Παραλλαγές του μονόχωρου τρουλλαίου οκταγωνικού κατά τον 12ο και τον 13ο αιώνα (πίν. 3-6)

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Twelfth and Thirteenth Century Variations of the Single Domed Octagon Plan (pl. 3-6)

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TWELFTH AND THIRTEENTH CENTURY VARIATIONS OF THE SINGLE DOMED OCTAGON PLAN*

Typological questions in Byzantine architecture are of particular interest, since they are directly related to the question of the articulation of the interior space of the churches. New types were devised on only a very limited scale during the middle Byzantine period. The architectural forms that were familiar in the areas of the capital and of Greece after the year 1000 were to a very large extent survivals or revivals of earlier forms. In most cases, the plan used was that of the cross-in-square church, with a number of variations, and the only new type in the 11th century is the so-called domed octagon, which was employed in relatively large, wealthy buildings in Greece and the region directly influenced by the capital.

In the two following centuries, at least until 1261, the date in which we are interested here, the majority of the new churches continued to be cross-in-square. The cross vaulted churches that made their appearance during the late 13th century do not concern us here, and the only innovations that remain to be studied are therefore the derivatives of the domed octagon type, and especially the so-called single, or ‘insular’ domed octagon. The few monuments of this type have already been described partly as domed octagon, and partly as domed pseudo-octagon.

The publication of new churches and the re-dating of others, already known, make it possible to reconsider them as a group, within the chronological boundaries of the period, and to broaden the question of their typological origins. All the eight churches in question are relatively small and belong to monasteries of limited importance. None of them are certainly dated by specific historical references or inscriptions; in

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all cases we rely on indirect comparisons, and there is occasionally considerable obscurity.

I begin this communication with a re-examination of a monument in Greece—the narthex of the now deserted Monastery of Zooodochos Pege on mount Kithairon, near the village of Pyli (formerly Derven-salesi) on the borders of Attica and Bocotia. It became known to the world of scholarship as early as 1935, when it was published by Professor A. Orlandos, who also published the very interesting bath from the same monastery.

As Orlandos demonstrated, the original katholikon of the Monastery was initially built during the 11th century in the form of a domed cross-in-square. The domed pseudo-octagon narthex and the funerary chapels on the south and north sides were added to it later on. Nothing survives today of this katholikon except the foundations of the walls and a number of sculptures in marble, scattered here and there. It was destroyed by the 19th century, though the narthex survived in ruined condition. In 1890, the inhabitants of the village nearby converted the domed pseudo-octagon narthex into an independent church, building a new niche for the sanctuary, the hemisphere of the dome, and reconstructing the walls whereever they had collapsed.

Orlandos dated the narthex of Zooodochos Pege to the 13th or 14th century, but the new examination of it, and the preparation of new measured drawings help to assign its erection to the end of the 12th or the beginning of the 13th century (Pls. 3 - 6). In fact, certain parts of the church which had been thought to belong to the radical reconstruction of 1890, appear to have been original features—the drum of the dome, for example, the porch on the façade, the northern entrance and the form of the roofs (Figs. 1-2).

A detailed description of the monument would take us beyond the bounds of this communication. We may, however, note some parallels that suggest an earlier date for the monument.

1. Various features in ashlar blocks (arches of voussoirs, ashlar masonry without bricks, crowning cornices, and horizontal string courses),

4. ABME 1 (1935), 172. A. Passadéos accepts that the monument should be attributed to the 13th century. See AE 1971, 48 not. 3.
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which testify to an advanced competence in stone-carving, are characteristic of the 12th century.

Fig. 1. Pyli (Dervenosa). Katholikon of the monastery of Zoodochos Pege. Section and plan of the narthex.

2. The division of some of the walls into two zones, an upper and a lower, was a particular feature of the 12th and 13th centuries. The careful cloisonné system, and the masonry with undressed stones and

6. A. C. O r l a n d o s, ΑΒΜΕ 7 (1951), 175 and C. h. B o u r a s, Ο "Αγιος Γεώργιος της Άνδρος, Χαριστήριον είς Α. Όρλάνδον, Β', Athens 1966, 275.
7. C. h. B o u r a s, Η Παλαιοκαναγά στήν Μανωλάδα, Έπιστ. Έπετηρίς Πολυχρονικής Σχολής Α.Π.Θ. 4 (1969-70), 255, pl. 5γ.
a large number of horizontal briks\textsuperscript{8} is likewise reminiscent of the monuments of the Komnenian period.

3. The disepsilon cut-brick frieze of the porch, arranged in a semi-circle, finds a parallel in the church of Merbaka at the end of the 12th century\textsuperscript{9}.

8. A. C. O r l a n d o s, 'Ο παρά τήν "Αμφίσσαν ναός τοῦ Σωτήρος, ABME I (1935), 184 (south wall of the church).

4. The semi-columns of the dome, made of small drums of porous stone\textsuperscript{10}, also recall similar carefully worked architectural forms of the 12th century, and

5. The arch over the northern entrance, which is made of narrow voussoirs and has a slightly pointed shape, is similar to the one in the katholikon of the Haghia Mone of Nauplion (Areaia), of 1148.

Internally, the shape of the cross is quite clearly articulated on the plan, and the vertical axis of the church is especially emphasized. The octagonal support for the dome is formed with the help of four niches in the corners, which have very tall proportions, while the pendentives have an unusual shape. The arrangement of two tombs, formed by marble plaques under barrel vaults, in the narthex of Zoodochos Pege, is a unique feature in Byzantine churches in Greece. Particular interest attaches to the porch with very tall proportions, which is roofed with a groin vault and is somewhat inorganically connected to the narthex; it is reminiscent of the later porches that rise up to a belfry\textsuperscript{11}. The funerary chapels, in ruined condition today, merit special investigation.

There is unfortunately no historical evidence relating to this important monument. No inscriptions have been found. The name Zoodochos Pege is certainly more recent (it was widely used for churches and monasteries after 1727) and makes no contribution to the question of the date. Orlandos suggested\textsuperscript{12} that this was the Monastery founded by Hios Meletios (1035 - 1105), but this does not solve the problem of the narthex of the katholikon that we have examined.

We may now proceed to examine the other monuments in the series.

— The Kamariotissa on the island of Chalke near Constantinople has recently been studied at great length by Pasadaios\textsuperscript{13} and Ma-

\textsuperscript{10} As for instance, those of the katholikon of the Haghia Moné in Areia, near Nauplion. See also A. C. O r t a n o s, 'Η μονή τοῦ Ὅσιοῦ Μελετίου καὶ τὰ παραλάοντα αὐτῆς, ABME 5 (1939 - 40), 46, not. 1 - 3. In addition to these examples see those of St. Sophia in Monemvasia and Pantanassa in Geroumania.
\textsuperscript{11} As in Samarina (C. K α l o k y r i s, Ἐκκλησία τῆς Ι. Μητροπόλεως Μεσσηνίας, Thessaloniki 1973, 61, pl. 18,20), the katholikon of the monastery of St. Demetrius in Kypseli (Tourkopolouko) in Thesprotia (A. C h a t z i n i k o l a o u, Βυζαντινά Μνημεία Ἡπείρου, ΑΔ 21 (1966), B1, 295, pl. 299 A), the church of St. George in Omohofolissia (Galista), (E. S t i k a s, Une église des Paléologues aux environs de Castoria, BZ 51 (1958), 102, not. 6) and other monuments.
\textsuperscript{12} ABME 1 (1935), 177, and 5 (1939 - 40), 39.
\textsuperscript{13} ‘Η ἐν Χάλκη Μονή Παναγίας Καμαριώτισσης, AE 1971, 1 - 55.
Most importantly, it has been securely dated to the end of the 11th century, and is thus the earliest of all the churches in this group. The lively emphasis on four of the eight niches makes this building intermediate between the domed octagon and the tetraconch type.

— The first of the churches on the island of Chios, Haghiós Georgios in the village of the same name, may be attributed to the same period. Despite the fact that this is the earliest and most faithful copy of Nea Moni, the modifications of the plan have already begun, for the eastern shallow niche of the prototype is replaced by the barrel vault that covers the holy bema. The church has unfortunately been much altered from the 18th century onwards.

— The Panaghia Krina, also on Chios, shows precisely the same development of the plan. It can be dated, from some of its frescoes, to the end of the 12th or the 13th century.

— The dating of the third monument on Chios, the church of the Haghiói Apostoloi in the village of Pyrgi, remains problematic; it probably belongs to the 13th, or even the 14th century. Here the form of the plan moves even further away from the original, two of the niches being replaced by barrel vaults, and the other two by wide arches. The shape of the cross begins to appear in the plan, though the imitation of the katholikon of Mea Moni is clear in all the other features.

— The church of the Saviour in the village of Chortiatis near Thessaloniki was made known four years ago by the epimelete N. Nikonanos. From the typological point of view, it directly calls to mind the above monuments from Chios, particularly Haghiói Apostoloi at Pyrgi. It is

17. A. C. Orlandos, op. cit. Pl. XXXI - XXXVII, G. Sotiriou, op. cit. 33 - 34, fig. 12 - 13, 20, pl. 5, fig. 11, pl. 6, fig. 17, pl. 7, fig. 22.
18. A. C. Orlandos, op. cit. pl. XXXVI - XLIII, G. Sotiriou, op. cit. 33 - 34, fig. 16, pl. 6, fig. 15, 21.
19. Η Εκκλησία τῆς Μεταμόρφωσης τοῦ Σωτήρος στὸν Χορτιάτη, Κέρνος, Τιμητική προσφορά στὸν καθηγητή Γ. Μπακαλάκη, Thessaloniki 1972, 102 - 110, pl. 33 - 34.
in poor condition today, but it makes it absolutely certain that the type spread to the area that was under the artistic influence of Constantinople. The building is fairly securely dated to the middle of the 12th century.

— Haghios Demetrios, near the village of Haghios in northern Euboea, is today completely in ruins; it is known from the publication of Orlandos, and is dated with certainty to the 12th century. In this instance, only the east and west niches have been replaced by barrel vault. The niches in the corners are proportionately much narrower, so that the designation domed pseudo-octagon seems more apposite.

— Finally, the large narthex of the katholikon of the Monastery of Porta Panagia, near Trikala in Thessaly, very closely resembles that of Zoodochos Pege, the first church examined. Here again, the four main niches are replaced by barrel vaults, and the cross shape can be made out. The main church, to which the narthex was added, is dated to 1283, but a number of features (chiefly the ashlar masonry without bricks in the walls and dome) point to the 12th century in this case also. The re-dating is suggested with great reservation. It is supported by the form of the masonry in the northwest corner of the katholikon, which perhaps indicates that the church of 1283 was built on the remains of an earlier one, to which the narthex examined here was added.

Two monuments which are relevant to the subject, but which present special problems, will not be examined here; in any event, they fall outside our period. These are the Paregoritissa of Arta and the church of Antikyra in Phokis.

We shall not concern ourselves here with the theories concerning the archetype of the single domed octagon churches of the middle Byzantine period, which is believed to have been an important church in Constantinople. What is significant is that the katholikon of Nea Moni

20. O parà to χωρίον Ἀγίου τῆς Εὐβοίας ναὸς τοῦ Ἁγίου Δημητρίου, ABME 7 (1951), 168 - 177.
22. A. C. Orlandos, Ἡ Παρηγορήτισσα τῆς Ἁρτης, Athens 1963, 55 - 64.
24. The important remains of the katholikon of St. George in Mangana, has already been pointed out in this respect, by A. Grabar (L’art byzantin au XIe siècle. Architectures, Cah. Arch. 17 (1967), 261) and more recently by Cyril Mango (DOP 27 (1973), 131 - 132 and Byzantine Architecture, N. York 1976, 231). It is significant to note that according to the synaxarium of the two founders of Nea Moni, its octagonal church was modelled after the «small church of the Holy Apostles» in
on Chios, an imperial foundation, was very close to the prototype. If we examine this case carefully, in which the form remains pure, we observe that it consists of an octaconch arrangement over a simple square area. It is apparent that, at the higher level at least, the architect endeavoured to distribute the space equally about the two axes, to give the impression of a centralised arrangement, and to give great emphasis to the vertical axis.

The so-called single or 'insular' domed octagon type of Byzantine church thus differs in general architectural conception from the complex or cross domed octagon type that is found in mainland Greece. It also differs in a number of points of detail: it consists of a single space, and is not surrounded by spaces whose vaults buttress the lateral thrust of the main dome. The dome thus appears very heavy in comparison with the mass of the building. In the interior there are semi-circular niches surmounted by half-domes in the corners, instead of the half-conical squinches found in the domed octagon churches of mainland Greece. The niches in the corners are much smaller than the four main niches. Above these we have, not eight separate pendentives, but a circular corona which in geometrical terms should be regarded as a segment of the circumscribed sphere.

The katholikon of Nea Moni has decided disadvantages from the point of view of statics. The main niches are very shallow, so as to fit into the thickness of the walls, and the lateral thrust of the dome is therefore not adequately countered. Despite the fact that the statics are improved in all the derivatives of the original shape, it is no coincidence that of the nine monuments examined, only three preserve their original domes intact.

The variations of the plan that we have seen were thus based on the octaconch plan of an unknown model, or on the church of Nea Moni (Fig. 3). Some of the plans (mainly on Chios) are very faithful to the prototype, while others come close to other forms. We thus have:

1. The unification of the east niche with the barrel vault covering the bema (Panaghia Krina and Haghios Georgios on Chios) (Fig. 4).

Constantinople. Nevertheless, practically nothing is known about this Constantinopolitan monument. C. Mango (op. cit.) makes further suggestions in relation to the hypothetical model.

25. It should be pointed out that the dynamic articulation of the interior space in the greek cross octagon is essentially different from that of the «insular» single octagon which is clearly defined and static.
2. Emphasis of the four main niches, so that they project on the outside (Kamariotissa on Chalke)\textsuperscript{26} (Fig. 5).

3. Replacement of the east and west niches by barrel vaults (Haghios Demetrios in northern Euboea)\textsuperscript{27} (Fig. 6).

4. Replacement of three niches (west, north and south) with wide arches (Haghioi Apostoloi at Pyrgi, and the church of the Saviour at Chortiatis) (Fig. 7).

\textsuperscript{26} I.e. by means of four barrel vaults. Ar. Passadéos, ("Η ἐν Χάλκη Μονή Παναγίας Καμαριωτίσσης, ΑΕ 1971, 47) extensively refers to the resemblance of this plan to the tetraconch as well as to the inscribed cross plans.

\textsuperscript{27} In this case the architectural layout has also been compared to the rest of the pseudo-octagon plans (A. C. O r l a n d o s, ABME 7 (1951), 172, 173) as well as to the church of the Kamariotissa in Chalke.
5. Replacement of all four niches with barrel vaults (narthex of Porta Panaghia, and Zoodochos Pege on Kithairon). Tiny corner spaces are thus created, and the general shape becomes cruciform (Fig. 8). This variation indirectly approaches the complex octagon type found in mainland Greece.

These variations have a relatively limited importance for the interior articulation of the church. The creation of them should perhaps be attributed, not to the search for new forms that can be seen in the other arts during the 12th and 13th centuries, but to an attempt to improve the stability of the building.

In fact, the pure octaconch type, which is exceptionally sensitive, is met only in Nea Moni. In all the following buildings, the architects replace one or more of the shallow niches with features that could resist
the lateral thrusts —that is, with deep niches, with arches of some depth, or with barrel vaults. In the secondary, later monuments that we have seen, they no longer ventured to attempt the proportions and scale of

the katholikon of Nea Moni, in which an advanced technology, making use of light bricks, had been deployed. They tend to reduce the size of the openings and increase the strength of resistance of the arches on which the dome was supported, by means of the devices we have already seen.

To return to the building from which this communication set out, the narthex of Zoodochos Pege, we see that the adoption of the domed pseudo-octagon type made it possible to combine a large narthex, or lite, with funerary monuments. The lite of Porta Panaghia and Zoodochos Pege, which are square and to some extent independent, have

![Fig. 7. Fourth variation of the octagon plan.](image1)

![Fig. 8. Fifth variation of the octagon plan.](image2)
precedents in mainland Greece, such as the Moni Sagmatas and that of Hosios Meletios. The inclusion of two tombs in the façade of the church, with arches placed symmetrically either side of the high porch in a shape that recalls that of a triumphal arch, is a unique feature. The tombs originally had marble slabs in front of and above them (the grooves for the supports are preserved), and the vaults over them were most probably intended to receive fresco paintings.

Even though, as already stated, we have no historical evidence for Zoodochos Pege, it is an easy conjecture that founders or benefactors of the Monastery will have been interred in the two tombs. It is also easy to relate the unprecedented inclusion of the two funerary monuments to the social conditions prevailing in Greece about 1200. The founders and benefactors will without doubt have belonged to the strong land-owning families who had obtained great power just before the Latin Conquest. These same men projected the name of the family or the individual through the Art and Architecture of their age.

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28. A. C. Orlandos, ABME 7 (1951), 81, 83.
ΠΕΡΙΛΗΨΗ

ΠΑΡΑΛΛΑΓΕΣ ΤΟΥ ΑΠΛΟΥ ΟΚΤΑΓΩΝΙΚΟΥ ΤΥΠΟΥ ΕΚΚΛΗΣΙΩΝ
ΚΑΤΑ ΤΟΝ 12ο ΚΑΙ 13ο ΑΙΩΝΑ

(ΠΙΝ. 3 - 6)

Μια ομάδα μνημείων στον 'Ελλαδικό χώρο και τήν Πρωτεύουσα μπορεί να μελετηθεί από τυπολογικής πλευράς χάρη στήν άποσαφήνιση τής χρονολογήσεώς τους και τή αποστότερη κατανόηση τού δομικού τούς συστήματος. Πρόκειται για έκκλησίες τού 12ου και τού 13ου αιώνος, ώρ' ένδος τού ἄπλου ὀκταγωνικού τύπου (πού ἀναφέρεται ἐνίοτε ως νησιώτικος) και ώρ' ἐτέρου αὐτές πού ἔχουν γίνει γνωστές ως ψευδοοκταγωνικές. Η νέα χρονολόγηση τῆς Καμαριώτισσας τῆς Χάλκης (Th. Mathews), ή ἐπισήμανση τῆς Σωτήρα στὸν Χορτιάτη (Ν. Νικονάνος) καί ή ἀναχρονολόγηση τῶν ναρθηκών τῆς Ζωοδόχου Πηγῆς στὸ Δερβενοσάλεσι καί τῆς Πόρτα-Παναγιάς στή Θεσσαλία, ἀνεβάζουν τά γνωστά μνημεία τῆς παραπάνω ομάδος σέ οκτώ. Η διερεύνηση τῆς ἐξελίξεως τού τύπου ἐξειδίκευσε ἀπό τή διαπίστωσή ότι ὁ μονόχωρος μεσοβυζαντινός ὀκταγωνικός ναός καμία σχέση δὲν ἔχει μὲ τά γνωστά ὀκταγωνικά μνημεία τῆς κυρίως 'Ελλάδος, τά ὃποια κτίστηκαν μὲ συνθετικές ἀρχές ἀλλὰ καὶ μορφές, τελείως διαφορετικές. Ἀφετέρου τόν παραλλαγόν τῆς ὁμάδας εἶναι τὸ ὀκτάκογχο συμμετρικό ως πρός τοὺς δύο κυρίους ἄξονες σχήμα, ὅποιο αὐτὸ ὕφασμάζεται στὸ καθολικό τῆς Νέας Μονῆς τῆς Χίου. Ἡ ἐγκατάλειψη τού σὲ ἕνα τετράγωνο ἢ ὑποπολευκό σχήμα δηλαδή στή διάπλαση τῶν κογχών μὲ περιορισμένο τό βάθος, σὲ μία λύση δηλαδή μειονεκτική ἀπὸ πλευράς στατικῆς. Γιὰ τήν ἀρσή τοῦ μειονεκτήματος καί σ' ὅλα χαρίς ἐξαίρεση τὰ μεταγενέστερα παράγοντα τοῦ ἀρχικοῦ αὐτοῦ σχήματος, γίνεται προσπάθεια ἄντικαταστάσεως τῆς μίας, τῶν δύο ἢ καὶ τῶν τεσσάρων ἄβαθων κογχών μὲ ἄλλες πολύ βαθύτερες καὶ προέχουσες ἐξωτερικά ἢ μὲ κυλινδρικὲς καμάρες. Στή πρώτη περίπτωσι τὸ ἀποτέλεσμα θυμάται τῶν τετρακόγχων ναοὺς (Καμαριώτισσα Χάλκης). Στή δεύτερη ἀρχικά τό ὄλο θέμα παρουσιάζεται ἐνδιαφέρον γιατί συσχετίζεται μὲ τὸ ἐρώτημα.
Χ. ΜΠΟΥΡΑΣ

διν στην αρχιτεκτονική του 12ου αιώνος υπήρχαν ανανεωτικές τάσεις ή συντηρητισμός. Άφορμή για την δέξια της θέματος αποτέλεσε η νέα θεώρηση του νάρθηκα του καθολικού τής Μονής Ζωοδόχου Πηγής κοντά στο χωριό Πύλη (Δερβενοσάλεσι) στον Κιθαιρώνα, το οποίο μπορεί να χρονολογηθεί στα τέλη του 12ου αιώνος.

ΧΑΡΑΛΑΜΠΟΣ ΜΠΟΥΡΑΣ
Pyli (Dervenosa). Katholikon of the monastery of Zoodochos Pege. The narthex. From the north-west.
Pyli (Dervenosailesi). Katholikon of the monastery of Zoodochos Pege. The narthex. From the south-east.
Pyli (Dervenoualesi), Katholikon of the monastery of Zooodochos Pege. The narthex. Detail of the west façade of the porch.