1. Fridrich Miess - "Portrait of Ottokar Czernin" - Inv. No. 1231 – before restoration

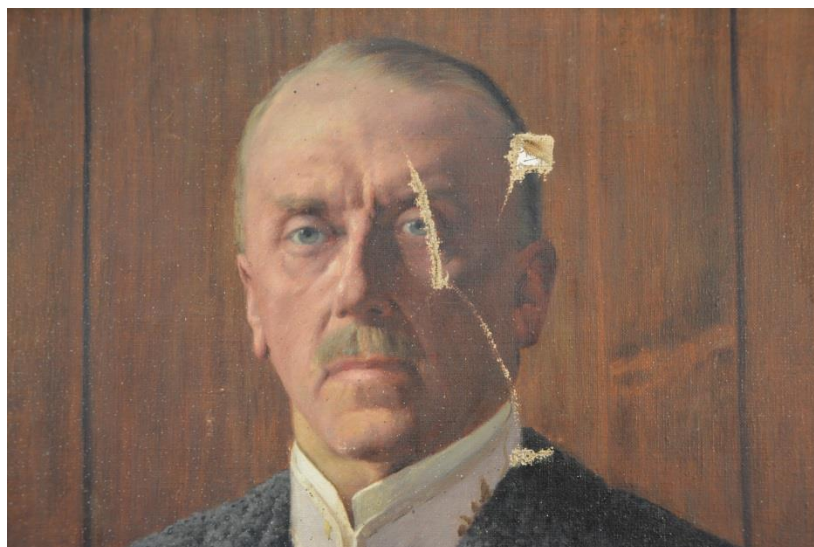


2. Coca Romano - "Portrait of Queen Mary" - Inv. No. 2503 – before restoration



3. Coca Romano - "Portrait of King Ferdinand" - Inv. No. 2504 – before restoration

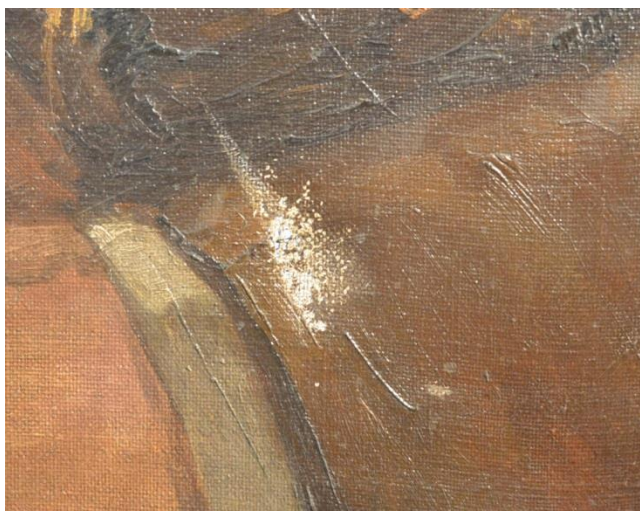




4. Inv. No. 1231 – detail, before restoration



5. Inv. No. 2503 – detail, before restoration



6. Inv. No. 2504 – detail, before restoration



7. Scraping the area with the scalpel before welding – Inv. No. 2503



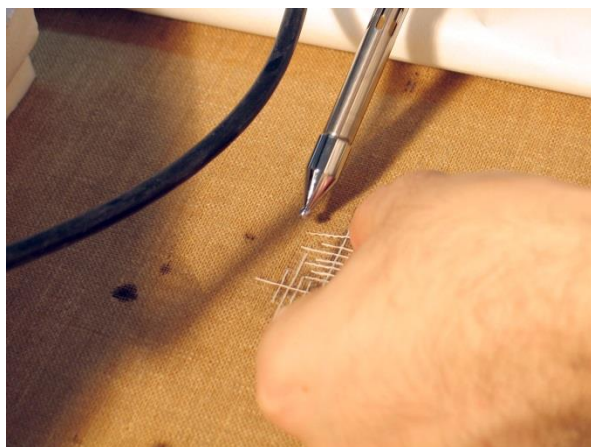
8. Thread welding – Inv. No. 1231



9. Thread welding – Inv. No. 2503



10. Thread welding – Inv. No. 2504



11. Thread bridging – Inv. No. 2503



12. Thread bridging – Inv. No. 2504





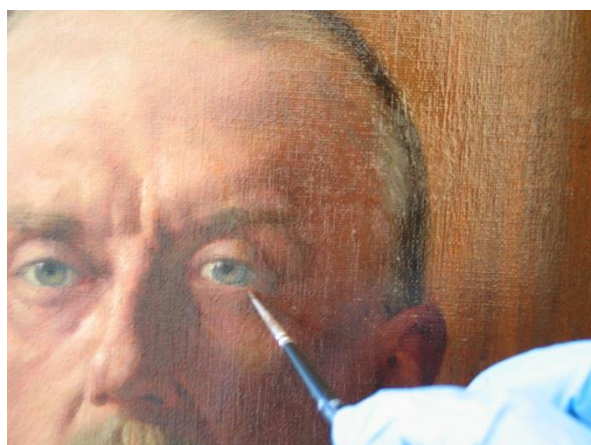
13. Applying the filler – Inv. No. 1231



14. Applying the filler – Inv. No. 2503



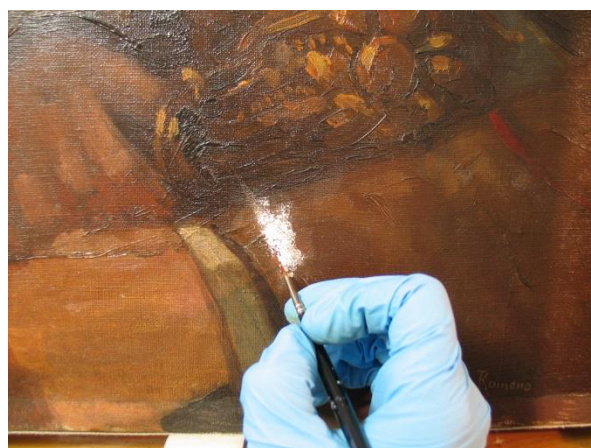
15. Applying the filler – Inv. No. 2504



16. Retouching – Inv. No. 1231



17. Retouching – Inv. No. 2503



18. Retouching – Inv. No. 2504





19. Inv. No. 1231 – After restoration



19. Inv. No. 2503 – After restoration



20. Inv. No. 2504 – After restoration

## SOME REMARKS OCCASIONED BY THE CONSERVATION OF A PAINTING BY PAUL JUVENEL THE ELDER FROM THE COLLECTION OF THE BRUKENTHAL NATIONAL MUSEUM

Ioan MUNTEAN\*

Alexandru Gh. SONOC\*\*

**Abstract:** *In order to consolidate the lime tree wood panel, a new consolidation system was made, with wooden tappets and aluminium rails. By removing the parquetry added in the late 19th c., on its backside an inscription was discovered painted in the 17th or rather 18th c. with black paint. It shows that at that time this signed and dated work was attributed not to Paul Juvenel the Elder, than to a painter from the De Vries family. This wrong attribution, contradicted by the signature with the monogram of Paul Juvenel the Elder, is actually due to the strong influence of Hans Vredeman de Vries and Salomon Vredeman de Vries. Since the 19th c., the research on this painting confirmed with so much authority the attribution to Paul Juvenel the Elder, that the recently discovered inscription was not ever mentioned, although it remained visible until the wooden parquetry was added on it.*

**Keywords:** *consolidation system with wooden tappets and aluminium rails, lime tree wood panel, oil painting restoration, Biblical scene, Paul Juvenel the Elder*

**Rezumat:** *În vederea consolidării panoului de lemn de tei a fost realizat un nou sistem de consolidare, cu tacheți din lemn și traverse din aluminiu. Prin înlăturarea parchetajului adăugat la sfârșitul sec. XIX, pe partea posterioară a tabloului a fost descoperită o inscripție pictată cu vopsea neagră în sec. XVII sau mai curând în sec. XVIII. Ea arată că pe atunci această lucrare semnată și datată a fost atribuită unui pictor din familia De Vries. Această atribuție eronată, contrazisă de semnătura cu monograma lui Paul Juvenel cel Bătrân, se datorează de fapt puternicei influențe exercitate asupra pictorului de Hans Vredeman de Vries și Salomon Vredeman de Vries. Din sec. XIX cercetările asupra acestui tablou au confirmat cu atâta autoritate atribuirea sa lui Paul Juvenel cel Bătrân, încât inscripția recent descoperită nu a mai fost nicicând menționată, deși ea fusese vizibilă până la aplicarea parchetajului din lemn.*

**Cuvinte cheie:** *sistem de consolidare cu tacheți din lemn și traversă din aluminiu, panou din lemn de tei, restaurare pictură în ulei, scenă biblică, Paul Juvenel cel Bătrân*

In the European Painting collection of the Brukenenthal National there is an interesting artwork with religious subject, *The Cleansing of the Temple* (oil on lime wood, 46 x 60 cm; signed by monogram and dated on the floor, to the middle: PJ (bounded) 1636; inv. 632), by Paul Juvenel the Elder (1579-1643) (fig. 1; fig. 8; fig. 30). Since many years this painting, although fairly well known to the researchers of the Gallery and, due to its artistic, cultural-historical value (ÄK, cat. no. 4 (*n. Schule, IV.-es Zimmer*); Die Gemälde- Galerie 1844, 81,

cat. no. 291; Führer 1893, 62, cat. no. 332; Frimmel 1894, 76, cat. no. 332; Csaki 1901, 170, cat. no. 613; Csaki 1909, 189, cat. no. 632; Vollmer 1926, 366 (R. A. Peltzer); Pigler 1956, vol. I, 329; Ionescu 1967, 55; Budapest 1993, 234, cat. no. 60 (Miklós Mojzer); Mureșan 2002, 124, fig. 2; Mureșan 2006, 199-200, fig. IV.4; Mureșan 2007, 100-102, cat. no. 58, fig. 58; Mureșan 2009, 21-22, fig. 2; Mureșan 2011, 306-307, fig. 1), and even asked in 1993 to be exhibited (despite its poor conservation) in Budapest, in the context of the

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International Year of the Baroque, could not be shown in the permanent exhibition of the Brukenenthal National Museum, due to the progressing damage of which the panel was affected.

### 1. The restoration and conservation operations.

The work *The Cleansing of the Temple* by Paul Juvenel the Elder was brought to the Painting Conservation Laboratory in order to be prepared for its presentation in the exhibition *Sin. The Mirror of Human Behaviours and the Universal Order*, which will be organized in Poland, at the National Museum in Gdańsk (Muzeum Narodowe w Gdańsku) between October 30, 2015 – January 31, 2016. Its conservation was poor and since many years it did not allow to be displayed in the permanent exhibition of the Brukenenthal National Museum. The visual analysis of the painting occasioned some remarks, both on its technical execution and on its conservation status (fig. 1) and also to correct some misinterpretations in the catalogue of the mentioned exhibition, which are due to the difficulty to perceive certain details, as well as some wrong technical information in the museum's inventory register.

The painting was made in oil on wood. The wooden panel is made from four horizontal boards, joined by gluing (fig. 2). The work was restored previously at least twice, as proven by the consolidation systems on its backside. In the first phase (1897) there were applied four softwood stringpieces, glued with an animal glue, and between the stringpieces were applied pieces of coarse cloth. In the second phase of restoration (20th c.) the previously applied cloth pieces were removed and replaced with new ones, but some of the previously used adhesive remained visible. Two inscriptions with black paint could be seen between the cloth pieces: 124 and DE · VRIES ·. On the cloth pieces were glued three labels. On the first is printed in red 632 (which is the current inventory number). The second one, which is an old collection label added in the late 19th c. by custodian Michael Csaky, shows the following text in cursive hand written: D: Schule / 291/332(344), i. e. the inventory numbers of the work, mentioned in the German School's section of the Brukenenthal Museum's Gallery guides published in 1844 (inv. no. 291) and 1893 (inv. no. 332). The third label has the following text, typewritten after 1948: *Paul Juvenel / 1574-1643 / Sc. Germană – Nr. tab. 632 / Depozitul... / Raftul... – Christos alungă din templu pe / samsari / Christus vertreibt die Mäkler / aus dem Tempel / Pictură pe lemn de stejar (obliterat cu pixul și scris tei) / Dimensiuni: In. 0,46, Lt. 0,60*

*/ Starea: Rest. 1897, i.e. Paul Juvenel / 1574-1643 / German Sc. – Tab. Nr. 632 / Store... / Shelf... – Christ Drives Out the Middlemen from the Temple (in Romanian and German) / Painting on oak wood (cancelled with pen and written lime) / Dimensions: H. 0,46, L. 0,60 / Condition: Rest. 1897.* The old grown varnish layer turned brown and changed the painting's general chromatic. An older retouch, which changed its hue, was also visible on the surface of the work, affecting negatively its aesthetic perception. The painting's stratigraphy showed also small gaps in the area where the boards were joined, as well as on its borders. In the upper part, the wooden panel was perforated by two metallic nails, improperly used (probably by Maria Paștiu, in the late 20th c.) to fit the work in its frame.

As a result of the above mentioned remarks some restoration interventions were made, as described below.

In order to remove the old panel's consolidation system, first step, warm water compresses, the heated spatula and the scalpel were used to remove the cloth pieces and the adhesive (fig. 3). After removing the cloth, the elimination of the stringpieces began, by using the saw, chisels for wood and a piece of metal sheet, in order to protect the backside against scratches (fig. 5). During this operation the inscriptions with black paint were completely uncovered. Just below the inscription DE VRIES, a little to right and with the same black paint was written a number of two ciphers (maybe 13), cancelled with the same paint. In the top right corner appeared the trace of a damaged red wax seal, which cannot be read anymore, but whose shield was oval, according to its still preserved part (fig. 4). With the elimination of the stringpieces the mark of a triangular stamp was lost. It had the legend: O(ficiul de) P(atrimoniu) C(ultural) N(ațional) SIBIU, i.e. *The Office for National Cultural Heritage Sibiu*, applied for the painting's temporary export to Budapest (1993).

The consolidation of the panel continued with joining the boards with an adhesive based on rabbit-skin glue and grouting the joined areas with putty made of rabbit-skin glue and balsa sawdust. To reinforce the wooden panel a parquetry was made with a system consisting of beech and balsa wood tappets and aluminium rails (fig. 6). To apply the tappets, only areas without inscriptions were chosen (fig. 7). Three vertical rails and a number of 21 tappets were applied, which ensured the work's flatness, without straining it by excess of weight or fluctuations in relative humidity. The rails are light

and in addition they do not change their volume as a result of variations in the relative humidity.

To remove the old grown varnish layer and the old retouch cleaning tests were made. The operation was successful. The artwork was grouted on the areas with stratigraphy gaps or where the boards are joined. The grinding of the grouted areas was made with cork and cotton-wool, to obtain a surface similar to the original one. The chromatic integration of the grouted areas was made using watercolour type colours, after which a layer of dammar varnish was applied. The conducted retouch is in imitative style, with retouch colours (Maimeri Restauro), then was put a protection coat with aerosol varnish in order to equalize the light's refractive index (fig. 8). For a good fitting of the work in its frame a balsa wood bed was made, which subsequently was painted with black tempera. In its frame the work was fitted using Temart metallic spring plates.

Finally, after the restoration of the work, a number of details became apparent that allowed its aesthetic and cultural-historical reconsideration.

## 2. Cultural-historical remarks.

Born in Nuremberg (1579), as son of the painter Nicolaus Juvenel the Elder, a native of Dunkirk, Paul Juvenel the Elder began his training as an artist with his father, who was known as a vedutist and a protégé of the Fugger banking family, as well as of Maria of Hungary, the Dowager Queen Consort of King Lajos II, who after his death in the battle of Mohács (1526) became Governor of the Netherlands (1531-1555), on behalf of her brother, Emperor Charles V.

The young artist continued his studies in Rome, with Adam Elsheimer. During this period his work was influenced by the great masters of the Italian Renaissance. After his return from Italy he settled for a while in Frankfurt am Main, entering the painter Frederick van Valkenborch's service and became known as a copyist (especially of the works of Albrecht Dürer) and for achieving some altar painting commissions. Subsequently he settled in Nuremberg, where in 1613 he took part at the restoration of the fresco from the big hall of the City Hall (together with Gabriel Weyer, Georg Gärtner the Elder and Jobst Harrich), and in 1622 he made for the City Hall 13 ceiling paintings. Occasionally, he painted also portraits of some patricians from Nuremberg, which are known now only from their reproduction in engravings. For the City hall of Nuremberg he painted also portraits of

Emperors Rudolf I, Ferdinand II and Matthias. Emperor Ferdinand III appreciated him for the decoration of the City Hall of Nuremberg and called him to Vienna (1638), where he made ceiling paintings with allegorical, historical and mythological subjects. Subsequently, he accepted to make the fresco painting of the castle of Bratislava/Pressburg/Pozsony and settled in this town, where he died in 1643. Of a big cultural-historical interest are the 82 personifications of various peoples and cities from the museum of Bamberg. His style is marked by eclecticism, combining Renaissance and Mannerist elements taken from Adam Elsheimer and from the painters he copied. Under the influence of Hendrick van Steenwijck the Elder, Hendrick van Steenwijck the Younger and Hans Vredeman de Vries, but also of Nicolaus Juvenel the Elder himself, his compositions are often characterised by his predilection for the architectural decor with more or less fantastic church interiors. He had also a studio, to which are assigned some easel paintings and within were trained maybe also his 4 children (3 boys, namely Johann, Friedrich and Johann Philipp and a girl, Esther), who all became painters. In his studio worked also Georg Dorn, Carl Reiser and Leonhard Golling (For the biography and work of Paul Juvenel the Elder: ADB 1881, 762-763 (Rudolf Bergau); Vollmer 1926, 365-367 (R. A. Peltzer); NDB 1974, 712-713 (Kurt Pilz)). In Nuremberg, in a style very similar to that of Paul Juvenel the Elder, painted also Johann Kreuzfelder, another student of Nicolaus Juvenel the Elder (Réé 1905, 165-166), to whom could be assigned maybe some of the works attributed now to the studio or to the circle of Paul Juvenel the Elder.

In *The Cleansing of the Temple*, following a pattern already approached in the Renaissance art Paul Juvenel the Elder introduced the characters in the interior of the architectural environment of this episode narrated in the Gospels (*Matthew*, 21:12-13; *Mark*, 11:15-17; *John*, 2:14-16; *Luke*, 19:45-48), which Valentin Mureşan recently analyzed in detail (Mureşan 2006, 200; Mureşan 2007, 100 and 102; Mureşan 2011, 306-307). The attention of the artist is focused, moreover, on the monumental architectural framework, which becomes somewhat autonomously, without any direct link with the action and the characters. It is inspired by the Northern Late Renaissance architecture, maybe by the plates with plans and architectural drawings of Hans Vredeman de Vries, combining in a fantastic way older elements (like the columns of Doric inspiration and the bays with crossed arches with-

out ogives, aiming to suggest an ancient temple or the triumphal arches of the temple's three naves, recalling a hall church) with Renaissance elements (like the staircase to right, the golden medallions of the staircase and triforium, but especially the barrel vaults with golden ornaments in the background) or even with elements of the Italian Early Baroque architecture, inspired by the vaults of St. Peter's basilica in Rome, from the nave added during the first decade of the 17th c. by Carlo Maderno (1556-1629), who in 1602 was asked to change the plan of Michelangelo, a task which he achieved only in 1612, with the new facade of the building. The comparison with a painting (oil on canvas, 145.7 x 228.3 cm) from the St. Louis Art Museum in St. Louis (Missouri, United States of America), *The Interior of St. Peter's Basilica in Rome*, made in 1731 by Giovanni Paolo Panini (1692-1765) (fig. 9) supports this observation much better than the comparison with the actual appearance of the monument (fig. 10), affected by the restoration works. According to Valentin Mureşan, the spiral staircase to right resembles strikingly to the octagonal staircase of the Blos castle's the northern wing (built at 1515-1519) (fig. 11) and brings into the composition an effect of asymmetry and first plan's embossing, due to the Renaissance tradition. By its gigantic proportions, highlighted by the depth of the perspective that opens into the nave, but also by the high pillars supporting arches and huge vaults with the triphoria above the side aisles, the large interior of the temple overwhelms, making the characters (of which many are wearing costumes specific for the age when the painting was made) to look insignificant. The monumentality of the architectural ensemble is compromised, however, by the insufficiently highlighted volumes and by the hues of grey and brown, too less balanced by the colour accents of the characters' vestments, hence the impression of artificiality, of a theatre decor, first noticed by Miklós Mojzer (Budapest 1993, p. 234 (Miklós Mojzer)).

However, the previous commentators did not pay attention to the reliefs and the statues which decorate the interior of the temple, nor that in a farther plan, at the end of the nave, there is the Altar of the Burnt Offering, which actually was situated in the Court of the Priests, between the Temple and the Court of Israel (2 *Chronicles*, 4:1; cf. 1 *Kings*, 8:22, 8:64, 9:25), but it seems that the painter depicted it in the Holiest, behind richly decorated curtains, however drawn one side to allow the worship by the believers rendered to right, while to left another group, led by an old priest, approaches having into its middle Jesus, who is easily recog-

nizable by his blue mantle and the halo surrounding his head (fig. 12). Because the Temple from Jerusalem was built by King Solomon (2 *Chronicles*, 3), who according to the Biblical tradition is the third king of the Jews, we can assume that the intention of the painter was that the three statues would render him and his two predecessors, Saul and David. Because Solomon is David's son (1 *Chronicles*, 3:5; cf. 2 *Kings*, 12:24), the two statues situated on either side of the nave, looking towards each other, could render David and Solomon. As the statue to left of the nave's arch turns away from that located in a corner, at the left border of the work, the latter could render Saul (fig. 13/1), and the first mentioned David (fig. 13/2), that Saul had thought a contender to the throne and tried to kill, which led David to flee to the Philistines, Saul's enemies (1 *Kings*, 18-31). Therefore, the statue rendering King Solomon is that on the right triforium (fig. 14/5).

The reliefs above the triumphal arches of the temple show, from left to right, the following scenes from the Old Testament: Moses drawing water from the rock (*Numbers*, 20:1-13) (fig. 13/3; fig. 15), the Jews gathering the manna (*Exodus*, 16:13-36) (fig. 13/4; fig. 16) and the death of the Egyptians' first born child (*Exodus*, 11:1-12:36) (fig. 14/9; fig. 17). To left, the reliefs adorning the parapet of the triforium depict (from left to right) the following scenes: Abraham preparing the sacrifice of Isaac (*Genesis*, 22) (fig. 13/5; fig. 18) and Isaac blessing Jacob (*Genesis*, 27) (fig. 13/6; fig. 19). To right, the reliefs of the medallions adorning the parapet of the triforium depict (from left to right) two less clear scenes, maybe the anointing of Saul as king (1 *Samuel*, 9-10) (fig. 13/7) and the welcoming of David as winner (1 *Samuel*, 18:6-7) (fig. 14/6; fig. 20/1) (fig. 14/7; fig. 20/2; fig. 21/1), followed by Jacob's ladder (*Genesis*, 28:10-19) and Jacob's fight with the angel (*Genesis*, 32) (fig. 14/8; fig. 21/2). The reliefs of the medallions which decorate the parapet of the staircase have the followings content (from left to right): Jacob sleeping with a stone under his head (*Genesis*, 28:11) (fig. 14/11; fig. 22/1), Moses holding the tablets of the Law (*Exodus*, 20:1-17) (fig. 14/2; fig. 22/2) and King David playing the harp for Saul (1 *Samuel*, 16:13-16) (fig. 14/12; fig. 22/3). Unfortunately, the scenes of the reliefs in the medallions of the lantern of the temple's dome (fig. 13/8) are more difficult to identify. Like the characters in colourful costumes, spread everywhere, including on the triforium, these golden medallions with reliefs inspired by various episodes of the Old Testament, placed in the top of the composition, are



designed to invigorate the grittiness induced by the cold grey of the stone masses, prevalent in the upper parts of the work.

The expelling of the merchants and money changers from the Temple by Jesus using the whip, often mentioned during the Counter-Reformation, is the only violent action known to been done by Jesus who moved by a justified anger, resorted to applying them a corporal punishment (Fleming 1983, 56). According to the Jewish religious view, his attitude can be easily explained by the fact that some of the coins used for purchase, changed or lend there could have engraved on them the image of the reigning Roman emperor, i. e. Tiberius or of his predecessor, Augustus or various pagan symbols and legends and therefore they could be used only in the Court of Gentiles. This episode, which contrary to the opinion of Miklós Mojzer (Budapest 1993, 234 (Miklós Mojzer)), is neither too less important nor rarely depicted by the artists (even in the Baroque painting!), has been interpreted as an allusion to the offensive of the Catholic Church against the heresy, namely the Reformation, and the painter strives to represent it explicitly, in order that the message of the work (the defence of the faith, respectively of the Church against desecration) could be clearly understood (Mureşan 2007, 100; Mureşan 2009, 21-22).

Noting that in the Jesus cleansing the Temple is rendered without aura, Valentin Mureşan (who could not examine properly the other two small renderings of Jesus in farther plans) considered that this scene is devoid of sacred symbols (Mureşan 2002, 124; Mureşan 2009, 22), almost like a genre scene translated in an architectonic framework perceived as sacred only by the onlooker who knows the Biblical narrative. In the foreground, in the middle, Jesus drives out with lashes a moneylender carrying two large money bags and a poultry seller holding a cage in his hand (fig. 23). To left, a group of scholars (of which one is wearing a mantle with ermine collar) looks surprised to them (fig. 24), while another merchant, who sells a lamb and some birds in a cage, sits at right, just near the staircase, speaking with a rabbi and another male character, both rendered inside the staircase (fig. 25). A stocky and bearded man, preparing to emerge from the staircase, looks marvelled to Jesus too. The somewhat isolated position of this strongly individualized character, whose physiognomy is carefully made and who is rendered in the attitude of a witness (fig. 26), could be a self-rendering of the painter, as an onlooker,

according to an older tradition of the European religious painting, occurring both in the Netherlands and in Germany. This hypothesis could be verified by comparing the characters physiognomy with the only two known portraits of the painter (Vollmer 1926, 366 (R. A. Peltzer); NDB 1974, 712-713 (Kurt Pilz)), unfortunately inaccessible to us: an engraving by Georg Strauch (of which a copy is kept at the Germanisches Nationalmuseum in Nuremberg), made in 1655 after a portrait from 1620, due to Lorenz Strauch (but lost) and the self-portrait in *The Crucifixion of Christ*, made in 1625 (also at the Germanisches Nationalmuseum in Nuremberg, previously at the Holy Spirit's church of Nuremberg). However, placing separately certain characters in the stands or inside the staircase and their criticism, stemming from their gestures, suggests their moving away from the hypocrite piety and the lust for gain hidden behind aberrant forms of religiosity, expressed through bloody rituals and by the belief that the offerings could buy God's grace.

In a second plan, to left, a cripple is carried in a chair by two bearers towards a farther plan, where the crowd gathered around a healer in a blue mantle, having his head surrounded by a halo and who can be identified therefore as another image of Jesus, in a different hypostasis. Coming from the second plan of the nave, other two invalids are heading towards him (fig. 27). To right, also in the nave, a money changer tries to raise his table, undoubtedly overturned by Jesus (fig. 23), while in a farther plan another poultry seller is preparing to leave the temple through a side exit (fig. 28). In more distant plans, both in the nave and in the right side aisle there are here and there small groups of people discussing. In the farthest plan, on the axis of the nave, there is the Altar of the Burnt Offering (fig. 12). Pairs, small groups or isolated individuals are looking down, from the stand. Due to the people who seem concerned only with their personal worries, like the desire of getting rich or healthy or who are looking without involvement to the violent intervention of Jesus, the scene seems chaotic, far from any semblance of piety, excepting the three images of Jesus. Despite this impression, in the depiction of the temple's interior there are several elements suggesting the sacredness of this space, even if they conflict actually the ritual needs of the Jewish worship (the reliefs depicting scenes from the Old Testament and the statues), being rather transpositions of some specific elements of the architectural decor of the Catholic churches' interior. Their presence in the Temple from Jerusalem,

blasphemous according to the Jewish view, but also to the radical Reformation, indicates that the reaction of Jesus against the desecration of the site is directed only against those who practice here gainful, sacrilegious activities, which therefore are not perceived as expressions of idolatry. So, it can be inferred that the work was certainly intended for a Catholic commissioner and not for a Protestant one.

Being placed in more distant plans, the other two images of Jesus suggests a chronological succession of the events, which narrates how around Jesus gathered a group with an own religious identity, which will become the first Christian community. The spatially and chronologically most distant scene is that where Jesus is rendered as a faithful Jew coming to the Temple (fig. 12), but not as one who offers animal sacrifices, according to the old Jewish rituals, the painter intending thus to emphasize that the New Testament is a straightening of the Old Testament's teachings. The second hypostasis of Jesus, that of a healer (fig. 27), places in a nearer plan, alludes to his power to heal and, symbolically, to reform the Jewish faith, as a proof of his divine nature. His last hypostasis, the punishing one (fig. 23), in the nearest plan, suggests his salutary decision to intervene violently against the hypocritical piety, supported by rituals which are distorted by the people's lust for gain.

Thus, it can be considered that, by its message, the painting express a set of expectations related to the Counter-Reformation, namely that the Catholic Church, purified by returning to the true message of the New Testament and assuming it after a deep reflection on the criticism of its Protestant opponents, will pass to a determined offensive against the thirst for enrichment of those who hypocritically took advantage of the popular religiosity's aberrations.

How Teodor Ionescu noted (Ionescu 1967, 55), the painting from the collection of the Brukenenthal National Museum is one of the few easel works of the artist, proving his tend towards the perspective painting, but no influence of Adam Elsheimer, his teacher. However, we think that concerning Adam Elsheimer's influence is too harsh. By composition and colour, it can be regarded rather as an expression of the extension in full Baroque age, much later than 1600, of the Netherlandish Mannerist style, for as noted by R. A. Peltzer, in all Paul Juvenel the Elder's compositions with interiors the architectural decor is predominant, even if sometimes the stage-lighting and the staffage figures recall Adam Elsheimer (Vollmer 1926, 366 (R. A.

Peltzer)). A work similar to that from Sibiu, *The Presentation at the Temple* (oil on wood, 33,76 x 62 cm; signed with the monogram PJ and dated 1630) (fig. 29), but whose staffage was painted by another hand, was only recently attributed to Paul Juvenel the Elder, on the occasion of repeated attempts to sell it at various auction houses: Hampel (September 20, 2003, lot 1759), Sotheby's (December 7, 2006, lot 144), Koller (April 1, 2011, lot 3086), Mercier & Cie (October 9, 2011, lot 222). As *Jesus visiting Simon in the Temple*, it was previously purchased on the occasion of an auction in Berlin at the house Leo Spik (July 21, 1984, lot 374), as due to Frans Francken the Younger and dated in 1632.

The inscription DE · VRIES · on the backside of the panel and the accompanying number, inscribed also with black paint, shows that initially, before its purchasing by Baron Samuel von Brukenenthal, the painting was attributed (most likely due to the architectural framework of the scene) to the painter Hans Vredeman de Vries (1527-c. 1607) or to his son, Salomon Vredeman de Vries (1556-1604). Although, in the handwritten catalogue of Baron Samuel von Brukenenthal's Gallery, the work is recorded as made in 1630 by an anonymous from the Netherlands, who signs with the monogram PJ (ÄK, no. cat. 4 (n. *Schule, IV.-es Zimmer*)). In the guide of the Brukenenthal Museum's Gallery printed in 1844, the painting is already attributed to Paul Juvenel, mentioned however as a Flemish painter (Die Gemälde- Galerie 1844, 81, cat. no. 291). The 1893 edition of the Gallery's guide keeps this attribution, but mentions the work among those of the German School's painters (Führer 1893, 62, cat. no. 332). The same attribution is found in the guides printed in 1901 (Csaki 1901, 170, cat. no. 613) and 1909 (Csaki 1909, 189, cat. no. 632), remaining unchallenged until now. Becoming internationally known, the work is mentioned by R. A. Peltzer (Vollmer 1926, 366 (R. A. Peltzer)) and by A. Pigler (Pigler 1956, vol. I, 329). Commenting the painting in 1967, Teodor Ionescu emphasized its elements of Renaissance tradition (Ionescu 1967, 55). Subsequently, the work was discussed by Miklós Mojzer (Budapest 1993, 234, no. cat. 60 (Miklós Mojzer)) and by Valentin Mureșan (Mureșan 2002, 124, fig. 2; Mureșan 2006, 199-200, fig. IV.4; Mureșan 2007, 100-102, cat. no. 58, fig. 58; Mureșan 2009, 21-22, fig. 2; Mureșan 2011, 306-307, fig. 1). Due to the painting's poor state of conservation, until now it attended only one international exhibition, namely *Baroque Art in Central Europe. Crossroads*, organized in Bu-



dapest during the International Year of the Baroque (1993).

### 3. Conclusions.

The restoration works, whose necessity was strongly emphasized already in 1993 by Miklós Mojzer, reintroduced in the exhibition circuit a valuable painting with religious subject, important for a better knowledge of the activity of Paul Juvenel the Elder, as one of the important representatives of the Nuremberg School in the first half of the 17th c., but especially of his attitude toward the Counter-Reformation, as well as toward some aspects of that's age religiosity. By removing the parquetry added in the late 19th c. in order to strengthen the lime tree wood panel, on its backside was discovered an inscription painted in the 17th or rather 18th c. with black paint. It shows that at

that time this signed and dated work was attributed not to Paul Juvenel the Elder, than to a painter from the De Vries family. Actually, the strong influence of Hans Vredeman de Vries and Salomon Vredeman de Vries on Paul Juvenel the Elder, confirmed once more by this inscription, led to confusion. The record of the monogram PJ (belonging to the true author) in the handwritten catalogue of Baron Samuel von Brukenthal's Gallery indicates that at c. 1800 the painting had already been carefully and critically examined. The subsequent research confirmed with so much authority the attribution of this painting to Paul Juvenel the Elder, that the recently discovered inscription was not ever mentioned, although it remained visible until the wooden parquetry was added on it.

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## LISTA ILUSTRAȚIILOR

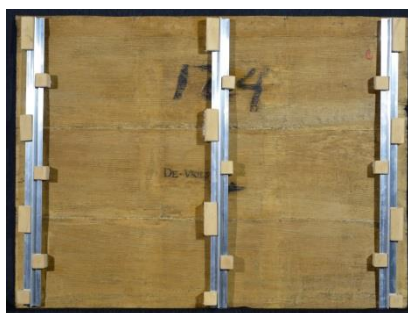
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2. The backside after restoration.



3. The backside after the removal of the cloth pieces.
4. The red wax seal remain.



5. The elimination of the stringpieces.
6. The backside after restoration.
7. Detail of the new consolidation system.





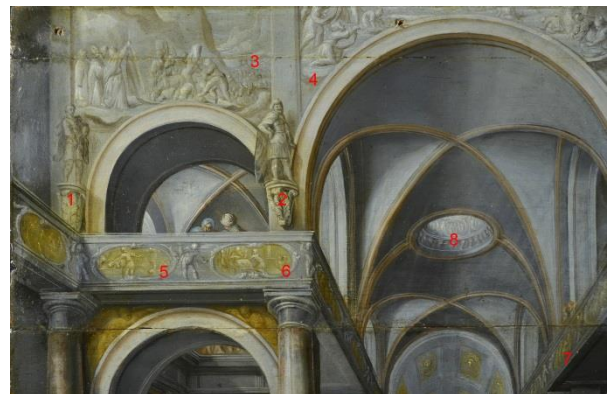
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10 St. Peter's Basilica in Rome. The nave added by Carlo Maderno. Current state.

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30. Paul Juvenel the Elder, Jesus Cleansing the Temple (1636). Brukenthal National Museum, Sibiu, Romania. Detail. The painter's signature and the date.



## THE RESTAURATION TREATMENT OF AN AUSTRO-HUNGARIAN HELMET

Călin BOBIC\*

**Abstract:** *Arms Collection of the Altemberger House; The Museum of History is an important element of the Brukenthal Museum Complex Heritage as through its' composition and age provide information about the evolution of weapons types used throughout the history of Transylvania. This paper focuses on the restoration of an Austro-Hungarian helmet.*

**Keywords:** *restoration, metal, helmet*

**Rezumat:** *Colecția de arme a Muzeului de Istorie – Casa Altemberger reprezintă un element important al patrimoniului Complexului Muzeal Brukenthal din Sibiu deoarece prin componența și vechimea sa oferă informații despre evoluția tipurilor de arme folosite de-a lungul istoriei Transilvaniei. Lucrarea de față tratează procesul de restaurare a unei căști austro – ungare*

**Cuvinte cheie:** *restaurare, metal, cască*

The Austro-Hungarian Helmet is part of the Altemberger House-History Museum weapon collection, is dated to the end of the nineteenth century – beginning of the twentieth century, specifically between the years 1880 - 1920.

### Description of the object

The helmet was made of leather, wood and metal belonged to the Austro-Hungarian Empire. In front it had the representation of the two-headed eagle emblem with the inscription *Für Köenig und Vaterland*.

The metal ornaments were made of brass, punched, fretted, embossed and riveted, placed on top and on the sides of the helmet. The dimensions are L: 26 cm, L 15 cm, H: 23cm.

### Diagnosis

The conservation status of the object is somewhat satisfactory, presents discontinuous and uneven surface deposits of products specific to copper, clogged dirt and dust on the entire surface. Analyzing these issues we conclude that the piece requires thorough restoration interventions, for optical display in the arms collection

### Restoration and Conservation of the Object

The helmet was first disassembled into its elements. The conservation treatment applies on

the metal ornaments were as followed:

- Dusting;
- Degreasing with acetone with analytical purity;
- Cleaning with nonionic detergent Romopal OF-10 in 1% concentration;;
- Cleaning with 10% concentration solution of orthophosphoric acid combined with intermediate fiberglass brush strokes under running water until the complete disappearance of corrosion products existing on the surface of the objects (Stambolov 1985);
- Neutralization in distilled water and drying in ethyl alcohol of analytical grade;
- Balistol final coating (White 1995, 5).
- The leather was emolliated with *Lapte Doina*
- The mounting of the item
- Protection coating with silicone grease.

### Conclusion

Restoration of an object follows a technological flow after the evaluation of the conservation status and the specific characteristics of the piece to display optimally for the general public.

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## LIST OF ILLUSTRATIONS

1. Before restoration
2. After Restoration

## LISTA ILUSTRAȚILOR

1. Înainte de restaurare
2. După restaurare



1. Before restoration



5. After Restoration



## THE RESTORATION OF THE WOODEN SUPPORT BELONGING TO ONE OF THE ROYAL DOORS FROM THE BIG ROYAL CHURCH IN TÂRGOVIȘTE, DÂMBOVIȚA COUNTY ICONOSTASIS

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**Abstract:** *the restoration interventions executed on the wooden support level belonging to the right royal door from the Big Royal Church iconostasis, from the National Complex „Curtea domnească” in Târgoviște, Dâmbovița county, have been executed in the restoration laboratory of the Brukenthal National Museum, for about one year, and they implied complex interventions, especially when it came to removing the previous inadequate interventions, and the consolidation of the fragments from the original wooden support.*

**Keywords:** *royal door, degradation, consolidation, conservation, restoration*

**Rezumat :** *Intervențiile de restaurare executate la nivelul suportului din lemn aparținând ușii împărătești drepte din componența iconostasului Bisericii Mari Domnești, edificiu aflat în cadrul Complexului Național Muzeal “Curtea Domnească”, din Târgoviște, jud. Dâmbovița, au fost executate în cadrul laboratorului de restaurare al Muzeului Național Brukenthal, timp de aproximativ un an, și au presupus operațiuni complexe, mai ales în ceea ce privește îndepărtarea intervențiilor necorespunzătoare, executate anterior, și consolidarea fragmentelor păstrate din suportul original din lemn.*

**Cuvinte cheie:** *ușă împărătească, degradare, consolidare, conservare, restaurare*

The precious sculpted and painted ensemble, the iconostasis of the Big Royal Church in Târgoviște, Dâmbovița County, has been executed in the atelier of the Royal Court in 1697.

The royal doors present an ample version of the Annunciation, and four club shaped medallions that hold the representations of the evangelists' symbols. The sides are decorated with images representing the prophets David and Solomon. (Porumb, 1998, 444).

The elements decorating the iconostasis have a floral ornamentation, heraldry, anthropomorphic and zoomorphic motifs also being present.

According to the inscription on the back of the door on the right side, they have undergone an inadequate completion, consolidation and du-

plication intervention, on the wooden support level, in 1929.

According to the bulletin executed by expert biologist PhD Livia Bucșa, the support, executed from linden wood presents the traces of a strong xylophages insects *Anobium punctatum* attack, which produced significant losses of constituent material, especially in the upper area, on the sculpted decoration level, and, also, on the extremities level (Fig. 1). One can deduce that only about 20% of the original wood mass is still preserved, and this fact explains the high frailness of the item. In the present, the attack is no longer active. The back of the door has been duplicated on about 75% of the entire surface with panels made of linden wood, cut tangentially, mechanically processed and consolidated with massive me-

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tallic elements, inserted in a bitumen layer, which had the role of affixing the original wooden panel upon the one applied in the restoration intervention. Some of these metallic elements belong to the original structure of the doors, increasing their weight considerably. The completions executed on the sculpted ornaments level, in the upper area, have also been made of new linden wood, coloured in a greyish brown shade, and do not present any xylophages insects attack. They have undergone a preventive treatment with a mixture of bitumen dissolved in an organic solvent. Both the doors present metallic hinges and traverses in the inferior areas. The tensions generated by the metallic elements, which have suffered oxidation processes along time, have produced losses of wooden material.

On the entire surface of the wooden support cleavages, rifts and fractures, due to these tensions, and also accentuated frailness produced by the xylophages insects attack and by the excessive humidity in the church, which increased the porosity of the wood, can be observed. The frailness is visible both on the support and the painted layers level, which have lost their cohesion. The losses of painted layers are visible as far as the ground or even the support level.

The excessive humidity has led to the loss of the cohesive qualities of the adhesives, and to the dusty effect of the painted layers. Their accentuated frailness is also accentuated by the rifts and fractures on the wooden support level, which cross the panel from the back to the front. The surfaces decorated with golden leaf present numerous degradations, losses and attrition signs. The losses of colour, due to functional attrition, can be observed mostly on the extremities and on the marginal areas, these being the most exposed to frequent handling during the religious services.

Adherent deposits of grime and dust are visible on both the back and the painted surface.

The consolidations performed on the wood level, which consisted in thinning the original support and doubling it with a new panel of linden wood, applied over a connecting adhesive layer of bitumen, represent the most im-

portant previous conservation intervention executed on this item. In the composition of the bitumen layer, a series of metallic elements have been inserted, with the role of reinforcement for the structure, in order to increase its mechanical resistance.

On the painted surface level, a layer of Japanese paper has been applied, in order to protect them when the restoration interventions on the frescoes in the church had started.

As a first step of the restoration process of the royal door, the removal of the superficial grime was performed.

This operation was followed by the prophylactic consolidation of the preparation and colour layers, called facing. The intervention consists in covering the painted surface with a layer of Japanese veil, so that the interventions executed on the wooden support level will not cause deteriorations of the painting. Also, the operation is necessary in order to prevent possible losses on the painted layer level, which could present frailty or detachments, and has a consolidating role. The veil was affixed on the entire surface of the door with skin glue with a 3-6% concentration (Fig. 2).

The specific degradations of the painted layers – this being the name used for the layers applied over the wooden panel, both preparation layers and colour layers – were represented by „blind” detachments, rifts and also lacunae and attrition. In order to stop the evolution of this kind of degradations, a structural consolidation of these layers was requested, following the prophylactic consolidation. Therefore, this operation was performed in several stages, the first one being executed before the interventions on the wooden support.

The veil on the painted layers was softened with a solution of glue with a 2% concentration, and the surface was pressed with an electric spatula, and then cold marble presses were applied, for the consolidation to be realized. For the protection of the painting, and also in order to ensure a better sliding of the spatula, a thermo-resistant foil has been used.

Another stage of the structural consolidation consisted on the application of several neutral

paper layers, with an additional protective role, for the execution of the restoration operations on the wooden support level (Fig. 3). Due to the fact that, after the visual investigations, the reduced width of the original panel could easily be observed, and its mechanical resistance was diminished by the existence of the galleries resulted from the xylophages insects' attack, this additional consolidation method was chosen. Thus, the resistance of the original panel, and the painted layers covering it, was increased, in order to safely perform a whittling of the layers applied on the back during the previous restoration interventions, which were to be removed.

The next intervention consisted in the removal of the completions added to the back of the panel. The wooden elements, used for doubling the support, attached with the help of metallic screws, were detached. The operation was performed gradually, respecting the order in which these elements have initially been applied, in order to avoid exerting additional tensions (Fig. 4).

The thinning of the bitumen layer was mechanically performed, with various types of tools, like chisels and scalpels, thus avoiding the use of solvents which could have produced the softening of the bitumen layer applied over the original support, and therefore affect their integrity (Fig. 5). Due to the reduced width of the panel, a possible softening of the bitumen layer might have caused the migration of the bitumen based solution to the painted surface. During this operation the metallic elements inserted in the bitumen layers, with a reinforcing role, were also removed (Fig. 6).

For the completions on the support level, after the removal of the linden doubling, several elements, made from sculpted balsa wood, were glued to the support. These elements were added in order to recompose the original support (Fig. 7).

The structural consolidation of the support implied its impregnation by injecting and brushing over the surface a Paraloid B72 based solution, methyl acrylic copolymer, characterized by a good chemical stability (Istudor,

2011, 246), dissolved in ethyl acetate, known in the field literature as ethylic Esther or acetic ether, an Esther of the carboxylic acid which decomposes at high temperatures (Leahu, 2006, 52), with a concentration of 6-12%. It was used in order to increase the resistance of the wood composing the support of the royal door.

The mechanical consolidation of the wooden support implied several stages, respectively the gradual application of various types of consolidating agents.

Therefore, as a first stage, a fibreglass layer was applied over the entire surface of the original support, in order to create a homogenous surface over which the subsequent consolidating layers were to be applied on. It was affixed on the surface of the wood with Devcon epoxy resin (Fig. 8). This layer has the role of increasing the mechanical resistance of the wood used in the item. Using this method of consolidation constituted one of the few options corresponding to the restoration principles, taking into account that the previous conservation and restoration interventions had proved to be irreversible.

In the superior part, before Balsite epoxy stucco backing replacing the bitumen completion, was applied, a system which would enable its maintenance only on the wooden surface, avoiding the free spaces, was created. In order to prevent possible leakage of the stucco through the cut out spaces, cellulose paste, which could easily be removed after finishing the consolidation process, was applied. At first, a network made of fibreglass rails was created, having the role of the new, lighter, reinforcement system, which will not suffer any significant structural modifications along time, different from the previously used metallic one, which, in this case, has suffered oxidation processes.

The mechanical consolidation of the wooden elements, detached from the support, i. e. the conserved fragments extracted from the lower and left parts of the door, was followed by their reattachment with epoxy resin. This intervention implied their adhesive reattachment,

supplemented with wooden nails. The next step was laying the epoxy stucco (Balsite) on the backside, in order to complete the free space. It was applied over the fibreglass rails system, having the consolidating and reinforcing role that the bitumen previously held (Fig. 9).

The removal of the epoxy stucco surplus, and the finishing of the completions, constituted the operations preceding the reapplication of the linden top, previously used for the closing of the ensemble. After the removal of the bitumen layer on its surface, the linden top was reused, due to the fact that it has proven itself to be the best choice, under these circumstances.

Thus, the linden top was reapplied with the help of wooden nails, supplemented by thermoplastic and solvent soluble, formed from linear macromolecules epoxy resin EPO 150 transformed in a rigid, insoluble and churlish macro-molecule after the mixture with the hardener (Istudor, 2011, 250), which was used, in this case, for its superior mechanical qualities in binding wooden structures, in an adhesive junction (Fig. 10).

The metallic elements sustaining the door, the hinges and the clamping system, underwent a superficial cleaning process executed with a fibreglass brush, in order to remove the adherent deposits of grime (dust, detached corrosion products). Then, the following intervention was the skimming in organic solvents (acetone), with the help of steel wool. The removal of the corrosion products and of the grime on the objects surface was executed with a circular brush. Once cleaned, they were polished with Ballistol<sup>R</sup> lubricant for metallic elements, in order to prevent subsequent incurring of corrosion products (Fig. 11, 12). After cleaning the sustaining elements, they were reattached on the door, respecting the order in which they were detached at the beginning of the restoration process (Fig. 13).

After executing the consolidation and cleaning operations on the backside level, a series of interventions on the painted layers level followed.

In order to have access to the painted layers, the removal of the Japanese veil, and the neutral paper laid upon it for protection and consolidation, was executed.

The consolidating layers were removed using cotton tampons, immersed in hot water. By dampening small areas, followed by the exsiccation with dry cotton tampons, a gradual removal of the protective layers, and of the glue surplus on the surface, was obtained.

The prophylactic consolidation implied the application of a new Japanese veil layer over the painted surfaces, with skin glue in a 3 % concentration, and the structural consolidation process was repeated.

The removal of the epoxy stucco surplus in the floral decorated area implied the use of abrasive heads of various shapes and hardness, attached to the technical suspended motor (Fig. 14).

The interventions executed in the present were conditioned by the previous ones. Therefore, similar solutions were chosen, except for the fact that the materials used in this intervention do not exert tensions of any kind on the support level, and, also, they are compatible with the ones used before, thus avoiding possible detachments or losses of material in the future.

Also, the weight of the item was substantially diminished because of the use of epoxy stucco with fibreglass reinforcement replacing the bitumen filling reinforced with a metallic network.

The restoration of the royal door from the Big Royal Church in Târgoviște, Dâmbovița County iconostasis represented a challenge due to the fact that the previous consolidation, conservation and restoration interventions proved to be irreversible. Under these conditions, the solution chosen for the partial re-establishing of the integrity of the item was their removal, as much as possible. The restoration interventions implied choosing and applying tested materials, compatible with the ones previously used, with the difference that the new ones will not produce subsequent degradations on the item, and they will allow keeping the integrity of the original elements.



Therefore, the methods used previously „dictated” the choice of the ones executed in this case, with the difference that the materials used in the present restoration are reversible

and do not produce tensions on the original elements level.

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3. Detail; supplementary consolidation of the painted layers
4. Detail; the removal of the wooden elements on the backside
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14. Detaliu; îndepărtarea excesului de stuc epoxidic de la nivelul decorului sculptat



1 Ensemble before restoration



2 Detail; prophylactic consolidation of the painted layers



3. Detail; supplementary consolidation of the painted layers



4. Detail; the removal of the wooden elements on the backside



5. Detail; thinning of the bitumen layer





6. Detail; the removal of the metallic elements



7. Detail; completion of the lacunae on the wooden support level with Balsa wood elements



8. Detail; the consolidation of the support with fibreglass



9. Detail; structural consolidation of the support with fibreglass rails and epoxy stucco



10. Detail; reapplying the linden wood doubling on the back





11. Detail; mechanical cleaning of the metallic elements



12. Detail; passive process of the metallic elements





13. Backside ensemble after restoration

14. Detail; removal of the epoxy stucco excess on the sculpted decoration level

## MEDIAEVAL STOVE TILES WITH EMBOSSED ORNAMENT. RESTORATION STAGES THROUGH DIFFERENCED METHODS

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**Abstract:** Princely residence for almost four centuries, Târgoviște was one of the most important mediaeval towns from outside the Carpathians. In this context, the existence of several important mediaeval ceramic workshops led to the attainment of some stove tiles with a remarkable artistic and technical quality. Chance discoveries and systematic archaeological researches led to the identification of some ceramic stove tiles, unglazed, with heraldic or decorative symbols. Because of their distinct artistic and historical importance, these artefacts were chosen to be part of the permanent exhibition of the Brancovan Palace Museum from Potlogi. The pieces were conserved and restored in the laboratory of the Princely Court National Museum Complex from Târgoviște, the subject of this article being represented by the intervention stages.

**Keywords:** restoration, consolidation, reconstitution, filing, chromatic integration

**Rezumat:** Reședință domnească timp de aproape patru secole, cetatea Târgoviște a fost unul dintre cele mai importante orașe medievale din spațiul extracarpatic. În acest context, existența unor importante ateliere medievale de ceramică a dus la realizarea unor cahle de o calitate tehnică și artistică remarcabile. Descoperirile întâmplătoare și cercetările arheologice sistematice, au dus la identificarea unor cahle ceramice, nesmălțuite, cu simboluri heraldice sau decorative. Datorită importanței lor istorice și artistice deosebite, aceste artefacte au fost selecționate pentru a face parte din expoziția permanentă a muzeului din palatul brâncovenesc de la Potlogi. Pieseile au fost conservate și restaurate în laboratorul Complexului Național Muzeal „Curtea Domnească” din Târgoviște, etapele de intervenție reprezentând subiectul articolului de față.

**Cuvinte cheie:** restaurare, consolidare, reconstituire, plombare, integrare cromatică

Târgoviște was one of the most important mediaeval towns from outside the Carpathians, with an antiquity which descends towards the middle of the 14<sup>th</sup> century. For more than three centuries it was princely residence, and kept the capital status of Wallachia for more than two hundred years. As a consequence, the actual town's territory now represents an exceptional historical area, proven by the various, valuable and diverse archaeological discoveries.

A special category among them, attested by the quantity, the quality of execution and the typological variety is represented by the fireplace tiles, discovered in the mediaeval town's historical hearth. Found after researches or discovered by chance, some artefacts prove not only the exist-

ence of some local workshops, but a privileged status for those who ordered such artefacts as well. For centuries, the fireplaces, made by ceramic plates, flat or tubular, were in a continuous aesthetic and technical innovation, being the support of some figurative representations, laic, iconographic or, most frequently, heraldic, transforming this heating plant into an object with special artistic value, “symbol of social status, of economic power, of religious belief, of political fidelity for well-off or rich families” (Bucur 2006, 13; Cursaru-Herlea 2010, 295).

In the beginning phase, the stove tiles had the shape of water pots, which covered the brick structure of the fireplace. Afterwards, they became flat, form which is still kept, the fireplaces

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being made of plates printed in a pattern. Between the 14<sup>th</sup> and 16<sup>th</sup> centuries, stove tiles of different types and forms were used, from the concave type, close to the common ceramic, with round opening, square or lobate, to the semi-cylindrical one, decorated through fretwork, and in the end, the simple flat one. Their form depended on the stove tile's disposition in the fireplace: at the base, bottom, corners or on the crowning. Since the beginning, the stove tiles were decorated, because, aside from their functional attributes, they constituted an important interior decoration component. The stove tile's model was obtained through its fingerprinting in clay, using a pattern with fine fibre (sycamore, linden, walnut, beech etc.), from which the pressed clay slowly detached, and the ornaments' printing was clearer (the trace of wood fibre didn't appear) (Goman 2007, 30). In certain situations, for this, stone, burnt clay, metal or gypsum patterns were used (Istrate 2007, 22-23).

Three of the four restored stove tiles, which occasion the writing of this article, are part of a family's life story, which was confused with the history of Wallachia in 16<sup>th</sup>-18<sup>th</sup> centuries. The decoration of these pieces, represented by the double-headed eagle, leaves no space for any other interpretations but the Cantacuzino family, which was established in the (*aulic*) space of Târgoviște through possessing numerous high offices, but especially through the enthronement of three of their members: Șerban Cantacuzino (1678-1688), Constantin Basarab Brâncoveanu (1688-1714) and Șerban Cantacuzino (1714-1716).

After the finalisation of the Brancovan Palace's restoration from Potlogi, Dâmbovița County, followed the themes conception stage, concerning the creation of an enjoyable ambience in the halls that constitute the permanent exhibition of the palace, reason for which, from the mediaeval ceramic collection, several pieces were chosen to be restored and exposed afterwards. Among them are four fireplace stove tiles, unglazed, representative for the second half of the 17<sup>th</sup> century, three of them having as central motif the double-headed eagle.

Aquila is the first rank heraldic bird which symbolizes courage, determination and high aspiration. The symbol of the Byzantine Empire, banner of the Carolingian Empire and afterwards the chevron of Austria and Russia was represented by the double-headed eagle. In the Romanian heraldry, it can be seen in the Cantacuzino family's emblem and in the coat of arms of Curtea de Argeș town (Georgescu 2000, 57-58).

In this article, the differenced method of restoration of unglazed stove tiles will be shown, amongst which a stove tile pattern from 1666 can be found as well.

**1. Plate stove tile** (Fig.1) was discovered in 1971, after the archaeological researches performed in Târgoviște, in the point of Piața Tricolorului, and was given to our institution by the architect Cornel Ionescu. The piece was made of clay, having as degreasing substance the fine sand, modelled through manual pressing in wooden pattern, and suffered oxidizing combustion, after which it gained the crimson-red colour. The stove tile's area is rectangular and three of its corners are missing (approx. 50% of the stove tile). The ornamental composition stands out, and the decoration consists in floral and plant motifs, symmetrically done both horizontally and vertically. The central motif is represented by a flower, from which four tulips stems pop out, pointed towards the four corners. The stove tile's sizes are 24 centimetres in length and 21 centimetres in width.

The first direct intervention on the stove tile consisted in its immersion in a tub of water with C2000 detergent, in which we intervened mechanically, by brushing, in order to remove the sediments that existed on the area of the piece. After drying at the ambient temperature, we proceeded to the structural consolidation stage (Fig. 2), using Paraloid B 72 solution, 5% concentration, rendered soluble in ethyl acetate (Iamandi 2011, 170).

For the reconstitution of the form and the existing decoration on the area of the initial fragment, several clay moulds were made (Cursaru – Herlea 2010, 297) (Fig. 3). After the fingerprinting of the whole area of the stove tile and the gluing of the obtained mould, we proceeded to pouring in shape of the Ceresit 33 fine grouting mortar, mixed with modelling plaster (3/2 parts). For the reconstitution of the embossed ornament on the new-made areas, the adequate tools were used (scalpels, fine spatulas), which helped obtaining the detailed finishing of the decorative elements (Fig. 4). The final restoration stage consisted in the chromatic integration of the reconstituted portion, for which tempera colours mixed with acrylic ones were used, contributing to the increase of the pictorial layer's adherence.

**2. Plate stove tile** (Fig. 6) was discovered as a result of the clearing interventions of the princely palace's ruins from Târgoviște, by Virgil Drăghiceanu, historic and academician, between 1934 and 1938. This piece was restored in the 80's, but

without the reconstitution of its decorative elements in the area of the new grout.

The piece is part of the intensely (*micasate*) stove tile category, obtained through pattern foundry, where, previously, mica powder was strewn, which, through the compaction of the clay in shape, was printed on the area of the piece (Goman 2007, 30). Relating to the ornamental field typology, the ornament of the stove tile is embossed, having as central motif the two-headed eagle, with its wings wide open. Between the two crowned heads of the eagle there is a big dark imperial crown, considered as symbol of the Cantacuzène's byzantine lineage. Next to the claws of the two-headed eagle, there are two rampant lions, and at the base of the tail usually existed the potter's marks. The pearled locket is surrounded at the lower part by two water pots, from which a grapevine string arises from each of them. The linear winding paths intertwine with the pearled locket, uniting in a continuous decoration above the central crown. At the upper corners of the stove tile and inside the locket, in order to complete the grapevine motif, grape clusters can be seen. The stove tile's sizes are the following: 19 centimetres in length and 18.3 centimetres in width.

After the previous restoration, the inlay of the missing portion was made with an excess of material, granting a distorted aspect of the piece, and the removal of the old grout presumed an additional tensioning of the stove tile. Because of that, the correction of the added areas was made through the abrasive burnish of the areas, until the real sizes of the piece were obtained (Fig. 8).

The lack of reconstitution of the decorative elements on the completed area of the stove tile did not grant a unitary artistic aspect of the piece. We do not know the reason concerning the unfulfillment of this decoration during the previous restoration, but we consider that we are able to bring this piece back to its initial artistic form. Through this approach, we proceeded to the reconstitution of the decorative elements, these being partially made by modelling clay fingerprinting and, partially, by grout pouring directly on the existing plaster support, then finished by engraving (Fig. 8).

The integrity of the form and ornament of the stove tile were practically completed by the stage of artistic finishing, when the reconstituted area was chromatically integrated in tones close to the

original colour, using a mixture of tempera and acrylic colours (Fig. 9).

**3. Stove tile pattern** (Fig. 10), of unknown origin, was used in the making of the rectangular fireplace plates, with full front. Pursuant to the description offered by Mrs. Maria Venera Rădulescu, in the pattern's field we can see the two-headed eagle with crowned heads, open beaks, wide-open wings and its claws free. Tendrils with leaves, buds and flowers come out from the beaks and between the heads of the chimerical bird an open crown, artistically represented, and are reproduced. The body of the bird is outlined with a precise, elegant line, and the plumage was made with a lot of refinement. The lower part is decorated with half-palmettos and tendrils which form volutes. In the lower part of the stove tile there is an inscription, with Cyrillic letters, disposed on two rows, which contains the name of the artisan „IOH ME GŌ IX” and the year 1666. The decorative composition is surrounded by an outside inclined border and decorated with acanthus flowers. The sizes of the stove tile pattern are: 21.5 centimetres in length, 30 centimetres in width and 2 centimetres in height.

In regard to the conservation status, the pattern divided into fragments (four fragments), and only the lower half of it remained. For its reconstitution, both graphic delineation (Rădulescu 2001, 125) (Fig. 13) and one of the plate stove tiles, from the archaeological ceramic collection of our institution, which has the same decorative components, were used.

The restoration stages of this piece were made in the same way as the plate stove tile from point 1 (Fig. 10, 11, 12) with mentioning that, for the reconstitution of the decorative field from inside the border, the left side half was made by fingerprinting with modelling clay of the embossed ornament from the initial stove tile, and for the other half, the ornament was made by sculpting and modelling in the new support (Fig. 14). The last applied operation consisted in the chromatic integration of the added area, at which tempera colours mixed with acrylic ones were used (Fig. 15).

**4. Plate stove tile** (Fig. 16). The fourth piece shown in this article is a fragmentary stove tile, (*micasată*), having the same decorative composition as the one that the pattern shown at point 3 had, but with larger sizes. The decorative composition is framed by a wide border, inclined towards the field, decorated with acanthus flowers.

The sizes of the stove tile are the following: 32.5 centimetres in length, 27 centimetres in width and 5 centimetres in height.

After covering the active conservation stages (washing, drying, impregnation) (Fig. 17), we proceeded to the reconstitution of the stove tile's embossed decorative elements, stage which required the fingerprinting of the lower part of the stove tile pattern. In the obtained clay moulding we poured Ceresit 33 fine grouting mortar, mixed with modelling plaster. The negative result was skinned with silicone oil, pouring grout and this way obtaining the positive. After the fingerprinting with modelling clay of the border, we poured the positives, and the resulted elements were attached to the initial fragment. On the back of the stove tile, we finished the equalization completions with grout, restoring the whole shape (Fig. 18), except for the elements of the right upper corner decoration. On the area of the new grout, where the decoration was inexistent, the other details (the wing, one of the eagle's heads, the crown and plant decorations) were reconstituted by carving. The whole result was finished using the initial details as a model, granting compositional unit, stylistically and visual coherence to the decorative field of the stove tile.

For the chromatic integration of the added areas, tempera colours mixed with acrylic colours were used, in the same case as for the other three stove tiles. This stage led to the obtainment of the substantial integrity of the stove tile, and for the recovery of the aesthetic status of the piece as well (Fig. 19).

After finalising the restoration of the four stove tiles, with embossed ornament, we can conclude that the direct intervention method regarding the recovery of the shape, the decoration and, implicitly, the rescue of these valuable objects, was made differenced, as a result of their distinct features, using fingerprinting methods, pouring and artistic reconstitution, conditioned by the obtainment of the negative and positive decoration, the same way as we intervened in the case of the ceramic pattern.

In order to create a pleasant ambient in the exhibition halls of the *brâncovenesc* palace, the stove tiles can represent ideal models for the reconstitution of the fireplaces from the *Constantin Brâncoveanu* period, granting an additional sumptuousness and originality to the rooms of the palace, harmoniously integrating in the eastern ambient, represented by the stucco work in fresco.

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13. Reconstituire grafică a vîlului bicefal (după Maria Venera Rădulescu, Argesis 2001)
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18. Cahla după reconstituire
19. Cahla după restaurare





1. The aspect of the plate stove before restoration



2... The plate stove after cleaning and consolidation



3. The reconstruction stage



4. The aspect of the plate stove after the reconstruction of the shape and ornamentation



5. The plate stove after restoration







6. The plate stove before restoration



7. The aspect of the plate stove after the removal of the colour and putty layers



8. The reconstruction of the relieved decora-



9. The plate stove after restoration





10. The aspect of the plate stove before restoration



11. The plate stove after the washing and consolidation operations



12.. The plate stove after the affixing of the fragments



13. Graphic reconstruction – two-headed eagle  
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14. The plate stove after reconstruction



15. The plate stove after restoration



16. The aspect of the plate stove before



17. The plate stove fragment after the cleaning and consolidation operations



18. The plate stove after reconstruction



19. The plate stove after restoration

## MILITARY DOCUMENT FROM THE FIRST WORLD WAR CONSERVATION AND RESTORATION

Radu SCHULLER\*

**Abstract:** *The most prevalent support for text and image is the paper. Over the years, different raw materials were used in obtaining the pulp. Therefore, we must place a great importance in the identification of the old paper' structure, in order not only to cut out the destabilization phenomenon, but to authentic cate it. A particularly useful for the study of paper is optical microscopy. This paper presents the various stages of a document restoration and preservation, a nineteenth century document entitled: " Brevet from the highest order of His Majesty King Ferdinand I" dated in 1921. To make the most of it, the piece was presented, in 2012, at the National Show from Craiova.*

**Keywords:** *military document, paper, degradation, restoration-conservation*

**Rezumat:** *Lucrarea de față prezintă etapele de restaurare și conservare ale unui document din secolul al XIX-lea: „Brevet din Înaltul Ordin al Majestății sale Regelui Ferdinand I”, datat 1921. Piesa a fost valorificată expozițional în cadrul Salonului Național de Restaurare Craiova, 2012.*

*Pentru restaurarea Brevetului, în evaluarea stării de conservare și identificarea degradărilor s-a folosit examinarea cu ajutorul microscopului optic. A fost posibilă observarea unor detalii, care macroscopic nu ar fi fost vizibile și care au permis obținerea unor indicii privind structura hârtiei și aprecierea mai exactă a gradului de deteriorare al acesteia. De asemenea, au fost observate detalii ale tipăriturii și caracteristici ale cernelurilor folosite, aspectele observate dovedindu-se foarte utile în activitatea de restaurare-conservare a piesei.*

**Cuvinte-cheie:** *brevet militar, hârtie, degradari, restaurare-conservare.*

### 1. Brief History

The widespread support for text and image is paper. In order to obtain paper pulp different materials have been used over time and therefore identifying the structure the old paper has a special importance, not only to halt the degradation phenomena ( Moldoveanu 1999).

On the European scene the orders were conferred exclusive to officers, soldiers being awarded other decorations. In order to "align" to the European customs, after the France model, King Ferdinand promulgated the High Decree, which established the Military Order of War "Michael the Brave", organized in three classes, only five weeks after Romania entered the war. This order became the most important distinction that could be given to officers for acts of bravery or heroism. Within the same establishing decree it was stipulated that the medal "Military War Virtue" was reserved exclu-

sively for acts of bravery of the lower ranks. (Crucea Comemorativă a Războiului 1916-1918).

In 1917 were instituted "The Queen Maria Cross" health war medal divided into three classes. It was given to medical and sanitary staff and all persons involved in the care of wounded and sick in war-time or during major epidemics. When Romania entered the war (08.15.1916), the legal possibilities to decorate the deserving military is reduced to the "war" insignia of the "Star of Romania" Order in the ranks of Knight, Officer and Commander, and the two classes of the medal "Military Virtue of War". Inspired by the French model of the "Commemorative War Cross 1914-1915" Romania has set itself a "Commemorative Cross of War 1916-1918", conferred to all participants in the military campaign. On the ribbon decoration could be attached a series of straps that were inscribed with the names of localities or areas of conflict where major battles were given. The

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Commemorative Cross of War 1916-1918, was awarded to all participants in the First World War (Revista Prahova Eroica, 2012, 21-22)

## 2. Description of the piece:

Title: Military Brevet ("Brevet of the highest order of His Majesty King Ferdinand I" given to the soldier Mihai Stanciu that was awarded the "Commemorative Cross of War 1916-1918, with strips Danube-Carpathian-Mărășești"), printed in 1921. The document is part of a private collection. Paper is made from mechanical pulp and has the following dimensions: 214 mm wide, 342 mm length.

## 3. Artistic description of the document:

The text is printed on one column, with little ornamentation; the only ornament that could be find is on the top, namely the design that represent the emblem of the Royal House of Romania. In the document there are a series of writings in black ink and blue (the name of decorated soldier, who received the order, the brevet dating and two signatures).

## 4. Conservation status:

The paper has been affected over time by physical factors (temperature, humidity, light) and various chemical agents (air pollution). (Probleme de patologie, 1974, 110)

It was observed degradation of cellulose fibres caused more likely by the ink composition (acidic) of the handling and inadequate storage conditions. (Probleme de patologie 1976, 120-12)

Also are visible adhering dirt traces, grease stains, deposits of dust and organic debris as well as different mechanical degradation: bends, folds,

fringed edges and corners (the superior ones), tears and loss of the material (Fig. 2). The paper has a slightly rough aspect, yellow and brown spots in marginal areas, halos of moisture and traces of ink. The printing ink is black, is not soluble in water and hydroalcoholic solution, according to the chemical analyses.

## 5. Restoration treatment.

The Restoration operations were recorded in the restoration data sheet also the photo documentation for each stage of intervention are included (before restoration, during, after the completion of restoration).

The restoration treatments performed were: dry cleaning (dusting) using a soft, natural hair brush with light movements from the centre outwards; were used kneadable erasers for removing dust and adhering dirt; wet cleaning: buffering with cotton pads in hydroalcoholic solution at a concentration of 1:1; consolidation: Japanese paper veil was used to consolidate areas that had cracks and fragile areas, using as an adhesive CMC (carboxymethylcellulose) at a rate of 1-1.5% per 100 ml water. (Probleme de patologie, 1971, 75)

The next step was the filling of the loss with Japanese paper in the "double" technique, the adhesive used was CMC 2%. The holes formed in the paper were covered with Japanese paper fluff or "stripes" of Japanese paper. After the drying of the adhesive, the excess paper was cleaned with a scalpel and the ends were anchored with adhesive and pressed with a folder. Once the adhesive used to complement and strengthen, dried, the document was pressed, the paper excess was cut with the help of a metal ruler and a cutter.



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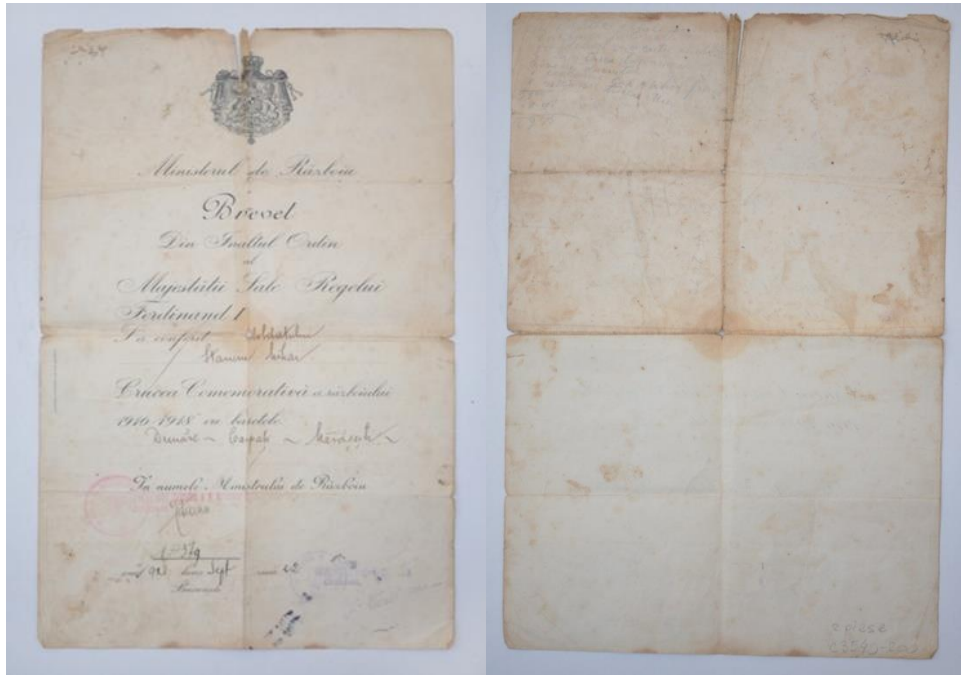
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## LIST OF ILLUSTRATION

- 1 Document before restoration front and revers
2. Degradation of the paper (fissure and paper loss)
- 3, Detail fissure, microphotography 32x
4. Mechanical cleaning with a scalpel
5. Cleaning with erasers
6. Consolidation
7. Filling of the loss
8. Brevet after restoration front and revers

## LISTA ILUSTRAȚIILOR

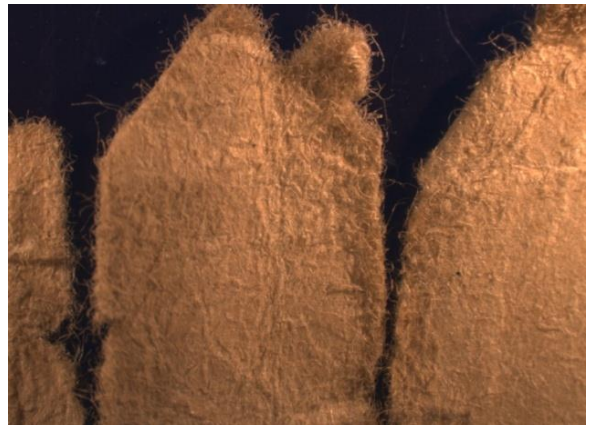
- 1 Document înainte de restaurare față și verso
- 2 Degradări ale suportului din hârtie (fisură și lipsa material)
- 3 detaliu ruptura - microfotografie, 32x
- 4 Curățarea mecanică cu bisturiul
5. Curățire mecanică folosind guma plastică
6. Consolidare cu vâln de hârtie japoneză
7. Completare cu hârtie japoneză
8. Brevet după restaurare – față (a) și verso (b)



1 Document before restoration font and revers



2. Degradation of the paper (fissure and paper loss)



3, Detail fissure, microphotography 32x



4. Mechanical cleaning with a scalpel



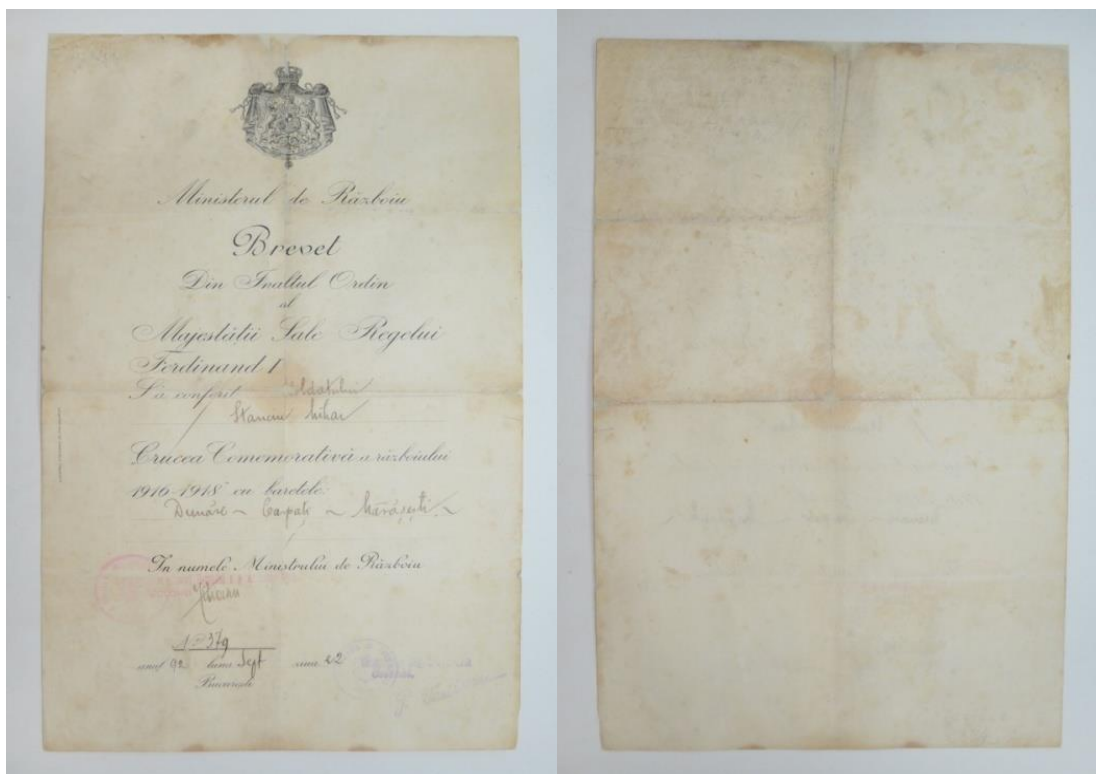
5. Cleaning with erasers



6. Consolidation



7. Filling of the loss



8. Brevet after restoration front and revers



## THE RESTORATION OF THE ROYAL ICON "THE ASSUMPTION OF MARY" FROM THE BIG ROYAL CHURCH IN TÂRGOVIȘTE, DÂMBOVIȚA COUNTY ICONOSTASIS

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**Abstract:** During the restoration operations performed on the royal icon with the theme „The assumption of Mary” the stabilization of the item as an ensemble composed of painted layers and wooden support, as well as rendering its appearance as close to the original as possible were taken into account. This intercession implied the visual harmonization of the original painting through an ample set of interventions with the purpose of either the total or partial removal of the repainted layers, the re-establishing of the stratigraphic integrity, and also a certain plaiting of the interventions with the original work of art.

Therefore, the message sent by the icon was not diminished, it was rather refreshed, and the original piece executed by the master of the Constantin Brâncoveanu era was not altered, perpetuating the clarity of the stylistic and iconographic tendencies in order to ensure the knowledge for future generations and the continuity of tradition.

**Keywords:** icon, restoration, conservation, repainting, tradition

**Rezumat :** În cadrul operațiunilor de restaurare a icoanei împărătești cu tema „Adormirea Maicii Domnului” s-au avut în vedere atât stabilizarea piesei în sine ca ansamblu pictural pe suport din lemn, cât și redarea unui aspect cât mai apropiat de cel inițial. Acest lucru a presupus armonizarea vizuală a picturii originale printr-un set amplu de operațiuni ce au avut ca scop, fie înlăturarea totală, fie parțială a repictărilor din vechime, restabilirea integrității stratigrafice, dar și împletirea subtilității intervențiilor cu opera originală.

Astfel, mesajul transmis de icoană nu s-a diminuat, ci mai degrabă a fost îmbogățit, iar originalul meșterului iconar al epocii Brâncovenești, nu a fost alterat, perpetuând claritatea tendințelor stilistice și iconografice pentru a asigura învățătura generațiilor viitoare și continuitatea tradiției.

**Cuvinte cheie:** icoană, restaurare, conservare, repictare, tradiție

The first iconographic representations of the Virgin Mary are attributed to Luca the Evangelist. The originals disappeared but it is believed that they have served as prototypes for later iconographic representations. The oldest, and most numerous frescoes representing the Virgin Mary were discovered in the Priscilla catacomb, later called the catacomb of the Virgin Mary, one of these frescoes, dating back from the second century A.D., represents the Virgin nourishing her child. Standing beside her a prophet is pointing at a

star. One can also find here other two representations of the Virgin Mary: the Annunciation and the Adoration of the magi (creștinortodox.ro 28.09.2015). The religious texts have also constituted a fountain of inspiration for the images representing the Virgin Mary. An example is the ensemble illustrating 24 scenes inspired by the psalm composed by Roman the Melod, and the prologue of the patriarch Serghie (Pr. Dr. Ene Braniște 1993,56).

The Virgin Mary is represented in iconography in

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different genres (after the Calcedon synod reconfirms her as the Mother of God), on the throne, as an empress; the leading Virgin (Hodigritia), in triumph, with her Son on her knees, or nourishing Him. This last posture is the most used in the western paintings. Other representations of the Virgin Mary are: the Virgin Mary Platytera, holding the baby Jesus on her chest and the Deisis, representing Jesus in a archbishop garb flanked by Joan the Baptist on his right and Mary, dressed in royal clothes, on his left. The iconographic representations of Mary also illustrate important moments of her life, such as the Conceiving of the Holy Virgin, The Birth of Mary, Virgin Mary blessed by the priests or The Virgin Mary entering the Church (Michel Quenot 1993, 33).

The royal icon with the theme „The assumption of Mary” from the Royal Court in Târgoviște is a part of the Big Royal Church iconostasis. The precious sculpted and painted ensemble was executed in the atelier of the Royal Court in 1697 (according to the inscription above the royal doors of the iconostasis), by the team composed by Ioan, Ioachim and Stan, lead by Constantinos, during the reign of Constantin Brâncoveanu (Drăguț, 1982, 394) (Fig.1).

The restoration of the icon was executed in the restoration laboratory of the Brukenenthal National Museum in Sibiu. The interventions were realized with the coordination of expert restorers Cristina Daniela Scărlătescu and Constantin Scărlătescu, and they encompass the dissertation on the score of which I obtained the Masters diploma within the History, Patrimony and Protestant Theology Department of the „Lucian Blaga” University in Sibiu.

The icon was painted according to the canon laws, keeping the basic traditional elements and also archaic ones, like the character in the inferior frontal part of the painting, under the coffin of the Virgin (Fig. 2). According to Leonid Uspensky, this man, called Athon, was a fanatic Jew who dared to touch the coffin. He added the fact that this detail is a apocryphal one.

Kontoglu offers sort of a different explanation. He claims that the man was a religious Jew called Jehonias, who was punished by the angel for being on the point of overthrowing the holy body. The opinion of the Church is that this element is without importance, and it is only a distraction from the image representing the Virgin, Jesus Christ and the rest of the suite (crestinortodox.ro 15.09.2015- 19:26).

The icon was executed on a walnut panel, consolidated with two semi-embedded traverses, made up of oak, with a trapezium section and splayed edges, both setting from the same part and crossing almost the entire width of the panel. On the painted surface, the panel presents a frame almost 5 cm. thick (Fig. 3).

The ground or the preparation layer is not too thick and was applied directly on the wooden support, with the help of a brush. It is visible and it can be analysed in the areas where the painted areas present lacunae. According to the chemical analysis bulletin, executed by PhD Polixenia Popescu, it consists of an inert material, calcium carbonate ( $\text{CaCO}_3$  - gypsum) and a binding media, animal glue, the main protein component of tissues (Istodor, 2011, 208). The preparation has a good adherence to the wooden support, which confirms the preservation of its stickiness and elasticity.

The sketch was made by incision of the contours. The engraving of the sketch used to be executed on icons especially in the areas where dark colours were to be applied, which usually covered the lines entirely, and it was realised with the help of a pin with a handle (Monahia Iuliania, 2001, 85).

The colour layer, executed with watercolour mixed with an emulsion, was applied over the gold leaf (present on the entire surface of the icon). The identified pigments are: golden blue (a very thin green layer containing copper based pigment, possibly malachite), gold (very thin gold leaf), golden green (very thin green layer applied on gold leaf), red (red mercury based pigment, possibly cinnabar), bluish black (dark blue and green colour layer containing green and dark blue pigments, possibly azurite and malachite), lead white and a ochre-brown layer.

The natural resin based varnish was applied in 15  $\mu\text{m}$  thick layers. It suffered photochemical degradations which lead to a brownish, unequal aspect. Also local varnish congestions due to an inadequate varnishing process can be observed. All of these, together with the adherent deposits of dust and grime gave the icon a very dirty appearance, the intensity of the colours and the character of the work of art being therefore intrusively diminished (Fig. 4).

According to the inscriptions on the back of the icon, it has suffered previous conservation and restoration interventions. These operations are due to the lesions produced by vandalizing occurred at some point in the history of the item. Therefore, their purpose was the completion of the affected



areas in order for the image to continue being visible. Thus, extensive areas, puttied with wax, repainting interventions, visible on approximately 35 % of the entire painted surface, extending over the affected areas, and also traces of an improper re-varnishing can be observed.

The repainting of these areas changed the aspect of the faces of saints and angels. Also, the colours and the contours of the clothes suffered modifications, in most cases, broader surfaces being repainted, extending over the injured areas (Fig. 5, 6).

As a first phase of the restoration process, a dedusting operation was performed using soft brushes. Then the prophylactic consolidation, also called "facing", was executed, consisting in the application of Japanese veil glued to the surface with rabbit glue, in a 6 % concentration (Fig. 7).

After the pre-consolidation, a mechanical cleaning of the backside was executed, followed by a chemical cleaning using a mixture of water, alcohol and ammonia solution. After the cleaned panel dried, the traverses, which had shifted from their embedment places, were relocated.

The structural consolidation of the wooden support was executed impregnation with Paraloid B72 dissolved in ethyl acetate, in a 4 -8 % concentration, which was injected in the xylophages insects flight orifices (not very numerous) and also in the rifts of the panel. Also, the consolidating solution was applied by brushing over the entire surface of the wooden support, and the surplus was removed with cotton tampons immersed in the solvent – ethyl acetate. Three successive impregnation stages were executed, and in the end, the support was structurally stabilized (Fig. 8).

The exsiccation process the wood went through along created longitudinal rifts on the wooden panel level, also visible on the preparation and colour layers level, where tensions occurred and lead to losses. In order to stop their evolution, a mechanical consolidation consisting in the execution of 8 completion elements bowtie shaped which were inserted in the areas where rifts were visible on the back of the panel. The places where these elements were to be inserted in, about 5 mm deep, were cut out with the help of electric tools such as electro-pneumatic chisels and Dremmel (technical suspended motor). The bowtie shaped elements were glued and then pressed on to the panel, and then chromatic integration was executed.

The next operation was the consolidation of the painting layers. It was executed by brushing warm glue, in a 2 % concentration, on to the painted area, and pressing the surfaces with the electric spatula, followed by the application of cold marble presses, used for the water in the glue solution to evaporate faster, in order for the glue to re-establish the painting layers adherence to the panel once it hardens (Fig. 9).

The removal of the Japanese veil from the painted surface with the help of cotton tampons immersed in warm water was the next intervention. The surplus water was removed with dry cotton tampons.

After the solubility tests were executed, the solutions that were to be used for cleaning the painting, that proved to have the best practical efficiency, were chosen. This operation was, in this case, executed before the completion of the lacunae (puttying), due to the fact that the partial removal of the re-painted and wax completed areas was requested. Therefore, the intervention was systematically realized, and the cleaning was executed following the shapes of the characters and the coloured areas separately, because the previous interventions implied the use of different materials which dictated this kind of differenced cleaning (Fig. 10). The background on the inferior part of the icon was entirely re-painted with a dark shade of blue. The colour was laid in a thick layer over the original green, in order to guise the multiple different shaped lacunae. As far as the characters represented in the painting are concerned, they underwent extensive re-painting interventions on the clothes level, as the case of the hierarchs shows, where the white areas were covered with a light green colour with a good adherence to the original surface, which brought difficulties when it came to its removal. The face of Jesus and the faces of the apostles were also mostly covered with re-painted layers, due to the intent of covering the lesions (abrasion signs and inflictions), and in the case of the Virgin Mary, the eyes were drawn out and then completed with a wax based putty. In these cases, the only option was keeping the re-painted interventions, since the original painting had been lost.

After the cleaning the lacunae, their completion was executed. A chalk dust and 6 % rabbit glue based putty was used. The putty was applied mostly with a spatula, and in some of the areas a different application technique was used – a more liquid putty was brushed especially on the areas where attrition and wearing out signs were visible. The larger areas where the painting layers presented

lacunae were first covered with epoxy stucco Balsaite, followed by the application of a chalk dust and glue based putty. After the completed areas were dry, their finishing was executed. The operation consisted in flattening the surfaces out with cotton tampons immersed in egg yolk emulsion, and also, on the larger areas, with abrasive paper (Fig. 11).

The chromatic integration or the retouching of the completed areas was executed in different techniques, in dots (*rittocco*) or stripes (*tratteggio*), based on location and shape of the lacunae. Water based colours were used (watercolours), in order for the intervention to be reversible, and the utilised materials as similar to the original ones as possible. The interventions were limited by the edges of the lacunae, and the examination of the interventions was executed with the help of a UV light lamp. The shading off of the attrition of the gold leaf was realised with golden pigment based watercolours (Fig. 12).

The varnishing process consisted in the application, with a smooth brush, of a thin resin based protection layer, obtained from Dammar resin dissolved in turpentine (with a 8% concentration). Before varnishing, in order to

obtain an easier application for the varnish layer, the icon was previously warmed up with the help of an IR light lamp. The final varnishing has a protective role against humidity, dust, etc. (Fig. 13).

During the restoration of the royal icon with the theme *The assumption of Mary*, both the stabilization of the item itself, as an ensemble, and the rendering of its appearance as close to the original as possible were taken into account. This implied a visual harmonization of the original painting through an extensive set of operations which had the purpose of either the total or partial removal of the re-paintings, rendering its integrity, and also intertwining the interventions subtlety with the original work of art.

Thus, the message transmitted by the icon was not diminished, but it was rather brought back to the eyes of the viewer, and the original painting of the master from Constantin Brâncoveanu era was not altered, perpetuating the clarity of the stylistic and iconographic tendencies in order to ensure the knowledge of generations to come, and the continuity of the item and, also, the tradition (Fig. 14, 15).

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1. Ansamblu înainte de restaurare
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7. Apect din timpul preconsolidării
8. Consolidarea straturilor de culoare
9. Consolidarea suportului
10. Curățirea straturilor de culoare
11. Detaliu după chituire
12. Integrarea cromatică
13. Vernisarea
14. Ansamblu după restaurare (Față)
15. Ansamblu după restaurare (Verso)



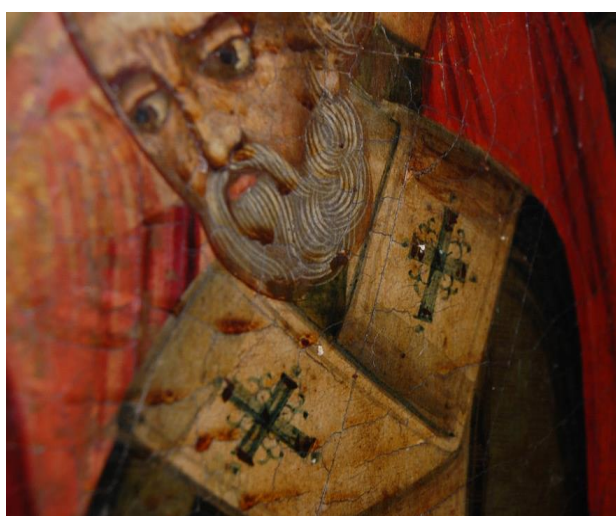
1. Ensemble before restoration



2. Detail

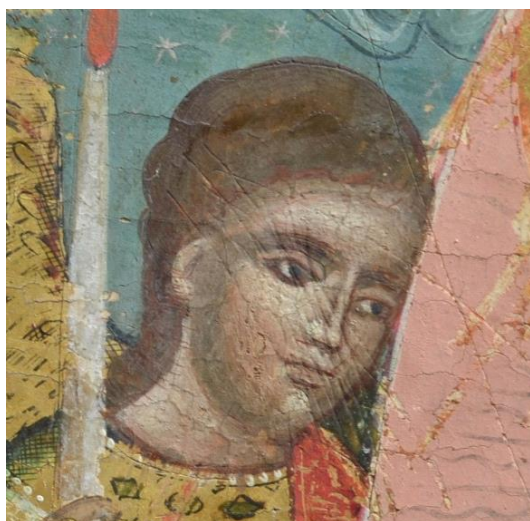


3. Backside before restoration

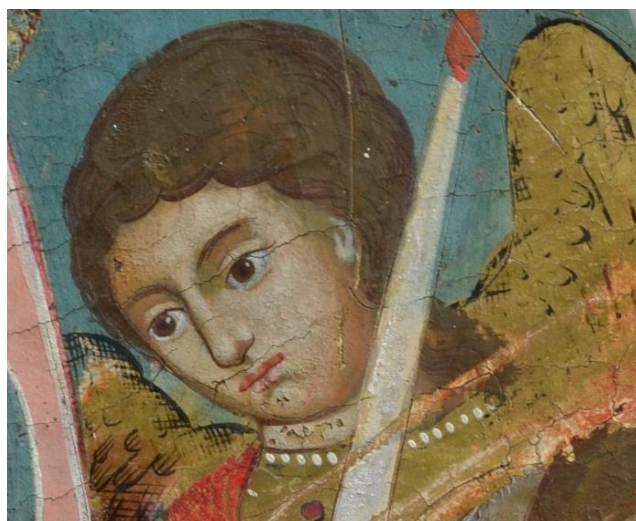


4. Detail; degradation of the varnish





5. Detail; re-painting



6. Detail; original painting



7. Aspect during the pre-consolidation



8. Consolidation of the support



9. Consolidation of the colour layers





10. Cleaning of the colour layers



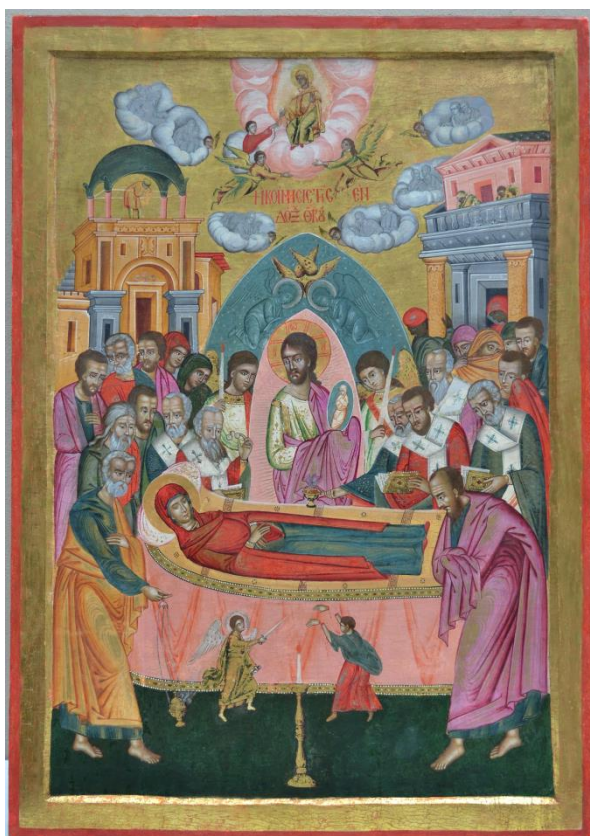
11. Detail after the completion of the lacunae



12. Chromatic integration/retouching



13. Varnishing



14. Ensemble; front view after restoration



16. Ensemble; back view after restoration



## THE RESTORATION OF THE ICON „JESUS CHRIST THE JUDGE”, FROM THE COLLECTION OF THE NATIONAL „ROYAL COURT” COMPLEX, TÂRGOVIȘTE, DÂMBOVIȚA COUNTY

Constantin SCĂRLĂTESCU\*

Daniela LEVAI

**Abstract:** *The restoration of the icon with the theme „Jesus Christ the Judge” or “Deisis” included interventions which had the purpose of recomposing the image without the alteration of the values transmitted by the item being distorted or deteriorated. In addition to that, every operation answered to certain criteria and principles. If, during the restoration process, these principles are being respected and implemented carefully, patiently and with prudence, will, indeed, be difficult for good results not to be obtained (Dancu, 1966).*

**Keywords:** *degradation factors, re-painting, restoration, intervention, conservation, analysis*

**Rezumat:** *Restaurarea icoanei împărătești cu tema “Iisus Hristos Judecător” sau “Deisis” a presupus intervenții de recompunere a imaginii fără ca valorile transmise de obiect să fie deformate sau deteriorate. În plus, fiecare operațiune de restaurare a fost nevoie să răspundă anumitor criterii și principii. Dacă, pentru restaurare, aceste principii sunt respectate și aplicate cu precauție, răbdare și prudență, va fi într-adevăr dificil să nu se obțină rezultate bune (Dancu, 1966).*

**Cuvinte cheie:** *factors de degradare, repictare, restaurare, intervenție, conservare, analiză*

The iconostasis in the Big Royal Church, built by Petru Cercel between 1583 and 1585, has three rows of icons in the superior registers: the repasts, the apostles surrounding the Deisis scene, and the messianic prophets, which were replaced in the 19<sup>th</sup> century.

Deisis (gr. prayer) is the fundamental theme in the byzantine and post-byzantine iconography, with the significance of the mediation, in which Jesus is presented as an emperor sitting on the throne, situated between the Virgin Mary and Joan the Baptist, as mediator saints, praying for the forgiveness of sinners. The theme is always presented in the centre of the Judgement Day program, encompassing the iconographic centre of any iconostasis, being also presented often as a royal icon and in the centre of the frieze decorated with the icons representing apostles.

The painting of the church in Târgoviște was executed in the Royal Court atelier by the team lead by the painter Constantinos, the leader of the big Hurez workshop (Draguț, 1982, 393), composed of

Ioan, Ioachim and Stan.

The item presents traces of previous restoration interventions, large areas being re-painted (Fig. 1). The X-ray examination was performed in order to observe the work of arts elaboration process, also making possible the observation of its creation, in an inverted sense, starting from the wooden support. Exposing the icon to X-rays can lead to the discovery of its degradation state in the interior of the item, and in some cases, to the determination of its authenticity. Due to its dimensions, the icon could not undergo only one exposure to the X-rays, in order to obtain a full radiographic image, and therefore two exposures were executed, on two different sectors of the item.

In the first radiographic image (Fig. 2) the portrait of Jesus can be observed, surrounded by a strong radiographic signal, traceable to the metallic ornament applied at some point in the history of the item over the halo, and the visible light coloured surfaces are due to the presence of the lead white pigment and the mercury red (cinnabar), and the fact is also confirmed in the chemical analysis

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bulletin. The age rifts and cleavages, produced due to the natural ageing of the painting layers and the structural movements of the wooden support can easily be observed. In the lower part of the image the book held by Jesus, who presents serious lesions due to a previous vandalizing, is visible. Such lesions are also visible on the face of Jesus. Due to the fact these areas were not visible, the conclusion was that they underwent previous filling interventions and re-painting. The proportions of the re-painted areas proved to be very extensive, almost on the entire surface of the icon, even the original text on the pages of the book held by Jesus being changed.

In the second radiographic image (Fig. 3) the portrait of the Virgin Mary can be observed. The rifts due to ageing are visible in this case also. The master painted the entire icon on gold leaf. The hands, the faces and the feet of the characters can easily be observed in the radiographic image, due to the fact they were painted using lead white pigment. The contours of the halos appear as bright areas in the radiographic image, due to the fact they were re-painted with lead white and mercury based red, even if in the original painting they were only embossed with star shaped decorative elements.

The panel was executed from three pieces of wood, glued with the heart of the wood oriented towards the painted surface. The panel was strengthened with two semi-embedded, trapeze shaped traverses, both starting from the same part of the panel and crossing it almost entirely. The front of the panel, where the painted layers were laid is decorated with a frame sculpted from the mass of the wood, about 5 mm. thick.

The preparation layer is not very thick and was applied on the support by brushing. It is visible and can be analysed in the areas presenting lacunae of the colour layers. According to the chemical analysis bulletin no. 2094/24.06.2014, executed by expert in chemical investigations PhD Polixenia Popescu, the presence of a white, chalk dust ( $\text{CaCO}_3$ ) based preparation layer can be ascertained.

The paint layer was applied over the gold leaf in the watercolour and emulsion technique. The identified pigments are: golden blue (a very thin green layer containing copper based pigment, possibly malachite), gold (very thin gold leaf), golden green (very thin green layer applied on gold leaf), red (red mercury based pigment - cinnabar), bluish black (dark blue and green colour layer containing green and dark blue pigments, possibly azurite and malachite). The varnished is natural resin based.

The wooden support was stable due to the gluing of the three pieces composing it, consolidated with the two traverses (each one expelled for about 3 cm.). In between the traverses several areas with natural defects of the wood could be observed in the backside, which were not visible on the painted surface level. The merging areas of the wooden pieces were only visible from the back side (having the aspect of longitudinal rifts). Traces of adherent grime, unctuous substances and preparation could be observed on the borders level. On the entire surface of the wooden support non-adherent deposits of dust, grime and flight orifices from the xylophages insects attack (the attack was inactive and orifices could be seen on approx. 5 % of the back of the panel) were visible.

In the case of the studied icon, the preparation and the colour layer presented a good adherence to the support. The item presented lacunae on the painted layers level (varnish, colour layer, gold leaf, bolus, gesso) with specific localizations, which indicated that the degradations occurred due to inadequate handling, especially on the edges level. The preparation layer (gesso) had a good adherence to the wooden support and its grain was homogenous.

The painted layer has suffered mechanical degradations (abrasions, traces left by shocks in the lower part of the icon which caused lacunae that were crossing the entire stratigraphy), especially in the area where gold leaf was applied. The attrition of the paint layer, due to the improper storage conditions and especially to the fact the icon was used during religious ceremonies, was visible on the entire surface of the item. The varnish layer had a brownish appearance and was covered with a thick layer of adherent grime. The degradations on the varnish layer are usually due to vices of technique (areas covered with a thick, unequal layer), functional attrition, inadequate handling and accidents. The brownish appearance of the varnish is also due to the chemical reactions occurring in the structure of this layer, in the presence of light and air.

The icon was decorated with a metallic ornament, a halo, attached with metallic nails. It was removed in order for the restoration interventions on the painted layers level to be performed (Fig. 4).

The next operation, the pre-consolidation, or the prophylactic consolidation of the painted layers was executed using Japanese veil land skin glue, with a concentration of 6 % (Fig. 5).

As the time passed, the binding media of the painted layers lose their adhesive qualities which leads to a variety of degradations such as cleavages due to ageing or detachments on the painted layers level. The consolidation of the preparation and the

painted layers began by re-hydrating with a solution based on 2 % rabbit glue, applied over the Japanese veil used for the pre-consolidation process, followed by re-establishing their adherence in the score of the thermo-lactic reaction resulted from hot pressing them with the electric spatula. For the protection of the icon, but also in order to ensure the spatula a better sliding effect, a thermo-resistant, non-adherent foil was used (Fig. 6).

The impregnation of the support is the operation having the role of consolidating the wood used in the execution of the panel. The operation was executed using Paraloid B72, mixed with ethyl acetate, in 4-8 % concentrations, in several applications, by injection in the xylophages insects' flight orifices and also by brushing over the entire surface of the panel, on the backside. The support was cleaned afterwards using cotton tampons immersed in a solution of water and ammonia, and the operation implied the removal of the adherent deposits of grime, but keeping the patina the wood has gained through time (Fig. 7).

After the operations on the backside were executed, the removal of the Japanese veil on the painted surface followed (Fig. 8), in order to start the thinning of the varnish layers and the cleaning operations on the colour layers level. For establishing the adequate solutions for the cleaning of the painted layers tests were executed, and the most efficient and less harmful ones were chosen (Fig. 9). The cleaning tests were executed in several areas of the item, on the painted surface, due to the differences in their frailty degrees (Fig. 10).

During the cleaning process the re-painted areas, executed on the score of previous lesions produced by vandalising of the item at some point in its history, especially on the faces and the clothes levels, were revealed. These re-painting interventions were covering ample surfaces, and changed the original aspect, in several areas of the icon up to the point of re-writing the text on the pages of the book held by Jesus.

The tests revealed that the alcohol-acetone 50:50 and dimetilsulfoxide-Ethyl acetate 50:50 solutions, gave the best cleaning results in the thinning of the varnish layer and the removal of the re-paintings and grime deposits. The cleaning processes were executed in stages, since a total removal of the varnish layer was not desired (Fig. 11). The con-

glomerated varnish areas went through a thinning process executed with the cleaning solutions, and the surplus was dispensed on the areas which presented accentuated attrition on the varnish layer level.

In the areas where signs of vandalizing traces and previous restoration interventions were visible, operations consisting in the removal of the old completions based on chalk dust mixed with glue or wax, were executed, both mechanically and also chemically, using solvent based (White spirit, Toluene) solutions (Fig. 12). Profound lacunae resulted after this process.

For the filling of the lacunae a mountain chalk and 6 % skin glue based putty was used. The putty was applied with the spatula on some of the areas, and on others thinner putty was applied by brushing. The areas where large painted layers lacunae were present, also with gaps on the wooden support level, a Balsite epoxy stucco was applied, which was then covered with the chalk based putty (Fig. 13, 14).

After the filling operations were executed, the chromatic integration, or retouching was performed. For this intervention, watercolours were used, and the application techniques were adapted based on the surfaces they were to cover. Thus, *ritocco*, *tratteggio* and imitative retouching were executed.

The last operation was the protective re-varnishing of the icon. It was executed by applying successive layers varnish based on dammar resin, excreted by a species of the *Dipterocarpus* gender, that creates a soft, colourless, resistant to light film, and turpentine, an oleoresin excreted by some species of pines (*Pinus silvestri*, *Pinus maritime*) (Istudor, 2011, p.p. 231, 234).

The desire to bring back, to the eyes of the viewers, the initial image increased the risk of degradation caused by complex invasive interventions which have irreversibly misbalanced and affected the intimate structure of the item. The previous inadequate restoration interventions in line with the additional degradation resulted from the exposure to improper environment conditions, lead to the necessity of a in-depth scientific study, followed by the decision of removing the re-paintings and bringing back the original image (Fig. 16)

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2. Detail; X-ray
3. Detail; X-ray
4. Detail; Removal of the metallic ornament
5. Detail; prophylactic consolidation
6. Detail; electric spatula pressing
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8. Detail; removal of the Japanese veil
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16. Ensemble after restoration

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2. Radiografie; detaliu
3. Radiografie; detaliu
4. Îndepărtare ornament metalic; detaliu
5. Consolidare profilactică; detaliu
6. Calcare cu spatula electrică; detaliu
7. Curățarea verso-ului; detaliu
8. Îndepărtarea foitei japoneze; detaliu
9. Teste de curățire; tabel; detaliu
10. Test de curățire; detaliu
11. Subțierea vernis-ului; detaliu
12. Lacune profunde; detaliu
13. Chituire; detaliu
14. Chituire; detaliu
15. Vernisare
16. Ansamblu după restaurare



1 Ensemble before restoration



2. Detail; X-ray



3.Detail; X-ray

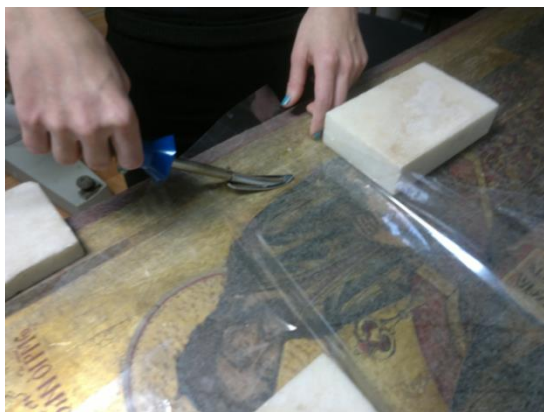




4. Detail; Removal of the metallic ornament



5. Detail; prophylactic consolidation



6. Detail; electric spatula pressing




7. Detail; cleaning of the backside



8. Detail; removal of the Japanese veil



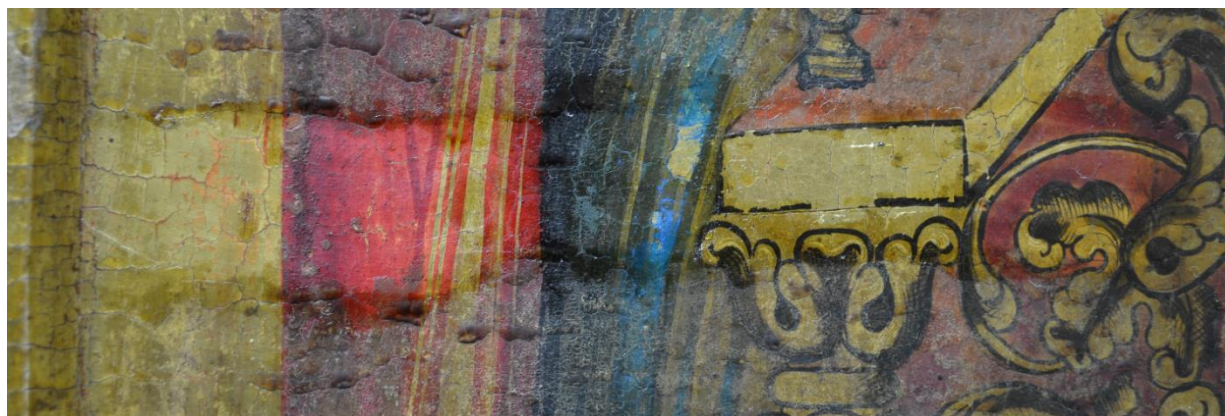
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Emulsie de ou	_____	2
C 2000	_____	3
Soluția 1	_____	4
Alcool 50% și acetonă 50%	_____	5
Dimetil sulfoxină 50% și acetat de etil 50%	_____	6



9. Detail; cleaning tests, table

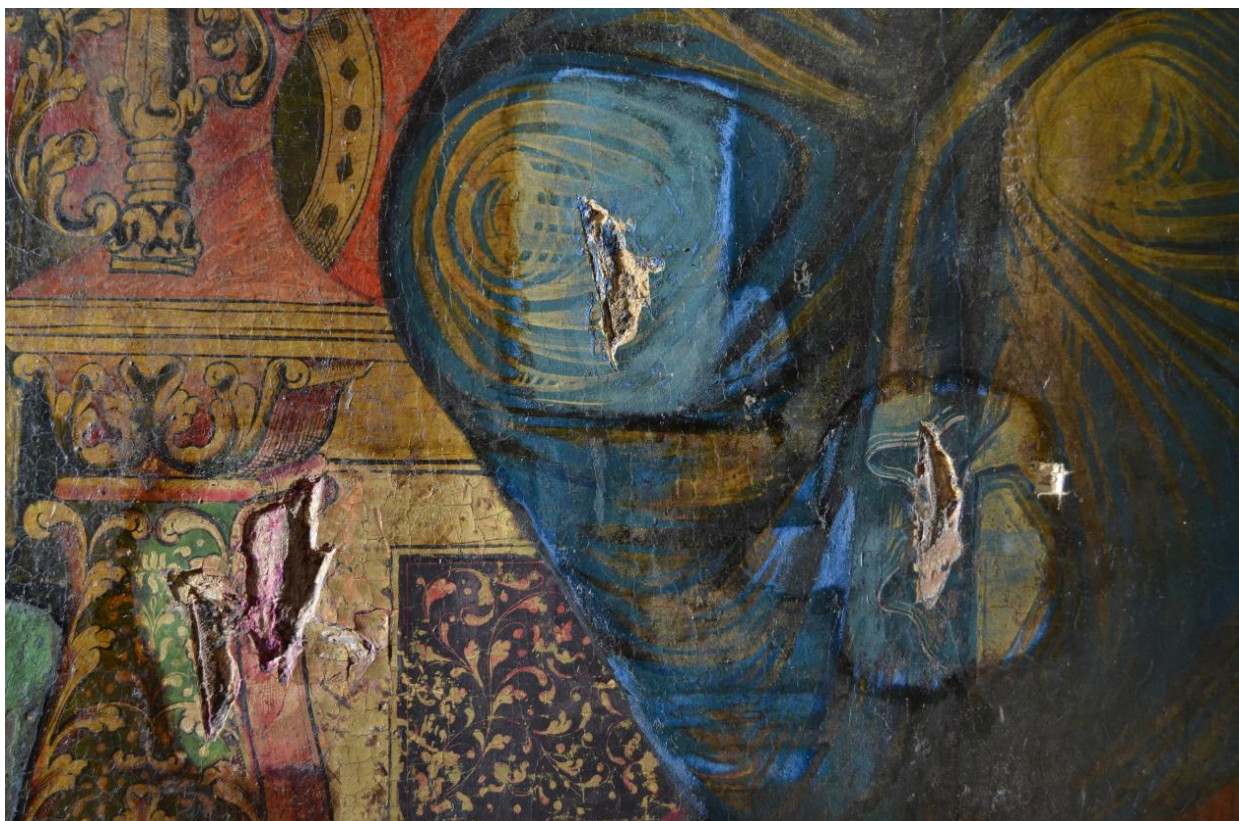


10. Detail; cleaning test

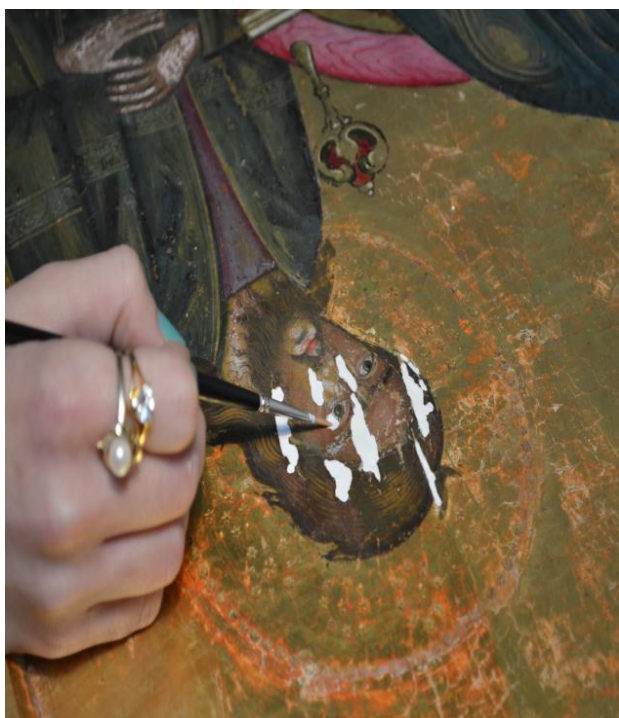


11. Detail; thinning of the varnish





12. Detail; profound lacunae



13. Detail; filling of the lacunae



14. Detail; filling of the lacunae





15. Re-varnishing



17. Ensemble after restoration

## ASPECTS REGARDING THE RESTORATION OF THE ALTARS CROSS OF THE PRESIDENTIAL ADMINISTRATION COLLECTION

Lect. univ. dr. Mirel BUCUR\*

**Abstract:** *The present study presents some aspects of the restoration interventions of the altars cross from the collection of the Presidential Administration. The treatments made on the support and the paint layers were complex because the cross is painted on both sides and the technique is different on the two sides.*

**Keywords:** *altar cross, digital radiographic image, pigments, restauration, analyse*

**Rezumat:** *Prezenta lucrare prezintă aspecte privind intervențiile de restaurare pe o cruce de altar din colecția Administrației Prezidențiale. Tratamentele aplicate pe suport și pe straturile picturale au fost complexe deoarece crucea este pictată pe ambele fețe în tehnici diferite.*

**Cuvinte cheie:** *cruce de altar, imagine radiologică digitală, restaurare, analize.*

During May 2013 - August 2014, it was restored at The ASTRA Centre for Heritage seven artworks from the collection of the Presidential Administration – five icons, an altar cross, a cross of the iconostasis with two *molenii*<sup>1</sup> – pieces that are part of the recovered heritage from the church of the monastery Cotroceni. The restored artworks constituted, by its complexities, and because of the time available, due to the time set for the organization of the exhibition, a real challenge because the technique and state of preservation of the art pieces was different, the restoration treatment was specific and adapted to each artefact. In this article we will direct our attention to *The altar's cross* (no inv. 3436/543/1) dated 1878 and signed by the artist Mihail Dragomirescu<sup>2</sup>, an impressive piece

for its beauty and the rich ornament and also because of its size (206 x 115 cm) ( Fig. 1-2).

**Support.** The cross is richly decorated with stylized vegetal motifs carved in relief and gilded. The ends are trefoiled. Cross-rays are composed of two parts (base and rays) made on wood of the same essence. The base has carved vegetal motifs. Of this, starts a four-ray bundle attached to the base. The adhesion is realized with collagen-based adhesive and metal nails. Due to the passage of time, a weakening of the joints occurred resulting in separation of the rays (one of the rays is detached). Because of wood shrinkage, between these elements and the crucifix arms a distance took place.

The two main boards are made from linden wood<sup>3</sup>, joined halfway, at a 90° angle, through gluing (Fig. 2). Because of wood shrinking the degradations of paint layer occurred, on front side being noticeable cracks directly on Jesus arms, while on the back side the medallion has been sectioned on the upper and lower sides.

Marginal, small loss of paint layers and wood is visible (Fig. 6). Burns are present in the lower area. No traces of wood decay or insect damage are found. Wear phenomena, craquelure, separation and gaps in the paint layers are present. In the golden coloured areas, evolutionary paint layers

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<sup>1</sup> *Molenie*, -i – the icon representing the Virgin Mary or the apostle John flanking the Crucifixion, crowning the iconostasis. The term is borrowed from the old glory (Slavic), meaning Prayer (Porumb 1998, 247)

<sup>2</sup> Painter of churches in Wallachia he worked in the nineteenth century. Although a number of churches are known painted by him, relatively few murals painting have been preserved, because since early last century massive repainting were made and after the 1977 earthquake, there were new interventions of repair and restoration. The work kept so far are on wood, Vivian Dragomir mention *The Raising of Lazarus* from St. Elias Church, Rahova - Bucharest, dated 1866 (Dragomir 2011, 258).

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<sup>3</sup> Chirtea, Ileana, *Buletin de analiză Nr.41 din 28.06.2013*



loss (recent and older) is visible. Golden leaf presents some wear, the bolus is notable.

**Painting layers.** On the front side is represented the scene of the Crucifixion, in the lower part appear the date and the painter signature. On back side are five medallions painted on marouflaged canvas, on edge being a black outline is traced. If the four paintings on crucifix extremities (the four evangelist's) are maintained in a good conservation state, the central scene representing *The Last Supper*, which is place right on the joints of the main elements, has been strongly tensioned by woods movements which resulted in two ruptures (in the upper and lower side).

Because the paint layer is preserved well we have taken only a small samples of colours but not from the entire chromatic palette used by the painter. After preliminary analysis, resulted that the metal leaf is made of gold alloy with cooper, the red pigment is based on Cinnabar and the blue organic pigment (possible Prussian blue)<sup>4</sup>. The spectaculars digital radiographic photo shows us the presence of lead white and mercury-based red. On the lacunar spots it is noticeable that the preparation has a white colour. The radiographic image is special because it has been reconstituted out of 22 exposures. The resulting image has a good quality and it highlights aspects of the manufacturing techniques, especially the metallic nails that were used to attach the decorative elements. Under environmental factors and the properties of the wood and the aging of the adhesive, the decorative elements were partially detached, this being registered in radiography as dark lines. The ranges of dark shades, close to black, with irregular outline are highlighted paint layers gaps (Bucur 2009, 253-261).

There are revealed the irregularities and some defects of the support that are covered with paint layers on both sides.

The varnish is brown and a layer of dirt has adhered, in time, to the entire surface. The item has no previous restoration interventions.

Preliminary tests to establish the optimum blend of solvents were performed:

- ammonia water,
- mixture of water, spirits of turpentine, ethyl alcohol, raw linseed oil, ammonia,

- mixture of 50% isopropyl alcohol, 25% water, 25% ammonia
- mixture of 90% isopropyl alcohol, 5% water, 5% ammonia,
- DMF and ethyl acetate (1: 1).

Following the tests, the painted surface was cleaned with 90% isopropyl alcohol mixture, 5% water, 5% ammonia and the gold area with a blend composed DMF and ethyl acetate (1: 1). The intervention of the removal of wax deposits in *The altar Cross*, a common operation, but due to multiple applications with wax was a very important operation, slow, whereby we aim to achieve a uniform appearance of the original paint layers. It was done mechanically with a scalpel and complementary with petroleum derivative (white spirit) (Fig. 5: 10-11).

Consolidation was performed with rabbit glue 15% in aqueous solution. After applying the glue, remained in the press for 24 hours.

For the lost ornamental area, it was made from linden wood a look alike element that was attached to the panel by gluing, after that was primed and finished. For chromatic integration, gold leaf was applied over it a wash and transparent coloured layer to temper the brightness of the new gold, to harmonize with the original old and worn leaf colour.

The grouting of the gaps was done with a mixture of purified mountain chalk and fish glue 7-8%, most often in two or three stages. In the first stage was applied a mixture of hot glue and a little quantity of mountain chalk so that the composition remains sufficiently fluid to apply it with a brush fine. In the next steps the amount of chalk increase, due to the consistency of the mixture, the applying of the ground was made with the dental spatula (Fig. 14-15).

The varnishing has an optic and also a protective role. In our case it was done with a varnish prepared from natural resin (dammar) dissolved in spirits of turpentine (8-10%), applied by brushing in alternate horizontal and vertical direction (with a broad brush with soft hair, naturally) until the solvent largely evaporated (Dancu 1966). It can be seen that on the base of the cross, the addition can be distinguished from chromatic composition but still retains the unitary appearance (Fig.16-17). We consider a necessity this addition to provide a surface support for the exhibition. The filling was made of Balsite W + K mixed with sawdust, the colour harmonization was made with watercolours.

<sup>4</sup> Lăzureanu, Daniela, *Buletin de analiză 430-iulie 2013*, also dr. Gheorghe Niculescu and Georgescu Migdonia conducted a series of X-ray fluorescence measurements that lead us to similar conclusions.

The cross is now exposed in medieval spaces of the Cotroceni National Museum, in permanent

exhibition *Cotroceni church. History, art and spirituality*, opened 7 October 2014 (Fig. 18).

## REFERENCE

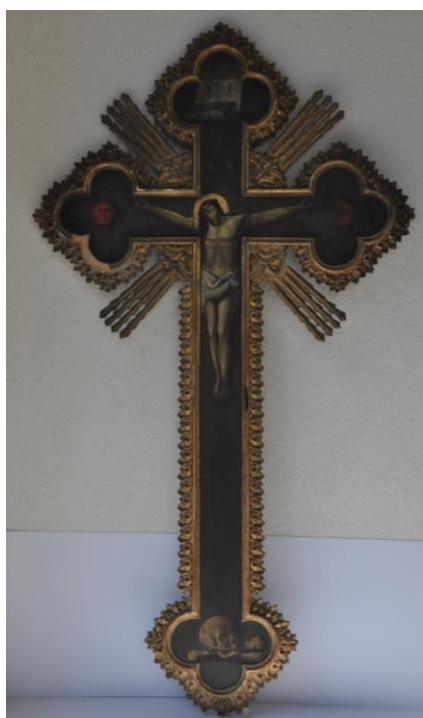
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## LIST OF ILLUSTRATIONS

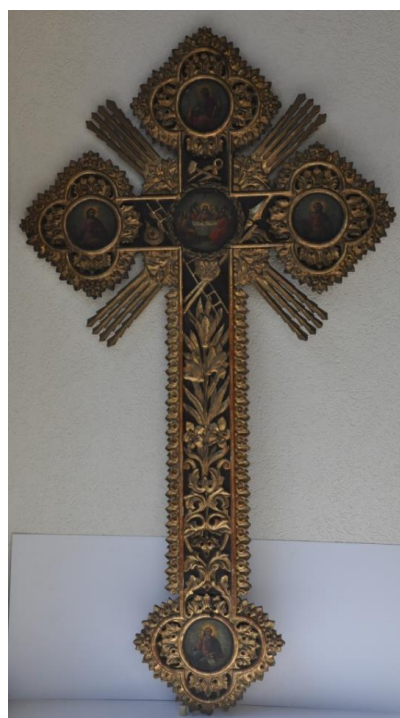
1. Assembly before restoration, front
2. Assembly backside before restoration
3. Digital radiographic image
4. Detail. Cutting the canvas glued on wood
5. Detail. Multiple deposits of wax.
6. Detail. Embrittlement and loss of timber.
7. Canvas support is broken on the conjunction of wood
8. Partial loss of ornamental edges of painted area
9. Detaching of ornament
10. - 11. Details during the removal of wax deposits
12. Appearance during consolidation joining rays
13. Completions ornament
14. - 15. Additions bracket
16. Assembly to after restoration
17. Assembly back after restoration
18. Layout of exhibition

## LISTA ILUSTRAȚILOR

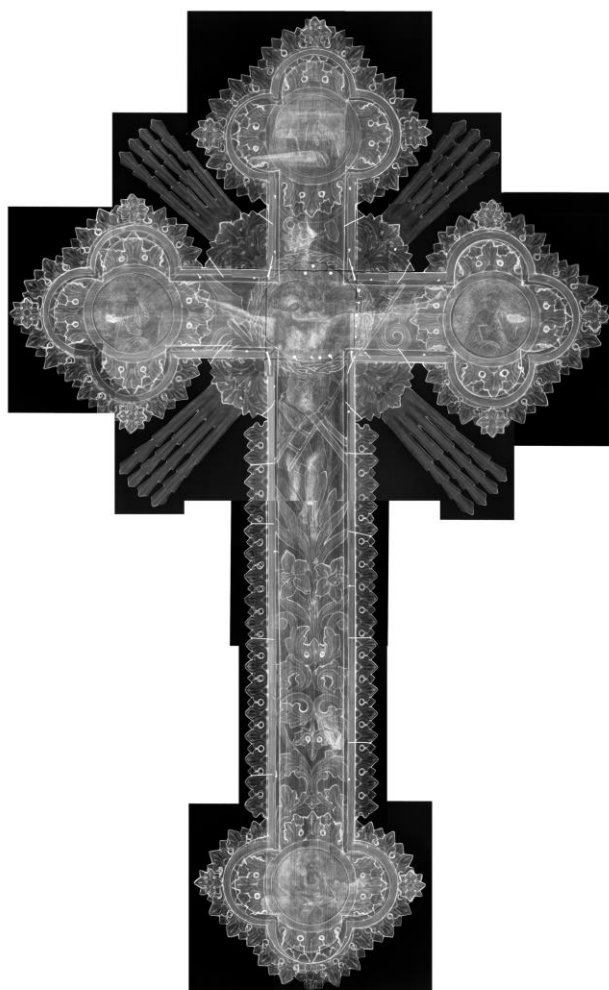
1. Ansamblu față înainte de restaurare
2. Ansamblu verso înainte de restaurare
3. Imagine radiografică digitală de ansamblu
4. Detaliu. Secționarea pânzei maruflata pe suportul din lemn
5. Detaliu. Multiple depuneri de ceară.
6. Detaliu. Fragilizare și pierdere de material lemnos.
7. Pânza suport este ruptă pe zona de îmbinare a lemnului
8. Pierdere parțială a ornamentului ce mărginește câmpul pictural
9. Desprinderea ornamentului
10. - 11. Detalii în timpul îndepărtării depunerilor de ceară
12. Aspect în timpul consolidării îmbinării razelor
13. Completarea ornamentului
14. - 15. Completări ale suportului
16. Ansamblu față după restaurare
17. Ansamblu verso după restaurare
18. Aspect din expoziție



1. Assembly before restoration, front



2. Assembly backside before restoration



3 Digital radiographic image





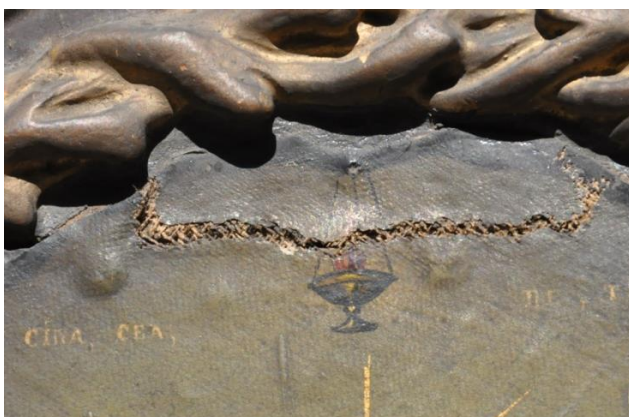
4. Detail. Cutting the canvas glued on wood



5. Detail. Multiple deposits of wax.



6. Detail. Embrittlement and loss of timber.



7. Canvas support is broken on the conjunction of wood





8. Partial loss of ornamental edges of painted area



9. Detaching of ornament



10. 11. Details during the removal of wax deposits



12. Appearance during consolidation joining rays



13. Completions ornament





14-15. Additions bracket



16. Assembly to after restoration



17. Assembly backside after restoration





18 Layout of exhibition