Restoration of Wood Baroque Altarpieces in Portuguese Churches.

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Restoration of wood baroque altarpieces in Portuguese churches

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Summary

Many Portuguese churches have very rich and colourful altars mainly constructed in the late Baroque period, during the second half of the 18th century in Portugal. Although most of them were constructed from very good species of wood, the need for rehabilitation is very common, due to unsolved humidity problems, deficient restoration interventions and to everyday use. A line of research has recently been implemented by the author, in cooperation with IPPAR (a National Portuguese Institution that manages and preserves many Portuguese monuments with architectural interest), to collect and publish very valuable knowledge that is in the hands of a few private companies that perform this kind of work and is in danger of being lost. The purpose of this paper is to present the results of the first steps of this research. The main retable of “S. João de Tarouca Monastery” which will be repaired in the near future serves as a case study.

1. Introduction

1.1. Justification

In this paper, a brief description of the main concerns related to the restoration of wood baroque altarpieces existing in Portuguese churches is presented. It was originally presented at the Oulu seminar of the “Wooden Handwork/Wooden Carpentry: European Restoration Sites”, Culture 2000 European project which was held in Finland on June, 6th, 2001.

The reason for this choice of subject can be found in the purpose of this project:
- a multidisciplinary project that deals with culture and historical architectural patrimony in several European countries and which is mainly devoted to wood;
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– a project whose main objective is to exchange different ways of preserving wood architectural patrimony in several European countries.

The Portuguese wood altarpieces have all the ingredients needed to illustrate these concerns:
– they are a part of the patrimony;
– they area built of wood;
– they are typical of Latin countries; the Portuguese solutions have strong singularities;
– the restoration techniques used in Portugal have its own singularities that deserve specific description.

2. Historical overview

2.1. Portugal: A country of carpenters

Portugal has always had a long tradition in wood and forest and still today wood products are very important to the nation’s economy.

The North of Portugal is widely filled with forests originally covered with Atlantic and Mediterranean species such as oak, chestnut, cork and other species of the family Quercus. The shape of the land is of small mountains, between 500 m and 2000 m (the highest peak in Portugal is 1991 m), and the climate (with lots of rain in the winter and high temperatures in the late spring and summer) is very appropriate for the growth of trees.

Today, most of the forest is covered with pine (Pinus Pinaster ale) introduced in the XIIIth century to Portugal, from the French “pin maritime” and eucalyptus (“Eucalyptus globulus”), was only introduced on a large scale in the 20th century and is, originally, an Australian tree.

For many centuries wood was the basic material for the Portuguese economy: ship construction, building construction and furniture.

The basic natural species were used in the late Medieval Age: chestnut for furniture and building construction; oak for ship construction (together with many other native species).

After the 15th century, Portugal introduced many African and Brazilian species to the European market.

The commerce of wood and the huge needs for an increasing demand of new timber related jobs led to the growth of the popularity of the profession of carpenter.

In the 20th century, the introduction of reinforced concrete in building construction brought important competition to traditional wood structural building and over the past 20 to 30 years, carpentry has lost importance in many areas, and especially in construction.

Today, sustainable construction theories and the increasing public and private interest for the patrimony and cultural heritage preservation are putting
wood in a relevant position again and carpentry and wood furniture are regaining their importance in the context of the Portuguese economy.

However, since one generation of workers has lost interest in the ancient wood techniques, Portugal has a large age gap between the old craftsmen and the new young apprentices who are trying to learn the ancient techniques.

The public institutions that deal with the patrimony are more and more interested in developing new forms of co-operation with suppliers who have kept the knowledge of the ancient techniques, so that more and more young workers are able to restore old wood works.

2.2. The gold from Brazil

In the 18th century, Portugal discovered gold mines in Brazil. The gold was taken to Portugal and financed a lot of public works. The 18th century was one of great prosperity in Portugal.

Portugal has always been a very religious country, of Catholic Christian faith, and this explains why most of the public investment of the 18th century was spent on building new churches and on the decoration of existing churches. All over Portugal, altars in churches were constructed and decorated with real 23 carat gold. Due mainly to political reasons, altar conservation is now, in many cases, in the hands of the public authorities and is an important issue in the maintenance of the Portuguese cultural heritage.

3. Constitution of an old wood Portuguese altarpiece of the 18th century

3.1. General description of a traditional Portuguese wood altarpiece

*Figures 1 to 6* show the more important parts of the main retable of S. João de Tarouca Church (part of the original 12th century monastery). Figure 1 shows the main details of the visible part of the retable (*figure 1*). *Figures 2, 3 and 4* show details of the same altar seen from behind.

3.2. Wood species

Traditional Portuguese altars were made essentially of chestnut (structural and decorative elements). Other species were introduced in the 19th and 20th century restoration interventions (pine and some African deciduous species).
3.3. Construction techniques

Basically, altar construction uses furniture connection techniques. In the old days, steel nails were used. Animal glues were also used. Today, repairing techniques use mainly stainless steel screws that normally are not disguised and serve as a testimony of the intervention.

3.4. Wood preservation treatment

In the past wood was not treated. Today, wood normally receives a surface treatment with protective products. The toxicity of the products and the depth of the intervention depend on the importance of the infestation.

3.5. Preparation for decoration

To make the wood soft and round and in a good condition to receive finishes, the craftsmen put several products over the wood:
- gypsum plaster;
clays of different colours;
- animal glues.

After this preparation, the wood is ready to receive the decorative finishes.

3.6. Final decoration of the wood altarpieces

In principle, paint or gold were used for the final decoration of the wood altarpiece.

Old painting techniques basically include:
- gouache on wood;
- egg tempera on wood;
- oil on wood.

Decoration with gold uses very thin 23 carat gold, sold today in small pieces of $5 \times 10$ cm or “Hamburg” gold, a copper and silver alloy, also called false gold, that is cheaper because it oxidises very easily. Figures 5 and 6 show aspects of the decoration of the altar, the walls behind the throne without finishes, and the ceiling covered with gold leaf.
4. The rehabilitation process

4.1. Actual philosophy of intervention

At present, the restoration of wood altarpieces basically follows these general rules:

– the intervention must be limited to the essential;
– wood parts should only be replaced in very extreme situations and, if possible, using wood of the same original species;
– all the original artist’s work must be maintained; if one needs to substitute wood parts, the original woodwork should be copied, but the old artistic painting should not be copied in any case; the new wood parts only receive a disguising finish;
– all new corrections must not be disguised;
4.2. The usual problems

The most common problems existing on old altar pieces include:
- high humidity content of the wood due to several external reasons;
- fungi and insect attacks;
- inadequate previous structural rehabilitation interventions, sometimes using other materials, such as steel or aluminium;
- complete lack of maintenance that leads to the simultaneous effect of dust and humidity which can be devastating even to durable wood species;
- inadequate previous interventions that completely changed the original shape and external image of the altarpieces.

4.3. The restoration techniques

Normally, the restoration of an old wood altarpiece includes the following stages:
- resolution of all existing humidity problems related to condensations, rain penetration and high moisture content of the environment where the altarpiece stands;
- an exhaustive historical research with the final purpose of defining the original shape and style of all the parts of the altarpiece;
- analysis of the integrity of the existing wood parts in order to define the eventual need for the substitution of the more degraded;
- decision on the type of intervention (local or factory);
- eventual total or partial “dismount of the altar”;
- wood restoration intervention using furniture connection techniques, stainless steel screws and normally avoiding glues (responsible for rigid connections which could have devastating effects on finishes);
- finishes intervention using old painting techniques and/or gold covering;
- eventual total or partial remounting of the altar piece on site.

5. Case study: the main retable of S. João de Tarouca

5.1. IPPAR and the Culture 2000 project

IPPAR means Portuguese Institute for the Architectural Patrimony and depends on the Ministry of Culture. It was created originally in the 1980s with a different name and has had its present name and function since 1997.

IPPAR is associated with the Portuguese partnership of the Culture 2000 project “Wooden Handwork/Wooden Carpentry: European Restoration sites” having opened the doors to research studies on three existing historical
sites where restoration is under way (S. João de Tarouca Monastery, Salzedas Monastery and Caminha’s main church).

The restoration of the main retable of S. João de Tarouca church is integrated in the project.

5.2. IPPAR and expert companies on wood altarpieces restoration

The companies that have the skills and knowledge needed to perform a suitable wood altarpiece restoration operation are very few. IPPAR has a permanent plan of intervention that helps these companies develop and maintain their financial well-being. These companies also have a sufficient number of private clients who help maintain their businesses in good economic conditions.

Actually, IPPAR is asking the companies to produce a very detailed technical report of each intervention, including illustrations, of all its more important phases. These reports constitute a very important way of conserving knowledge and help preserve the memory of each intervention.

Integrated in the Culture 2000 project “Wooden Handwork/Wooden Carpentry: European Restoration Sites”, the author is beginning a new line of research in cooperation with IPPAR in order to collect and publish this very valuable knowledge that is in the hands of the above mentioned companies (figure 7).

Figure 7. A craftsman: Mr. Monteiro Vouga – Lamego.
5.3. Art history research

The research on the history of the interventions on the S. João de Tarouca main retable is now being done by Dr Natália Alves of the Faculty of Humanities of the University of Porto.

The more important first conclusions include the following:
- a late 19th century intervention changed the original shape of the altarpiece removing many of its parts. These are now in a false pulpit, in other places in the church, have been stolen or are behind the altarpiece;
- it is possible to make a drawing of the original form and make up of the altarpiece but it is probably not possible to find all the original wood parts of the altarpiece (figures 8 and 9).

![Figure 8. Wood parts of S. João de Tarouca’s main retable that have been removed. (Photo: Dr. Fernando Ribeiro – IPPAR – Viseu).](image)

![Figure 9. False pulpit erected using parts of the original retable.](image)

5.4. The planned intervention

The planned intervention on the S. João de Tarouca main retable includes the following actions:
- restore the original shape of the altarpiece;
- demolish the existing false pulpit in the church (figure 9);
– move the throne down;
– recover all the existing lost parts and reconstruct the altar using these parts and new parts using “old” chestnut wood;
– evaluate the stability and integrity of the structural wood parts and reinforce and substitute those that cannot be maintained as they actually are;
– make a surface protective treatment on the back of all the wood parts;
– substitute pine boards on the back walls of the altar for “old” chestnut boards;
– recover existing gold coverings and apply acrylic disguising paintings on the parts that have lost their gold coverings in all situations that have a negative decorative impact (it is not planned, due to cost, to put new gold on the damaged parts).

6. Conclusion

The basic conclusions of this paper are the following:
– many Portuguese churches have altarpieces fully covered with gold;
– altarpieces of the late Portuguese baroque period are a very rich patrimony that must be preserved;
– restoration should always maintain the original shape of the existing altarpieces and normally the intervention should restore the original shape if previous interventions have changed this;
– cooperation is needed between owners, wood experts, art history experts, restorers and craftsmen dedicated to wood art object restoration;
– the final result of an intervention is always a very rewarding task as can be seen (figure 10).

Figure 10. A restored lateral altarpiece with a 15th century painting of oil on wood.
7. Acknowledgements

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References