

VOLUNTEERING FOR CULTURAL HERITAGE CONSERVATION - TWO CASE STUDIES

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Abstract

A voluntary action is the key for individual benefits in addition to social ones. The voluntary actions for cultural heritage conservation are meant to provide gains for long terms and to raise public awareness on the importance of conservation-restoration activities. During the past 5 years different volunteering actions for cultural heritage conservation organized by our faculty alone or in cooperation with the ASTRA Museum from Sibiu were finalized with exhibitions and public events. The case study presented in this paper is referring to the conservation-restoration of two long benches with backrest, dating from the first half of XXth century. The benches restored make parts from a group of artefact that was restored in the restoration camps at ASTRA Museum in 2013 and 2014. The particularity of the benches was de finishing layer that imitates the wood texture known as flander technique. This type of finishing is common to the landler community who was deported from Austria to Transylvania at the end of 17th century. The approach of conservations – restorations process was different for the artistic painting parts and needs special and appropriate intervention and investigation. While minimum interventions were making in order to preserve the objects for the future, we want to ensure that the value of less known technique can be well understood by younger generations.

Key words: *volunteering actions; conservation-restoration; furniture; artistic painting.*

INTRODUCTION

Over the past two decades different studies indicates that volunteering provides individual benefits in addition to social ones (www.nationalservice.gov). Geiser et al. 2014 refer to the volunteering action as a “win-win-win” situation regarding to the benefits derived by society, by the recipients of the volunteer service, and by the providers of the volunteer service (Geiser et al. 2014).

Volunteering is generally referring to “service-learning”, considered an altruistic activity and is intended to promote goodness or improve human quality of life. In return, this activity can produce a feeling of self-worth and respect (Janet et al. 1999; Furco 2011).

Service- Learning involves teaching staff - University’s and volunteers community service in mutually reinforcing ways. The service makes the study immediate, applicable and relevant, through knowledge, analysis and reflection (<http://ecommons.med.harvard.edu/>).

Today there are a large number of non profit organizations that facilitate various volunteer activities in different fields, complex through international collaboration. Therefore they are many different activity areas of work that involves volunteering actions, such as medicine, education, emergency rescue, ecology or cultural heritage conservation (<http://www.volunteerweekly.org>, <http://whc.unesco.org/en/whvolunteers/>).

The concern for cultural heritage does not mean that we just glorify the past, but we want to have these treasures in present and for future generation too. Conservation of cultural heritage derives from the need to ensure our identity, our roots, a departure and return point and, why not, for the beauty of old artifacts, often impressing by their special design and polychromy. The activity of

conservation/ restoration of an historical object/monument can provide self education for the person involved, can stimulate lifelong learning and give idea about values in life.

VOLUNTEERING ACTIONS OF IL STUDENTS

Since 2010 our institution (*Transylvania University of Brasov, Faculty of Wood Engineering*) has been organising various volunteering activities focussing on the conservation-restoration of olden wooden objects. During the past 5 years, a number of students from different levels (bachelor, master or doctoral degree) have participated as volunteers at five volunteering actions for conservation of various old wooden artefacts belonging to private collections.

Since 2013 we started to organize also summer restoration camps in cooperation with ASTRA Museum Sibiu. These are special volunteering actions offering the opportunity to work in cooperation with recognised specialists on various wooden objects from the patrimonial collection of the museum.

All the conservation volunteering actions and other projects in this field were finalized with exhibitions and public events, a total of 12 so far. The expected impact was raising public awareness on the importance of conservation-restoration activities by putting unaware people in direct contact with the outcomes of conservation – restoration work. Positive feed- back following the 12 public events makes us optimistic and ready to take more challenges in the future. On the other hand, sharing experience is important for professionals and therefore the results of these actions were disseminated also by publications (Timar et al. 2013a; Timar et al. 2013b; Varodi et al. 2013; Beldean et al. 2014; Timar et al. 2014; Timar, et al. 2015). Understanding the importance of cultural heritage in our life and defining our cultural identity as individuals and community is a necessary step to conscience the necessity of its conservation for further generations. Within these actions we had the opportunity to better understand the diversity and complexity of our wood cultural heritage, restoring objects very different as type and utility, from traditional tools to furniture, from gate and windows to a carriage (Fig. 1).



Fig. 1.

Exhibitions of different volunteering actions: a) The Attic - Die Brucke - year 2012; b) Windows in dialog - year 2014 ;c) 13 for ASTRA - year 2014

The furniture of the old houses was very simple and adapted to the people needs. Simple benches (long benches without backrest) made from wood among the oldest pieces of furniture used almost in all Romanian regions (Pripon 2012). Without any decorations, benches from wooden houses were often fixed in the wall beams. Since the second half of the XIXth century, they are replaced first in Transylvania and then in the rest of the country, with long benches with backrest, sometimes painted, or with storage spaces serving for keeping clothes and even sleeping (Olaru 2014).

OBJECTIVE

The papers refers to two long benches with backrest, dating from the first half of XXth century, which were restored within the restoration camps at ASTRA Museum in 2013 and 2014. These can be considered as representative for Transylvanian traditional furniture as typology, constructive solutions and decoration. Common and specific aspects of their initial state and conservation schedule are presented.

PRESENTATION OF THE OBJECTS

The two benches presented as case studies in this paper belong to ASTRA National Museum Complex from Sibiu. They are made from fir wood (*Picea Abies*) boards assembled by gluing and are coated with decorative opaque finishes in dark brown color.

Bench 1 (Fig. 2a – initial state – before restoration) was restored in the volunteering camp “11 for ASTRA” in 2013, representing a piece of furniture from the newly transferred monument Dragu – Brad, in the open air museum. The frame of the object was in rectangular shape with two legs with “R” profile in which are fixed the walls, the bottom and the backrest. These parts were assembled with straight joints fixed with metal nails. On the front of the bench is fixed a decorative wooden moulding at the inferior part. The bench was provided with two separated storage spaces with two hinged lids which are intertwined. The lids come out a little bit, exceeding the dimension of the bench. The simple metal lock, ornamental escutcheon and four hinges were the metal accessories. The backrest was designed with three frames in which are fixed four ornamental elements made from wood to.

Bench 2 (Fig. 2b – initial state – before restoration) was restored in 2014 in a volunteering action named “13 for ASTRA”. This bench is originated from Scoreiu, a village from Sibiu region. It was manufactured in parallelepiped shape with four low, profile legs in which are fixed the walls, the bottom and the backrest. All the wooden parts of the bench were fixed with wooden nails or metal nails. The backrest was made from 3 parts (two laterals and one in the back), fixed in legs, with a fastening element in the middle of the back part. The armrests have an elegant curved shape of the upper parts of the two lateral sides. The seat was made from three wooden elements and in the front of the bench; the place of panels is taken by two drawers, placed under the seat. The back side of the drawers was fixed with “sparrow tail” tenon, but it was visible a previously inadequate intervention, employing PVAc glue (Fig. 4f). Moreover these parts had opaque ochre finishing, deeply crackled, totally different from the rest of the object and, suggesting that these elements were made from wood recovered from another older artifact (Fig. 4i). Another previous intervention observed was the consolidation of the bottom of the legs with putty made of animal glue and sawdust.



Fig. 2.
Initial state of the benches: a) Bench 1; b) Bench 2.

Finishing layer

The pieces studied had an interesting painted layer that imitates veneering. At the end of the 17th century, in the houses of rich people from towns the painted furniture is replaced with veneered furniture that was more expensive (Ionescu 2013). Common people tried to copy this type of furniture with a finishing style that imitates the wood texture known as *flander* technique (Fig. 3). This type of *artistic painting* is common to the *landler* community who was deported from Austria to Transylvania in the same period of time, being concentrated in seven villages nearby Sibiu (Bottesch et al. 2002; Girtler 2014). The furniture of the *landlers* was much simpler painted than the Saxon furniture and most often it has engraved the year of manufacturing and the owner (Malearov and Ștefan 2012, Ștefan and Malearov 2014)

The chromatic design of this type of artistic painting is based on the colour brown, reddish brown, dark brown, that copy wood texture as is seen in Fig. 3. This painting layer was observed especially on backrest and in fronts of the benches, in other places was destroyed by manipulation and long time use.

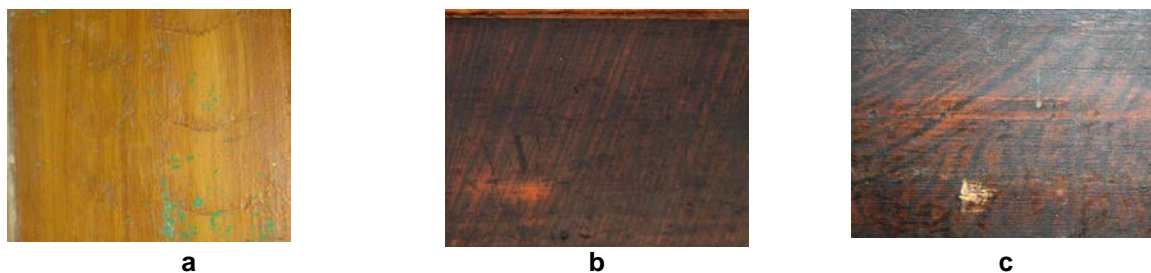


Fig. 3.
The artistic painting of landlers: a) Flander technique of a restored bench in the project “Florile Transilvaniei” (processed picture from <https://floriletransilvaniei.wordpress.com>); b) Aspect of finishing of bench 1; c) Aspect of finishing of bench 2

Initial state of conservation

The initial conservation state of the two benches, illustrated in figure 4, could be resumed as unstable and relatively precarious due to the active insects attack, mostly in the bottom parts (fig 4a).



Fig. 4.

Initial conservation state of the two benches: a) Fragile wood do to the insects attack; b) Degraded wood and erosion of bottom parts of legs; c) Detail of structural damage made by rodents; d), e) Initial aspect of surfaces cracks, different spots and advanced surface texturing; f) Inappropriate previous interventions of structural consolidation with PVAc adhesive; g) Degraded finishing layer with adherence problems; h) Degraded finishing layer revealing the preparation layer on the bench 1; i) Back of the drawer with opaque ocher finishing - previous intervention bench 2

The presence of the sawdust in numerous flying galleries indicated the possibility of an active attack. The combined biological attack by insects (predominant) and fungi (due to soil contact of the legs) (Fig. 4b) caused frailness of the wood support. The objects were very dirty with lot of dust deposits; clogged dirt. Presence of holes made by rodents has further weakened the stability of benches (Fig. 4c). The entire surface of the objects presented different characteristics of aged wood with multiple cracks and advanced surface texturing (Fig. 4d,e). The external surface of the benches and the intern surface presented different spots (paints, oils, rusty). Both pieces presented functional wear by faulty handling.

The finishing layer was aged, thick and rough, with areas of extensive cracking and low adherence (Fig. 4g), presented functional wear on seat and drawers. Possibly, refinishing in previous interventions/ maintenance treatments contributed to the very dark and clogged aspect in the initial state. Finishing layer showed lacunas revealing the preparation layer, especially on the bench 1 (B1) (Fig. 4h). The back of the drawers from bench 2 (B2) had an ocher opaque finishing (Fig. 4i), with exfoliation trends (elements reused). All parts of the benches were dirty and sticky, with clogged dirt and depots, while different stains were present on the inner, unfinished parts. After cleaning, a two color finish, imitating a wood structure pattern, was visible on the front and on the backrest of B1 and on the faces of the two drawers of B2. Metal elements (metal lock, ornamental escutcheon) were rusty, losing their functionality.

Investigations and conservations-restoration

Before any direct intervention the two benches were meticulously examined and photos were taken to document their initial conservation state. All the obvious previous interventions were pictured and described, as these were not mentioned in the available conservation records. The whole process of conservation - restoration was conceived in accordance to the basic principles of good practice in restoration. Authenticity of the objects was preserved by maintaining all the original elements, from wood substrate, including areas of frail wood which were consolidated, to finishing layer and accessories, while previous completion of drawers was considered as part of the artifacts history was also kept. At the same time, inappropriate interventions, such as faulty gluing of the drawers with modern adhesive, were amended. So it was decided to dismantle these elements after their codification in order to be properly re-glued with traditional materials.

The first step for conservation-restoration was dedusting the benches with soft brushes. Thorough examination of cleaned wood surfaces revealed that the wood species used was fir wood for both benches, as was stipulated in the records of the museum. To establish the finishing materials, small samples of the finishing layers were taken for both benches (Fig. 6a).

Micro-chemistry tests based on specific reactions were made on small's samples. The microscopic analysis of the samples suggested that the preparation layer was made from animal glue mixed with natural resin (Fig. 5a). Pigments based on iron were employed to give the two shades of brown colors.

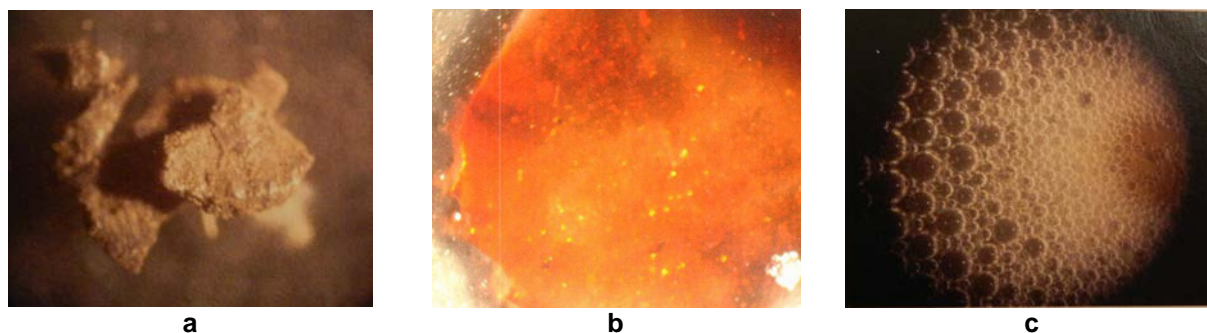


Fig. 5.

Different investigation of the taken sample: a) Microscopic aspects; b) Positive test for Fe; c) Micro-chemical tests for fatty materials

Tests for fatty materials (oils, waxes etc.) were made for samples from both benches employing concentrated ammonia solution (25%) and concentrated hydrogen peroxide (H₂O₂). These tests revealed the presence of a fatty material by the formation of stable white foam (Fig. 5c). This was demonstrated with a micro-chemistry test of identification of iron oxide (Fe₂O₃) with potassium sulphocyanide leading to specific red coloration (Fig. 5b) was positive.

The unfinished parts were mechanically cleaned with more rough plastic brushes to remove clogged dirt from the whole surface, but special attention was given to the areas with cracks and fissures. Tests with different solutions (see Table 1) were made in order to establish the most appropriate cleaning solution for the unfinished and finished surfaces (Fig. 6b).

Table 1

The compositions for the different solution tested for wet cleaning process.

Solution 1	Solution 2	Solution 3	Solution 4	Solution 5
<ul style="list-style-type: none"> • 74% water • 24% ethanol • 1% ammonia • 1% C2000 	<ul style="list-style-type: none"> • 60% water • 25% ethanol • 2.5% ammonia • 2.5% C2000 • 10% turpentine 	<ul style="list-style-type: none"> • 20% water • 80% ethanol 	<ul style="list-style-type: none"> • 1part dimethylformamide • 2 parts ethyl acetate 	<ul style="list-style-type: none"> • 80% ethanol • 20% turpentine • 5 drops of linseed oil

Following these tests, it was decided to employ standard solution 1 for unfinished parts and cleaning solution 5 five for the finished /painted areas. Cleaning of the painted (*flader* decorated areas) parts was made step by step on small areas with little cotton wool pieces. Cleaned areas were treated with raw linseed oil to "nourish" the aged coating film and stop the tendency of whitening as result of cleaning. Wet cleaning of the unfinished areas (inside of the bench) was performed using

small teeth brushes and cotton wool, special attention being needed for the areas with cracks, fissures and recesses. After drying, these unfinished areas were gently sanded to remove raised fibers without affecting the texture appeared from natural aging or functional usage.

An important step of the conservation-restoration process was the curative treatment with PerXil 10 insecticide, by repeated injecting in galleries (successive injection at a minimum interval of 24h – Fig. 6c), followed by consolidation with Paraloid B72 solution (5% in ethyl acetate), applied in the same way (by injecting in the areas with fragile wood - 3 successive treatments). After this treatment, all big cracks were glued with rabbit skin glue (solution of 30% - Fig 6d).

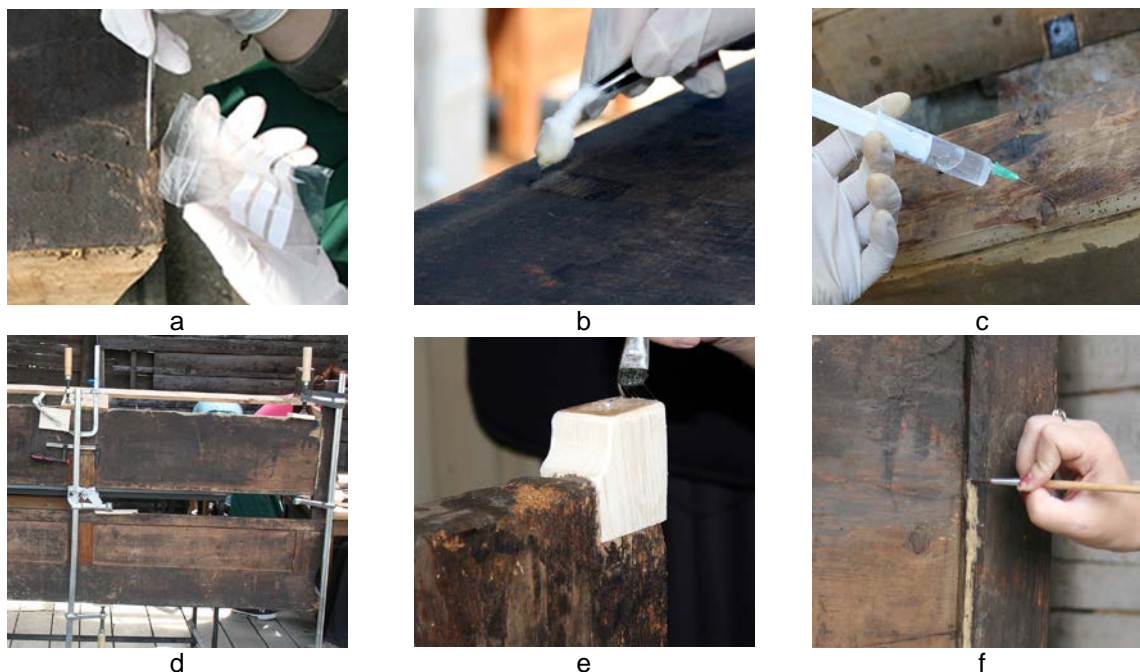


Fig. 6.

Aspects of conservation and restoration process: a) Sample taken for investigations; b) Performing cleaning tests for finished parts; c) Curative treatment with insecticide; d) Gluing of different cracks; e) Completion with new wood; f) Chromatic integration

Completion with new wood, after consolidation, was required for B1 object on the lateral panels in the legs area, because of loss of material due serious frailness as result of fungal attack (Fig 6e). The new wood parts were treated with fungicides to prevent both insects and fungal attack (PerXil 10 and Biotin) before gluing with rabbit glue. For the second bench B2 a new wood completion was necessary for the drawer slide rail. Other smaller areas with loss of material were remediated after curative treatment and consolidation with remedial putty made of from glue rabbit and sawdust. After drying and conditioning, these areas were smoothly polished with sandpaper.

All new wooden parts and grouted areas were chromatic integrated with tempera color, by painting in fine lines or small points (Fig. 6f). The inside of the benches was treated with Biotin fungicide and for additional protection (waterproofing) beeswax treatment was applied as a final step.

Original metal parts were mechanically cleaned with sandpaper and steel wool, before treating with Evipass solution for removing the rust. After a necessary action time, the withed areas were sanded again, cleaned with ethyl alcohol and finally covered with a thin layer of graphite in Paraloid solution. A replica of a missing hinge was made for the bench B1 and finished to look similar to the original ones.

Finally, a layer of Dammar solution in turpentine (20%) was applied as varnish on the whole external (finished) surface of the benches, ending the conservation – restoration process. The aspect of the restored objects was putted in value in the exhibitions, which were organized at the finishing of the volunteering actions and illustrated by the pictures in Fig. 7.

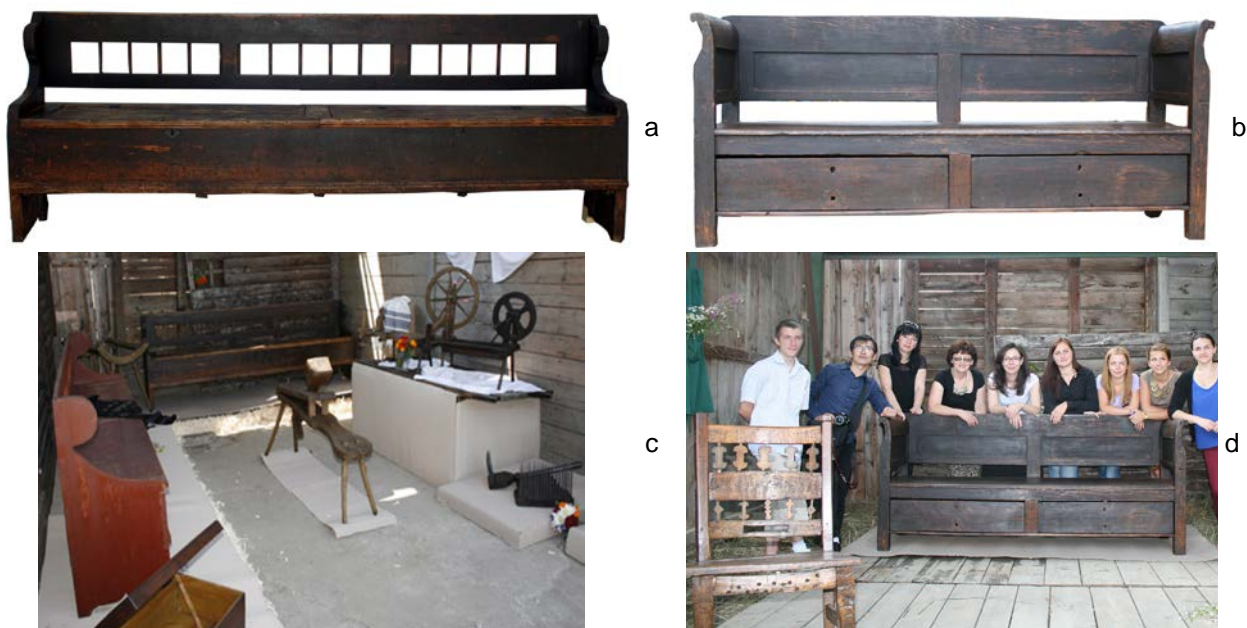


Fig. 7.

Final state of the restored benches and public events of dissemination: a), c) Bench 1(in the back of the photo) exhibition “11 for ASTRA” 2013; b), d) Bench 2 –A group of volunteering at the exhibition “13 for ASTRA” 2014

CONCLUSIONS

Volunteering is both a professional and human valuable experience.

The volunteering actions of conservation-restoration and their outcomes are proofs demonstrating it. Involving science and art, restoration and conservation of **old wooden artifacts with** artistic, technical, historical and documentary value contributes to the professional experience of volunteers.

Particularity, difficulty and complexity of conservation-restoration process for different objects of cultural value consists in diversity of involved materials, structures and techniques of manufacturing, decorating and chromatics as parts of needed knowledge. Especially for the two benches presented as case study in this paper, the *artistic painted in flader* technique needed special attention. The investigation of finishing material was imposed for identification of the original materials and techniques so that the restoration intervention on the objects was appropriate.

A “win-win-win” situation was generated through these volunteering actions. Education, practical experience, cooperation, constructive and friendly exchange of ideas is among the values gained. That is why we will continue to organise such actions and invite all those interested to join us.

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