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The Katholikon of Nea Moni in Chios Unveiled

With nine plates and four plans

The Katholikon of the Nea Moni monastery on the Greek island of Chios, a magnificent Middle Byzantine monument (pl. 1a) is still producing new evidence for its intriguing history, twenty five years after the exemplary monographs by Bouras on the architecture and Mouriki on the mosaic decoration[1]. Built on Mount Provateion overlooking the capital of the island, under the patronage of the emperor Constantine IX Monomachos (1042 until 1055), it is still considered one of the best preserved eleventh-century buildings, surpassing in splendour those surviving in the Capital. The scope of this paper is limited to the presentation of new evidence uncovered by the removal of the external plaster, to an analysis of this newly revealed physical evidence, setting it both in a general context of contemporary and later developments in Byzantine architecture.

The early history of Nea Moni is rather well documented: Three monks, who had founded the monastery just before 1042, approached Constantine, then in exile, and predicted his ascension to the throne. When it eventually became true, he rewarded them by lavishly supporting the construction of the Katholikon[2] not only financially but also by sending from the capital an architect, craftsmen and even some materials not found on the island.

The building is free-standing in the monastery courtyard with a total length of 36.70 m, while the naos is only 10.70 m wide (plans 1–2, pl. 2a). It rests on a pronounced slope from north to south with a slight inclination to the east. The east end of the building consists of the bema with three projecting polygonal apses, followed by the aisleless, almost quadrangular nave. The great dome above rises to a total height of 17.25 m. Adjacent to the nave is the tripartite narthex which is as wide as the nave but much shorter, and the exonarthex that is flanked with semicircular apses to the north and south. Three interconnected domes on drums of medium height rise above the exonarthex, while the inner narthex is roofed by a single low pitched roof that hides the internal tripartite division. Through a narrow annex the exonarthex is connected to a modern campanile that closes off the building complex on the west.[3]

The monument survived up to the nineteenth century in rather good condition. However, in 1822 it was burnt down by the Ottoman Imperial army sent to suppress the revolution. Serious interventions by the abbot Photeinos, described in his publication *Νεαμονήσια*, inflicted irreparable damage on the building in 1857[4]. Finally, the severely damaged building partly collapsed during the 1881 earthquake. It was

[1] Ch. BOURAS, Nea Moni on Chios. History and architecture. Athens 1982; D. MOURIKI, The Mosaics of Nea Moni on Chios. Athens 1985. Cf. R. OUSTERHOUT, Originality in Byzantine Architecture: The Case of Nea Moni on Chios. *Journal of the Society of Architectural Historians* 51/1 (1992) 48–60, and IDEM, Beyond Hagia Sophia. Originality in Byzantine Architecture, in: Originality in Byzantine Literature, Art and Music, ed. A.R. LITTLEWOOD. Oxford 1995, 167–185, who suggested new approaches to the problems of the original design of the building, proposing a mid-construction change of design for the nave. For an opposed view, see Ch. BOURAS, Originality in Byzantine Architecture. *TM* 15 (2005) (= Mélanges Jean-Pierre Sodini) 99–108.

[2] A. MISAILIDOU – A. KAVVADIA-SPONDYLI, Παρατηρήσεις και συσχετισμοί στοιχείων στο Καθολικό της Νέας Μονής Χίου. *Byzantina* 25 (2005) 342–343, who supervised the 2005 work, suggest a phase earlier than Constantine IX for the katholikon, attributing it to Michael V the Paphlagonian (1034–1041), following the view of E. VRANOUSSI, Les archives de Nea Moni de Chio. Essai de reconstitution d'un dossier perdu. *BNJ* 22 (1985) 267–269. Although the existence of an earlier building occupying the site of the katholikon cannot be ruled out, no physical evidence exists today.

[3] A thorough description and historical analysis of the building is beyond the scope of this article.

[4] Gregorios PHOTEINOS, Τά Νεαμονήσια. Chios 1865.

subsequently restored in 1901, not without loss of valuable information about its history. A completely new dome was built, with the use of an iron skeleton and manufactured bricks for lightness. A new belfry was also erected in the place of the demolished sixteenth-century one.[5]

Despite major restaurations a thick white plaster (pl. 2a) covered the monument for centuries[6], at least since 1732, as it appears in Barskij's drawing, who is well known for the accuracy of his sketches. The monument was therefore externally whitewashed for at least 250 years. A few uncovered areas were insufficient to give scholars the opportunity to study its fabric, usually considered the "signature" of the masons.

Work in 1987 on the roof of the narthex proved beyond any doubt that the exonarthex was added to the main body of the church at a later date.[7] It also revealed the upper part of the original west elevation of the narthex, concealed until then by the later addition of the exonarthex. Surprisingly enough, considering the importance of the building, the wall proved to be constructed of poor rubble masonry. The visible parts of two of the blind arches were made of bricks and the middle one of banded voussoirs with alternating brick and stone elements[8]. A thin layer of pinkish plaster (*corasan*) covered the stonework of the facade, leaving decorative brickwork exposed. This west facade was mentioned in an article,[9] but its evidence did not receive any further study, since at that time it was considered to be a hastily finished intermediate phase that was very quickly covered by the mass of the exonarthex.

In 1997 a major renovation was undertaken by the Hellenic Ministry of Culture. All the external white plaster was removed, somewhat hastily, with unexpected results that will be examined in this article.

The lower part of the church is marked by the existence of a stone bench (pl. 2a). Upright slabs of local *poros* stone support the horizontal ones, joined by bronze ties. This construction was probably deemed necessary to cover the foundation of the building which had been exposed by the lowering of the surrounding ground level at a later date. The bench cannot be dated exactly, but it was certainly a later addition (it blocked the north door of the nave) structurally connected with the pebbled outer floor and the now lost semantiras.[10] Barskij's drawing of 1732 offers a *terminus ante quem* for the construction of the bench and the *semantiras*.

It became obvious that all the external walls of the nave-narthex complex were constructed in a single building phase (at least up to the arches). No construction line appears anywhere on the facades[11]. Rubble masonry was used, consisting of a variety of stones and broken bricks, divided by triple (quadruple at some points) horizontal courses of bricks (pl. 3, plans 3–4)[12]. The same masonry continues uninterrupted down to the ground. One more triple course of bricks ran behind the stone bench a few centimeters above the ground. Not even two courses of bricks are parallel, indicating rather sloppy workmanship. The lower parts of the walls totally lack decoration, but the upper parts were heavily decorated with brickwork, which will be discussed later. The recessed or concealed-brick technique, the hallmark of 11th–12th century Byzantine construction[13], is nowhere present.

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[5] A drawing of Barskij (1732) is the only testimony of the older belfry: Stranstvovanilia Vasilia Grigorovitcha Barskago po Sviat im miestam Vostoka, 1723–1747, II. St. Petersburg 1886.

[6] The best documented restauration, unfortunately, is the 1857 one by Photeinos.

[7] See already Bouras, Nea Moni 61.

[8] S. Voyadjis, Νεότερα στοιχεία για την οικοδομική ιστορία του καθολικού της Νέας Μονής Χίου. *DChAE* D 14 (1987–1988) 167, fig. 8.

[9] Voyadjis, Νεότερα στοιχεία 159–172.

[10] Bouras, Nea Moni 178–179. It was demolished by Photeinos in 1857.

[11] If Ousterhout's (Originality 55) suggestion that the original plan of the church was a cross-in-square is correct (which can only be proved by excavating the floor of the nave), then the alteration suggested took place in an advanced stage of construction, when the walls had already been erected.

[12] Mavis de Zulueta, A Grand Entrance or the Facade and Crypt of a Church in the Marmara Sea Walls at Istanbul? *REB* 58 (2000) 257 wrongly supposed recessed brick technique.

[13] R. Ousterhout, Master Builders of Byzantium. Princeton 1999, 175. The author suggests that this technique is always associated with Constantinopolitan workshops since it cannot be learned by simple imitation (179).

East facade: Three projecting apses articulate the east end of the building (pl. 2b). The main apse is higher and five faceted; three of the facets are pierced by a trilobed window flanked with recessed niches, a true Constantinopolitan articulation of the apses.[14] All the window and niche arches as well as those of the side apses are constructed of bricks.[15] Above them the apse is decorated through a second layer of five shallow niches inscribed in recessed arches, formed by plain radial bricks (pl.s 1b and 8a [j]). Finally the projecting eaves of the roof have brick corbels, in the shape of isosceles trianles (pl.s 1b and 8a [j]),[16] crowned by a modern stone cornice.

A single-lobed window flanked with blind arches fills the main facet of the side apses. Wide bands decorated with brick meander patterns crown the side apses, which are surmounted by a single dentil course (pl.s 2b, 1b–c). The brick courses we saw dividing the walls horizontally have been expertly used as window sills for all the windows of the east facade.

North facade: The north and south facades are articulated by stepped pilasters ending in blind arches, crossed by four horizontal brick courses (one is hidden under the stone bench) (plan 3). The easternmost arch, that corresponds to the holy bema (pl. 3a) is made of banded voussoirs with three or four bricks alternating with stones, like most of the arches of this building phase; an arched window pierces it, which was only slightly enlarged in 1857[17] and fitted with a nineteenth-century stone frame. A triple recessed arcade follows, topped by the pitched roof of the nave. The middle arch is much higher than the side ones. The difference in height is compensated by two shallow, curved niches formed of thin, closely laid bricks, with almost no mortar in the joints.

The tympana of the recessed arches are decorated with brickwork of ordinary bricks (not specially cut ones). The uppermost part of the middle arch shows the same brick meander frieze that adorns the apses of the pastophoria. Two lines of W-shaped chevron patterns surmount the arch (pl.s 4a and 8a [i]). Lower down is a single-arched window enlarged and disfigured by the later rectangular 19th c. stone frame fitted to it. Three bricks of the original arch remain *in situ* and the form of the window can be reconstituted as a plain arched one. A quite common ornament of basket-weave bricks (pl.s 3b and 8a [o]) is situated one both sides of the window. On the lowest level, an original bilobed window was remodeled into an arched one, as is obvious from the exposed remains of two brick arches[18].

The tympanum of the east side arch remains completely undisturbed. It is decorated with bricks forming upright lozenges with a central piece (pl.s 4b and 8a [c]). The side door to the nave was exposed after the removal of the covering plaster; its original marble jambs were blocked by the later poros stone bench. A more unusual design decorates the tympanum of the lower west arch. A radiating brick pattern is inscribed in a quadrangular one flanked with bricks forming "K"s in four directions (pl.s 4c–8a [d]). Lower down an arched window was again transformed into a rectangular one by abbot Photeinos in 1857.

It is obvious that the middle arch (but not its tympanum) and its side niches are not original. Their construction with thin bricks and almost no mortar bears no resemblance to that of the lower arches. Moreover, until at least 1732 (Barskij's drawing) the building had a different, tripartite skyline, which means that the transformation occurred after that date.

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[14] Bouras, Nea Moni 153.

[15] Most of the bricks used in the building are standard good-quality ones, 30×30 cm with a thickness ranging between 3–3.5 cm, either light-pink or dark-reddish. The difference in color is not intentional, since the position of the bricks in the motifs does not depend on it. These bricks are cut in half or even smaller to form the ornaments discussed below. A few thicker bricks might be second-hand ones taken from an unknown earlier building.

[16] As predicted by Bouras, Nea Moni 153. They are not easily visible today but become obvious if we consider the plaster that filled the gaps.

[17] Bouras, Nea Moni 99. An important fact is that a large chunk of the original plaster that covered the church remained intact here, as we shall see later.

[18] Photeinos, Νεαμονήσια 83 did not conceal his removal of the mullion: "…Ταῦτα ἔφερον ἐν τῷ μέσῳ παχὺ ἐπίμηκες μάρμαρον κατὰ κάθετον, ἅπερ ἀφελὼν τὸ 1857, ἐμεγάλυνα πρὸς πλείονα φωτισμόν …".

The north facade continues uninterrupted to the end of the narthex. The last part is articulated by a wide double blind arch of alternating brick and stone voussoirs. A simple frieze of upright brick parts bordered by horizontal ones delimits the top of the wall. A door and a window with their original arches and marble frames pierce the wall at a lower level[19]. A fully fledged swirling disk ornament made of special curved bricks, replaced the initial recessed heart (pl. 8a [n]). This is the only decoration on the building for which special bricks were used, possibly during a later repair.

South facade: The south elevation is similarly articulated to its north counterpart (plan 4). There is a single large, arched window corresponding to the holy bema at the east end, followed by the tripartite arrangement of the nave. It is almost the same as the one on the north facade, with only a slight difference: in the higher middle arch the innermost, original and plain brick arch has been preserved, corbelled out of its pilaster. It seems that originally the arches on both the south and north facades had triple setbacks. In any case, the same meander brick pattern topped by "Λ" arranged in the shape of a "Λ" decorates the tympanum of the middle arch (pl. 8a [e]). Lower down there is a single-arched window without flanking decoration. Below an original bilobed window was transformed into a single-arched one in 1857.

The tympanum of the easternmost of the three arches shows a fully fledged brick ornament consisting of a roundel with radially placed half bricks which enclose a flaring cross. The rest of the arch tympanum is completed by upright lozenges with horizontal bricks in their centres (pl.s 5a and 8a [b]). The west tympanum is equally interesting and displays an area of repair where at least two roundels can be distinguished, flanked by inclined bricks (pl.s 5b and 8a [a]).

The south narthex wall displays a wide double recessed arch, its lunette completely filled with a diaper of W-shaped chevron pattern (pl.s 5c and 8a [g]). Below, a single-arched window, centrally placed, fitted with a 19th-century stone frame, but otherwise intact, pierces the narthex wall. In the spandrels of the arches are displayed: a recessed heart shape, (pl.s. 6a and 8a [p]), a brick circle (pl. 8a [l]) to the right, and a large ceramic cross (pl. 8a [m]) to the left. The eaves of the narthex side walls are slightly reduced in height, as the work of the 1980s prooved.

To conclude the description of the nave we should mention that since the 1980s[20] it has been known that the west elevation (the part extending over the lower narthex) also had a tripartite arrangement: a triple recessed arch of brick and stone voussoirs in the middle flanked by double recessed arches[21]. The side arches are no longer extant, but were replaced by thin brick arches embedded in the wall, similar to the side niches high up on the north and south elevations. The middle arch was chiseled so that the thick white plaster could be applied.

Finally the initial west elevation of the inner narthex, now concealed by the bulk of the exonarthex added later, was partially uncovered during the 1980s (upper part) and the restauration in 2005 (lower part, inside the church). The northernmost arch was originally pierced by a round skylight, later blocked and partially disturbed when windows were opened during the addition of the exonarthex[22].

Summary of brick motifs	*Position*
meander frieze	side apses, east facade; middle arch, north and south facade
W-shaped chevron pattern	middle arch, north facade; narthex south wall
basket weave	medium-height flanking window, north facade
lozenges	east arches, north and south facade
radiating "K"s	west arch, south facade

[19] Although the mosaics on the north wall of the narthex give an impression of destruction to create the window, this is not the case (Bouras, Nea Moni 76).

[20] Voyadjis, Νεότερα στοιχεία 171, fig. 16.

[21] Voyadjis, Νεότερα στοιχεία 167, fig. 8.

[22] As described by Misailidou – Kavvadia-Spondyli, Παρατηρήσεις και συσχετισμοί 365, fig. 17 (not subject of this paper).

swirling disk	narthex north wall
"Λ"s	middle arch, south facade
flaring cross in roundel	west arch, south facade
double roundel	west arch, south facade
recessed heart	spandrel, south facade
circle	spandrel, south facade
large cross	spandrel, south facade

External appearance: The unveiling of the Katholikon revealed a poor, rough construction incompatible with the importance of the monument and the magnificence of the architecture and decoration. Since the 1980s, however, some new evidence suggests that this appearance was deceptive. During work on the roof of the narthex it was discovered that a thin layer of pinkish plaster covered most of the concealed west facade of the narthex, leaving only decorative brickwork and sometimes larger stones exposed. Also the general removal of the external white plaster it became obvious that the same applied to the other facades of the nave-narthex complex.

Evidence is sparse. The older skin was probably completely removed when the whitish plaster was applied. Some traces of the original outer skin were left where it was protected by later additions (pl. 6b). Also some traces of the original plaster remained stuck to the facades, despite having been violently scraped in the past. Larger areas were discovered on the west facade of the narthex when the internal plaster was removed.[23] This plaster, the so-called *corasan* mix, had thinly crushed brick mixed in it, rendering it slightly pink and giving it hydraulic properties. It was evenly spread, flush with the outer surface of the bricks, up to their edge, filling up the gaps and covering the rough stones. All around the bricks it was slightly beveled so that they would stand out. On this plaster finishing, thin horizontal and vertical lines were traced with a fine instrument (probably a trowel) on the still-wet mortar. These lines tried to imitate regular ashlar masonry. The original facade probably had the appearance proposed in plate 8b[24].

It seems, that the outer skin was constructed in two phases. First the builders came. They built the walls with normal whitish lime mortar with stone or sand aggregates. This mortar was finished one to two centimetres back from the surface of the brick. The edge was beveled to almost 45°, a procedure carried out with the trowel on the wet surface, so as to drain rain water. This mortar is very well preserved in many places. Then the second phase, executed by the same or a different workshop, added the finishing touch, covering the stonework of the whole building with pinkish plaster, filling the gaps left by the builders but leaving the decorative brickwork exposed (pl. 9b).

In general the workmanship is sloppy. It seems that the construction was undertaken by local craftsmen using locally found materials. Only the brickwork is of a higher standard, possibly constructed by a Constantinopolitan workshop. The stonework was covered by the all-encompassing pinkish plaster, hiding all the imperfections of the construction but leaving the decorative brickwork exposed. However, the difficulty in obtaining materials and the sloppy workmanship cannot conceal the originality of the overall composition. It seems that the tradition that an important architect from Constantinople designed or supervised the whole project[25] is probably true; but the execution was done, at least in part by local craftsmen.

Comments: Rubble masonry divided by triple (or quadruple at some points) horizontal courses of bricks generally conforms to the main Constantinopolitan tradition, although it does not indicate a date

[23] Misailidou – Kavvadia-Spondyli, Παρατηρήσεις και συσχετισμοί 328–239.

[24] The dome is after Bouras. The upper side niches are conjectural and so are the proposed clay quatrefoils. As G. Dimitrokallis, Κεραμοπλαστικά κοσμήματα αγνώστου τύπου από την Βυζαντινή Μεσσηνία, in: Lampedon. Aphieroma ste mneme tes Ntoulas Mourike, I. Athens 2003, 179 has shown, they were first used on Chios (being jars to store the local mastic), it seems reasonable to assume that they were also applied in Nea Moni.

[25] Bouras, Nea Moni 24.

or a particular workshop.[26] However, the absence of the recessed-brick technique points rather to a local workshop not completely familiar with Constantinopolitan practice. Banded voussoirs are a somewhat unusual feature for a mid-11th century building, although they are employed in the Holy Sepulchre, a building contemporary with Nea Moni and constructed under the same imperial patronage[27].

Arches more complex than the pilasters on which they are based can be observed in Eski Imaret Camii[28] and several other Constantinopolitan buildings of the twelfth century (Pantokrator, Gül camıı[29]).

Shallow decorative niches articulating the upper parts of the bema apse are a common feature of many Constantinopolitan churches,[30] but plain radial bricks are the simplest design, similar to some buildings in Constantinople or the nearby provinces such as at the *Prothesis* of Theotokos Lips[31], or Pantovasilissa (Kemerli Kilise) in Tiriliye, Bithynia (after 1336)[32] and possibly Kamariotissa at Chalke.[33] Corbels in the shape of isosceles triangles are a well known motif found not only in the capital itself but also in its immediate vicinity and a few monuments in mainland Greece.[34] Finally, the meander pattern,[35] an ancient Greek motif, is widely used in every kind of decoration, but in brickwork in particular, it is found mostly from the eleventh to the fourteenth century[36] on any part of the walls. In Chios it is easily compared with similar motifs on a church that is thought to be modeled on Nea Moni – the Panagia Krina (on the main apse and the middle arches of the side facades).[37]

The ornament of basket weave bricks is found mostly in Paleologean architecture and is quite similar to the north arch of the church now named after the Prophet Elijah in Thessaloniki[38] and St. Andrew in Treska.[39] Also on Chios, it adorns the easternmost arch of the north facade of the Panagia Sikelia.[40]

Bricks forming upright lozenges with or without a central piece (pl.s 4b and 8a [c]) are a quite common pattern found elsewhere in Constantinople and its area of influence, either flat on part of the facade

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[26] Ousterhout, Master Builders of Byzantium 169.

[27] R. Ousterhout, Rebuilding the Temple: Constantine Monomachus and the Holy Sepulchre. *Journal of the Society of Architectural Historians* 48/1 (1989) 74.

[28] T. Mathews, Byzantine Churches of Istanbul. A Photographic Survey. London, 1976, 62. Mango has argued convincingly that Eski Imaret Camii was not Christ Pantepoptes, and that the latter was probably situated on the site now occupied by the Sultan Selim Camii (C. Mango, Where at Constantinople was the Monastery of Christ Pantepoptes? *DChAE* IV 20 [1998/1999] 87–88). This will be discussed later.

[29] Mathews, Byzantine Churches 73 and 132 respectively. The actual date and Byzantine name of the latter is frequently contested in scholarly literature. The date ranges from the ninth century (J. Pargoire, Constantinople: L'église Sainte-Theodosie. *EO* 9 [1906] 161–65) to the more plausible 12th century suggested by H. Schäfer, Die Gül Camii in Istanbul. Ein Beitrag zur mittelbyzantinischen Kirchenarchitektur Konstantinopels *(IstMitt, Beiheft* 7). Tübingen 1973.

[30] Bouras, Nea Moni 153.

[31] A. Pasadaios, Ὁ κεραμοπλαστικὸς διάκοσμος τῶν Βυζαντινῶν κτηρίων τῆς Κωνσταντινοπόλεως. Athens 1973, πιν. 11η.

[32] C. Mango – I. Ševčenko, Some Churches and monasteries of the Southern Shore of the Sea of Marmara. *DOP* 27 (1973) fig. 24–25, and recently St. Mamaloukos, Παρατηρήσεις στην αρχιτεκτονική του ναού της Παναγίας Παντοβασίλισσας στην Τρίγλεια της Βιθυνίας. *DChAE* IV 26 (2005) 58, fig. 27.

[33] T. Mathews – C. Mango, Observations of the Church of Panagia Kamariotissa on Heybeliada (Chalke), Istanbul with a note on Panagia Kamariotissa and Some Imperial Foundations of the Tenth and Eleventh Century at Constantinople. *DOP* 27 (1973), fig. 10.

[34] Bouras, Nea Moni 153.

[35] The meander patterns encountered at different places on the walls of the church are of the same design, sometimes expanded to fit the given space.

[36] See the monumental publication on the subject by the late G. Dimitrokallis, Παλαιοχριστιανικοί καί βυζαντινοί μαίανδροι. Athens 1982, 37.

[37] A. Orlandos, Monuments byzantins de Chios. Athenes 1930, pl. 34–35.

[38] The church of St Elias is of uncertain date and name, but most likely from the middle of 14th c. See C. Bouras, Βυζαντινή καί Μεταβυζαντινή αρχιτεκτονική στήν 'Ελλάδα. Athens 2001, 202 and also P. Mylonas, Τα καθολικά Προφήτη Ηλίου Θεσσαλονίκης και Κουτλουμουσίου Αγίου Ορους: Τελευταία εξέλιξη του Αγιορείτικου Καθολικού, in: Proceedings of the 9th Annual Symposium of the Christian Archaeological Society. Athens 1989, 58–60.

[39] J. Prolović, Die Kirche des Heiligen Andreas an der Treska. Geschichte. Architektur und Malerei einer palaiologenzeitlichen Stiftung des serbischen Prinzen Andreas (*Öst. Akad. Wiss., phil.-hist. Kl., Denkschriften* 253). Wien 1997, 18.

[40] Unpublished. Orlandos, Monuments byzantins de Chios, pl. 47.

(Pammakaristos, south facade[41]), in a niche (Lips, in one of the lower niches of the east facade[42]), or similarly in a tympanum of an arch (Aghios Ioannis Aleitourgeitos in Mesembria[43] and the Panagia Krina on Chios, north facade[44]). "K"s in four directions are a rare ornament (pl. 8a [d]). Although the motif resembles similar brick lettering on the walls of the churches of Kastoria,[45] it is too far removed in time and space to consider a connection. It is certainly an original composition.

Swirling disks are rarely seen on buildings, but are mostly depicted on marble.[46] However, such ornaments can be traced on the east facade of Lips,[47] as well as on older buildings such as Koumpelidike and the Holy Apostles in Kastoria (11th c.)[48], and later on the south facade of the Prophet Elijah in Thessalonike[49].

A flaring cross set in a roundel appears over the right door of the so-called Christ Philanthropos[50] in the Mangana region of Constantinople, and also on the north facade of St. George at Mangana,[51] the Panaghia Eleousa in Veljusa,[52] and in a much simpler version on the Holy Anargyroi in Kastoria.[53] The inclined brick pattern is quite commonly used on the east elevation of Lips,[54] without the centerpiece, and also in St Nicholas in Melenikon / Melnik.[55]

The diaper of W-shaped chevron pattern filling the lunette of the south narthex wall is quite a common ornament. Chevron patterns, though considered ornamental, have their origins in construction practices.[56] They appear on two of the upper niches of the apses[57] and independently on the north elevation[58] of the Chora church, high up on the south elevation of the Pammakaristos,[59] and on the west facade of Vefa Kilise[60], to mention only churches in Constantinople. It can also be found on most 13th–14th century monuments in the sphere of influence of the capital (on the south facade of the Prophet Elijah in Thessalonike[61], and the Olympiotissa in Elasson, east facade,[62], to mention just two). However, so large a composition is to be found only on the south elevation of the church called Fatih Camii at Enez

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[41] Pasadaios, Κεραμοπλαστικός διάκοσμος, πιν. 19β.

[42] Pasadaios, Κεραμοπλαστικός διάκοσμος, πιν. 15η.

[43] St. Bojadziev, Le tectonique de l´eglise St Jean Aleitourgikos de Nesebar. *Byzantino-Bulgarica* 7 (1981) 351–357.

[44] Orlandos, Monuments byzantins de Chios, pl. 34.

[45] N. Moutsopoulos, Ἐκκλησίες τῆς Καστοριᾶς. Thessaloniki 1992, 86, fig. 81 (Koumpelidiki), 218, fig. 194 (Holy Stephanos).

[46] Th. Pazaras, Ανάγλυφες σαρκοφάγοι και επιτάφιες πλάκες της μέσης και ύστερης βυζαντινής περιόδου στην Ελλάδα. Athens 1988, 111.

[47] Pasadaios, Κεραμοπλαστικός διάκοσμος, πιν. 23ε, and Ousterhout, Master Builders 196, fig. 158.

[48] Moutsopoulos, Ἐκκλησίες τῆς Καστοριᾶς 86, fig. 81, and 326, fig. 292.

[49] Bouras, Βυζαντινή καί Μεταβυζαντινή ἀρχιτεκτονική 202, fig. 241.

[50] Pasadaios, Κεραμοπλαστικός διάκοσμος, πιν. 24β. This facade was considered by Demangel and Mamboury and later by Janin to be the church of Christ Philanthropos. De Zulueta, Grand Entrance 260, suggests correctly, I think, that it was the sea entrance to the Mangana region.

[51] R. Demangel – E. Mamboury, Le quartier des Manganes et la première région de Constantinople (*Recherches françaises en Turquie* 2). Paris 1939, 24, fig. 23. Similar ornaments decorate Eski Imaret Camii (R. Ousterhout, Some Notes on the Construction of Christos Ho Pantepoptes [Eski Imaret Camii] in Istanbul. *DChAE* IV 16 (1991–92) 53) and the church known as Fatih Camii in Enez (R. Ousterhout, The Byzantine Church at Enez: Problems in Twelfth Century Architecture. *JÖB* 35 [1985] 264, fig. 9), although the pattern in the middle is a cross in brick and curved tiles.

[52] P. Miljkovic-Pepek, Veljusa: Manastir Sv. Bogorodica Milostiva vo seloto Veljusa Kraj Strumica. Skopje 1981, fig. 11.

[53] Moutsopoulos, *op. cit.*

[54] Pasadaios, Κεραμοπλαστικός διάκοσμος, πίν. 12ζ.

[55] G.M. Velenis, Ἑρμηνεία τοῦ ἐξωτερικοῦ διακόσμου στήν Βυζαντινή Ἀρχιτεκτονική. Thessaloniki 1984, fig. 35a; cf. recently M. Popović, Zur Topographie des spätbyzantinischen Melnik. *JÖB* 58 (2008) 113.

[56] Ousterhout, Master Builders 225.

[57] Pasadaios, Κεραμοπλαστικός διάκοσμος, πίν. 15 ξ.

[58] Pasadaios, Κεραμοπλαστικός διάκοσμος, πίν. 19 ζ.

[59] Pasadaios, Κεραμοπλαστικός διάκοσμος, πίν. 19 γ.

[60] Pasadaios, Κεραμοπλαστικός διάκοσμος, πίν. 19 ε.

[61] Bouras, Βυζαντινή καί Μεταβυζαντινή ἀρχιτεκτονική 202, fig. 241.

[62] E. Constantinides, The wall paintings of the Panagia Olympiotissa at Elasson in Northern Thessaly, II. Athens 1992, fig. 1.

in Thrace.[63] A similar arrangement can also be observed on the southeast lunette of Eski Imaret Camii, although it is a different ornament.[64]

Finally, the indented heart motif is an ornament much loved by the Byzantines.[65] It is found on the facade of the so-called Christ Philanthropos, flanking the door[66], on St John of Lips low down on the *diakonikon* wall,[67] and at several places in the Panaghia Krina on Chios[68]), but the ornament of Nea Moni is the earliest ever recorded.

The use of plaster on the exterior surfaces of Byzantine buildings is not as exceptional as was earlier thought. Construction similar to that of Nea Moni can be found at Enez, Mangana and in the 11th-century phase of the Holy Sepulchre.[69] Since the 1980s it has come to the attention of the academic community that possibly all Middle Byzantine buildings in Constantinople and its immediate vicinity and influence were plastered on the outside. This technique was first hinted at by Schäfer[70] and more thoroughly studied by Ćurčić .[71] Not only were the external walls plastered, but also lines and sometimes drawings were traced on the wet mortar and in a few cases painted.[72] It seems that Byzantine architects tried to achieve finished outer surfaces with inexpensive means such as plaster and paint, as in the case of the Veljousa monastery, where plaster and paint was applied on perfectly fine brickwork.[73]

Usually the desired pattern was cloisonné masonry, which, curiously, is not encountered in the churches in the immediate area of Constantinopolitan influence but in southern Greece, where easily carved poros stone abounds. This fact clearly shows, *inter alia*, the existence of constant interaction between practices originating in the capital and the provinces. This outer skin of the building is most vulnerable to weather or human intervention, so Middle Byzantine buildings have survived without any of their outer finish, or have either been replastered or repointed roughly. This explains the number of buildings with magnificent interior decoration and poor exterior finishes, as in the case of the Katholikon of Nea Moni on Chios.

Conclusions: The removal of the external plaster of the Katholikon revealed our relative ignorance of eleventh-century Byzantine architecture, posing new questions instead of giving definite answers. As the readers should have noticed, all the similar examples in brick decoration are either contemporary or later than Nea Moni, or are obscure and unimportant buildings. Much of the repertory of brick decoration, which flourished in thirteenth-fourteenth century Constantinopolitan architecture, now gains securely dated mid-eleventh century predecessors on Chios. In fact, since eleventh-century buildings are generally lacking in the capital, Nea Moni becomes the earliest securely dated church in which this kind of decoration was applied.

Only one other monument with similar brick decoration can be securely assigned to in the eleventh century: the Panaghia Eleousa in Veljousa, dated to 1080. Eski Imaret in Constantinople, if it is no

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[63] Ousterhout, Enez 264, fig. 7.

[64] However, given Mango's argument about Eski Imaret Camii not being the Pantepoptes (see above note 28), it could be argued that the decoration of its elevation resembles Nea Moni closely enough to be considered original and not a later Paleologean alteration, as Ousterhout, Some Notes 52 hints.

[65] R. Ousterhout, The Byzantine Heart. *Zograph* 17 (1986) 36 and 40, also Idem, Master Builders 197.

[66] Demangel – Mamboury, quartier des Manganes, pl. IV.

[67] Pasadaios, Κεραμοπλαστικός διάκοσμος, πίν. 18 β.

[68] Orlandos, Monuments byzantins de Chios, pl. 34.

[69] Ousterhout, Master Builders of Byzantium 183, fig. 146.

[70] H. Schäfer, Architekturhistorische Beziehungen zwischen Byzanz und den Kiever Rus im 10. und 11. Jahrhundert. *IstMitt* 23 / 24 (1973–74) 197–224 and 220–223, fig. 97–99.

[71] S. Curcic, Middle Byzantine Architecture on Cyprus: Provincial or Regional. Nicosia 2000. Also, for a painstaking collection of the evidence for plaster on the external facades of Byzantine monuments, see S. Mamaloukos, Τό καθολικό τῆς Μονῆς Βατοπεδίου. 'Ιστορία καί ἀρχιτεκτονική. Athens 2001, appendix C, 297–338.

[72] Traces of external frescoes have been discovered on the external facades of the Panaghia Scripou (9th c.) in Boeotia, Greece (forthcoming publication by the author).

[73] Miljkovic-Pepek, Veljusa 96–98.

longer associated with the monastery of Christ Pantepoptes (built in 1081–1087)[74] can no longer be dated by historical evidence and its date could be closer to that of Nea Moni. A twelfth-century date has been tentatively suggested for the church at Enez.[75] In the light of the above evidence a date closer to the mid-eleventh century seems more probable. The few surviving ornaments resemble those at Nea Moni and other features demonstrate equally the close ties between the two buildings: the addition of a light portico, later developed into an exonarthex, engaged decorative columns in the interior, and so on.[76] These buildings resemble Nea Moni, because they show mature, but sporadic decoration. We may therefore tentatively date them to the same historical period (middle of the 11th c.), with Veljusa being the latest example, which has the most developed decoration.

The facade of the so-called Christ Philanthropos, or more possibly the Grand Entrance to the Mangana area,[77] can finally be securely dated. For a long time its origin and purpose remained uncertain. Some scholars even believed it should be dated to the thirteenth century[78] due to its rich decoration. Demangel and Mamboury, however, had already suggested that St. George at Mangana was related to Nea Moni;[79] new evidence provided here reinforces their position. The close resemblance between the decoration of the Mangana buildings and Nea Moni leaves no doubt that the three buildings (the Katholikon of Nea Moni, St. George and the Entrance to the Mangana area) were constructed during the same period and possibly by the same architect or workshop. Another building relatively securely dated in the same period (but far removed geographically), the Holy Sepulchre, built under the patronage of Constantine IX Monomachus,[80] has to be reexamined in the light of this physical evidence, although no similar brick ornaments have been discovered so far.

A gap of more than 150 years separates Nea Moni from Paleologean buildings that bear similar brick decoration, such as the second church of Constantine Lips, the Pammakaristos, and Chora. In the meantime, important monuments of Comnenian architecture had been built where bricks were used as mere building blocks. Apart from a few quirks at the niches, no brick decoration is found, for example, at the Pantokrator, the major Comnennian complex, or in the Kyriotissa (otherwise known as Kalenderhane Camii).

Churches almost contemporary with the major Comnenian buildings, were built in Chios that bore a very close resemblance to the Katholikon of Nea Moni. The Panagia Krina (most probably built around 1192[81]), the Holy Apostles, the Panagia Sikelia, St. George Sykousis, St. John Prodromos Halkios, Hagio-Galas,[82] all display an explosion of brick decoration exceeding in complexity even the much later Paleologean models. Obviously the local influence of Nea Moni remained strong, despite the official tendencies emanating from Constantinople.

It can be argued that buildings erected during the Macedonian dynasty and especially during Monomachos' reign, displayed a lavish amount of brick decoration, not present in the later Comnenian ex-

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[74] This building was long considered to be Christos Pantepoptes, and therefore dated around 1087 through historical evidence. However the revision of this notion by C. Mango (see note 28) makes its dating uncertain. S. Kotzabassi, Zur Lokalisierung des Akataleptos-Klosters in Konstantinopel. *REB* 63 (2005) 234–236, accepts Mango's arguments and suggests that Eski Imaret could be the Monastery of Christos Akataleptos; cf. recently N. Asutay-Effenberger – A. Effenberger, Eski İmaret Camii, Bonoszisterne und Konstantinsmauer. *JÖB* 58 (2008) 13–14 with note 6, 40. This important edifice appears in texts for the first time in 1092, but it was certainly built earlier in the 11th c. This suggestion does not conflict with my suggestion for a mid-11th dating, but has to be proven by further research.

[75] Ousterhout, Enez 275.

[76] Ousterhout, Enez 275.

[77] See note 50.

[78] Mathews, Byzantine Churches 200.

[79] Demangel – Mamboury, quartier des Manganes 28.

[80] Ousterhout, Rebuilding the Temple.

[81] Ch. Pennas, Οι κτίτορες της Παναγίας Κρήνας στη Χίο, in: Proceedings of the 15th Annual Symposium of the Christian Archaeological Society. Athens 1995, 62–63.

[82] Unfortunately this very important group of churches is not properly published, the major publication still being Orlandos, Monuments byzantins de Chios, which is a mere inventory.

amples, which had an austere appearance. The Macedonian period was an era of relative stability and affluence for the Byzantine state, what became evident in the construction of extravagantly decorated public buildings.

During the Comnenian era, a few years after Manzikert (1071), the situation changed for the worse and an economically more severe atmosphere prevailed, that might have had a similar effect on the decoration of buildings.[83] The same atmosphere was diffused in the provinces where the explosion of brick decoration (though different from that of Nea Moni) of the tenth-eleventh century (e.g. Kapnikarea, Agioi Theodoroi in Athens[84], Hosios Loukas[85], to mention just a few examples) gave way to a more austere external appearance (e.g. the Transfiguration of Christ at Christianoi, Messenia[86]).

It could be argued that, when the Palaeologoi retook Constantinople in 1261, they wanted to display a new spirit of rebirth, showing at the same time to be a new and different ruling. They may, therefore, have turned, consciously or unconsciously, to an older "heroic" tradition, of happier times, that was extant but dormant. Certainly the important Macedonian dynasty buildings, such as the grand Mangana complex were battered, but still in existence. Moreover, this tradition was also alive in Chios, a province loyal to the Nicaean Empire since 1226, and producing magnificent architecture in the true Macedonian tradition throughout the twelfth century. Did Chian architecture play any part in the Paleologean revival of the Byzantine state? It seems highly probable.

When and where this brick decoration of Nea Moni originated is difficult to tell. Certainly the Katholikon is the oldest recorded monument bearing this kind of decoration. Buildings of the Macedonian era predating Nea Moni either do not survive or have only left mere traces, such as the Kosmedion or Romanos III Argyros's major endeavour, St Mary Peribleptos.[87] The Katholikon of the Vatopedi monastery on Mt Athos[88], a true Constantinopolitan building erected forty-fifty years before Nea Moni, bears no similar ornaments.[89] No decoration exists on the Panaghia Chalkeon in Thessalonike (1028),[90] which is firmly embedded in the Constantinopolitan sphere of influence[91]. Thus, brick decoration like that on Nea Moni and Mangana seems to have been a fairly short-lived experiment, and can possibly be assigned to Constantine Monomachus reign only[92].

It is suggested that an architect or *protomaistor*[93] was sent together with the masons to undertake the reconstruction of the Holy Sepulchre.[94] We also know, that an architect from Constantinople was sent to

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[83] Of course this did not completely prevent decoration in a few buildings in the provinces (such as the Panagia Eleousa at Veljusa and Chian churches).

[84] A. Xyngopoulos, Μνημεία των Βυζαντινών Αθηνών και της Τουρκοκρατίας. *Eureterion Mesaionikon mnemeion Ellados* II (1929) 100.

[85] R.W. Schultz – S.H. Barnsley, The Monastery of St Luke of Stiris in Phokis. London 1901, is still the best publication on this important monument.

[86] This change of attitude has been recorded in the two major phases, one in the eleventh century and one ca 1200, see S. Voyadjis – E. Delinikola, Νεότερες παρατηρήσεις στην οικοδομική ιστορία του ναού Μεταμορφώσεως Σωτήρος Χριστιάνων Μεσσηνίας. *DChAE* IV 23 (2002) 56.

[87] K. Dark, The Byzantine Church and Monastery of St Mary Peribleptos in Istanbul, *The Burlington Magazine* 141/1160 (Nov. 1999) 656–664.

[88] Mamaloukos, Μονή Βατοπεδίου, appendix C, 297–338.

[89] My forthcoming examination of the katholikon of the Great Lavra on Mt Athos, a building also constructed with imperial funding, and contemporary with Vatopedi, is not expected to provide any more clues.

[90] R. Krautheimer, Early Christian and Byzantine Architecture. Middlesex 1986, 373–4, fig. 329.

[91] Its founder was an important Byzantine official.

[92] The church of Saint George in the village of Koloucha-Kustendil in Bulgaria is attributed to the emperor Romanos IV Diogenes (1067–1071), see L. Mavrodinova, Les anciennes peintures de l'église Saint Georges à Koloucha-Kustendil, in: Euphrosynon. Aphieroma ston Manole Chatzedake, I. Athens 1991, 344–353 and Idem, Données historiques sur l'église médiévale de Koloucha-Kustendil, Bulgarie. *DChAE* IV 29 (2008) 101–104, that is very close to the period we examined. It is a church built with the recessed-brick technique and although heavily, almost unrecognizably, restored its decoration is still visible. It does take after Nea Moni, but is sparse and limited to the upper lateral recessed arches.

[93] R. Ousterhout, Master Builders 225

[94] R. Ousterhout, Rebuilding the Temple 72.

Nea Moni to supervise work there,[95] which does not contradict the surviving physical evidence. One may therefore tentatively propose that he was possibly a senior official, who had certainly supervised works at Mangana, belonging to the same group that had rebuilt the Holy Sepulchre. This person or group of collaborating persons, who had traveled widely and viewed and probably sketched decorative elements from the entire empire, devised the rest and incorporated them in a highly original composition.

Exonarthex: The stripping of the plaster revealed that the body of the exonarthex is constructed with rubble masonry with a lot of thin bricks that do not form any patterns (pl. 6c). The two apses are different, built with low-quality cloisonné masonry in which two horizontal and two vertical bricks surrounding the rough uncut stones. Marble pieces, either left-over from the construction of the nave or remains after some kind of destruction, have been incorporated inorganically in the fabric of the apses.[96] There is some brick decoration: "lozenges" and "Λ"s, clumsy imitations of the Byzantine ornament seen in the nave, are incorporated below the west windows.

The fabric of the three small domes surprised us. The north dome was constructed in the recessed brick technique (pl. 7a).[97] A wooden roof of later date (removed in 1987) protected a part of it, which remained remarkably intact (pl. 7b).[98] The two other domes are of poor-quality rubble masonry. Broken bricks and pieces of wood are embedded in thick mortar that forms the arches and the engaged colonnettes.

Over the south apse, part of the original wall of the exonarthex is visible (its northern counterpart is concealed under a later rubble structure). Three successive brick arches topped by a dentil course, which was later scraped and is almost not recognizable, decorate the upper visible part.

The exposing of the internal fabric of the exonarthex by the Third Ephorate revealed that it was not built during a single phase of construction. Misailidou and Kavvadia, who supervised the work, suggest (correctly),[99] that the exonarthex was originally constructed as an open portico without the side apses and with six marble columns, four of them still visible, attached to the pillars. This proposal does not conflict with the earlier interpretation put forward by Bouras.[100]

What is an important discovery is that the three domes are carried on peculiar curved surfaces constructed of voussoirs that are not concentric, but almost corbelled, built without centering. These surfaces are not pendentives. The distance from their springing to the bases of the three domes is 1.10–1.20 m, far exceeding the height of normal pendentives. Moreover no cornice encircles the base of the drums, which is rugged and unfinished. It is more probable that they were low domes without drums that originally covered the exonarthex. Therefore, the exonarthex initially did not have any projecting domes on drums. Its three spaces were roofed by low domes.[101] Later on, these spaces were pierced for the construction of the drums of the extant three domes[102] (pl. 9a). This suggestion may resolve the problem of their clumsy crowding observed by Bouras.[103]

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[95] Bouras, Nea Moni 164.

[96] They are not original (Bouras, Nea Moni 128).

[97] Ch. Bouras, Ελλαδική Ναοδομία κατά τον 12ο αιώνα. Athens 2002, 465 proposes that the recessed brick was originally a method of disposing of broken or deformed bricks, what later became a mannerism.

[98] Indications were present since the 1980s (Voyadjis, Νεότερα στοιχεία 170, fig. 15–17), although Misailidou – Kavvadia-Spondyli, Παρατηρήσεις και συσχετισμοί 337 curiously rejected them.

[99] Misailidou – Kavvadia-Spondyli, Παρατηρήσεις και συσχετισμοί 330–337.

[100] Bouras, Nea Moni 114.

[101] The Holy Apostles in Athens, although heavily reconstructed, might offer a similar example (A. Frantz, The Church of the Holy Apostles at Athens. Princeton 1971, 27.

[102] O. Wulff, Byzantinische Kunst. Berlin – Neubabelsberg 1918, 468, observed these peculiarly grouped domes and meant that they were not built simultaneously; instead he believed that the side ones were added to the middle dome. His proposal (which was partly correct) was later dismissed.

[103] Bouras, Nea Moni 61, sugests that the three domes may have been an afterthought. This is not far form reality, as we shall see below.

Only the northern dome is a Byzantine construction, built with the recessed-brick technique. Tthe exterior of the other two was reconstructed, as Misailidou-Kavvadia thought, probably by abbot Photeinos in the 19th century.[104] Inside, these domes retain their Middle Byzantine fabric. Traces of 12th–13th century frescoes are still visible. No exact date can be given for the original construction. The recessed brick technique of the north dome possibly speaks in favour of the Comnenian period. Recessed brick is associated with the architecture of the eleventh and mostly twelfth centuries, although this technique also appears sporadically at later dates.[105]

Building without centering and with almost corbelled voussoirs was observed in the main dome of the narthex in the 1980s[106] and in the collapsed dome above the nave.[107] A similar building method was registered in the Mangana church.[108] It seems, therefore, that this was a fairly common building practice in the mid-11th century.

It has long been known[109] that the exonarthex was attached to the finished nave-narthex complex, although the date is still contested. Through the ages it was heavily altered, but the results of research research are still inconclusive. Bouras[110] argues for an 11th-century date based on stylistic evidence of the marble frame of the west door and the marble pavement. The evidence of the construction method of the original low domes may be added. The side apses are also separated by a joint from the body of the exonarthex. Misailidou-Kavvadia, who supervised the works, have correctly argued for two phases of construction, at least one of them Byzantine.[111]

The west elevations are very similar in construction to the upper part of the nave´s skyline. Possibly they are an Ottoman alteration of the seventeenth or eighteenth century, and date certainly before the Barskij drawing. An important detail offers the attempt to imitate Byzantine brick ornaments, which prooves that until this date the church was not yet covered with the thick white plaster skin.

To summarize, the exonarthex was originally added to the narthex during the initial building phase as an open portico, blocked by parapets or railings[112] and roofed with three low domes without any side apses. In the late twelfth century the three domes were pierced for the construction on top of them of three new domes on tall drums. Before or after that alteration the side apses were added in two building phases, at least one of them Byzantine. During the Ottoman period, the west facades were built up. In the major restoration-alteration period of the early nineteenth century, the exterior of two of the drums was rebuilt.

Although the exonarthex is considered a spatial unit characteristic of the Paleologean era,[113] it has several predecessors in the Middle Byzantine period, which are more or less open porticos rather than closed spaces of the earlier examples. Some are later additions, while others left only traces. Nea Moni shows clearly this transformation of an open portico to a closed space, according to the changing needs of the monastic community.

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[104] Misailidou – Kavvadia-Spondyli, Παρατηρήσεις και συσχετισμοί 337.

[105] P.L. Vocotopoulos, The Concealed Course Technique: Further examples and a few remarks. *JÖB* 28 (1979) 247–260 and Idem, The Role of Constantinopolitan Architecture during the Middle and Late Byzantine Period, in: Akten XVI. Internationaler Byzantinisten-Kongreß I/2 (= *JÖB* 31 / 2 [1981]). Wien 1981, 556–557. So Ousterhout was right, at least in part, to propose a late twelfth-century date for the exonarthex (Ousterhout, Originality 298–299).

[106] Voyadjis, Νεότερα στοιχεία 164.

[107] Bouras, Nea Moni 152.

[108] Ousterhout, Master Builders 175, fig. 137.

[109] Bouras, Nea Moni; Voyadjis, Νεότερα στοιχεία 162.

[110] Bouras, Nea Moni 112.

[111] Misailidou – Kavvadia-Spondyli, Παρατηρήσεις και συσχετισμοί 332, discovered that the apses were constructed in two phases, both added to the main body of the exonarthex.

[112] Bouras, Nea Moni 61.

[113] A good sample of Middle Byzantine exonarthexes offers Ousterhout, Enez 274.

Annex: The removal of the plaster lead to the surprising result that the long disregarded annex (it did not even appear in Orlandos'[114] elevation of the Katholikon) is a Byzantine addition.[115] It consists of two bays in plan, undivided by walls, each roofed in a different manner. The east one is roofed with a barrel-vault parallel to the axis, while the west compartment is a sturdier construction roofed by a lower dome on four thick pillars. Its construction with almost corbelled voussoirs closely resembles the domes of the narthex, exonarthex and nave of the first phase.[116]

These two compartments are borne by two-arch arcades, built up later, each running along the axis of the building. They were constructed of brick and stone voussoirs by the recessed-brick system. Over the east arches the walls are decorated with brick meander bands (pl.s 7c and 8a [f]), exact copies of those on the holy bema apse, surmounted by friezes of "Λ"s and half brick (pl.s 7c and 8a [h, k]) ornaments. The decoration abruptly ends on the bisecting lines of the middle pilasters. The further walls of the west compartment are of plain rubble masonry of later date, probably from the Ottoman period. Under the eaves of the roof there is a single dentil course.[117]

This Byzantine annex was added to the finished exonarthex. Original *corasan* plaster that covered the west elevation of the exonarthex can still be seen in the gap between the two buildings (pl. 6b). The brick meander and the construction of the arches and domes closely resemble those of the original mid-11th c. phase. The annex was originally built as an open arcade, which was then blocked up during the Ottoman period, when the inscription (with the date 1718[118] that confused scholars) over the north door was added. Although no exact date for the original construction can be given, it may be suggested that the annex was added at a date not very long after the completion of the exonarthex, probably in mid-11th century. The existence of recessed brick possibly suggests a different workshop, because it does not exist anywhere in the nave; its use is common practice in the 11th and 12th centuries.

The west compartment of the annex is obviously constructed to bear something much heavier than the east one. Is it possible that we have here a forerunner of the axial belfries to appear in later churches?[119] This does not conflict with the funerary character suggested by the side arcosolia discovered under the arches.[120]

At the actual stage of research we cannot decide whether the additions to the first phase, which seem to be almost contemporary, were merely afterthoughts or whether the building was created in an additive process.[121] However, a highly original composition emerges from our research, unlike anything else built before it, and very influential on Byzantine architecture in general.

In conclusion the following *building phases* may be distinguished in the Katholikon of Nea Moni on Chios (pl. 9a):

a. 1045. Foundation of the monastery, simultaneous construction of nave and narthex (the latter either planned from the beginning, or added as an afterthought).

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[114] Orlandos, Monuments, pl. 11.

[115] Photeinos, Νεαμονήσια 76, 78 (note a) speaks about the "ugly annex", covering the entrance to the Byzantine monument built by the Emperor "like a black cloud", saying that he was not able to demolish it.

[116] Misailidou – Kavvadia-Spondyli, Παρατηρήσεις και συσχετισμοί, fig. 35.

[117] Dentil courses, a very common decorative element in Byzantine architecture, are curiously lacking in the katholikon. The few that exist at present are confined to the upper parts of the side apses of the whole bema and the annex and are probably later alterations.

[118] Bouras, Nea Moni 19.

[119] Misailidou – Kavvadia-Spondyli, Παρατηρήσεις και συσχετισμοί, fig. 11 suggest it just covered a *phiale*. However Bouras, Nea Moni 71 has found evidence that the *phialion* rites were instead performed in the exonarthex.

[120] Misailidou – Kavvadia-Spondyli, Παρατηρήσεις και συσχετισμοί 338.

[121] Ousterhout, Master Builders 114.

b. Eleventh century (shortly after the completion of the first phase, probably before 1055). Addition of the exonarthex in its first form as an open portico roofed with three low domes. Marble paving of the whole building.
c. Mid-eleventh century. Addition of the west gallery possibly leading to an axial belfry.
d. Twelfth-thirteenth century. Exonarthex modified with addition of the three domes on drums and the side apses.
f. 1512. Addition of a belfry (non-extant) west of the conjectured 11th-century one, probably after the destruction of the older one by an earthquake.
g. Before 1732 (when Barskij drew the sketch of the monastery), probably during the 1718 work or even in the 16th century. Blocking of the west facade of the exonarthex and the arches of the annex. Covering of the whole building with thick white plaster. Construction of the *semantiras* and the pebble pavement outside the church.
h. After 1732 and before 1881. Demolition of the four upper corners of the nave, possibly after an earthquake, and reconstruction of the corner niches using thinner tiles. The multiple pitched roofs of the nave (cf. the Barskij-drawing) were replaced with single pitched ones.[122]
i. 1857. Work by abbot Photeinos, who altered the external appearance of the building. Widening or creation of windows, probable alterations to the domes of the exonarthex.
j. 1901. The main dome and the east side of the nave were rebuilt after a major collapse. Replacement of the 1512 belfry with a new one.
k. 1988. Lowering of the roof of the narthex.
l. 1994. Removal of the external white plaster.
m. 1998–2004. Restoration works on the whole building.

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[122] Bouras, Nea Moni 131.