

Vitruvius and antique techniques of plaster work and painting

Laura Thiemann¹, Stefanie Gerzer², Ralf Kilian³

¹ Technische Universität München, Lehrstuhl für Restaurierung, Kunsttechnologie und Konservierungswissenschaft, Germany, thiemann@rkk.arch.tu-muenchen.de

² Technische Universität München, Lehrstuhl für Restaurierung, Kunsttechnologie und Konservierungswissenschaft, Germany, gerzer@rkk.arch.tu-muenchen.de

³ Fraunhofer Institute for Building Physics, Holzkirchen, Preventive Conservation and Heritage Preservation, Germany, ralf.kilian@ibp.fraunhofer.de

Vitruvius and the *De Architectura libri decem*

Marcus Vitruvius Pollio (~ 84-20/10 BC), the author of the *De Architectura*, was a Roman architect, art historian and engineer in military and hydraulic construction. Little is known about his life and information is mostly provided by his own remarks where he relates about his close connection to Emperor Augustus, whom he dedicated his work. Divided into ten sections or "books", *De Architectura* covers almost every aspect of architecture, from town planning, materials, decorations, temples to water supplies, etc. His work today represents the only major antique written source on architecture and building techniques. So far *De Architectura* has been translated into several languages. The youngest German edition was published in 1964.

Aims and methodology of the research-project

The project "*Vitruv und die Techniken des Raumdekor*" intends to create a new German edition, translation and annotation of the technological aspects in Vitruvius' *De Architectura*, especially those concerning plasters, stucco and wall paintings (focussing on books II, VII and VIII).

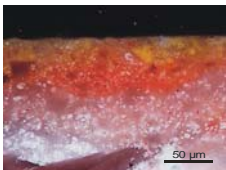
Latest results in context with archaeological, chemical and technological investigations are going to be incorporated into the texts. The project is strongly interdisciplinary, integrating restoration, art technology, building history, archaeology and philology. Results of the studies on buildings and mortars will be verified within workshops of experimental reconstruction.



Comparing various translations shows the wide range of existing interpretations of the text. Book VII, 3 is a colourful example for the dissimilarities:

„Sed et liaculorum subactionibus fundata soliditate marmorisque candore firmo levigata, coloribus cum politionibus inductis nitidos experiment splendoros.“
[Latin text in FENSTERBUSCH 1964]

„[...] sondern sie werfen auch, wenn sie mit Stöcken dicht geschlagen und mit hartem Marmorstaube geschliffen, zugleich aber beym Poliren mit Farben überzogen werden, einen schimmernden Glanz von sich.“
[German translation in RODE 1796]



„But once the durability of such revetments has been ensured by being worked over with plasterers's floats and polished with bright and stable marble-powder, they will be brilliantly luminous when the colours have been applied with the final surface.“
[English translation in TAVENOR 2009]



„Mais lorsque leur solidité, assuré en profondeur par la pression des taloches, aura de surcroît acquis par le lissage la blancheur éclatante du marbre, les murs, grâce aux couleurs étendues avec la couche de finiton, jetteront un brillant éclat.“
[French translation in LIOU/ZUINGHEDAU/CAM 1995]

„Ma una volta che la loro compattezza è stata consolidata, strofinandola con spianatoi, e levigata con il marmo lucente e duraturo, le pareti irradieranno la più smagliante lucentezza dopo che, assieme alla rifinitura finale, vi saranno spalmati i colori.“
[Italian translation in GROS/CORSO/ROMANO 1997]



Front page of „Vitruvius Teutsch“, the first German translation (1548)

Expected results

In archeological context

- How far are Vitruvius' descriptions based on real ancient traditions?
- Does the *De Architectura* represent rather a standard or a exception in real built architecture concerning technological aspects of plaster-decoration?
- Which regional and chronological validity do Vitruvius' techniques have?
- How do techniques differ depending on their context?

In philological context

- Do existing differences between literary source and implemented practice indicate the intentions of the author, be it in didactical or in ideological sense?
- Whom does the text address?
- Does a terminological specification have impact on other literary contexts?
- To what degree does Vitruvius adopt terminology or design new terms?

In technical context

- Correlation between literary source and archaeological finding on a broad basis.
- Handing down of techniques into venetian art-technology up to today.
- Deeper knowledge on techniques of antique roman wall paintings.
- Improved knowledge for their restoration.
- To what degree did Vitruvius' descriptions on the techniques of wall painting and stucco influence renaissance architects, builders and artisans?