

The Conservation and Restoration of Casa de Rui Barbosa Museum architectural surfaces in Rio de Janeiro: reflections and planning issues

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Abstract

The challenges for the conservation of historic surfaces at Casa de Rui Barbosa Museum, a building from the 19th century that has been greatly replastered with cement in the nineteen-seventies is presented in this paper. Furthermore, within the Brazilian conservation field, problematic issues concerning the conservation of architectural surfaces are discussed as well as the development of a strategic plan, involving research, experimentation, training and education. In its pre-investigation approach, this paper presents the plan goals, emphasizing the importance of bridging the gap between the theoretical, technical and practical attitudes towards the heritage conservation, of establishing a compromise to maintain authenticity and integrity without accelerating decay; of developing compatible materials and techniques and the skills of builders and craftspeople; of developing building conservation techniques to remove damaged, deteriorated, contaminated and incompatible areas of plaster among other specific issues in the framework of sustainable heritage preservation.

1 Introduction

The Casa de Rui Barbosa Museum in Rio de Janeiro is a national monument built in 1849. Rui Barbosa was a prominent lawyer, writer and statesman, active at the end of the 19th century and the beginning of the 20th century. In 1930, the Rui Barbosa's house became the first historic

house museum in Brazil, with a varied collection including a precious library with books on law, humanities and culture.

Amongst the activities taking place at the Museum, preventive conservation strategies are being developed for better conservation of the building and its collections, including the installation of an alternative climate control system in the library to provide a suitable preservation environment for the collection and comfort for visitors.

Since its architectural conception almost two centuries ago, the building has been changed by historical usage and alteration, deterioration evolution and intervention actions that happened mainly in the nineteen-seventies. During this period, the building underwent interventions which significantly altered the external surfaces characteristics and properties, due to introduction of extended areas of cement. Paint, colours and, surface details, seem to be different now because of these alterations when compared with former images. Research is being developed to clarify the extent of changes.

Conservation works using lime in one of the building's facades confirmed the need, in Brazil, for the increase of the quality of the practical execution, contracts and management on work sites to guarantee conservation based on correct principles and guidelines, as discussed by Kanan [1]. This paper presents a reflection upon the issues of the conservation of the historic surfaces of the Casa de Rui Barbosa Museum and the planning steps towards research and the development of a strategic plan for research, experimentation, training and education in the context of the Brazilian conservation field.



Fig. 1 Casa de Rui Barbosa Museum in Rio de Janeiro.

2 Reflections on Conservation and Restoration: Issues of Historic Surfaces

We base the conceptual framework for the conservation and restoration of the surfaces of Casa de Rui Barbosa Museum in the perspective of current general principles that sustain the conservation and restoration of the building heritage, to keep authenticity and integrity, and specifically the issues of historic surfaces and the technical and aesthetic requirements and properties. [2]

Although it is not clear for many professionals, managers and owners of cultural heritage, mortars and plasters play an important role in the conservation and in determining the significance of cultural built heritage. Currently, a lot of attention is being dedicated to the studies of it. The importance of the proper conservation and restoration of architectural surfaces relies mostly in the following:

- they give historic cultural appearance and identity to the building.
- they present an aesthetic function: the colour, texture, finish and style of a period.
- they are evidence of techniques, materials, cultural practices, etc.

- they give protection to the building envelope against physical and environmental forces.

The understandings of these plural aspects make the conservation of these surfaces a real and practical restoration issue, and can't be considered only as ordinary maintenance. In this sense conservation must be conducted considering the established principles of the field, because the action involves form and fabric, requiring historical research, formal analyses and technical knowledge. Furthermore, these works can't be developed as an external layer treatment, in a formal sense, but should consider the architectural object as a whole, with its functional, aesthetic and structural complexity.

Relying on today's conservation principles, the action taken on architectural historical surfaces can have two main approaches, as suggested by Carbonara [3]: the first is when minimal intervention is possible to consolidate the plaster and stabilizes the painting, keeping the sense of passed time. The second is related to a situation where it is impossible to avoid the surface renovation. In this case the solution must be seen as an addition, based on critical judgment and technical analyses, developed to preserve the aesthetic and historical values, without being a retrospective falsification, bearing in mind technical compatibility and allowing removal in the future.

3 Architectural Surface Research at Casa de Rui Barbosa

Since its architectural conception almost two centuries ago, the building has changed mainly due to intervention actions, mainly during the nineteen-seventies. In order to investigate the problems and to establish principles and procedures for the house's surface conservation architectural surface research been implemented, in two stages, one theoretical and other more practical. The following steps illustrate what has been done so far:

3.1 Theoretical/ Technical Approach:

- An architectural and historical survey to consolidate the understanding of the place concerning its original concept and changes throughout the previous two centuries.

- An architectural analysis and critical assessment of the significance of the heritage.
- Conservation assessment and mapping of the deterioration problems.



Fig. 2 The deterioration of cement plaster at Casa de Rui Barbosa Museum's surfaces



Fig. 3 The deterioration of cement plaster at House of Rui Barbosa's surfaces-detail

3.2 Practical Approach – Evaluation Process

In 2008 the facades of a part of the built complex, a small pavilion, a former stable, was conserved using lime plaster to replace cement, due to accelerated rate of deterioration observed. The results exemplify the problematic issues of surface conservation. Soon after the end of the works the surfaces presented spots in the paintings and detachment of the renders, and also big areas with salt efflorescence; the process is being analyzed to better identify the causes. The first analysis were restricted to visual evaluation of the surfaces and to the data collection about the procedures used in the repair, which showed the need for a more detailed specification and also stronger field control. These problems are certainly related to high humidity, the use of cement in the repairs for many years, the alteration of the traditional characteristic, but the actual reasons needs to be investigated by analysis and a deep understanding of the whole process, as until now only a visual observation of the repairs were done. The solutions for the problems should be based on a deep understand of the materiality of the walls and plasters, the causes of the deterioration process, etc., as well as compatibility of intervention materials and building's structure.

Thoughts for a Conservation Project

The architectural surfaces of Casa Rui Barbosa present general and specific difficulties for their conservation and restoration. In the specific case where the house has an architectural value, a museum function, and the actual surfaces are not from the time of its construction and historical phases, but from an intervention phase, i.e. from the seventies, it is much more complex to make the conservation and restoration decisions [4,5]. The project should be based on a complete study to understand the whole process, the restoration principles and critical assessment that will completely validate the intervention in terms of these conservation principles, and not only an intervention to minimize deterioration problems and attend to functional needs.



Fig. 4 Stable façade restored with lime plaster two years after the intervention.

3.3 Questions related to authenticity, integrity, deterioration, materials and skills

In order to help to format a research project for the conservation works to the architectural surfaces of Casa Rui some questions need to be discussed:

Authenticity and integrity

- What are the historic and architectural values of Casa Rui and its architectural surfaces?
- Are the plasters changing the historic architectural significance and integrity of the house? Is there a need for another intervention to minimize visual problems?
- Does the building have any evidence from the former plasters that could give a key for the restoration?

Deterioration

- Are the plasters incompatible, causing damage? What kind of damage? Too impermeable, too strong?
- What is the extent of the damage?

- Will removal of the plaster damage the building? Will it be necessary to develop special techniques?
- Does the damaged render need to be replaced? Totally or partially? Using what type of technology? Will traditional technology be wise and sufficient in the future [6]?

Materials and Skills

- Is it possible to develop high quality compatible materials without experimentation?
- Are qualified builders and craftspeople easily available today and in the future for the conservation and maintenance? Or is there a need to train and increase levels of skills before the development of the works?

3.4 Proposal: Plan for a Research Project

Considering the above situation the authors understand that a research project to provide sufficient and consistent information in answer to the questions related to the conservation of the architectural surfaces of the house and to higher the levels of the work should be developed before the final project [7]. The research project should include the following phases:

- Survey and typological analysis phase: Historic documentation, research, building inspections to identify values, materials construction techniques and construction phases, etc; typological analysis to evaluate the specific characteristics of the architectural surfaces of the house.
- Diagnostic phase: to identify and evaluate the state of conservation and problems of deterioration, incompatibility, etc. using scientific methods.
- Experimental and laboratory analytical phase: to carry out material analysis (including the documentation and the compositional and physical characterization of the original materials and substrates) in order to determine the basis and the range of acceptable properties of any proposed new render; to search sources of materials and suppliers; to review the literature to asses current approaches to specification

and the properties of available materials; and to develop formulations to be tested. After detailed analysis of original materials using lab methods, experimental formulations will be developed and tested in a field assessment prepared for the house.

- Training/ education phase: to train a team of craftspeople and develop workshops for qualification and increase levels of the skill of the professionals involved.
- Critical assessment and guideline phase: to review results and develop technical parameters and procedures for the conservation project and works.

4 Final Considerations

During historical times the Casa Rui Barbosa was used and the architecture of the building was kept and maintained as a residence. When the house was changed as to a museum there were other changes too, that altered the architectural characteristics of the house and the maintenance routines. Today as a result of all these changes the architectural analysis and the state of conservation of the house are more complex. The house needs to be investigated and critically assessed to form a foundation for the next actions of conservation and maintenance. It is expected that the reflections and proposals of this paper will be a contribution to increase the conservation works at Casa Rui Barbosa as well as at other work sites in Brazil that present similar challenges.

5 References

1. Kanan M (2008) Experiences to conserve the lime fabric of our architectural heritage illustrated by Santa Catarina's island, Brazil, HMC2008
2. Cassar M (2001) Technological Requirements for Solutions in the Conservation and Protection of Historic Monuments and Archaeological Remains. (ed) European Parliament, Directorate-General for Research, Directorate A, STOA Programme. London, UK.
3. Carbonara, G (1997) Avvinamento al Restauro. Liguori Editore, Napoli
4. Berducou M (2007) Cultural Heritage Values and conservation: a historical perspective. In: Valori-Piazza (ed) Sharing Conservation Decisions, ICCROM, p.48-52

5. Jokilehto J (2007) Concepts in International Doctrine: conservation between theory and practice. In: Valori-Piazza (ed) Sharing Conservation Decisions, ICCROM, p.53-58
6. Hurd J (2009) Sustainable and Careful use of Conservation Materials in Diverse Cultural Conditions, ICOMOS
7. Menezes M, Tavares M (2008) Social and sustainable development of the architectural heritage. Historical Mortars Conference, HMC2008