



Dr. Nazzareno Gabrielli

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Chemist, Director of "Gabinetto di Ricerche Scientifiche dei Musei Vaticani" (in Vatican State), involved from about 40 years in problems related to conservation and restoration of works of art.

Participation in the restoration of "Pietà di Michelangelo" in 1972. He has directed and coordinated the restoration of frescos in the "Cappella Sistina" (Michelangelo and quattrocentisti) and of the Necropolis under San Peter Basilica.

Consultant, for about ten years, for the restoration of Byzantine monasteries in the old Yugoslav.

[CMA4CH 2006 Opening Lecture](#)

The Measurements in Art

Introduction

Art and measurements, fantasy and rationality, two opposites that seem do not have a relation. Measurements are applied to something of commensurable and no aesthetic content is visible in a table of values or in a graph. Furthermore the forms of the art are different and complex, they can concretize themselves in paints realized by tens of colours, marble sculpture with not-homogeneous material and so on. This problematic is well know to the Dr. Nazzareno Gabrielli during the period of study and research starting from 1965, and specially when he was director of the Scientific research laboratory of Vatican Museum [1] in the year 1975. In the occasion of this conference, a large number of studies carried out on important pieces of our art history are presented.

During his activity most important cases have been studied as the restoration of the Michelangelo's Pietà, after the low attack by Laslo Toth in 1972. In that time, non many scientific apparatus were devoted to the study on Cultural Heritage problems, neither some important samples could be detached for laboratory analyses, so the expert had to be based only on an exiguous number of data without have a view of the situation at 360 °.

Restoration

More complicate is to organize a restoration project for the Byzantine Monasteries in Ohrid, Macedonia in the period 1975-1985 as member of a special commission in Yugoslavia. Hundreds of information came from the large surfaces painted very detailed, and to realize a procedure to derive a common pattern among all the results was almost impossible.

All this can be treated by rationality and diligence, but if an other important factor is added the job became very hard. This factor is the emotion to operate on a masterpiece that belongs to the Humanity as the frescos of Sistina Chapel by Michelangelo. From 1980 to 1994 the Dr. N. Gabrielli directed and coordinated the physique chemical and biological preliminary analyses for the restoration of the precious paints [2]. The responsibility to return the opera in the originals aspect, the awareness to answer all the criticisms, made necessary to get objective evaluations of the data collected by the instrumental analyses, by elaborating special program to made evident for example, composition difference in more pigments of a same colour or different conservative states as a function of relative position and exposition in the wall of the Chapel. The complexity of the data

coming from an artistic object is without limits, starting from the aesthetic aspect, to its realization technology, by considering the chemical nature of the composing materials, or all the processes operate for its realization. In the case of metals the history of metal and its transformations are of particular importance for conservative purpose as the case of the big bronze sphere on the Saint Peter dome. If we join this to the problem of the settlement of the metal Manufact in a architectonic contest, the data coming from different sources to be elaborated, to have a unique answer in terms of the choice of the most suitable way to protect the goods. This has been the attempt done during the restoration of the main entrance of Saint Peter Basilica with the Saint Door, the Saint Paul Basilica Cloister, the Saint Joan Basilica Cloister up to the restoration of the Saint Peter Necropolis [3].

The scientific instruments

All described can be undertaken if we consider the actual potentiality of the scientific instrument capable to detect data without moving the object from its position and capable to collect a large amount of data in a short time, but this is not the case in which other competencies began necessary, as the case of the studies on mummies for which biological investigation are necessities. Dr. N. Gabrielli has developed a great experience in the preparation of bodies of the “ Servi di Dio ” for the devotion of the faithful by operating 18 mummification treatments and 32 conservative treatments.

Among them it is possible to mention the holy body of Pope Giovanni XXIII and Saint Francesca Cabrini now venerated in New York by the Italian emigrants.

Very recent is the restoration intervention on the Zagabria Mummy wrapped up with long bandage totally written in Etruscan language, and for this represents the longest Etruscan text known.

In all the case presented the comparison of data coming from different source and of different nature are very difficult to interpret, the aid of a careful statistical analysis began essential for a objective and reliable interpretation of the instrumental values.

References

- 1) Vatican Museum, Vatican State, http://mv.vatican.va/3_EN/pages/MV_Home.html
- 2) Sistine Chapel, virtual tour, http://mv.vatican.va/3_EN/pages/CSN/CSN_Main.html
- 3) Saint Peter Necropolis, presentation of restoration, http://212.77.1.245/news_services/bulletin/news/7694.php?index=7694&po_date=28.09.2000&lang=po