

Analysis of post-Byzantine icons from the Church of the Assumption in Cephalonia, Ionian Islands, Greece: A multi-method approach

Eleni Kouloumpi^{a,c,*,2}, Peter Vandenabeele^{b,1}, Graham Lawson^{c,2},
Vassilios Pavlidis^{c,2}, Luc Moens^{b,1}

^a National Gallery – Alexandros Soutzos Museum, Conservation Department, Physicochemical Laboratory,
1 Michalacopoulou Street, 116 01 Athens, Greece

^b Ghent University, Department of Analytical Chemistry, Proeftuinstraat 86, B-9000 Ghent, Belgium

^c De Montfort University, Faculty of Health & Life Sciences, Research Department,
Hawthorn Building, LE1 7RH Leicester, UK

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Abstract

A multi-method approach has been developed for the characterisation of the proteinaceous binding media, drying oils and pigments present in samples from the panel paintings of the Church of the Assumption in Cephalonia (Ionian Islands, Greece). The analytical protocol involved the use of scanning electron microscopy/energy dispersive X-ray analysis (SEM/EDX), Raman spectroscopy and gas chromatography. The identification of the pigments was achieved by SEM/EDX and Raman spectroscopy. The latter technique was also used for the detection of the binding media, while their characterisation was achieved by gas chromatographic analysis of ethyl chloroformate derivatives. The aim of this multi-method protocol was to obtain as much information as possible from the panel paintings of the Church of the Assumption, through non-destructive methods, before proceeding to gas chromatography. Little scientific information is available for the understanding of the construction technique and the materials used by the post-Byzantine artists and whatever is available comes mainly from artists' manuals. One of the aims of this paper is to provide a scientific background to the technology of the Ionian post-Byzantine icons.

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1. Introduction

The post-Byzantine art of panel painting can be described as an amalgam of influences. It is the transitional period (16th till early 19th century) in which the artists manage to liberate themselves from the strict rules of the Byzantine icon painting (as a consequence of western European influences) and experiment with materials [1,2]. The result is the change of style from religious to secular [3–5] and the change of materials from the wooden substrate to canvas and from egg tempera to drying

oils. However, for this dramatic change to take place, the artists had already experimented with several techniques, such as the famous “tempera grassa”, an emulsion of mainly egg yolk and a drying oil [6].

The island of Cephalonia is part of the Ionian group of islands. Historically, after the fall of the Byzantine Empire in 1453, the Ionian Islands came under the rule of Franks and Venetians [5]. The latter occupation contributed mainly to the formation of the post-Byzantine character on the Ionian. A characteristic example is the 17th century Church of the Assumption in Cephalonia. The techniques and the materials used by the painters of that period, have been the subject of very little research. As far as the icons are being concerned, the characterisation of the paint layer and especially the binder is of high importance since it is the one that records the main changes of technique.

The aim of the research is to provide information on the nature of the materials used at the icons of the Church of the Assumption and to examine whether the post-Byzantine artists adopted

* Corresponding author at: National Gallery – Alexandros Soutzos Museum, Conservation Department, Physicochemical Laboratory, 1 Michalacopoulou Street, 116 01 Athens, Greece. Tel.: +30 210 7235937; fax: +30 210 7250087.

E-mail addresses: elenikouloumpi@nationalgallery.gr (E. Kouloumpi), peter.vandenabeele@ugent.be (P. Vandenabeele).

¹ Tel.: +32 9 264 66 23; fax: +32 9 264 66 99.

² Tel.: +44 116 257 7129; fax: +44 116 2577135.



Fig. 1. The Church of the Assumption in Cephalonia (Greece). (A) External view of the church. (B) The Dodekaorton.

the western characteristics in their painting techniques similar to what they did in their iconographic types. For this purpose, a multi-method approach was used. While the analysis of the inorganic components of a work of art has acquired a nearly routine

character, the identification of the organic media still encounters severe difficulties. Sampling paintings is a problematic procedure, since the quantity of the sample is small and should ideally be limited to the paint layer, in the form of powder. A methodol-

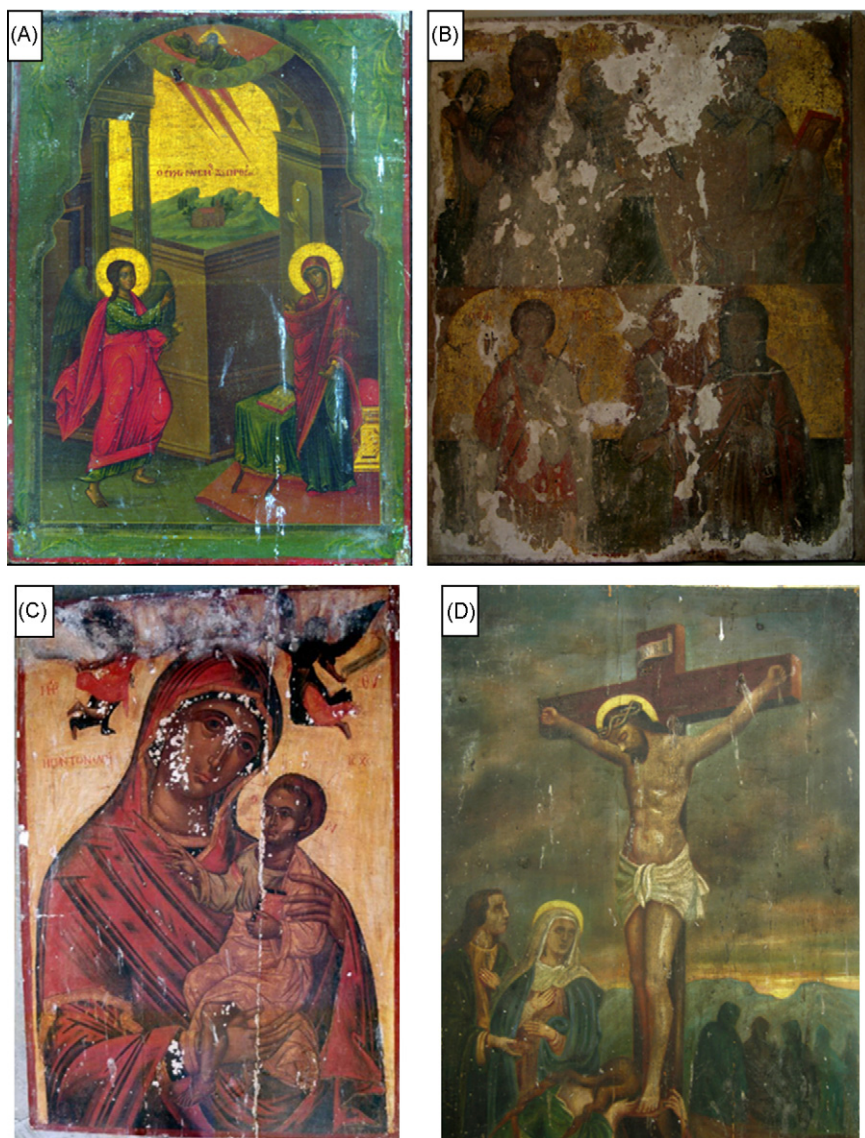


Fig. 2. The four different painting styles: (A) Style I: the Annunciation; (B) style II: St John the Baptist, St Spyridon, Maria Magdalene and St Gerasimos; (C) style III: Mother of God and (D) style IV: The Crucifixion.

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