

## SUMMARY OF THE DOCTORAL DISSERTATION IN ENGLISH

### **Building dipinti in the temples of Hatshepsut and Thutmose III at Deir el-Bahari in the light of the building stone dressing technology**

by

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The main purpose of the dissertation was to collect and describe a corpus of building dipinti preserved in the area of the temples of Hatshepsut and Thutmose III at Deir el-Bahari, dated to the early 18th dynasty of the New Kingdom, to analyse their epigraphy, all this carried out in parallel with the analysis of building stone material (lithic material), on which these dipinti were executed, in order to use this double analysis to embed the dipinti in the context of the construction process, and in consequence – to interpret the role they played in this process.

The dissertation consists of two parts. Part I is the main text of the dissertation, while Part II consists of two catalogues, the first containing the epigraphic material and the second – the lithic material. These catalogues, along with charts, supplement the text and illustrative material of the dissertation contained in Part I.

The dissertation is divided into nine chapters. Chapter I presents the research problem and discusses the state of art on the epigraphic material in question, the building stone dressing technology, as well as terminology used; the aim and scope of the work are determined and comparative material presented.

In Chapter II, the discussed corpus of building dipinti is presented, characterizing it in the form of a description of the place of discovery, the documentation process, and epigraphic data along with the archaeological context. Further in the same chapter, the typology of this material, along with its characteristics and interpretation of its respective types are outlined. As a summary of these considerations, the quantitative distribution of building dipinti within each type and their paleography are discussed.

Chapter III is devoted to building stone material, focusing mainly on geological data, description and characteristics of the main types of stone used in sacral and tomb constructions (such as limestone, sandstone and granite), along with an overview of their quarries. The most attention is paid to the distinctive features of the building stone types used in the construction of the temples of Hatshepsut and Thutmose III at Deir el-Bahari.

Chapter IV discusses the state of research on stone masonry in ancient Egypt, presenting the tools, mining, transportation and construction techniques used, with particular emphasis on wall construction.

Chapter V is entirely devoted to the study of the building stone dressing technology and the building stone blocks production, with the use of the *Toolmark Pattern Analysis* (TMPA) method, developed by the author for the purposes of this study. The chapter discusses in detail the process of analysing the stone material along with the results obtained, which allow the identification of the tools used, and first of all – which lead to the reconstruction of the *chaîne opératoire*, i.e. the sequence of actions required in the process of the building stone blocks production.

In Chapter VI, the results of research on the technological process discussed in Chapter V are juxtaposed with the epigraphic material (building dipinti) using the analysis of the stratigraphic relations between the preserved toolmarks and the dipinti themselves, which

eventually allows to determine the stratigraphic ranges of occurrence of the individual dipinti types and identification of 7 *stratigraphic horizons* within which all the building dipinti presented in the dissertation were executed.

In Chapter VII the building dipinti are analysed in the context of the reconstructed *chaîne opératoire* of the building stone blocks production in order to finally define their relative chronology and, consequently, to interpret their function and significance in the construction process, understood as a sequence of actions originating in a quarry, along with the extraction of raw stone material, and finished together with the execution of relief decoration on the walls of a completed building. For this purpose, the results of the analysis of the stratigraphic relations between the preserved toolmarks and the building dipinti themselves are outlined. This makes possible the linking between the identified 7 *stratigraphic horizons* of dipinti and the *chaîne opératoire* of the building stone blocks production.

Chapter VIII presents the results of the undertaken research problem, presenting the dipinti types discussed in the previous chapters within the construction process, and, based on their attribution to the certain stages of that process, proposing an interpretation of the role played by each particular type of dipinti in the construction.

The dissertation ends with Chapter IX, which briefly discusses the research potential of the *Toolmark Pattern Analysis* method. This method, although created by the author for the purpose of interpreting building dipinti and applied to building stone material dating back to the 18th Dynasty, seems to be universal enough to be used in the analysis of the monuments from other periods, in Egypt and beyond.

**Keywords:** Egypt, New Kingdom, temples, Deir el-Bahari, Hatshepsut, Thutmose III, building dipinti, construction techniques, tools, stone dressing, *Toolmark Pattern Analysis*, *chaîne opératoire*.