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SOME OBSERVATIONS ON THE ORIGINAL FORM OF THE ROTUNDA IN THESSALONIKI

The church of St. George (Rotunda) in Thessaloniki has long been admired as a monument with great architectural interest. Its dome is exceptionally impressive, due to the unusually large space it creates, a phenomenon rarely seen in Byzantine and post-Byzantine times. Mosaic representations of fine workmanship enhance this impression by underlining its dignity and monumentality[1]. The structural system of this building, although almost entirely preserved, does not, however, indicate the original appearance of the monument. Elements which might have helped in the restoration of the interior of the Rotunda as it was in the years of the Tetrarchy have hardly been preserved, and what does remain has not been adequately utilized by those who have undertaken the study of the monument[2].

1. Paul Lucas, *Voyages*, 1714, 1, ch. 28. F. de Beaujour, *Tableau du commerce de la Grèce*, 1800, 1, 35. Cousinéry, *Voyage en Macédoine*, 1831, 1, ch. 2, 23ff. Leake, *Travels in Northern Greece*, 1833, III, 240. Π. Παπαγεωργίου «Θεσσαλονίκης Βυζαντιακοὶ ναοὶ καὶ ἐπιγράμματα αὐτῶν» *B. Z.* 10, 1901, 25.

2. The basic publications about the Rotunda are:

E. Hébrand, «Les travaux du Service Archéologique de l'Armée d'Orient à l'arc de triomphe de Galère et l'église de St. Georges à Salonique,» *B.C.H.*, 44, 1920, 5-40.

E. Dyggve, «Kurzer, Vorläufiger Bericht über die Ausgrabungen im Palastviertel von Thessaloniki, Früjahr 1939», *Laureae Aguincenses* 2, 1941, 63-71.

Idem, «Recherches sur le palais impérial de Thessalonique», *Studia Orientalia Ioanni Pedersen dicata* (Copenhagen, 1953), 59-70.

Idem, «Fouilles et recherches faits en 1939 et en 1952-53 à Thessaloniki», *Corsi di cultura sull'arte ravennate e bizantina* II (1957), 78-88.

Idem, «La région palatiale de Thessalonique», *Acta Congressus Madgvigiani*: *Proceedings of the Second International Congress of Classical Studies* (Copenhagen 1958), I, 353-365.

H. Torp, *Mosaikkene i St. Georg-Rotunden i Thessaloniki*, Oslo, 1963, 1-12. Torp presents an interesting hypothesis that Galerius' Rotunda was never completed. He bases this belief on historical evidence, the fact that Galerius died only six years after the starting date of the construction, the lack of decorative elements from this period, and the later stamped bricks in the upper section of the dome. This theory is not impossible although largely based on negative evidence. We do not have many decorative elements remaining from the Christian period either, and the remodelling of the building would have destroyed much. In any case Torp's hypothesis does not alter this paper. Evidence indicates that certain elements were in fact installed, and hypothetical reconstructions of others denote intention and therefore remain valid for the original conception of the building.

It seems that in the Early Christian period at the end of the fourth century[1], the Rotunda underwent a series of changes, besides those adjustments which were necessary for liturgicalr easons, and these changes altered the quality of the interior space. As it is preserved today, an observer would have great difficulty in making an imaginary reconstruction of the original interior; moreover scholars are still in controversy as to its original function[2].

First of all, there is the theory of the existence of an opaion in the original structure, based on the discovery of a well in the centre of the room which would have gathered rainwater from the central opening[3]. This opaion would have given a vertical axis to the interior, and its subsequent blocking up would have greatly diminished the importance of this vertical axis by removing the light source and the strong vertical binding power it created from the apex. The change of emphasis was reinforced by the piercing of the cylindrical body into three vertical lighting zones.

When these blind arcades at the base of the dome were opened, the openings of the middle zone were enlarged and the tympana of the large vaulted niches on the ground level were torn down in order to link the central space with that of the encircling ambulatory[4]. These openings created a subsidiary longitudinal axis, emphasized by the light which entered from the large windows of the apse.

Along with this fundamental change there followed a series of lesser alterations, which nevertheless contributed greatly to the transformation of the monument as a whole. These adaptations for the most part occured in those decorative forms which were closer to the Greco-Roman tradition than to the

1. The date for the converted Rotunda has been usually based on that of the mosaic decoration, generally accepted as the end of the 4th century. This date was first proposed by Dyggve, «Kurzer, Vorläufer Bericht...,» p. 69. This has been supported by H. Torp, «Quelques remarques sur les mosaiques de l'église Saint-George à Thessalonique», in *Πεπραγμένα τοῦ Θ' Διεθνοῦς Βυζαντινολογικοῦ Συνεδρίου* Athens, 1955, and also with new technical evidence in *Mosaikkene...*, and in a publication of the final report of the Rotunda, being prepared along with H. P. L'Orange, the same dating will be presented. See W. E. Kleinbauer, «Name and Function of Hagios Georgios at Thessaloniki», *Cah. Arch.*, XXII, 1972, 59-60, note 20. Kleinbauer, however, suggests a later date for the church and mosaics, ca. 450 A.D., or at the latest, the third quarter of the 5th century. *Idem*, p. 58, note 14.

2. See Suzanne Lewis, «San Lorenzo revisited: A Theodosian Palace Church at Milan» *Journal of the Society of Architectural Historians*, 32, 3, 1973, 208-209.

3. Dyggve, «La region palatiale...», p. 356. Στ. Πελεκανίδης, *Α. Δ.* 16, 1960, 224-225. Torp, *Mosaikkene...*, p. 8. Torp claims that the bricks of the upper section of the dome, where the curve changes, are stamped and date from the time of the conversion of the Rotunda. This he takes to indicate that either the building had a very large opaion or was never completed.

4. Hébrard, *op. cit.*, 20-21. Dyggve, «Recherches sur le palais...», p. 64 ff.

Christian spirit. Such forms were the aediculae which in the original building framed the niches in each pier[1]. It is natural that similar adaptations would have occured in other areas as well, externally in the portico, for instance, in the interior revetment, and generally wherever there would have been related themes foreign to Christian beliefs and the new use of the building.

The reconstructed drawings of the original form of the Rotunda as presented by Hébrard and Dyggve are not satisfactory (fig. 1). The lack of a portico stressing the entrance creates difficulties because this absence does not conform to the character of the monument[2]. In accordance with either the structural composition of the monument, or its function in Roman times, an enclosed space in front of the entrance would be considered a requisite. Naturally, this portico would have interfered with the planned outer ring aisle and would have been torn down on its construction.

It is true that in the early Christian period the structure was composed in such a manner that, especially in the interior, the vaulted form coloured the entire effect of the monument. It is this which has led scholars to the opinion that the Rotunda had basically Anatolian elements, although they do compare the building in some respects to the Pantheon in Rome. This belief that the Rotunda incorporated eastern and western elements has held up to the present day, and it is obvious that scholars have not been able to free themselves from the idea of the Rotunda as it is preserved today in its early Christian form.

The only published record of the interior decoration is a drawing by Gosztonyi, a member of Dyggve's team in 1939. This drawing presents the surviving evidence for the surface decoration over two of the bays, namely the small niche between the two bays with the existing consoles, and the holes over the surface of the walls for the interior revetment[3].

The normal practice in Roman buildings was for an architectural decoration based on traditional post and lintel construction to be applied over an arcaded structure. The vaulted style, therefore, which today dominates the impression of the interior is quite different from the appearance of the Roman monument. Originally, the composition of the architectural members was meant to articulate the interior space in a fashion consistant with the Greco-Roman norm. There is evidence inside each large niche at the height of the springing of the vault for an architrave which would indicate the existence of a cornice (pl. 1, 3a, fig. 2). This entablature, together with a frieze of sheathing

1. A few elements from the tetrarchic aediculae remain—namely the consoles and fragments from the capitals of the decorative columns. See Hébrard, *op. cit.*, pp. 25-26.

2. See R. F. Hoddinott, *Early Byzantine Churches in Macedonia and Southern Serbia*, London, 1963, p. 109.

3. Dyggve, «La région palatiale...», p. 359, fig. 8.

marble plaques, would have concealed the construction of the niche, turning it into a relieving arch system which would have had the appearance of a post and lintel system. The existence of the epistyle is proved by the recesses in

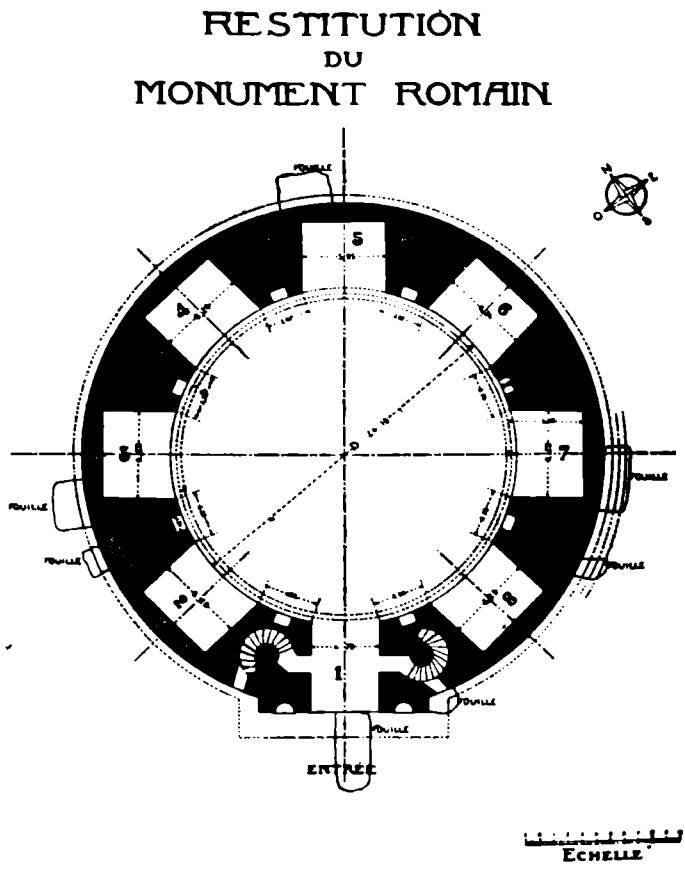


Fig. 1. Plan of the Rotunda (by Hébrard).

each pier, which, although today filled in, are nevertheless clearly observable and measurable. The measurements of the two facing recesses in each niche are equal (Fig. 3)[1]. At the base of each recess there is within the stone and brick construction a horizontally placed stone element (pl. 1, 3a) which helped in

1. The measurements in fig. 3 for L differ to a slight degree from those given by Hébrard (see fig. 1).

the even distribution of the weight of the entablature. The architrave was directly placed on this during the construction and was thus bound to the brickwork, as shown by the even vertical joining. The equal size of the facing recesses indicates that they would have been connected by a single horizontal element with a constant cross section. A lintel over such a wide opening would have

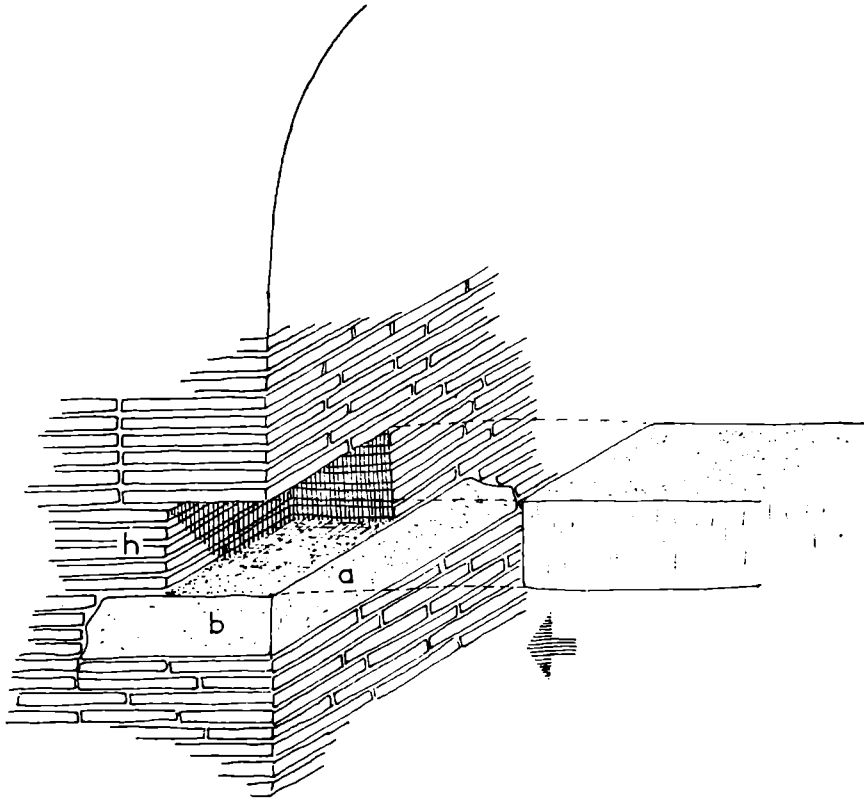


Fig. 2. Sketch of a recess.

been too heavy by itself and so a pair of supporting columns would have been necessary (pl. 4,5)[1]. This articulation of the façade of a secondary spatial area by means of two columns is very popular in Roman times (Pantheon in Rome, Hadrian's Library in Athens, Thermae of Caracalla, Thermae of Diocletian, Basilica of Hercules at Piazza Armenina, and others).

1. The existence of one or three columns is not acceptable because we would have one central column, an alien element in Roman architecture, whereas four columns would be too closely placed.

These recesses exist in all the large niches except in the one which originally formed the entrance of the Rotunda (pl. 2). Here, the horizontal element did not exist, and thus there was a visible barrel vault for all the length of the entrance, in order to draw attention to it. The width of this vault is noticeably smaller than the others which are all the same size[1]. A somewhat similar situ-

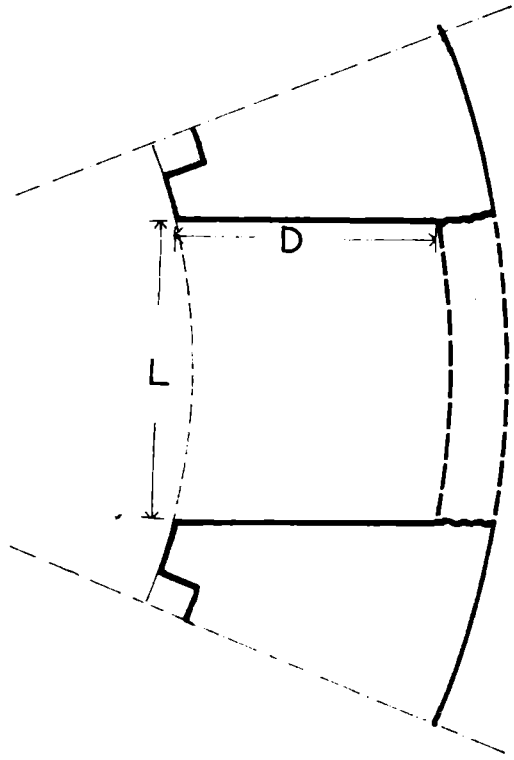


Fig. 3. Measurements of large niches (for the niches see fig. 1, for a, b, h, see fig. 2, and for L, D, see the diagram above).

ation is observable in the Pantheon in Rome[2]. In the Rotunda, as well as in the Pantheon, the niche which one expects to differ from the other, basically homogeneous niches, is the one directly opposite the original entrance (pl. 3), thereby receiving a greater importance. The solution, at any rate, was different from that of the entrance because there is indisputable evidence for the exis-

1. Hébrard, *op. cit.*, pp. 18-19. See also fig. 3.

2. For Pantheon, see the dissertation of Kjeld de Fine Light, *The Rotunda in Rome*, Kopenhagen, 1968.

tence of a horizontal element. The recess in this niche had a greater height so perhaps this niche presented a heavier, differentiated entablature. Hébrard, as seen in his restoration plan, questions the existence of an exterior wall for this niche[1]. Probably, however, the differentiation would have been achieved in another way (decoration, colour, furniture).

Hébrard's restoration of the back walls of the large niches is perhaps surprising. In his plan the exterior surface is presented as curved whereas the interior is rectilinear (fig. 1). However, was it actually this way? The opposite case is common and logical (for structural as well as for stylistic reasons). We assume the problem of the exact size and shape of the niches did not preoccupy Hébrard, for he gives the depth of a large niche as 5.20 m., while for the Roman period this same niche had a depth of exactly 5.00m., as is seen by the traces of the bonding of the tympanum with the corresponding sides of the piers (pl. 3b). Since at the present time there is insufficient evidence to determine the shape[2], we should accept the most orthodox and consistant solution. Most of the round buildings have a curved back wall in the rectilinear niches[3] (Pantheon, Thermae of Caracalla, Temple of Pergamon, and others).

The above-mentioned observations, especially the evidence of the existing horizontal elements at the height of the springing of the barrel vault of the niches, as well as the more acceptable form of the tympanum, are enough to allow a revision of the reconstructed plan of the first level of the Rotunda. Each rectangular niche was closed at its end by a curved tympanum, whereas on the interior, the façade of each niche was articulated by two columns which supported a concave architrave. In this way we can reconstruct the first level, though some details will remain uncertain. Probably some of these architectural members exist in the archaeological areas of Thessaloniki, but identification is difficult because exact statistics are lacking[4]. It would be easy enough to

1. Hébrard, *op. cit.*, pp. 18-19.

2. The trace of the wall which is indicated in Hébrard's plan (fig. 1) is too small to allow for a judgement as to its shape. Further excavations are necessary to bring to light more evidence.

3. There are a few round buildings with a straight back wall in a rectilinear niche: Tor Pignatara in Rome, see F. W. Deichman, «Untersuchungen an spätrömischen Rundbauten in Rom und Latium», *Jahrbuch*, 56, 1941, 738, abb. 1.

Also Santa Constanza in Rome has shallow rectilinear niches with straight backs, but the one large rectilinear niche facing the entrance has a curved tympanum.

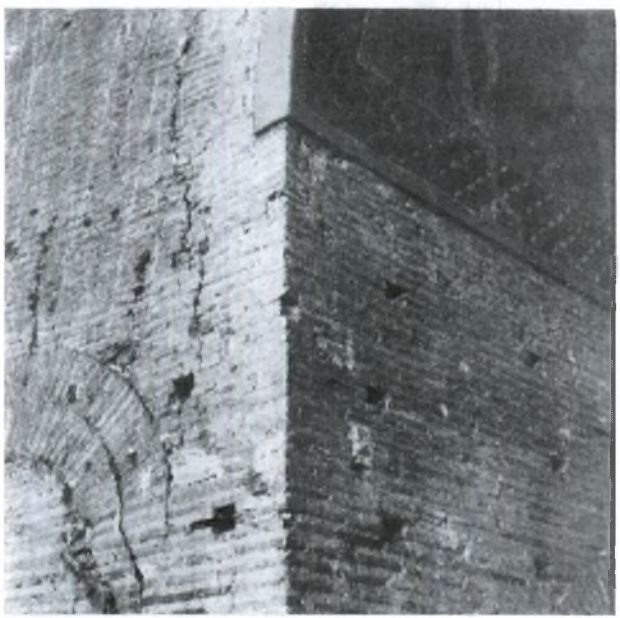
4. In the last years of the century column bases were found in an excavation which took place in the «Bema». The excavator planned to give further information about this, but never did (Γ. Οἰκονόμου, *Α.Δ.* 1, 1915 (παράρτημα), 59). Lately the column bases of the ciborium have been uncovered, but it is not certain whether these bases are the same as those which were found in the beginning of the century (See Στ. Πελεκανίδης,... *op. cit.*), Dyggve, «La région palatiale...», 357, fig. 7.

1a

1b

Pl. 1. Rotunda niche 3. Recesses: a. left, b. right.

2a



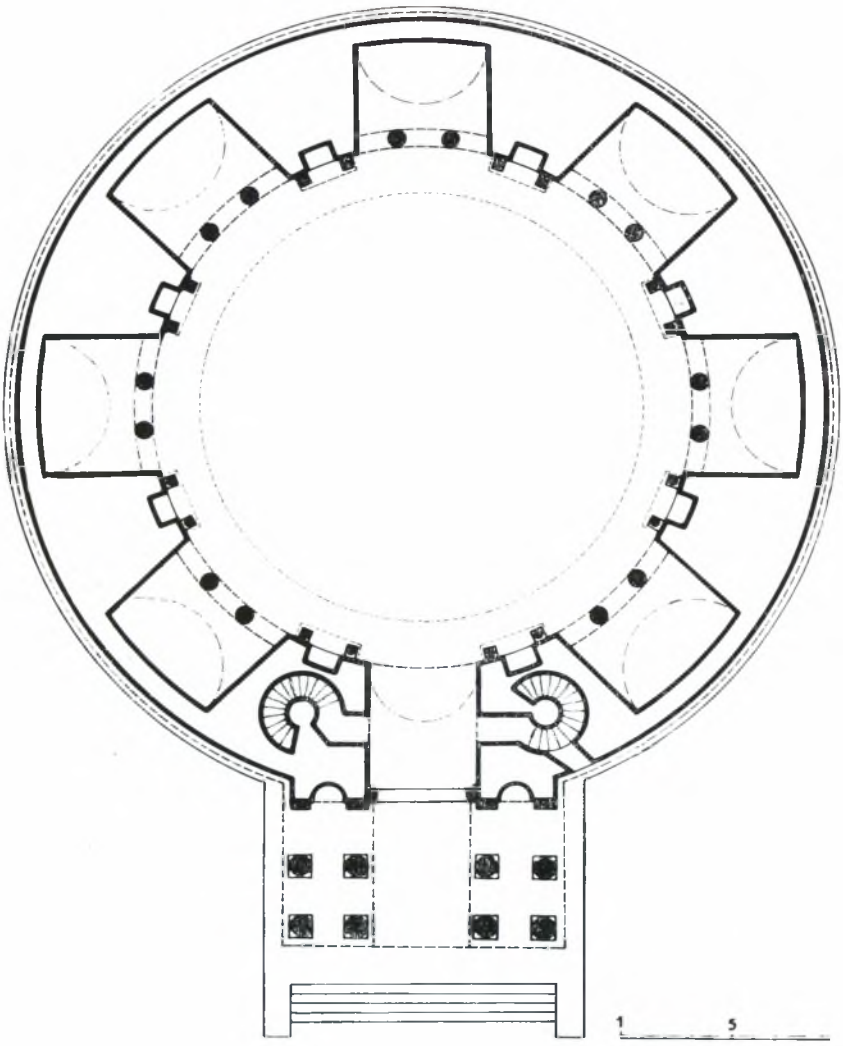
2b

Pl. 2. Rotunda, niche 1 (Entrance): a. left, b. right.

3a

3b

Pl. 3. Rotunda: a. niche 5, left recess, b. niche 4, traces of bonding.



Pl. 4. Plan of the Rotunda (Reconstruction).

Pl. 5. Rotunda. Interior view (Reconstruction).

Pl. 6. Rotunda. Exterior view (Reconstruction).

recognize the architrave, since the height, width, length and even more important, the radius of the curve are known, but nothing has been found so far. The only possible piece which was found by Dyggve is a porphory block, but its location at the present time is unknown[1]. The current excavations which are proceeding may offer additional elements in connection with the portico, as well as for the monument in general.

After these comments, it becomes clear that the Rotunda was one of those buildings which, at least in its interior arrangement, derived much of its style and character from the Pantheon. In the first level, there were the aediculae in front of each pier, as well as a similar articulation of the large niches (two columns, horizontal architrave, blind arches). However, there is a basic deviation from the scheme of the Pantheon. Whereas the Pantheon is basically divided into two halves, the upper half being the dome, the proportions of the Rotunda do not follow such a simple ratio. Between the ground level and the dome there is a second zone including window openings which intensify the vertical axis (fig. 4). These windows were probably stylistically analogous to the blind windows in the Pantheon, framed by polasters and pediments. In the first level, the composition with the columns created an especially characteristic atmosphere, occuring also in other round buildings (Pantheon, Temple of Venus at Baalbek, Mausoleum at Spalate). The holes visible on the interior surface of the well can be used for the reconstruction in both the upper and lower levels in regard to the revetment of the interior.

We can further suggest the existence of a columnar portico whose width is known (12.00 m.) and reconstruct it hypothetically. The presence of the niches on either side of the entrance is an indication for the acceptance of a tripartite portico of which the middle opening would have been larger; the architrave, if the Peristyle at Spalate be any guide, may well have risen up in an arch in the middle, while the flanks would have been horizontal (pl. 6). Such a shape has been suggested for the porch of the Tor de Schiavi in Rome[2] as well, and although there is no supporting evidence in the case of the Rotunda, it is presented as a possible alternative, especially in view of the close parallels between the architectural styles at Spalate and Thessaloniki. The porch would have been two or three columns deep, by analogy with comparable monuments

1. Dyggve, «Kurzer, Vorläufiger Bericht...», pl. VI, 23. It is not certain that this was a piece of the architrave; it could have come from elsewhere in the Rotunda. Recent excavations in the Rotunda have rediscovered some elements, including a decorative fragment originally found by Dyggve, see Item, III, 5. It is possible that this porphory block will also be uncovered in the process of these excavations.

2. See G. B. Ward Perkins, *Etruscan and Roman Architecture*, 1970, p. 503. It seems that a recently discovered 18th century painting suggests that this was the shape of the porch.

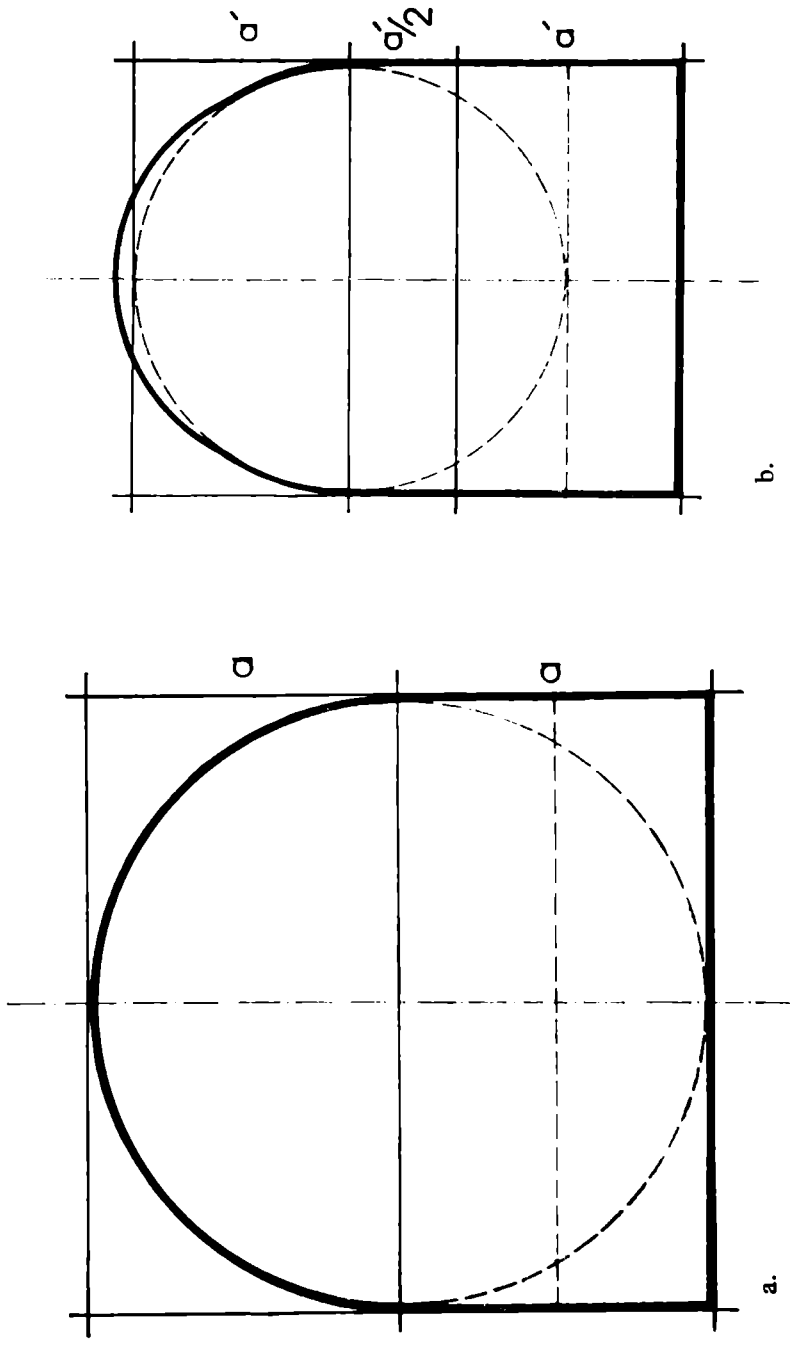


Fig. 4. Proportions: a. Pantheon, b. Rotunda.

(Pantheon, Temple of Venus at Baalbek, Mausoleum of Tor de Schiavi in Rome).

Naturally, the Rotunda is interesting not only as an isolated monument, but as part of an architectural complex including the Arch of Galerius and the vestibule. Dyggve's theory for a functioning axis Rotunda - Palace can no longer be sustained as a result of the most recent excavational discoveries in Gounari Street[1]. It is possible, however, that Dyggve's team have retained additional evidence from previous excavations which could be utilized to shed light on the problems presented by this complex. Probably in the future additional observations related to these problems will be presented. The reconstructed drawings given along with this text (pl. 4, 5, 6) present a general solution for the original plan and are intended as a basis for future studies. This study does not claim to be a complete reconstruction of the Rotunda. Its aim was to utilize certain observations made on the site and to contribute to the understanding of the original concept of the building.

1. Φ. Πέτσας, *Α.Δ.* 24, 1969, 295-297.

Niche	L	D	a^l	a^r	b^l	b^r	h^l	h^r
1.	4.79	—	—	—	—	—	—	—
2.	6.22	5.00	0.65	0.65	0.29	0.29	0.30	0.30
3.	6.20	5.03	0.77	0.65	0.28	0.28	0.28	0.28
4.	6.20	5.00	0.67	0.63	0.30	0.30	0.28	0.28
5.	5.91	5.03	0.65	0.65	0.28	0.28	0.42	0.42
6.	6.20	5.00	0.66	0.66	0.28	0.30	0.32	0.32
7.	(Enlarged niche-bema, no statistics available)							
8.	6.20	5.01	0.65	0.65	0.29	0.30	0.30	0.30