

**HUNGARIAN UNIVERSITY OF FINE ARTS**

**DOCTORAL PROGRAM**

**THE EXAMINATION OF CONSTRUCTION  
TECHNOLOGY AND PAINTING TECHNOLOGY OF  
GROTTOS MADE IN HUNGARY**

*Thesis of doctoral dissertation*

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The doctoral thesis will focus mainly on the painted grottos' construction technology, painting technology and their closely related, so called sala terrenas ("cooling rooms") from baroque era. This specific type of decoration was not so widespread, regardless of the fact that we have two unique grotto memories in our country. One of them is the "grotto chapel", built in the garden of the "hermitage of Majk", and the interior decoration of a marionette theatre, which belongs to Esterházy Castle. The primary objective of the research is to observe the production technology and to compare it to other similar decorations abroad. The results contribute to the recognition and preservation of our cultural heritage.

The primary methods in the doctoral research are the personal visit of these monuments, local source gathering, photography, condition review, examination of local production technology, search of professionals and restorers, gathering relevant literature and last but not least, research of archives and library research. The main lines of the foreign literature were mainly from the Austrian and Upland areas. The research's determining factors were also the production technological and laboratory tests, which were extended by photo technological analyses and large instrumental analyses. The analysis was reaching out to plasters, mortars, certain stone elements, grotto applications, stucco and to painted layers are well.

The dissertation is made up of three main themes. The first part of the thesis is above all an overview of art history in relation to the relevant literature background. The second part is the three most known "national" grottos (Majk, hermitage of kamaldu – "grotto chapel", Fertőd, Esterházy Castle – marionette theatre, Cseszte – The castle of Vöröskő) contain the examination of detailed construction technology and painting technique. The doctoral thesis' third part will present the complexity of the restoration and reconstruction of the painted grottos, the difficulties and problems of their overhaul, the types and causes of their deterioration introduced throughout Hungarian and foreign examples.

### **The short summary of the results**

Based on their type, appearance and position there can be several types of grottos, in which we can differentiate two main types. On the one hand, the artificial caves, which are based in the garden and first and foremost connected to the art of gardening and to the cult of ruins and they can be found in landscape gardens and in the castles' parks. On the other hand, cave-like type of space, which is built in the interior of the buildings is located quite often in the sala terrenas, which is represented by outstandingly rich material usage. This thesis puts

major emphasis on this type of space and although, it was not widespread in Hungary, it was popular in whole Europe. Firstly, it was often used in the era of baroque and the early era of classicism on Austrian, German, French territories.

During the research it was revealed that both in Hungary and abroad rich material usage is common when it comes to the creation and decoration of the interior grottos. The exceptionally detailed elaboration can be observed, the diverse sculptural, painting and applied arts techniques used at the same time. The snail and the shell applications' usage, the sea, mythological heroic statues, reliefs and wall-paintings, the cave-like booths, fountains, bubbling fountains and different mosaic techniques for instance pebble mosaic floors.

It can be stated that after the observation of painting technique and construction technology of this type of decoration system they cannot be separated from their carrying wall architectural medium. At the decoration of the marionette theatre of Fertőd (as those had been deconstructed, its elements were taken, some parts were plowed on the spot), the ornaments could not have been observed in their original nature. That is why, other characteristics and deterioration processes were experienced, which are typical to yet standing constructions and decorations.

The examination of the findings related to the puppet-show at Fertőd confirmed, that the analysis of the backs of the fragments are really important as we can predict the building technology and the carrying medium.

The dissertation's corner stone was the reveal of the fragments of the puppet-theatre at Fertőd and the examination of the ornamental system of "grotto chapel" at Majk. On the monument of Majk a decoration of two eras can be observed, stucco usage of the 18<sup>th</sup> century, which nets the vault with red-yellow colored splashed marble-paintings with decorative sculpture amongst the blue wall fields. Moreover, the middle of the vault we can see Saint Maria in a painted medallion, not to mention the 19<sup>th</sup> century "grottofication". Throughout the research it had been confirmed that the "grotto chapel's" interior ornamentation was in two different periods. An 18<sup>th</sup> Century decoration was kept with the grotto-like interior space creation and the intermediate surfaces and openings were enriched by rock-like stucco and shell-snail applications. Altogether with the observation of the vault, it is very likely that the outer view's 19<sup>th</sup> century reconstruction was in the same time with the transformation of the interior space.

The grotto-like created interior space of the puppet-theatre at Fertőd sculptural ornament was a very highlighted element including the snail-shell applications, and the

incorporation of the rock-like stones. It is very characteristic at both of their decorations the usage of copper greens in a bigger amount, besides that, the material research confirmed the usage of ground paintings, charcoal and smalte. At some parts' paintings cinnabar and minium was also used.

The research also put focus on the strengthening of the snail-shell elements. At Majk, they were embedded into fresh mortar, plaster. This method was also used on some ornaments, elsewhere the shells were fixed with nails, wires and other metal elements and it has to be mentioned as well that usage of the positive and negative prints of the mollusk frame was quite frequent.

At Majk, the "grotto chapel's" wall-painting, which is representing Maria was almost completely ruined. The researches shed light on the following fact as well that the environmental effects, the large extent and long lasting moisture, the erosion because of the damaging salt in the wall, and the usage of materials could have caused the quite rapid destruction of the ornaments.

The restorer point of view research is also important of the grottos, because this incredibly rich material usage represents the complexity and the restoration of these decorations. In many cases the location, the environmental effects and the surfaces exposed to vandalism result in serious damages. It is not rare that these changes occur because of constant usage, for instance the placement of different mood elements, for instance lampions, pools and bubbling fountains, or there can be also a significant deterioration because of not keeping the technological requirements. There can often occur deteriorations because of different materials, which are used together.