

## MARBLE SCULPTURES IN THE TRIBUNA OF UFFIZI GALLERY

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In the framework of the restoration project of *Tribuna* in the Uffizi Gallery in Florence (Italy), started 2010 and completed in the 2012, integrated studies for the analysis of the materials of the five marble sculptures were performed. The objectives were the assessment of the state of conservation, identification of materials due to past interventions and the provenance of marbles. The five sculptures in the *Tribuna* were: the *Venere Medici* (inv. 224), the *Medici Apollo*, so-called *Apollino* (inv. 229), the *Arrotino* or *Scythian knife-grinder* ( inv. 230), the *Satiro danzante* (inv. 220) and the *Lottatori* or *Wrestlers group*, (inv. 216) (Fig.1).

The *Tribuna* of the Uffizi was built in 1587 by Bernardo Buontalenti to celebrate the varied interests of collectors of Francesco I (1541-1587), eclectic and whimsical prince of the Medici family.

The five sculptures have a complex archaeological and antiquarian history. They are probably high quality Roman copies of original Greek ones; they were discovered in different archaeological excavations arriving in the collection in different moments between 17<sup>th</sup> century and 18<sup>th</sup> century.



Fig.1 Four marble statues of *Tribuna* of Uffizi Gallery  
(left: *Satiro*; center: *Lottatori*, *Venere Medici*, *Arrotino*; right: *Arrotino*, *Venere Medici*)

Before the restoration, the surfaces condition were assessed for four sculptures: the *Venere Medici*, the *Arrotino*, the *Satiro danzante* and the *Lottatori* trough colorimetric techniques

and portable optical microscopy. Furthermore, for the *Satiro Danzante* microsamples were also taken in order to investigate the composition of some patinas, stuccoes and gluing materials. Fourier Transform Infrared Spectroscopy and X-ray diffraction techniques were used for identifying materials. For the gluing materials the analyses evidenced the presence of different composition: rosin mixed with calcite and dolomite and beeswax with calcite. The patinas were composed of oxalates and gypsum or, in some specific areas, oil and white lead. In addition, some microsamples, both chips and powders of marble were taken in order to identify the provenance of stone used for the original and integrated portions of all the five. Very interesting results were obtained combining the minero-petrographic analyses with isotopic and EPR analyses [1, 2].

With respect to the provenance of marbles four of the five sculptures of the Tribune (the *Venere Medici*, the *Apollino*, the *Satiro Danzante*, and the *Lottatori*) were originally carved using Parian *lychnites*, whereas the last one, that is the *Arrotino*, is made of Docimium marble. Both for the *Apollino* and the *Arrotino*, only the original marble was tested and therefore there are no indications on the marble used for the integrations, which in both cases are, quite limited. The *Venere* and the *Satiro* were restored using Pentelicon marble.

The results obtained from the analyses of the *Lottatori* outlined a different, more complex but also more informative sequence of events.

The *Lottatori* underwent several different restorations that made use of a *lychnites* analytically different from the original marble stock, but also of Docimium (the two heads) and Carrara marble (base of the group). In contrast with this the left arm of the looser, considered to be a later addition, is made, in fact, using the original *lychnites*: an unexpected result that must be properly interpreted.

The data prove that marble studies may provide relevant information useful to support, on the basis of the known history of the quarries, the chronology of the sculptures inferred from historical sources and stylistic data. In addition different restoration events were identified, obtaining also in this case chronological information based again on the type of material used and, perhaps more important, on the type of restoration technique.

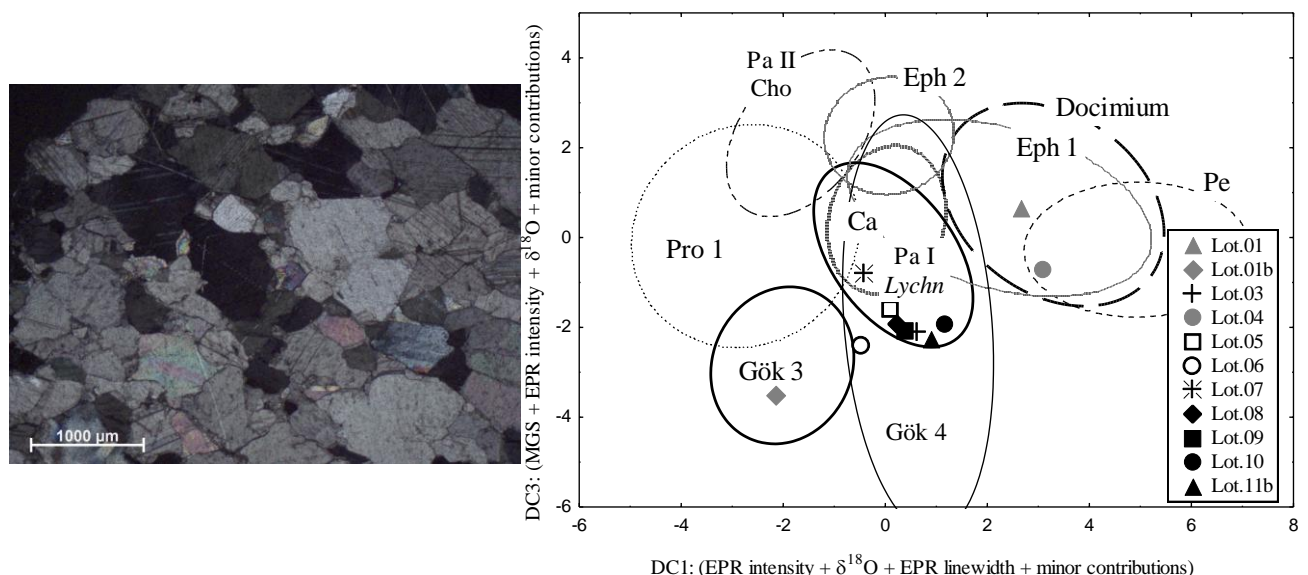


Fig.2 Microphotograph under polarized optical microscopy of a thin section of *lychnites* Parian marble ( n.l.,) ( left); statistical graph of the provenance of analyzed marbles of *Lottatori* sculpture (right)

VIII Congresso Nazionale di Archeometria  
Scienze e Beni Culturali: stato dell'arte e prospettive  
Bologna 5 - 7 Febbraio 2014

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- [2] Attanasio, D., Brilli, M., Ogle, N., 2006. *The isotopic signature of Classical Marbles*. L'Erma di Bretschneider, Rome.