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**ROUND TEMPLES IN ROMAN ARCHITECTURE
OF THE REPUBLIC THROUGH THE
LATE IMPERIAL PERIOD**

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VOLUME I

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TABLE OF CONTENTS

CHAPTER I: INTRODUCTION	1-6
I. PURPOSE AND BACKGROUND	1
II. QUESTIONS TO ADDRESS	2
III. COVERAGE	4
IV. ORGANIZATION: SOURCES, METHOD AND CATALOGUE	5
CHAPTER II: ANCIENT SOURCES ON ROUND TEMPLE DESIGN	7-15
I. ANCIENT TERMINOLOGY AND CONCEPTIONS OF THE ROUND FORM	
<i>Aedes, templum, tholus, and pantheum</i>	7
Cosmic implications of the round form?	8
II. VITRUVIUS ON ROUND TEMPLE DESIGN	11
<i>PART I: THE ARCHAIC AND REPUBLICAN PERIODS</i>	
CHAPTER III: THE ARCHAIC AND EARLY-MID REPUBLICAN PERIODS	16-33
I. EVIDENCE FOR ROMAN ROUND TEMPLES IN THE ARCHAIC AND EARLY-MID REPUBLIC PERIODS	16
Round temples founded in the seventh century BC:	16
The Temple of Vesta, Forum, Rome (#58)	16
The Shrine of the Camenae, Rome (#35)	18
Round temples founded in the sixth century BC:	19
The Temple of Fors Fortuna, Rome (#38)	19
The Shrine of the Penates, Lavinium (#19)	20
Round temples founded in the fifth century BC:	21
The Temple of Mercury, Rome (#49)	21
The Shrine of Spes Vetus, Rome (#56)	23
Conclusion	24
II. AUGURAL DIVINATION IN ARCHAIC ITALY: DEFINING THE ROMAN <i>TEMPLUM</i>	24
The celestial <i>templum</i>	26
The earthly <i>templum</i>	27
The subterranean <i>templum</i>	31

Conclusion	32
CHAPTER IV: THE LATE REPUBLIC	34-101
I. INTRODUCTION	34
II. DISCUSSION	38
Archaic foundations rebuilt in the late Republic:	38
The Temple of Vesta, Forum, Rome (#57)	39
The Mundus, Rome (#49)	40
The Monopteros, Pompeii (#28)	41
Round temples founded in the second century BC:	41
The Temple of Hercules and the Muses and the Shrine of the Camenae, Rome (#42 and 33)	41
The Temples of Hercules Victor in the Forum Boarium area (#43 and 44)	45
The Temple of Hercules Victor <i>in foro Boario</i> , Rome (#43)	46
The Temple of Hercules Victor <i>ad portam Trigeminam</i> , Rome (#44)	48
The Temple of Fortuna Huiusce Diei, Rome (#38)	51
The Round Temple, Tibur (#64)	55
The Shrine and Temple of Fortuna Primigenia, Praeneste (#30-1)	57
The Shrine of Hermes and Maia, Delos (#10)	60
Round temples founded in the first century BC:	62
The Tholus of Cybele and the Shrine of Bacchus, Rome (#34 and 32)	63
The Shrine of Venus, Rome (#55)	65
III. ANALYSIS	69
TEMPLE FOUNDATION AND LOCATION	69
BUILDING MATERIALS AND TECHNIQUES	75
Masonry techniques	75
Roofing techniques	77
BUILDING COMPONENTS	79
DECORATIVE DETAILS	81
The podium molding	81
The column base	83
The Corinthian capital in the late Republic	84
The Corinthian capitals of the round temples	86
The entablature	87
Ceiling coffers	90
Stucco and mosaic work	91
Statuary	92
PROPORTIONAL ANALYSIS	95

IV. CONCLUSION	99

PART II: THE EARLY ROMAN EMPIRE

CHAPTER V: THE JULIO-CLAUDIANS	102-151

I. INTRODUCTION	102

II. DISCUSSION	103

Augustus: (27 BC-14 AD)	103

The Pantheon, Rome (#50)	103

The Temple of Mars Ultor, Rome (#46)	109

The Temple of Roma and Augustus, Athens (#4)	115

The Shrine of Vesta, Rome (#56)	117

Tiberius: (14-37 AD)	122

The Rotunda, Corinth (#9)	123

Claudius: (41-54 AD)	124

The Temple of Fortuna, Rome (#37)	125

The Shrine of the Lares Augusti, Ostia (#23)	128

Nero: (54-68 AD)	129

The Temple of Vesta, Rome (#57)	130

Round temples dated to the Julio-Claudian period:	130

The Perirrhanterion, Rome (#51)	130

The Shrine of Hercules, Rome (#41)	132

III. ANALYSIS	134

TEMPLE FOUNDATION AND LOCATION	135

BUILDING MATERIALS AND TECHNIQUES	137

Masonry techniques	137

Roofing techniques	138

BUILDING COMPONENTS	139

DECORATIVE DETAILS	141

The podium molding	141

The column base	142

The column shaft	142

The column capital	143

The entablature	145

Pavements	146

Statuary	147

PROPORTIONAL ANALYSIS	148

IV. CONCLUSION	150

CHAPTER VI: THE FLAVIANS THROUGH THE ANTONINES	152-213
I. INTRODUCTION	152
II. DISCUSSION	152
The Flavians: (69-96 AD)	153
Vespasian: (69-79 AD)	153
The Perirrhanterion, Rome (#51)	153
Domitian: (81-96 AD)	154
The Temple of Fortuna Huiusce Diei, Rome (#38)	154
The Tholus of Cybele, Rome (#34)	155
The Pantheon, Rome (#50)	156
‘The Temple of Minerva Chalcidica,’ Rome (#48)	157
The Temple of the Gens Flavia, Rome (#40)	161
Round temples rebuilt during the Flavian period:	164
The Temple of Vesta, Forum, Rome (#57)	164
Trajan: (98-117 AD)	165
The Temple of Vesta, Forum, Rome (#57)	165
Hadrian: (117-138 AD)	166
The Pantheon, Rome (#50)	167
The Temple of Zeus Asklepios Soter, Pergamon (#27)	172
The round temples of Hadrian’s Villa, Tibur (#63 and 65)	174
The Temple of Tyche, Side (#59)	178
The Shrine of Sulis-Minerva, Bath (#8)	179
The Antonines: (138-192 AD)	180
Antoninus Pius: (138-161 AD)	180
The Pantheon, the Shrine of Bacchus, and the Shrine of Hercules, Rome (#50, 32, and 41)	181
The Shrine of the Genius Senatus, Rome (#39)	182
Commodus: (180-192 AD)	183
The Shrine of Liber Pater Commodianus, Portus (#29)	183
Round temples dated to the Antonine period:	184
The Temple of the Nymphs, Argos (#2)	184
The Rotunda, Athens (#5)	185
The Temple of Palaimon-Melikertes, Isthmia (#15)	186
III. ANALYSIS	188
FOUNDATION AND LOCATION	189
BUILDING MATERIALS AND TECHNIQUES	192
Masonry techniques	192
Roofing techniques	193
BUILDING COMPONENTS	195

DECORATIVE DETAILS	197
The wall base molding	197
The column base	198
The column shaft	199
The column capital	199
The entablature	202
Cornice soffits and ceiling coffers	205
Pavements and wall revetment	206
Statuary and reliefs	207
PROPORTIONAL ANALYSIS	209
IV. CONCLUSION	212

PART III: THE LATER ROMAN EMPIRE

CHAPTER VII: THE THIRD AND EARLY FOURTH CENTURY EMPERORS 214-268

I. INTRODUCTION	214
II. DISCUSSION	215
The Severans: (193-235 AD)	215
Septimius Severus: (193-211 AD)	215
The Mundus and the Temple of Vesta, Forum, Rome (#49 and 56)	216
The Abaton, Pergamon (#26)	217
Geta: (211-212 AD)	218
The Temple of Melampous, Aigosthena (#1)	218
Caracalla: (211-217 AD)	219
The Temple of Vesta, Forum, Rome (#56)	219
Alexander Severus: (222-235 AD)	219
The Temple of Dea Dia, Rome (#35)	219
The 'Pantheon,' Ostia (#23)	224
Round temples refurbished during the Severan period:	226
The Pantheon, Rome (#50)	226
The mid-to-late third century AD:	226
Philip 'the Arab': (244-249 AD)	226
The Temple of Tyche, Baalbek (#7)	226
Trebonianus Gallus: (251-253 AD)	228
The Temple of Juno Martialis, Rome (#45)	229
Aurelian: (270-275 AD)	230
The Temple of Sol, Rome (#53)	230

Round temples rebuilt during the third century AD:	237
The Temple of Fortuna, Rome (#37)	237
The fourth century AD:	237
Maxentius and Constantine: (306-337 AD)	238
The Temple of Romulus, Rome (#52)	238
III. ANALYSIS	247
FOUNDATION AND LOCATION	247
BUILDING MATERIALS AND TECHNIQUES	250
Masonry techniques	250
Roofing techniques	251
BUILDING COMPONENTS	253
DECORATIVE DETAILS	256
The podium and plinth molding	256
The column base	257
The column shaft	257
The column capital	258
The entablature	260
Soffits panels and ceiling coffers	262
Pavements and wall revetment	263
Statuary and reliefs	264
PROPORTIONAL ANALYSIS	265
IV. CONCLUSION	267
CHAPTER VIII: CONCLUSION	269-277

CHAPTER I: INTRODUCTION

I PURPOSE AND BACKGROUND

This thesis will address the history and development of round temples in an effort to both define the round temple as an architectural type and situate it within the repertory of Roman architecture. Round temples, first attributed by Roman literary tradition to the seventh century BC, become popular from the late Republic, when Rome gains access to the architectural and artistic legacy of Greece. In the Imperial period, the type appears widely throughout the Empire. Outside of Rome and central Italy, round temples are most frequent in areas that formed part of the Greek world. The round form continues to be used for Roman temples into the reign of Constantine, when it begins to appear in Christian churches and baptistries. His reign will serve as the endpoint of this thesis, which will start with the earliest round temples of Archaic and Republican Rome.

The history of round temples has not been studied in a comprehensive way since B. Altmann's fundamental *Die italischen Rundbauten* (1906). Altmann's work amassed all the evidence available at the time on prehistoric to Imperial round buildings used for domestic, public and religious purposes. To some extent, it has been supplemented by M. Weber's *Baldachine und Statuenschreine* (1990), which discusses Roman round buildings that displayed statues in both sacred and secular contexts. Round temples also appear in collected works on Greek round buildings or tholoi. Since K. T. Pyl's 1861 publication, *Die griechischen Rundbauten in Zusammenhange mit dem Götter- und Heroencultus*, tholoi have been examined with regard to their form, function, and development from the Archaic through the

Hellenistic periods. Discussed by numerous authors,¹ tholoi have been addressed most thoroughly by F. Robert (1939), who assigns them a chthonic function,² and more recently by F. Seiler (1986) and G. Roux (1992), who conclude that they played a variety of roles from the sacred to the secular.³

Many authors have sought to extrapolate from tholoi to Roman round temples, suggesting that they honored hero gods as well as goddesses like Vesta, the patron of the hearth.⁴ In their studies of Roman round buildings, Altmann and Weber do not address the religious functions or attributions of round temples. This aspect, like the design and decoration of individual round temples, forms the subject of numerous articles. A few round temples even receive lengthy monographs like the Temple of Hercules Victor *ad portam Trigeminam* (#44), which is examined by F. Rakob and W.-D. Heilmeyer in their *Der Rundtempel am Tiber in Rom* (1973).

Previous studies of Roman round temples either discuss them in the context of other round buildings or on a case-by-case basis. This thesis will aim to fill the gap in round temple scholarship by examining them both individually and in unison as examples of an independent architectural type.

II QUESTIONS TO ADDRESS

To define the round temple as an independent type within the context of Roman architecture, it becomes necessary to examine evidence from individual

¹ For a comprehensive list and a summary of their arguments, see Robert 1939, 14-108 and 180-3, to which may be added Will 1951, Hauteceur 1954, van Essen 1960, Roux 1984 and 1992, and Seiler 1986.

² Robert 1939, 155 and 423-5; cf. Pyl 1861 (as *heroa*) and Leroux 1913.

³ Seiler 1986, *passim*; Roux 1992, 177-8; cf. 1984, 170-1, and Weber 1990, 111. They have also been identified as *prytaneia* (Frazer 1885 and Charbonneaux 1925, 158-78) and *odea* (Thiersch 1908-1909, 27-50 and 67-95), while their form has been derived from hearths (Pyl 1861, Pomtow 1910, 52 fol. and 66, and Fiechter 1937, 314-5), huts (Pfuhl 1905, 331 fol., Leroux 1913, Rider 1916, and Hauteceur 1954, 19-22), and tombs (Leroux 1913 and van Essen 1960, 96).

⁴ Frazer 1885; Pomtow 1910, 52 fol. and 66; Fiechter 1937, 314-5.

examples with a view to answering questions that pertain to the type as a whole. Foremost among them is simply, ‘Why build a round temple as opposed to a rectangular temple?’ Though not uncommon, round temples are vastly outnumbered by rectangular temples in both Italy and the provinces. This fact would suggest that round temples had some intrinsic appeal which motivated their founders to employ the round form. This appeal could be aesthetic or, as Seiler and Roux have suggested in connection with Greek tholoi,⁵ could be explained by religious, social, or topographical factors.

To determine which, if any, of these considerations played a part in the development and use of Roman round temples, this thesis will examine how ancient Romans viewed the round form, specifically round temples, as well as how they founded and located them to see whether this process had an impact on the temples’ design. Additionally, it will ask if any particular gods received round temples and if their cult requirements stipulated the use of the round form. As patrons played a significant role in determining the appearance of their temples, their aims and agendas will be addressed in so far as these may shed light on their choice of form. From a topographical perspective, the settings of round temples will be examined to see if they were better enhanced by round than rectangular buildings.

Moreover, the materials, techniques and ornaments employed by round temples will be evaluated to determine whether they are comparable to those used in rectangular temples. How well they adhere to contemporary trends in construction may help to situate them within the context of Roman architecture. Moreover as size and proportions are important parts of the design process, these will be discussed with regard to round temples, and when possible, Roman architecture as a whole.

⁵ Roux 1984, 170-1, and see above.

Coupled with an analysis of their design, how the type developed both chronologically and geographically may show whether a single consideration determined their use throughout the millennium in which round temples are known or attested. If not purely religious, social, topographical or aesthetic, this study may show what factors came together in promoting the construction of round temples in Italy and abroad.

III COVERAGE

To best address the questions surrounding the use and development of Roman round temples, this thesis will examine all Classical round temples attested in the Roman world from the Archaic period through the early fourth century AD. Excluding Romano-Celtic *fana*, which owe much of their form and ornament to Celtic traditions,⁶ the round temples addressed in this thesis may be defined as round buildings, to which religious functions can be or have been reasonably ascribed. They take the forms of monopteroi, peripteroi and drums, occasionally preceded by porches.

The accompanying map reveals the distribution of round temples throughout the Roman empire, showing the highest concentration in Rome and central Italy followed by Greece and Asia Minor. Chronologically speaking, round temples are attested in Italy throughout the millennium covered by this thesis and in the provinces from the first century BC. Tholoi, studied as comparanda for their form and design, appear throughout mainland Greece between the sixth century BC and the late Hellenistic period.

⁶ For an overview of these round, octagonal and square shrines or *fana* (Varro *ling.* 6.54; Cic. *div.* 1.90; Suet. *Iul.* 54.2; Vitruvius 1.2.7 and 3.1, 4.1.3 and 5), found throughout western Europe in the early-mid Imperial period, see Horne and King 1980, 523-7 figs. 17.25-9, Rodwell 1980b, 568-70 and 582-3 fig. 18.4 (Britain), and Gros 1996a, 184 and 199-203.

IV ORGANIZATION: SOURCES, METHOD AND CATALOGUE

The materials employed in researching this thesis include archaeological remains, the texts of ancient authors and inscriptions, late Republican and Imperial coins, and other iconographic sources. While some of these sources are ancient like the Severan Marble Plan and sculpted reliefs, others date to the Renaissance when architects and topographers began to express an interest in recording ancient sites. Many of their drawings preserve verbal accounts of their discoveries, which may be confirmed by modern excavation reports.

Using this base, Chapter II will analyze the terms employed by Roman authors to denote or describe round temples, together with Vitruvius' approach to the design of temples, both round and rectangular. Chapter III will examine the concept of a *templum* as an essential component in the foundation of any temple building and will see whether this concept had an impact on the development of Roman round temples. This Chapter will also address the first attested round temples in Italy, introducing a chronological construct that will inform the layout of Chapters IV through VII. Set in their historical and architectural context, round temples will be examined from various standpoints including the divinities they honor, their locations, their patrons, their design, and the elements, both architectonic and sculptural, that comprise their decoration. After evidence for both individual round temples and the architectural type is discussed, Chapter VIII will address the issues raised in this Introduction in an attempt to answer the question of why round temples were built in the Roman world.

As an aid to this investigation, Volume II comprises a Catalogue of supplementary material for Roman round temples and their Greek comparanda. This material includes an outline of their topographical contexts, evidence for their dates,

their patrons and their architects, descriptions of their design and physical remains, literary, epigraphical and iconographic sources relevant to their analysis, and an account of their decorative programs. In addition, the dates and extent of their excavations are included together with any disproven theories about their attribution or ornament. Each entry concludes with pertinent bibliography, references to the text, Tables and Charts, which present their dimensions and proportional relationships,⁷ scaled Plans, and Plates as illustrations of their context, remains and elevations. Following the Catalogue, this Volume includes any supplemental Plates or Charts required by each Chapter and a full Bibliography applicable to both Volumes.⁸

⁷ See Vol. II 'Notes on the Tables and Charts.'

⁸ See Vol. II 'Notes on ancient source citations and the Bibliography'

CHAPTER II: ANCIENT SOURCES ON ROUND TEMPLE DESIGN

I ANCIENT TERMINOLOGY AND CONCEPTIONS OF THE ROUND FORM

Aedes, templum, tholus, and pantheum

Latin authors used a variety of terms to denote Roman round temples. Chief among them were *aedes*,¹ *templum*, and *tholus*. While *aedes* and *templum* were common ways of referring to temples, both round and rectangular,² *tholus* differed in so far as it expressed the circular form of a round temple without assigning it a religious function. This distinction in terminology is underscored by the fact that *tholus* was also used to designate round dining rooms³ and market buildings.⁴

The Latin *tholus* is derived from the Greek *θόλος*, a term which F. Robert has defined by analyzing its use in inscriptions and literature.⁵ According to Robert, *θόλος*, when employed in connection with free-standing round buildings,⁶ denotes their conical or tent-shaped roofs.⁷ After the most conspicuous element of their

¹ *Aedes* is occasionally qualified by *rotunda* (cf. Serv. *Aen.* 9.406, quoted below). This is comparable to *οικοδόμημα περιφερές* applied to the Greek shrine of Zeus and Aphrodite at Sparta (Paus. 3.12.9-11). Robert 1939, 98.

² Ov. *fast.* 6.265 and 281, and Serv. *Aen.* 7.153 (Temple of Vesta, Forum, Rome, #57), Plin. *nat.* 36.4.38 (Pantheon, Rome, #50), and *Reg. Urb.* p. 111 and 172 (Temple of Sol, Rome, #53). *Templum* as “temple building” marks a simplification of its original meaning (see Chap. III ‘Augural divination in Archaic Italy: defining the Roman *templum*’), which becomes popular in the Imperial period. Godfrey and Hemsoll 1986, 200.

³ Varro (*rust.* 3.5.12) refers to his aviary-cum-dining room at Casinum as a *tholus*, while Martial (*epigr.* 2.59.2) remarks on a *Caesareus tholus*. The latter can be identified as a dining room, whose remains may lie beneath the triclinium and nymphaea of the Domus Aurea (cf. Cassatella 1986, 535-9, and 1995, 63-4; Cecamore 1994-1995, 11-2, incorrectly links these remains to the Shrine of Vesta on the Palatine, see Chap. V #56). For alternative readings of Martial’s *tholus*, see Rodríguez Almeida 1993d, 213 (Arch of Titus) and Liverani 1996, 249 (Mausoleum of Augustus).

⁴ Varro (*Men.* 23) refers to the *tholus* of the 1st c. BC macellum at Rome. De Ruyt 1983, 158.

⁵ Robert 1939, 46-100; cf. Roux 1992, 177-82.

⁶ *θόλος* can also refer to hemispherical head bandages, cf. Galen 18.788 and 790-1, and Robert 1939, 59-60.

⁷ Strab. 4.4.3; cf. Suidas, Hesychius, and the *Etymologicum Magnum* quoted by Robert 1939, 47-52. Similarly, *σκιάς* or “parasol” may signify the roof shape of round buildings like the Skias in the Athenian Agora (Paus. 1.5.1, #6). Robert 1939, 153-4.

design, individual buildings came to be known by their roofs or *θόλοι*. Like later Roman *tholus*, their designation as *θόλοι* reflected their form, while their functions ranged from the sacred to the secular.⁸

The Latin *tholus* appears several times in connection with Roman round temples. In laying out guidelines for their design, Vitruvius uses *tholus* to refer to both the conical roofs of round temples and the buildings as a whole.⁹ His two-fold definition is echoed by Servius, who denotes both the Temple of Vesta in the Roman Forum (#57) and the Pantheon (#50) as *tholus*.¹⁰ Moreover, Ovid uses this term to describe the roof of the Temple of Vesta,¹¹ while Martial applies it to a round Shrine of Cybele (#34).¹² A final term which enjoys limited popularity in the Imperial period is *pantheum*, coined to designate round buildings whose plans reflected that of Hadrian's Pantheon in Rome.¹³

Cosmic implications of the round form?

The importance placed by ancient authors on a round building's roof, reflected in the term *tholus*, is underlined by Cassius Dio in his discussion of Agrippa's Pantheon (#50). He suggests that Agrippa chose the building's name "because of its

⁸ *θόλος* as an assembly area: *IG* III, 764 and Paus. 1.5.1 (Skias at Athens, #6), as a hero's tomb: Paus. 2.27.3 (Tholos in the Sanctuary of Asklepios at Epidauros, #13), as a temple, treasury or heroon of Phylakos: Vit. 7.praef.12 (Tholos in the Sanctuary of Athena Pronaia at Delphi, #12); as a shrine: Athen. 4.141E (the *νάος θολοειδής* on Ptolemy Philopater's yacht); and as a bath building: Alciph. *ep.* 3.40, Athen. 11.501c-e, *P.Magd.* 33 and 42, and *P.Zenon.* 59665 (cf. Robert 1939, 57-9 and Nielsen 1990, 7).

⁹ *Tholus* as a roof: Vit. 4.8, cf. Verg. *Aen.* 9.406-8, Varro *rust.* 3.5, and Robert 1939, 67-8 and 75-6; as a round temple: Vit. 7.5.5: *tholorum rotunda tecta*.

¹⁰ Serv. *Aen.* 9.406: *Tholus proprie est veluti scutum breve, quod in medio tecto est, in quo trabes coeunt: ad quod dona suspendi consueverant... Alii tholum aedium sacrarum dicunt genus fabricae, ut Vestae et Panthei est. Alii tectum sine parietibus columnis subnixum. Aedes autem rotundas tribus diis dicunt fieri debere, Vestae, Dianae, vel Herculi vel Mercurio.* Similarly, the Pantheon is referred to as *θολοειδής* by Cassius Dio (53.27, quoted in #50).

¹¹ Ov. *fast.* 6.281-2, quoted in #57.

¹² Mart. *epigr.* 1.70.9, quoted in #34.

¹³ The Mausoleum of Flavius Julius Catervius and his wife Septimia Severina is described as a *pantheum cum tricoro* (*CIL* IX 58.66). However, see Scranton 1951, 3 (Pantheon at Corinth) and Will 1951, 241-4, for Panthea, namely "temples to all the gods," which were not round.

vaulted roof, which resembles the heavens.”¹⁴ Similarly, Servius likens the roofs of all round temples to the sky,¹⁵ while Plutarch suggests that Numa intended the Temple of Vesta in the Roman Forum (#57) to imitate the world.¹⁶ For Macrobius, the oculus of the Roman Temple of Zeus Sebazios at Thrace reflects the shape of the sun that illuminates its interior.¹⁷ Even Varro’s discussion of his round aviary at Casinum equates its core with the earth and its roof with the heavens, its cupola depicting elements of the sky and the hours of the day and night.¹⁸

These sources raise questions about the extent to which architects and patrons employed the round form to convey their cosmological beliefs.¹⁹ In his controversial article entitled “The Dome of Heaven,”²⁰ K. Lehmann supports this connection, citing examples of domes that, like that of Varro’s aviary, depict the heavens. While Lehmann has been criticized both for the paucity of his examples and for their broad chronological and geographical spread,²¹ his conclusions may be examined in light of the few Roman authors who address the idea of the cosmic cupola.

Both Ennius and Varro liken the sky to the vault of the heavens,²² while Suetonius describes a ceiling in Nero’s Domus Aurea as rotating day and night like the sun and the stars.²³ Suetonius’ remark, applied to an Imperial dining room or audience chamber, recalls Martial and Statius, who compare Domitian’s audience hall

¹⁴ Cass. Dio 53.27.3.

¹⁵ Serv. *Aen.* 1.505.

¹⁶ Plut. *Numa* 11.

¹⁷ Macr. *Sat.* 1.18.11.

¹⁸ Varro *rust.* 3.5.9-12; cf. Stierlin 1984, 130-6 and Chap. IV #38. Based on Varro, Coarelli (1997, 283-4) divides the aviary into four sections: an “aquatic” section populated by fish, a middle “terrestrial” section, where meals were consumed, an upper “air” filled with birds, and a “celestial” cupola.

¹⁹ Roman conceptions of cosmology were based on astrological ideas inherited from the Greeks, in which the stars and the zodiac played a role in regulating human life. Stierlin 1984, 142-5, and see Chap. III ‘Augural divination in Archaic Italy: defining the Roman *templum*.’

²⁰ Lehmann 1945.

²¹ For: Smith 1950, 52-5, and 1956, 56-70, MacDonald 1982, 73-4 and 118-21, and Stierlin 1984, 113-213; against: Ward-Perkins 1956, 210-2 and Joyce 1990, 372-3.

²² Ennius quoted in Cic. *orat.* 3.40.162, and Varro *ling.* 5.19; cf. Vit. 7.3.3 and 8.2.4.

²³ Suet. *Nero* 31.2. Machines designed to reproduce the movement of the firmament appear in the works of Plato, Euxodes of Cnidus, Aratos, Ptolemy, and Vitruvius (9.7-8). For sources, see Stierlin 1984, 136-8.

to the heavens.²⁴ This may imply that Domitian's room was vaulted, like the judgment hall of Apollonius of Tyana. Philostratus compares its dome to "the heavens, covered with sapphire stars."²⁵

The use of cosmic imagery in Imperial settings goes back to the tents of Persian rulers, whose "round awnings were called heavens."²⁶ Adopting this tradition after his conquest of Persia, Alexander the Great, known as the Son of Heaven, "had a magnificent tent made ... which carried a sky of rich workmanship."²⁷ Roman emperors like Nero and Domitian, possibly inspired by Alexander, may have incorporated celestial roofs into their audience chambers to emphasize their status and that of the Imperial cult.²⁸

While these sources suggest that cosmic imagery has long-standing associations with divinity and kingship, they do not explicitly state that the structures which displayed this imagery were round.²⁹ This might imply that celestial symbolism had closer ties to the Imperial cult than to round buildings. In the case of Roman round temples, Plutarch's suggestion that the Temple of Vesta resembled the world, while surely the terrestrial counterpart of the heavens, may be intended to underline the scope of her authority.³⁰ Similarly, as Cassius Dio only knew the Pantheon as reconstructed under Hadrian, his affirmation that Agrippa placed a high value on its cosmic symbolism is open to doubt.³¹

²⁴ Mart. *epigr.* 7.56, 8.26, and 9.91, and Stat. *silv.* 3.4.47-8 and 4.2; cf. Cass. Dio 77.11.1, and Godfrey and Hemsoll 1986, 204 and 208 n. 64.

²⁵ Philostr. *Apollon.* 1.25; cf. Ward-Perkins 1956, 211. However, as Philostratus wrote in the 3rd c. AD, his description may not be reliable.

²⁶ Hesychius s.v. *οὐρανός*, cf. Smith 1950, 53 and 81.

²⁷ Plut. *Alex.* 3.

²⁸ Smith 1950, 82; Ward-Perkins 1956, 211.

²⁹ It is likely that Domitian's audience hall and the Persian tents were rectilinear.

³⁰ The sun visible through his Temple's oculus may indicate the source of Zeus Sebazios' authority, cf. Macr. *Sat.* 1.18.11.

³¹ Chap. V #50.

Even though celestial vaults may have formed part of the iconography of ruler cults, based on the evidence supplied by ancient sources, there is little to support Lehmann's claim that circular forms, particularly domes, were used in Roman round temples as a means to express the astrological beliefs of their founders.

II VITRUVIUS ON ROUND TEMPLE DESIGN (Plates II.1-4)

An ancient author who deals explicitly with round temples, albeit their design rather than their symbolic content, is Vitruvius. They appear in Book IV of his *De Architectura*, where he speaks about the forms and proportions of temples.³² In Book I, he lays the groundwork for this discussion by outlining the arithmetic and geometric principles behind their design and construction.³³

The principles that inform Vitruvius' text have their origins in Greek thought. Among the ideas that appealed to him were measure and the commensurability of parts, defined by Plato as "everywhere identifiable with nature, beauty and excellence."³⁴ These were expressed in terms of numbers, particularly simple or round numbers like 6 and 10, which were hailed as perfect by Greek mathematicians and philosophers.³⁵

Both measure and commensurability provide means by which proportional systems may be established. That such systems were important to Greek architects is evident from extant buildings as well as from references to lost architectural

³² Vitr. 4.8.1-3.

³³ Vitr. 1.1.4 and 3.1.1-9.

³⁴ Plat. *Phileb.* 64 E. These ideas were founded on the conviction that order, grounded in mathematical relationships, formed the basis for world events. von Naredi Rainer 1982, 11-4; Wilson Jones 1989a, 60, 1989b, 122-3, and 2000, 10.

³⁵ The Euclidians favored 6 (Eucl. *elemen.* 7.def.2) due to the proportional relationships between its factors (cf. Vitr. 3.1.6), while the Pythagoreans preferred 10 (Pythag. *Philol.* fr. B4; cf. Vitr. 3.1.5) as the number of fingers on both hands. Gros 1976b, 698-9; von Naredi Rainer 1982, 36 and 40.

treatises.³⁶ Among them, the treatise of the Hellenistic architect Hermogenes, whom Vitruvius holds up as an authority,³⁷ addressed the system of proportions he employed in the second century BC Temples of Artemis Leukophryene at Magnesia-on-the-Meander and of Dionysos at Teos.³⁸ Similarly, building plans preserved at Rome and Ostia³⁹ show that Roman architects placed a high value on observing mathematical principles in their designs.⁴⁰

Against this backdrop, Vitruvius defines symmetry and proportion as they relate to Roman architecture.⁴¹ For him, *symmetria* is “a proper agreement between the members of the work itself, and the relation of the parts and the whole general scheme, in accordance with a certain part, selected as standard.”⁴² This concept, reminiscent of the Greek ‘commensurability of parts,’ relies on the use of a “certain part” or module. By means of proportion, this module, usually defined as the lower column diameter, can be used to relate the building’s parts to the whole.⁴³

While symmetry and proportion enable a plan and elevation to be fashioned according to ideal mathematical principles,⁴⁴ Vitruvius admits that it may be necessary to adjust a temple’s design in response to questions of perception, utility, and the specifications of the site. These adjustments, made with intelligence and

³⁶ Vitr. 7.praef.12. Ionic buildings provide better evidence for Greek proportional theories in practice than Doric, as the evolution of the Doric order was both longer lasting and more pronounced. Coulton 1974, 61-86.

³⁷ Vitr. 7.praef.12, cf. 3.3.8.

³⁸ Theodoros of Phocaia also published a treatise on his design for the Tholos in the Sanctuary of Athena Pronaia at Delphi (Vitr. 7.praef.12 and #12).

³⁹ Haselberger 1997, 82; Wilson Jones 2000, 50-7. Of particular relevance here is an elevation which depicts the Pantheon’s pediment, Chap. V #50.

⁴⁰ Like Greek builders, Roman architects used straight-edges (*euthygramma*), rulers (*regulae*), and compasses (*circini*) to produce architectural plans (*ichnographia*) and elevations (*orthographia*), cf. Vitr. 1.1.4 and 1.2.2. Jacobson 1986, 69; Wilson Jones 2000, 64.

⁴¹ As some of Vitruvius’ terms lack clear definitions, caution is advisable when interpreting his design theories. Scholfield 1958, 16-9.

⁴² Vitr. 1.2.4, cf. 6.2.1.

⁴³ Vitr. 3.3; cf. Scholfield 1958, 25-6. Cicero (*Tim.* 4.13) suggests that Greek architects employed modules as part of their proportional systems. A good example is the Tholos at Epidauros (#13), which uses modules to determine its intercolumnations. Jacobson 1986, 70 n. 15; cf. Gros 1976b, 677-8.

⁴⁴ Vitr. 3.1.1, cf. 1.2.2.

common sense, should ensure that *eurythmia* is achieved.⁴⁵ Vitruvius defines *eurythmia* as the condition whereby “the members of a work are of a height suited to their breadth and a breadth suited to their length.”⁴⁶ Finally, he recommends that questions of *decor* be considered when designing a building, so that its form, size, and ornamentation reflect its function.⁴⁷ Taken together, as Vitruvius claims, these principles guarantee that the fundamentals of architecture, namely durability, convenience, and delight, are achieved.⁴⁸

Coupled with modules, Vitruvius stresses the importance of establishing simple arithmetic ratios between parts. Occasionally, in the case of complex problems, he recommends that geometry, based on the use of compasses and rulers, be employed,⁴⁹ although he is wary of incorporating irrational numbers into design.⁵⁰ Relying on arithmetic therefore, Vitruvius describes the proportions of the ideal man, wherein the principle parts are fractions of the whole and the secondary parts appear as fractions of the principle part to which they belong.⁵¹ This system results in a harmonic relationship between parts in line with his conceptions of symmetry and proportion.⁵²

⁴⁵ Vitr. 5.6.7 and 6.2.1. Wilson Jones 1989a, 64, 1989b, 135, and 2000, 43 and 59.

⁴⁶ Vitr. 1.2.3. For the Greek origins of *eurythmia*, see von Naredi Rainer 1982, 16.

⁴⁷ Vitr. 1.2.5; cf. Cic. *orat.* 3.180, and Wilson Jones 2000, 43-4. For the Greek roots of this concept, see von Naredi Rainer 1982, 17-8.

⁴⁸ Vitr. 1.3.2. See Wilson Jones 2000, xi and 40, for a discussion of *ordinatio*, *dispositio*, and *distributio*, which Vitruvius (1.2) includes among his list of principles.

⁴⁹ Vitr. 1.1.4 and 2.2. He suggested that geometry dictate the plans of theaters (5.6.1-6), the design of Ionic capitals (3.5.5), and entasis (3.3.13), cf. Wilson Jones 2000, 127. According to Wilson Jones (1989b, 133), ancient sources do not mention geometry being used in building elevations.

⁵⁰ Vitruvius advises that irrational numbers be employed in limited instances, including the design of Doric fluting (4.3.9), Ionic volutes (3.5.5-6), the abacus of Corinthian capitals (4.1.11), and the atria of houses (6.3.3, cf. Vitr. 9.praef.4-7, and Peterse 1985, 51-2). His reluctance to use them may stem from the fact that irrational numbers are generally incompatible with modules. Gros 1976b, 671-82.

⁵¹ Vitr. 3.1.2-4. In accordance with *symmetria*, the Vitruvian man relies on measure, ratio, number and shape (cf. Plat. *Nomoi* 653e, and von Naredi Rainer 1982, 15). Wilson Jones 1989b, 123-4; cf. Jacobson 1986, 123-4.

⁵² An harmonic scale is used in the design of Attic and Ionic bases (Vitr. 3.5.1-3) and Ionic entablatures (Vitr. 3.5.10-1). Scholfield 1958, 21-3; Gros 1976b, 700-3.

For Vitruvius, architecture should follow nature by ensuring proportional relationships between a building's parts.⁵³ As an illustration of this concept, he outlines the design of his basilica at Fanum, where round, commensurable numbers, namely fractions or multiples of 6 and 10, are related by arithmetic means.⁵⁴ Appropriate for secular buildings, this method of design is of paramount importance in religious architecture, wherein "the excellences and faults endure forever."⁵⁵

Vitruvius prescribes specific guidelines for the plans, elevations and orders of temples. In the case of round temples,⁵⁶ he relates their dimensions, via ratios, to the diameter of their podium stylobates.⁵⁷ In monopteroi, the stylobate diameter should equal the height of the columns and three times the width of the stairs, while in peripteroi, the ambulatory and cella represent respectively one-, three- and one-fifths of the podium. Regarding the columns of monopteroi, Vitruvius relates the lower diameter to the column height by 1:10, resulting in a pycnostyle arrangement,⁵⁸ and to the architrave height by 2:1.⁵⁹ Further, in peripteroi, he equates the height of the columns and the diameter of the cella, and sees the height of the roof as one-half of

⁵³ Vitr. 3.1.4; cf. Arist. *Phys.* 199a 15, and von Naredi Rainer 1982, 16.

⁵⁴ Vitr. 5.1.6-7; Wilson Jones 1989b, 124. It is significant that Vitruvius does not rely on modules in his own design.

⁵⁵ Vitr. 3.1.4.

⁵⁶ Vitr. 4.8.1-3.

⁵⁷ Similarly, Vitruvius' system of proportions for theater architecture (5.6.1-6) is based on the diameter of the orchestra. Jacobson 1986, 70-1.

⁵⁸ Vitruvius (3.3) lays out five possible arrangements based on the relationship of the lower column diameter to the intercolumnations and column heights. By using this measure, he is able to focus on elements of the order's design which determine its slenderness and help to establish its rhythm. Wilson Jones 1989a, 35 and 61, and 2000, 120.

⁵⁹ As J. Coulton has pointed out, for a monopteral temple whose stylobate diameter is 20 feet and lower column diameter (lcd) is 2 feet, the interaxial diameter of the colonnade equals 17½ feet (the stylobate diameter of 20 minus the lcd of 2 minus ½ as the setback from the stylobate edge necessary to accommodate the column bases, cf. Vitr. 3.5.1 at lcd/4). The interaxial circumference is 17½ times Π or approximately 55 feet, which, when divided by 5 feet as the lcd plus the intercolumnation based on a pycnostyle arrangement (i.e. 1½ lcd), results in 11 column spacings. While this works for a monopteros of any diameter (provided that the lcd/4 setback is retained), it presupposes a temple of 11 columns. Moreover, if the same method is applied to peripteroi, the results are less satisfactory unless a larger setback is employed.

the podium diameter. Finally, he stipulates that the finials of peripteroi, in their height and diameter, should reflect the column capitals.

Vitruvius makes some recommendations based on modules in the case of the Doric order, and on lower column diameters for the Ionic and Corinthian orders.⁶⁰ The lower column diameter in effect functions as a module,⁶¹ establishing the heights of the Ionic base, capital and architrave⁶² and the height and diameter of the Corinthian capital.⁶³ On Corinthian, the order most widely used during his lifetime, Vitruvius makes a few additional remarks: namely, its columns should resemble the Ionic order and its entablature should include a combination of Doric and Ionic features.⁶⁴

While even the most casual observation of Roman round temples reveals that they follow Vitruvius' principle of *decor*, attaining the level of beauty and utility appropriate for their function, only an analysis of their dimensions can determine how well they adhere to his notions of symmetry and proportion.⁶⁵ Although their state of preservation varies considerably, the remains of round temples may show what if any modules they employed, whether arithmetic or geometric ratios played a part in their design, and to what extent their plans and elevations were modified to promote *eurythmia*.

⁶⁰ Vitruvius (4.1.6-10 and 4.2.1-3) provides fanciful explanations of the origins of the orders. For more plausible derivations, see Wilson Jones 2000, 136.

⁶¹ Jacobson (1986, 71) points to the fortress of Herodium in Judea, ca. 20 BC, as an early example of a round building based on a modular plan. However, as he derived its system of proportions from the diameter of the perimeter wall, his module does not adhere to Vitruvius' definition (see above).

⁶² Vitr. 3.5.

⁶³ Vitr. 4.1. Using modules based on a division of the temple's façade, Vitruvius (4.3) addresses the shaft, capital and architrave dimensions suitable to the Doric order.

⁶⁴ Wilson Jones 1989a, 61. He makes no mention of the modillion cornice, developed in the late Republic, which becomes a feature of Augustan Classicism, see Gros 1976a, 197-207, and Chap. IV 'The entablature.'

⁶⁵ See Chaps. IV-VII 'Proportional analysis.'

PART I: THE ARCHAIC AND REPUBLICAN PERIODS
CHAPTER III: THE ARCHAIC AND EARLY-MID REPUBLICAN PERIODS

**I EVIDENCE FOR ROMAN ROUND TEMPLES IN THE ARCHAIC
AND EARLY-MID REPUBLICAN PERIODS**

A total of six round temples can be ascribed to the period between the beginnings of Rome and the late third century BC.¹ While five of these temples were located in Rome, one was sited at Lavinium. Of the five temples, two may be dated to the seventh century, one to the sixth century, and two to the fifth century BC. Although far from certain, the Shrine at Lavinium (#17) is probably contemporary with a nearby sixth century sanctuary.²

Round temples founded in the seventh century BC:

The Temple of Vesta, Forum, Rome (#57)

Located in the Roman Forum, the Temple of Vesta (#57) forms the centerpiece of a complex of buildings closely associated with her cult.³ Evidence provided by literary and archaeological sources ascribes the Temple to the seventh century BC. In addition to accrediting Numa with its foundation,⁴ ancient authors attribute the Temple's *sacra* to Aeneas⁵ and name Romulus' mother, Rhea Silvia, an early Vestal or priestess of Vesta.⁶ Their dating is substantiated by seventh century

¹ Depictions of round monopteroi on Etruscan bronze mirrors (see Weber 1990, 105-6 n. 553 and 219 cat. M2-3) may serve as additional evidence that round temples existed in Italy as early as the Archaic period.

² See #17 below.

³ For Vesta's cult, see Brelich 1949.

⁴ See #57. Its foundation has also been attributed to Romulus. Richardson, jr. 1992, 412.

⁵ Among these *sacra* was the Palladium brought by Aeneas from Troy, see #57.

⁶ Lugli 1946, 202.

finds uncovered near the Temple, including part of a rectilinear wall⁷ and a votive deposit,⁸ as well as by remains of the Atrium Vestae,⁹ the Regia¹⁰ and the Domus Regis Sacrorum,¹¹ dating from the seventh to the fifth centuries BC.¹²

While the votive objects indicate the heart of the sacred area, the wall formed one of its limits. Running between the Temple and the Atrium Vestae, it established a boundary between the sacred area with its Temple and altar,¹³ and the domestic Atrium. Although the wall probably demarcated all four sides of the area, it did not represent the cult's *templum*, as the Temple of Vesta was not inaugurated.¹⁴

According to Ovid, in its original form, the Temple resembled a primitive hut of wattle and daub,¹⁵ similar to ninth and eighth century BC huts found on the Palatine.¹⁶ Further, he remarks that a fire burned continuously inside its cella.¹⁷ His description may reflect both legends about the first Temple and the shape it assumed in his own lifetime. The first real evidence for its form consists of a set of circular foundations dated to the late third century BC.¹⁸ They incorporated a large

⁷ Scott 1993a, 11 and 17; Coarelli 1995k, 100-2.

⁸ Bartoli 1933, 259-60; Gjerstad 1960, 310-20 (inventory of the deposit) and 372-4; Scott 1993b, 161-5.

⁹ For the plan and phases of the Atrium Vestae or house of the Vestals, see Jordan 1886, 216, Bloch 1936, 216-25, Scott 1993b, 174-5, and Coarelli 1995k, 100-5.

¹⁰ From the Regia, the Rex Sacrorum and the Pontifex Maximus, who assumed the duties of the Rex by the end of the 2nd c. BC, oversaw the worship and practices of the Vestals. Coarelli 1995k, 97-9 (plan); Papi 1995, 169.

¹¹ For its function and location, see Ser. *Aen.* 8.363, Plin. *epist.* 4.11.6 and Fest. p. 372 L, and for its remains, see Papi 1995, 169-70.

¹² Scott 1993b, 166-7; Papi 1995, 169-70.

¹³ In addition to the altar attested by Ovid (*fast.* 4.731-4), the well which contained the votive deposit and a pit for plantings (a vestige of the *lucus Vestae*?; cf. Cic. *div.* 1.45.101) were sited in this precinct. Scott 1993a, 16, and 1999c, 130.

¹⁴ See #57 and 'Conclusion' below. Servius (*Aen.* 7.153 and 9.4) suggests that the Temple did not need to be consecrated *augurio*, as the senate could not convene where women assembled. Ziolkowski 1992, 212.

¹⁵ Ovid (*fast.* 6.254-60 and 295-8) notes that the Temple was roofed with thatch and walled with willow.

¹⁶ Scott 1993b, 162-3. Though these huts were rectangular, Etruscan hut-urns (see Andren 1959-1960, 21-59) show that the round form was employed in Archaic domestic architecture.

¹⁷ Ov. *fast.* 6.297-8 and 713; cf. Varro *ling.* 6.32. The smoke may have escaped through a hole in the Temple's roof, as illustrated on Neronian coins (see #57). Roux 1984, 164.

¹⁸ Scott 1993a, 11-3.

trapezoidal pit or *penus Vestae*, which may have served as a receptacle for ashes from the sacred fire.¹⁹

The foundations probably mark a rebuilding of the Temple of Vesta after the fire of 241 BC.²⁰ With their date secured by ceramic finds and the remains of a contemporary pavement,²¹ they prove that, whatever the form of its predecessor, the late third century Temple of Vesta was round.

The Shrine of the Camenae, Rome (#33)

In addition to the Temple of Vesta (#57), Numa is attributed with setting up a Shrine beside the spring of the Camenae or Roman Muses at the Porta Capena (#33).²² This small bronze structure,²³ possibly fashioned by the famous bronze-smith Mamurius Veturius,²⁴ was struck by lightning and moved to the Temple of Honos et Virtus sometime after its dedication in 205 BC.²⁵

In the early second century, M. Fulvius Nobilior, who founded the Temple of Hercules and the Muses (#42), is said to have incorporated the Shrine into his new complex.²⁶ As illustrated on the Severan Marble Plan, this complex includes two round structures set on top of a complicated podium. While the larger of the two is linked with the Temple of Hercules and the Muses, the smaller located in front of the Temple may represent Numa's Shrine.

¹⁹ Platner and Ashby 1929, 558; Richardson, jr. 1992, 413. It is less likely that the pit stored the Temple's *sacra*.

²⁰ See #57. Livy (26.27.4) notes that the Temple of Vesta was saved from the 210 BC fire, which devastated the Forum.

²¹ Scott 1999b, 126.

²² See #33 and Stambaugh 1978, 560.

²³ The Shrine of Janus Geminus, founded by Numa, was also bronze (Procop. 1.25). Tortorici 1996b, 93.

²⁴ Prop. 4.2.59-64. Richardson, jr. 1977, 357.

²⁵ Liv. 29.11.13 (Shrine beside the Temple of Honos). Richardson, jr. (1977, 357) suggests that the move predated 205, when the temple (see Palombi 1996c, 31-3) was rededicated to both gods.

²⁶ Serv. *Aen.* 1.8.

Though it is tempting to suggest that the Shrine served as a model for Fulvius' Temple, which honored the Greek Muses, the Plan provides the only proof that the Shrine of the Camenae was round.²⁷ Besides the power of tradition, there is little to preclude the possibility that, after it was damaged, the Shrine was remodeled into a new form and design.

Round temples founded in the sixth century BC:

The Temple of Fors Fortuna, Rome (#36)

Servius Tullius is credited with founding temples to Fors Fortuna at the first and sixth milestones of the via Campana-Portuensis.²⁸ While the latter is rectangular,²⁹ F. Coarelli has identified the former (#36) with a round building shown on the Severan Marble Plan.³⁰ This building lies near the Tiber, which played a pivotal role in her cult. As the protecting deity of travel and transport,³¹ Fors Fortuna was commemorated with a yearly festival,³² which involved a procession of boats on the Tiber, accompanied by crowds on the via Campana. E. Simon has reconstructed the festival's course from the Forum Boarium to the mouth of the Tiber, following the trade route for salt, a vital commodity for Rome and her neighbors. In Simon's view,

²⁷ Frothingham (1914, 309) mentions a round temple on Monte Musino near Veii, which may be Archaic and may represent a dedication to the Muses. However, as its existence is far from certain, this temple cannot shed light on the form of the Shrine of the Camenae.

²⁸ See #36. They were two of some sixteen dedications Servius Tullius made to Fortuna at Rome, see *LTUR* Vol. 2 1995, 267-87.

²⁹ For its remains, see Scheid 1990, 150-4.

³⁰ See #36 and Coarelli 1992b, 39.

³¹ Her role is emphasized by Fortuna's attributes of a ship's rudder and prow on coins, reliefs, and in statuary. Simon 1990, 60; cf. Matheson 1994b, 23.

³² The festival, which took place on the 24 June, the *dies natalis* of both Temples (see #36), is among the earliest recorded by the Roman calendars. Simon 1990, 65; vs. Champeaux (1982, 245 fol.; cf. Sabbatucci 1988, 220), who links it to the summer solstice.

Fors Fortuna may have overseen the transport of salt,³³ while the locations of her Temples may indicate important city limits.³⁴

Finds from both milestones corroborate the Temple's early date. At the sixth milestone, third century BC terracotta votives were discovered in the Temple's foundations,³⁵ while a sixth century rectangular platform and a votive deposit with Archaic bronze statuettes were found at the first.³⁶ Similarly, among the remains of the Temples of Fortuna and Mater Matuta, also attributed to Servius Tullius, are foundations almost contemporary with their legendary founder.³⁷

While the rectangular platform goes against identifying the first Temple of Fors Fortuna with Coarelli's round building, the Marble Plan may illustrate it according to a later reconstruction.

The Shrine of the Penates, Lavinium (#17)

Late Republican coins and Imperial medallions illustrate a round Shrine intended to house the Trojan Penates³⁸ at Lavinium (#17).³⁹ This Shrine, shown together with an altar and a laurel tree sacred to their cult,⁴⁰ may have stood near the Sanctuary of Frutis, an Italic version of Venus.⁴¹ Since the Sanctuary commemorated Venus as Aeneas' mother and the Shrine may have contained the Penates he brought

³³ Simon 1990, 64-6.

³⁴ Coarelli (1992b, 44-5) compares the Temple at the first milestone to those of Fortuna and Mater Matuta in the Forum Boarium, which signaled the limits of the pomerium, and notes that the temple at the sixth milestone, together with the Temple of Dea Dia (#35), indicated the end of the *ager Romanus antiquus*.

³⁵ Scheid 1976, 642, and 1990, 153-4; Broise and Scheid 1985, 542-4.

³⁶ Visconti 1860, 415-7; Visconti and Lanciani 1884, 27-8; Scheid 1990, 150-4.

³⁷ Pisani Sartorio 1995, 281-2. In addition to Servius' foundations, Fortuna was venerated at Praeneste and Antium, two major sanctuaries in Latium that are thought to have originated in the Archaic period.

³⁸ Palombi (1997, 447-63) links the Penates to the cult of the Great Gods at Samothrace.

³⁹ See #17 and Palombi (1997, 444 n. 33) for a round shrine of the Penates depicted on the Ara Pacis. Lavinium was also the site of Aeneas' round heroön. Guarducci 1971, 82.

⁴⁰ See #17.

⁴¹ Strab. 5.3.5-6; Fest. p. 80.18 L; Mela 2.71; Plin. *nat.* 3.58. Palmer 1974, 51.

to Italy,⁴² it is possible that they were inaugurated together. The thirteen altars, which make up Venus' sanctuary range from the mid-sixth century BC to the third century AD;⁴³ perhaps the Shrine of the Penates was erected as early as the sixth century. However, since the yearly festival connected with it⁴⁴ is first attested in 137 BC,⁴⁵ this date must remain speculative.

Round temples founded in the fifth century BC:

The Temple of Mercury, Rome (#47)

In 495 BC, sources suggest that the Roman people, empowered by the Senate,⁴⁶ dedicated a Temple to Mercury (#47).⁴⁷ They elected the centurion M. Laetorius to inaugurate the Temple in the vicinity of the Circus Maximus,⁴⁸ more precisely on the slopes of the Aventine near the Circus' starting gates.⁴⁹ This site is not far from the Forum Boarium, a trading post for which Mercury, as a god with strong mercantile connections,⁵⁰ was uniquely appropriate. In addition to the Temple, the Senate decreed that a festival be celebrated on its *dies natalis*, the Ides of May,⁵¹ and that a *collegium mercatorum* or *Mercurialium* be instituted to oversee the festival and rites connected with the cult.⁵²

⁴² See #17.

⁴³ Ziegler and Sontheimer 1979d, 1175; Schilling 1982, 83-5; Simon 1990, 218-9.

⁴⁴ Together with their priesthood (cf. *CIL* X 797), magistrates officiated over yearly sacrifices to the Penates at Lavinium (see #17). Palombi 1997, 443 n. 31.

⁴⁵ See #17.

⁴⁶ The Senate's decision to erect the Temple of Mercury reaffirmed the Roman people's victory over the Etruscan kings (in the year of Tarquinius Superbus' death). Zevi 1987, 127; Andreussi 1996a, 246.

⁴⁷ Some sources (see #47) suggest that the Temple was also dedicated to Mercury's mother Maia.

⁴⁸ See #47.

⁴⁹ See #47. Combet-Farnoux 1980, 266-9, and 1981, 461; Andreussi 1996a, 246.

⁵⁰ Fest. p. 135 L; cf. Combet-Farnoux 1980, 273-7, and 1981, 462-6 (derived from the Greek Hermes).

⁵¹ See #47.

⁵² See #47; cf. Waltzing 1895-1896, Vol. 1: 35 n. 1-2, and Vol. 2: 250, and Zevi 1987, 125-6 (Roman grain merchants).

Based on a statement of Servius, the Temple, of which no archaeological traces remain, has been identified as round. Servius lists Mercury among the gods to whom round temples were dedicated: *Aedes autem rotundas tribus diis dicunt fieri debere, Vestae, Dianae, vel Herculi, vel Mercurio.*⁵³ Of these gods, Vesta received a Temple in the Forum (#57) and Hercules was honored with Temples in the Forum Boarium (#43-4), facing the Circus Flaminius (#42), and beside the Pons Aelius (#41).⁵⁴ Although Hermes was celebrated with a round Shrine on Delos (#10),⁵⁵ this marks one of the few Temples of Mercury in Rome, while no Roman round temples are known to have commemorated Diana.⁵⁶

The Temple has been linked with a sesterces minted in 172-173 AD. This coin shows a shrine set on a three-step krepis with four herms in place of columns, an entablature, and a rounded pediment that displays Mercury's attributes.⁵⁷ A statue of Mercury, wearing a chlamys and carrying a caduceus and a moneybag, appears in the shrine's central intercolumnation.⁵⁸

Although its pediment is curved, suggestive of a round shrine,⁵⁹ the image on the coin has been seen as the Temple's pronaos.⁶⁰ A fragment of the Severan Marble Plan, which shows the southeast end of the Circus, illustrates part of a construction that could be a rectangular porch.⁶¹ However, as this interpretation depends on the coin, which is not corroborated by sources that link Marcus Aurelius with a restoration of the Temple, it is difficult to justify identifying the "pronaos" and the

⁵³ Serv. *Aen.* 9.406; cf. Combet-Farnoux 1980, 269-71.

⁵⁴ For #42-4, see Chap. IV, and for #41, see Chaps. V and VI.

⁵⁵ See Chap. IV #10.

⁵⁶ One of a pair of Romano-Celtic round temples at Autun (Augustodunum), ca. 1st-2nd c. AD, may have been dedicated to Diana. Horne and King 1980, 527.

⁵⁷ These include a tortoise, a cock, a goat, a caduceus, and a moneybag. Combet-Farnoux 1980, 272.

⁵⁸ Küthmann and Overbeck 1973a, 46-7 no. 87.

⁵⁹ However, Combet-Farnoux (1980, 268-9 and 272-3) notes that this motif is commonly used in depictions of rectangular buildings like the Temple of Isis in the Campus Martius (as shown on a coin of Vespasian).

⁶⁰ Platner and Ashby 1929, 339; Kroll 1932, 976.

coin with the Temple of Mercury. It seems more likely, as B. Combet-Farnoux suggests, that the Temple was rectangular and that the coin represents some other shrine founded during Marcus Aurelius' reign.⁶²

The Shrine of Spes Vetus, Rome (#54)

In 477 BC, a Shrine of Spes, later called Vetus (#54),⁶³ was erected on the summit of the Esquiline at a site where several aqueducts entered Rome.⁶⁴ The foundation of this Shrine is mentioned in the context of Horatius' victory over the Etruscans,⁶⁵ while its location is signaled by a toponym, *ad Spem Veterem*, which continued to define the area into the Imperial period.⁶⁶

Although no archaeological remains have been identified with the Shrine, P. Hill has proposed that a series of coins issued under Antoninus Pius, ca. 158-160 AD, illustrates it.⁶⁷ These coins,⁶⁸ which Hill also identifies with the Shrine of the Genius Senatus (#39),⁶⁹ show a four-column building with a rounded pediment that shelters a standing cult figure. The cult statue is difficult to identify, but may hold torches as an attribute of Spes.⁷⁰ Although Hill describes the image as representing a domed shrine, there is no indication from the numismatic or literary sources that the Shrine of Spes Vetus was round.

⁶¹ See #47.

⁶² Combet-Farnoux (1980, 272-6; cf. Küthmann and Overbeck 1973a, 46-7 no. 87, and Hill 1989, 37), recognizing Egyptianizing influences in the shrine's depiction, has identified it as an *aedicula* built by Marcus Aurelius during his Egyptian campaigns.

⁶³ Spes gained the epithet 'Vetus' following the construction of a temple to Spes in the Forum Holitorium during the First Punic War. Coarelli 1999h, 338; cf. 1999g, 336-7.

⁶⁴ More specifically, the Shrine has been located at the intersection of via Labicana and via Praenestina. Coarelli 1999h, 338.

⁶⁵ See #54.

⁶⁶ See #54; cf. Coarelli 1999h, 338, for a detailed discussion of this and related toponyms.

⁶⁷ Hill 1989, 17.

⁶⁸ See #54.

⁶⁹ See Chap. VI #39.

⁷⁰ *BMCEmp* IV lxxiv.

Conclusion:

An analysis of the evidence in favor of seventh to fifth century BC round temples yields few conclusive results. This is not surprising considering the nature of the material: legends and myths pertaining to the foundation of Rome and her first public buildings, few archaeological remains, and late iconographic sources.

The problems posed by the evidence are best illustrated by the Shrine of the Camenae (#33) and the Temple of Fors Fortuna (#36), whose round forms are based on interpretations of the Severan Marble Plan. Similarly, depictions of the Shrines of the Penates (#17) and of Spes Vetus (#54) follow after several centuries and probably rebuildings. Closer in date are the foundations of the Temple of Vesta (#57), which assure its round form from the late third century BC. Though they may not reflect Numa's Temple, votive deposits and a wall from Vesta's precinct can confirm the cult's seventh century date.

Of the round temples ascribed to this period, it is also significant that the Temple of Vesta was not inaugurated. The sacred area on which it stood was not defined according to the procedures that predated the foundation of any other temple or *aedes*. It is therefore invaluable to examine evidence for Roman conceptions of the *templum*, or ritually delimited precinct, what form it took, and what type and shape of building it accommodated. By determining whether an *aedes* could be round in accordance with Roman concepts of the *templum*, it may be ascertained whether round temples were a viable architectural type at this date.

II AUGURAL DIVINATION IN ARCHAIC ITALY: DEFINING THE ROMAN *TEMPLUM*

The Etruscans developed an advanced understanding of cosmology at a time when Romans conceived of little more than a universe demarcated by the heavens, the earth and the underworld.⁷¹ Using a system derived from the Greek East,⁷² they defined the structure of the universe and employed this structure to interpret signs visible in the sky. By examining the course of signs or auspices, Etruscan augurs determined the viability of actions ranging from founding cities or temples to engaging in battles.⁷³

With limited knowledge of the sky, the first citizens of Rome relied heavily on the Etruscans,⁷⁴ as well as on Sabine and Oscan augurs,⁷⁵ to interpret auspices. Once exposed to the augural arts,⁷⁶ they began to acquire a practical knowledge. Romulus reportedly used augural techniques to establish Rome's pomerium,⁷⁷ while Numa is credited with founding the first college of augurs and formalizing the augural rites.⁷⁸

Both the framework and the rites instituted by Numa signify a development in Roman augural practice. As an adaptation and evolution of the Etruscan arts, the Roman system frequently reflected their ideas. Following Etruscan practice,⁷⁹ Roman

⁷¹ The Romans did not embrace more complex cosmological views until they established contact with Greece and Greek ideas in the late 3rd and 2nd centuries BC. Weinstock 1946, 101 and see Chap. IV 'Introduction.'

⁷² Sol. 1.7; Dion. Hal. 2.22.3.

⁷³ Cic. *div.* 1.72 and 2.49; Fest. p. 358 L.

⁷⁴ Gell. 4.5.1 (the statue of Horatius Cocles in the Comitium is struck by lightning). Dion. Hal. 4.59-61, Plat. 28.2.15-6, Serv. *Aen.* 8.345, Zon. 7.11.38, Varro *ling.* 5.41, Liv. 5.54.7, Plut. *Cam.* 31, Flor. *epit.* 1.7.9, Arnob. *nat.* 6.7, Val. Ant. *hist.* 13, Vir. *ill.* 8.4, Mart. Cap. 3.223, and Isid. *orig.* 15.2.31 (Olenus Callenus prophecies Rome's future *imperium*).

⁷⁵ Sabine augury: Cic. *div.* 1.42.94, 1.47.105, 1.58.132, and 2.33.70, and Varro *ling.* 5.85 (augury by birds); Oscan augury: *Tabulae Iguvinae*.

⁷⁶ While Numa is thought to have learned augural practices in Tarquinia (Strab. 5.2.2), Romulus and Remus undertook their education at Gabii (Plut. *Rom.* 6; Dion. Hal. 1.84.5).

⁷⁷ Enn. *ann.* 77 fol.; Cic. *nat. deor.* 3.2.5, *div.* 1.2.3, 17.30, 48.107, and 2.33.70, 38.80, *rep.* 2.3.5, 9.16, 29.51, *leg.* 2.13.33, *Cato* 1.13.33, and *Vatin.* 6.14; Liv. 1.6.4, 7.1, 3.61.5, 5.52.2, 6.41.4, and 28.18.11; Ov. *fast.* 4.810 fol.; Prop. 4.6.43-4; *fasti Praenestini* = CIL XII.1 234; Sen. *dial.* 10.13.8; Fest. p. 276 L; Gell. 13.14.5; Flor. *epit.* 1.1.6; Sol. 1.18; Paneg. 10.13; Vir. *ill.* 1.4; Serv. *Aen.* 3.46 and 6.779; Claud. 15.28-9; Nepotian. 1.4; Praef. *bibl.* 23; Schol. Bob. p. 23; Diod. Sic. 8.4.5; Dion. Hal. 1.85-7; Plut. *Rom.* 9.7; cf. Briquel 1986a, 71.

⁷⁸ Cic. *rep.* 2.14. 26; Liv. 4.4.2; Dion. Hal. 2.64.3. Attus Navius was another important Roman augur (Liv. 1.36.6). Coarelli 1999d, 170.

⁷⁹ For parallels in Oscan and Umbrian ritual, see Catalano 1978, 471, and Stambaugh 1988, 215.

augurs employed points to map out the celestial *templum* or area for taking auspices.⁸⁰ This *templum* was then set in relation to other *templa* by the process of inauguration. In his discourse on poetic uses of the term *templum*,⁸¹ Varro lends insight into the three types of *templum* employed by Roman augurs: the celestial, the earthly, and the subterranean.

According to Varro, the celestial *templum* takes its form *ab natura*, the earthly from the consultation of auspices, and the subterranean *a similitudine* or by reflection of one or both other *templa*.⁸² Of the three, the form of the celestial *templum* is most clearly defined. As Varro suggests, it is taken “from nature,” reflecting the hemispherical shape of the sky as observed from land.⁸³ With the sky as its formal counterpart, the subterranean *templum* should be understood as hemispherical or, as archaeological finds suggest, round.⁸⁴ Moreover, if its form reflects that of both the heavenly and earthly *templa*, then all three, from the evidence of the celestial *templum*, may be interpreted as round.

The celestial *templum*:

After describing its form, Varro segments the celestial *templum* into four parts suggestive of the sixteen components that constitute the Etruscan sky.⁸⁵ Varro’s quadrants conform to the compass, dividing north from south, east from west, and left

⁸⁰ For these points, see ‘The celestial *templum*’ below.

⁸¹ While Ennius (*ann.* 541; cf. *Cic. nat. deor.* 2.65) describes the celestial *templum* as the domain of Jupiter, Varro equates the earthly *templum* with a stage for divine worship (*Pacuv. trag.* 309-10; cf. Linderski 1986, 2264 and 2275) and the subterranean *templum* with a seat for the chthonic gods (*Enn. trag.* 107-8). For other meanings of *templum*, see Godfrey and Hemsoll 1986, 207 n. 35.

⁸² Varro *ling.* 7.8: *templum tribus modis dicitur: ab natura, ab auspicando, a similitudine; [ab] natura in caelo, ab auspiciis in terra, a similitudine sub terra.* Cf. Gell. 14.7.7.

⁸³ Varro *ling.* 7.7.

⁸⁴ See ‘The subterranean *templum*’ below.

⁸⁵ The Etruscans divided the sky into four quadrants corresponding to the cardinal points, each of which was subdivided into four sections (*Cic. div.* 2.42) and linked to the celestial, subterranean, and earth-bound gods. Frothingham 1914, 306; Weinstock 1946, 115. Weinstock (1946, 121-2) suggests that the bronze augural liver from Piacenza was a direct equivalent of the Etruscan sky.

from right.⁸⁶ This understanding of the sky is reflected in contemporary augural practice. In augury, the celestial *templum* was a *locus designatus in aëre*,⁸⁷ namely a place that an augur demarcated by observing a series of points, including the horizon, the pomerium, and boundaries established in relation to terrestrial markers.⁸⁸

Augurs employed formulas to delimit the celestial *templum* and divide it into quadrants. These formulas, of which Varro preserves an example,⁸⁹ established the *templum* in preparation for the taking of auspices. Based on their consultation, decisions were made on the feasibility of political, social and religious actions. The process of establishing a celestial *templum* and interpreting auspices, therefore, played an essential part in the inauguration of a new earthly *templum*.

The earthly *templum*:

Varro describes the earthly *templum* as a *locus* designated for purposes of augury and auspices.⁹⁰ This site was conceived with certain words, *certa verba*,⁹¹ which probably reflected the formulas augurs used to define the celestial *templum*. Employing similar terrestrial markers, augurs determined the orientation and demarcated the boundaries of the earthly *templum*. Archaeological evidence suggests that the first *templa* took topographical features or areas of religious or political

⁸⁶ Varro *ling.* 7.7; cf. Liv. 1.18.6-10 (Numa's *inauguratio*), Isid. *orig.* 15.4.7, Cic. *div.* 1.17.31, and Fest. p. 244 and 454 L. Like the Etruscans (Serv. *Aen.* 2.693; cf. Weinstock 1946, 122-3), Roman augurs considered signs visible to the east or left of the sky's N-S axis lucky, since they originated in the quadrant governed by the celestial gods (Dion. Hal. 2.5.2; Fest. p. 454 L). Weinstock 1946, 123; Linderski 1986, 2280-4.

⁸⁷ Serv. *Aen.* 1.92.

⁸⁸ Linderski 1986, 2287-8.

⁸⁹ The formula he records (Varro *ling.* 7.9) fixed the celestial *templum* in relation to the *auguraculum* on the Capitoline Arx. Linderski 1986, 2269 and 2277-9.

⁹⁰ *Auspicia*, valid for a single day (favorable or unfavorable), held for all magistrates' actions from joining in battle to founding cities, while *auguria* determined whether gods approved of proposed locations for new temples. Linderski 1986, 2295-6.

⁹¹ Varro *ling.* 7.8; cf. Liv. 1.10.5-6 (Romulus lays out the *templum* for the Temple of Jupiter Feretrius on the Capitoline).

significance as markers on which to base their orientation.⁹² As Roman cities grew, their *Cardo*, *Decumanus* and urban plans,⁹³ together with ritual demands,⁹⁴ determined the direction and shape of *templum* sites.

Each earthly *templum* took one of two forms: a site where priests interpreted auguries⁹⁵ or a site where magistrates convened and consulted auspices.⁹⁶ Among the former were the *auguratorium* on the Palatine, and at least three *auguracula*, on the Capitoline, the Quirinal and the Janiculum.⁹⁷ After establishing the *auguratorium* by augural means, Romulus consulted auspices and defined the boundaries of the city with a *pomerium*.⁹⁸

Both *auguracula*, oriented towards the Alban hills during inauguration, were used in conjunction with meeting places, enabling priests to determine whether the gods approved of specific political actions.⁹⁹ F. Coarelli has proposed that the *auguraculum* on the Capitoline *Arx* corresponded to the Comitium in the Forum, both

⁹² While the first *templa* faced south (suggested by the orientation of early temple buildings like that of Jupiter Optimus Maximus), by the late Republic, they opened toward whichever direction afforded the best view of their surroundings. Stambaugh 1978, 564; Godfrey and Hemsoll 1986, 200-1.

⁹³ Stambaugh 1978, 563-4; Catalano 1978, 469-70. For example, the city of Ostia developed around the intersection of its *Cardo* and *Decumanus*, while the layout of the Campus Martius at Rome was oriented according to the cardinal points.

⁹⁴ By facing the Forum Boarium and its Ara Maxima Herculis (see Chap. IV #43-4), the late Republican Temples of Hercules Victor in *foro Boario* (#43) and *ad Portam Trigeminam* (#44) imply that religious factors influenced their orientation.

⁹⁵ Fest. p. 34 L. These purely augural *templa* may have been equivalent to *templa minora* (cf. Fest. p. 146 L; Serv. Aen. 4.200), while their temporary buildings may have been known as *tabernacula*. Frothingham 1914, 304; Linderski 1986, 2274-6; vs. Catalano (1978, 470), who incorrectly equates them with *loci designati in aëre*.

⁹⁶ Varro ling. 7.8: *loca inaugurata "in quibus auspiciato et publice res administrarentur et senatus habere posset."* Both types could only lose their inaugurated status through the ceremony of *exauguratio*, cf. Ulp. dig. 1.8.9.2. Stambaugh 1978, 567-8; Linderski 1986, 2272-3.

⁹⁷ Fest. p. 38 L. It seems likely that another *auguraculum* was located on the Alban hills. Grandazzi 1986, 134-6.

⁹⁸ Plut. Rom. 2; cf. Coarelli 1981c, 177. The *pomerium* should not be confused with the limits of an earthly *templum*, since the whole of Rome was not inaugurated. Castagnoli 1984b, 13; cf. Godfrey and Hemsoll 1986, 200 and 207 n. 43, and below.

⁹⁹ Coarelli 1981c, 178; Grandazzi 1986, 122-38.

seventh century BC in origin, while the later *auguraculum* on the *Collis Latiaris*, a section of the Quirinal, coincided with the Saepta.¹⁰⁰

In addition to their associated *auguracula*, the Comitium and the Saepta were earthly *templa*.¹⁰¹ Here meetings were held that governed the fate of Rome and required ready knowledge of the gods' will. Similarly, most temple buildings, with the exception of the Temple of Vesta (#57), were established on inaugurated land in order to accommodate political and religious meetings.

Though temple buildings or *aedes* came to be known as *templa*, the terms were not equivalent in augural discipline.¹⁰² The earthly *templum*, known from ancient sources and archaeological remains, was a plot of land on which an altar and either temporary or permanent buildings could be constructed. While both *auguracula* preserve some traces of buildings, an augural *templum* at Bantia lacked buildings, but was bounded by stone markers that name the celestial and earthly points by which it was oriented.¹⁰³

Although the *templum* at Bantia is rectangular, as are examples at Cosa and possibly at Gubbio,¹⁰⁴ neither the sources nor the archaeological record prove the exigency of this form. A. Frothingham has proposed that earthly *templa* could be circular.¹⁰⁵ As confirmation, he points to Varro's description of the *templa*, as well as to ancient survey drawings. These drawings, preserved in medieval manuscripts, show round plans for cities divided into quadrants by an intersecting *Cardo* and

¹⁰⁰ Arx: Liv. 1.18.6; cf. Fest. p. 34 L; *Collis Latiaris*: Varro *ling.* 5.42. Coarelli 1981c, 180-8; cf. Linderski 1986, 2277.

¹⁰¹ Stambaugh 1978, 557; Castagnoli 1984b, 13. For the Comitium, see Coarelli 1993f, 309-14, and the Saepta, see Gatti 1999, 228-9.

¹⁰² Frothingham 1914, 307; Castagnoli 1984b, 3-4.

¹⁰³ Linderski 1986, 2256-7 and 2284-6.

¹⁰⁴ Cosa: Catalano 1978, 471, and Coarelli 1981c, 179-80. Gubbio: *Tav. Iguv.* 6a, 8 fol. Rectangular form: see a Celtic-Latin inscription from Vercellae cited by Linderski 1986, 2256-7 and 2275; cf. Serv. *Aen.* 2.512, which Frothingham (1914, 304) criticizes as a misrepresentation of Varro's *templa*.

¹⁰⁵ Frothingham 1914.

Decumanus.¹⁰⁶ Though with possible parallels in late Republican *cippi*,¹⁰⁷ as city plans, they cannot represent inaugurated *templum* areas. Even if they trace the pomerium, were an entire city inaugurated, it would not have been necessary for augurs to demarcate sites for temples and meeting places.¹⁰⁸

More compelling are Frothingham's arguments in favor of placing early round constructions in *templum* areas. Among these he names *bidentalìa*, sites struck by lightening that were consequently inaugurated as *templa*.¹⁰⁹ Two are known from Rome, the Archaic *puteal* in the Comitium and the second century BC *puteal Scribonianum* in the Forum,¹¹⁰ which is represented on coins as a round altar set within a circular enclosure.¹¹¹ Another early round structure is the Shrine of Venus Cloacina.¹¹² Ascribed to the Sabine king Tatius, it marks the junction of two branches of the Cloaca Maxima, appropriate for its role in purification rituals.¹¹³

Like the enclosure of the *puteal Scribonianum*, the circular platform of the Shrine may signal the limits of its *templum*. However, evidence from other sites suggests that a strict correlation in size and shape between the *templum* and the structures it accommodated was not always required. This supposition is best proven by the frequency with which two temple buildings occupied a single *templum* site. In

¹⁰⁶ For the diagrams of Frontinus, Dolabella, and Hyginus, see Frothingham 1914, 310-1 figs. 1-4. Limiting sites by means of the *Cardo* and *Decumanus* is not unique to *templa*, cf. *vigna* and cities (above). Linderski 1986, 2288.

¹⁰⁷ *CIL* I 552-6 and VI.4 30593; cf. Frothingham 1914, 312. There is no reason to believe, like Frothingham (1914, 312-3), that the Etruscan augur Olenus Calenus and subsequent Roman augurs traced the circular outlines of new *templa* on the ground. Linderski 1986, 2270-1 n. 487 and 2287 n. 561.

¹⁰⁸ Catalano 1978, 476.

¹⁰⁹ *Schol. Pers.* 2.26. Frothingham 1914, 314; cf. Coarelli 1999d, 170-1.

¹¹⁰ For the *puteal* in the Comitium and its associated *statua Atti Navii* and *figus*, see Coarelli 1999d, 170-1, and for the *puteal Scribonianum*, see Chioffi 1998, 171-3.

¹¹¹ *RRC* I 416 nos. 1a-c and 417 nos. 1a-b (62 BC); cf. *BMCRep* I nos. 3377-85 (71 BC).

¹¹² The present Shrine, which dates to the late Republican or early Imperial periods, consists of a marble socle once topped by a balustrade and two statues of Venus (see *BMCRep* I 573-4 n. 1, and 577-8 nos. 4242-54). Hülsen 1905, 63; Coarelli 1983b, 87-9, and 1993e, 290-1.

¹¹³ *Liv.* 3.48.5; *Plin. nat.* 15.119; cf. van Essen 1956, 138-43, Gagé 1963, 60 and 256-7, and Coarelli 1983b, 84-8.

the Archaic and early Republican periods, the Temples of Fortuna and Mater Matuta serve as a good example, since they share a precinct and even a podium.

By the late Republic, the Round Temple at Tibur (#64) was added to the *templum* of the rectangular temple and the Temple of Fortuna Huiusce Diei (#38) was probably constructed within the precinct¹¹⁴ of the Temple of Feronia.¹¹⁵ Just as the shape this *templum* took did not matter in the late Republic, there is no evidence to suggest that the late third century BC coincided with changes in augural policy so significant as to effect basic conceptions of the *templum*. On the contrary, evidence that supports a continuum of ideas from the Archaic period onwards can be found in Varro's subterraneous *templa*.

The subterraneous *templum*:

Like the celestial *templum*, which mirrored the sky, and possibly some earthly *templa*, sites inaugurated below ground assumed a circular form. Due to their location, these *templa* commemorated chthonic divinities instead of the celestial gods honored on land.

At Rome, the Mundus (#49) in the Forum can be cited as an example of a subterraneous *templum*.¹¹⁶ The Mundus, which enjoys a continuous history from the Archaic through the Imperial periods, is linked to legends of Rome's foundation.¹¹⁷ The sources define the Mundus as the center-point of Romulus' pomerium, into which Rome's earliest citizens threw earth from their homelands and the first fruits of their

¹¹⁴ Frothingham (1914, 308-9) also points to the *templum Divorum* in the Campus Martius, which contained temples of Titus (*CIL* VI 10234) and Vespasian.

¹¹⁵ For the Temple of Feronia, see Coarelli 1981a, 24 and 40-2; vs. Ziolkowski (1986, 631-9, and 1992, 25-8), who identifies it as the Temple of Juturna.

¹¹⁶ Frothingham 1914, 314-7; Coarelli 1976-1977, 369-71, and 1999k, 288; Catalano 1978, 449; cf. Smith 1950, 52-3.

crops.¹¹⁸ The Mundus consisted of two parts: the *pars superior*, which stood above ground, and the *pars inferior*. This lower part, consisting of a vaulted underground cavity or *bothros*,¹¹⁹ was consecrated to the chthonic gods Dis Pater and Proserpina.¹²⁰

Remains of the Mundus comprise a pit surmounted by a round monopteros of late second century BC and Severan date.¹²¹ While Praeneste (#30) and Pompeii (#28) provide parallels for its *pars superior*,¹²² the mid-Republican hypogea at Bolsena, Volsinii Novi, Caere, and Artena recall the Mundus' *pars inferior*.¹²³ Accessed via vaulted chambers which mirror the sky, they provided sites where men could venerate the gods of the underworld.

Conclusion:

Drawing on knowledge of augury gained through contact with their neighbors, the early Romans defined procedures by which they were able to determine the gods' will. Through interpreting signs visible in the sky, the Romans, like the Etruscans, Oscans and Umbrians, made informed decisions about actions they proposed to take. Among these actions was the founding of temples.

As inherent to temple foundation, the Romans developed the concept of the *templum*. By evolving the Etruscan understanding of the sky and adapting Oscan and

¹¹⁷ Archaeological evidence suggests that a Mundus accompanied the foundation of most if not all new cities, see inscriptions from Padula (*CIL* IX 3173) and Corfinium cited by Coarelli 1999k, 288; cf. Catalano 1978, 464-6.

¹¹⁸ The Mundus should be identified with the foundation pit cited by Plutarch (*Rom.* 11.2) and Ovid (*fast.* 4.820-4). Coarelli 1999k, 288.

¹¹⁹ See #49. For the three days per year (24 August, 5 October, and 8 November) on which the subterranean cavity was open, business transactions were forbidden in Rome. Frothingham 1914, 315; Torelli 2000, 161-2. For additional examples of *bothroi*, the term used by Plutarch to describe this cavity, see Robert 1939, 185-8.

¹²⁰ See #49. Coarelli 1999k, 289; cf. Torelli 2000, 162-3.

¹²¹ See Chaps. IV and VII #49. Also, Festus (p. 144 L, quoted in #49) describes the Mundus as round in reflection of the sky.

¹²² Architecturally similar, they may constitute the *mundi* of their own cities, see Chap. IV #28 and 30. Another possible mundus is the 5th c. BC circular cavity embedded in the acropolis at Norba. Catalano 1978, 463.

Umbrian ideas about consecrated land,¹²⁴ Roman augurs created a system for locating temples whose complexity was without precedent. This system divided the *templum* into three ritually defined components, the celestial, the earthly and the subterranean. The celestial *templum*, round in reflection of the sky, provided a backdrop against which augurs determined the movement and portent of signs. With favorable auspices, augurs used ritual means to define earthly and subterranean *templa* in relation to the celestial *templum*.

With the exception of the Temple of Vesta (#57), all other round temples from the Archaic through the Imperial periods required a *templum*. The *templum*, equivalent to the cult's sacred area, was of a shape and size sufficient to accommodate a temple and its altar. It seems unlikely that the *templum* mirrored the shape of the temple building more than was necessary or that the temple building's shape was determined by that of the *templum*.

Evidence from the late Republic suggests that round temples could be constructed on earthly *templa* of rectilinear shape. Moreover, subterranean *templa* like the Mundus (#49) were round. As the Mundus and comparable subterranean *templa* maintain a constancy of shape, it seems likely that the relationship between earthly *templa* and their temples may not have changed too dramatically over the centuries. If rectangular *templa* could accommodate round temples in the second century BC, there seems no reason inherent in augural policy why round temples could not have been constructed on comparable *templa* prior to the late third century.

¹²³ Coarelli 1976-1977, 369-71; Torelli 2000, 141 fol. and 160. For the Mundus at Artena, see Morel 1999, 483-4.

¹²⁴ Catalano 1978, 471.

CHAPTER IV: THE LATE REPUBLIC

I INTRODUCTION

While evidence for Roman round temples in the Archaic and early to mid-Republican periods is limited and often inconclusive,¹ in the late Republic, physical remains, ancient sources, and coin depictions confirm the foundation of round temples in Rome, Latium, and on the island of Delos. These temples correspond in date to Rome's first direct contact with the Greek world. Through a series of military campaigns, beginning with Claudius Marcellus' conquest of Syracuse in 211 BC,² Rome was exposed to Greek artistic, literary and architectural achievements. Awakened to their potential, Rome began to absorb and adapt Greek products in ways that enhanced her own social, intellectual, and political life.

Among the most tangible products of Greek culture enjoyed in Rome were cult images, statues and paintings.³ Where this plunder was not used to decorate existing religious and public spaces,⁴ its sale funded the construction of temples intended to both glorify their founders and proclaim the power of Rome.⁵ Some early victory temples, which may have been designed by Greek architects and craftsmen,⁶

¹ See Chap. III 'Evidence for Roman round temples in the Archaic and early-mid Republican periods.'

² Polyb. 9.10.1-13; Liv. 25.40.1-3; Plut. *Marc.* 21.1-5. For other early conquests, see Eumen. *inst. schol.* 7-8, *CIL* VI 1307 and #42 (M. Fulvius Nobilior's sack of Ambracia in 187 BC), and #44 and Gruen 1992, 85 and 123-8 (L. Mummius' conquest of Corinth in 146 BC).

³ Introduced into a conservative society, the first imports were treated with ambivalence, cf. Cic. *Verr.* 1.46, 4.1-8, and 5.185, Plin. *nat.* 34.48, and Gruen 1992, 95-6.

⁴ Gruen 1992, 86-9 and 92 (examples).

⁵ Cic. *Verr.* 2.4.120; Plut. *Marc.* 21.1; Livy 25.40.1; cf. Gruen 1992, 100-1.

⁶ Generals known to have brought back Greek artists include M. Fulvius Nobilior and L. Aemilius Paullus (Plin. *nat.* 35.135; Plut. *Aem. Paul.* 6.5; cf. Gruen 1992, 85 and 115), while Scopas Minor and Hermodorus of Salamis number among the artists and architects working in Rome.

were purely Greek in style.⁷ The majority however combined Greek design principles with Italic advances in materials and techniques.

Exemplifying both trends, Roman round temples demonstrate an understanding of Greek architectural models coupled with a readiness to experiment and manipulate their forms. Their clearest models were Greek tholoi. In an exhaustive study,⁸ F. Seiler divides the evolution of this building type into three phases: its creation in the Archaic period, its refinement through the introduction of the Doric peristasis in the Classical period, and its culmination in the Hellenistic period, marked by considerable variation in the type's use and composition.

Like the earliest tholoi, including the Geometric building at Lathuresa and Archaic and Classical tholoi at Thebes and Eretria,⁹ the fifth century Skias in the Athenian Agora (#6), the best example of phase one, was a simple, non-peripteral drum. Consisting of a poros socle supporting mud brick walls and a tiled roof, the Skias contained two arcs of three columns and was accessed via two opposing doors. Ancient sources reveal its function as the meeting and dining place of the *prytaneis* or council presidents and a storehouse for weights and measures.¹⁰ Closely framed by public offices, the Skias' round form may reflect a need for sizable floor space¹¹ and easy access despite limited angles of approach.¹²

⁷ It is likely that the Pentelic marble Temples of Jupiter Stator, built by Q. Caecilius Metellus Macedonicus in 146 BC and designed by Hermodorus of Salamis (Vell. 1.11.5; Vitruvius 3.2.5), and of Mars *in circo*, founded by Brutus Callaicus in 132 BC (Nep. *Prisc.* 17), assumed a Greek form. Ziolkowski 1988, 327. It is also possible that the Temple of Ceres, Liber and Libera, which pre-dates the influx of Greek craftsmen, was designed by a Greek architect. Coarelli 1993d, 260-1.

⁸ Seiler 1986.

⁹ See Seiler 1986, 7-24 (Lathuresa), 25-8 (Sanctuary of the Kabires, Thebes), and 36-9 (Eretria). The earliest reference to a tholos appears in Homer's *Odyssey* (22.442-466). Robert 1939, 138-52.

¹⁰ In the Imperial period, the Skias also functioned as a temple to the Phosphoroi, see #6.

¹¹ Roux 1988, 292.

¹² Thompson 1940, 44.

The late fifth and fourth century Tholos at Delphi (#12),¹³ located in the Sanctuary of Athena Pronaia, was a peripteral structure built with greater harmony and sophistication than the Skias at Athens; as such, it serves as a good example of Seiler's second phase. From tufa foundations, the Tholos rose in Pentelic marble with a three-step krepis, twenty Doric columns, a frieze of forty metopes, and a marble-tiled roof. Inside the Tholos were ten Corinthian columns resting on a limestone socle, forty metopes, and nine statues. In addition to its costly materials and elaborate plan, it differed from its predecessors for the elongated, inclined columns that gave rhythm to its peristasis¹⁴ and the tiles, sima and acroterial sculpture that divided its roof into zones.¹⁵ Moreover, unlike the Skias, a modular system of proportions determined the relationship between its parts.¹⁶ This contributed to the overall unity of the Tholos, whose round form and significant sculptural program¹⁷ differentiated it, as the Athenian treasury,¹⁸ from other temples and treasuries on the sanctuary plain.

The contemporary Tholos at Epidauros (#13) was sited at the heart of Asklepios' sanctuary. While its foundations, used for sacrificial or oracular purposes,¹⁹ lack parallels among other tholoi, its Pentelic marble elevation is not unlike that of the Tholos at Delphi. One-third larger, the Tholos at Epidauros was only slightly taller, with comparable Doric columns, intercolumnations and triglyphs. The metopes of its Doric frieze embossed with phiales are much simpler than those at

¹³ This is the second of two tholoi at Delphi; the first (#11) sited in the Sanctuary of Apollo, ca. 560 BC, is significant both for its early stone peripteros and for its experimental use of the Doric order.

¹⁴ A diminution in the intercolumnation widths compensated for the columns' extra height. Bommelaer 1991, 65.

¹⁵ Roux 1952, 454 and 466-73.

¹⁶ This modular system, based on multiples of seven, recalls the numerical relationships praised by Greek philosophers. Bousquet 1980, xi; Laroche 1990, 52; cf. Chap. II 'Vitruvius on round temple design.'

¹⁷ Roux (1988, 294, and 1992, 186-91) suggests that the metopes, if representations of the Persian wars and Greek civil struggles, may have been intended to underline Athens' military supremacy.

¹⁸ Roux 1984, 154, 161-2, and 168-9; Seiler 1986, 65-71.

¹⁹ Robert 1939, 296-358; Roux 1992, 205-10. See Seiler 1986, 86, for the comparable Manteion of Apollo at Klaros.

Delphi as are its simas and antefixes. In its interior, the Tholos included a socle and fourteen Corinthian columns, but introduced an Ionic architrave and frieze course as well as a series of wall paintings.²⁰ As at Delphi, the Tholos' round form helped to set it apart from rectilinear buildings in the sanctuary,²¹ and may have facilitated the cult rituals enacted in its foundations.²²

The Philippeion at Olympia (#22) was begun by Philip II following his success at Chaironea in 338 BC, and completed by his son, Alexander, to serve as both a victory monument and a statue gallery for the Macedonian royal family.²³ While its round form provided an excellent means of displaying statuary,²⁴ its location next to the Temple of Pelops, an ancestor of his patron Herakles, was determined by Philip's social ambitions.²⁵ Influenced by its predecessors,²⁶ the Philippeion, with its varied architectural elaboration²⁷ and external use of the Ionic order, effects a smooth transition to Seiler's third phase.

Pertaining to this phase are a wide range of buildings from tholoi incorporated into courts, either rectilinear, like the Tholos at Kepos in Pontus Euxenos, or round, like the three tholoi annexes of the court at Pella (#25), tholoi combined with rectilinear elements, like the Temple of Artemis at Stymphalos (#61), which unites a round naos with a rectangular pronaos, to diminutive tholoi which appear as votives,

²⁰ See #13.

²¹ The Tholos retained the eastern orientation of its neighbor, the Temple of Asklepios. Seiler 1986, 72-3 and 82-3.

²² Robert 1939, 296-358; Roux 1992, 205-10.

²³ Seiler (1986, 100-3) sees the use of gold and ivory statues, previously confined to cult images, as a way to politically legitimize the dynasty created by Philip.

²⁴ The Tholos contains a curved base, which enabled the statues to be viewed from all angles. Seiler 1986, 96-8.

²⁵ Paus. 5.7.9 and 13.1-2; Arr. 3.3.2 and 6.3.2; Plut. *Alex.* 2.1. Miller 1973, 192.

²⁶ While its materials recall the Tholos at Epidauros, the Philippeion's roof and foundations are similar to the Tholos at Delphi's. See #22, and Seiler 1986, 91 and 96.

²⁷ In addition to Greek motifs, Miller (1973, 194-217) notes that the Philippeion incorporates Macedonian features to reflect Philip's origins.

like the Monument of Lysicrates at Athens (#3), or as components of funerary architecture.²⁸

The finest large-scale example is the Arsinoeion (#58), constructed by Arsinoe II, the wife of the Macedonian king Lysimachos, ca. 285 BC,²⁹ in the Sanctuary of the Great Gods at Samothrace. Composed of a smooth drum, the building rises from a three-step krepis to culminate in a gallery of Doric and Corinthian pilasters, Doric and Ionic architraves, and a lantern roof.³⁰ While its diameter is comparable to that of the Tholos at Epidauros and its floor space to the Skias at Athens, as the Arsinoeion lacks colonnades, its unsupported span is the largest in Greek architecture.³¹ Due to its size, scholars have proposed that it served as an assembly hall for public or religious functions, like the Skias at Athens, which it recalls in form and location.³²

This summary of the development of Greek tholoi reveals how a basic form with several variables had been created by the Hellenistic period, which Roman architects could adopt and adapt for their own purposes. As the Greeks used round buildings to fulfill political and religious functions, so the Romans of the late Republic tied their new temple foundations to ideas current in their society.

II DISCUSSION

Archaic foundations rebuilt in the late Republic:

In addition to the Temple of Vesta (#57) and the Mundus (#49), the Monopteros at Pompeii (#28), whose foundation may date to the Archaic period, was rebuilt in the late Republic.

²⁸ Seiler 1986, 115-19 (Pontus Euxeinus).

²⁹ For an alternative Arsinoe, see #58.

³⁰ The Arsinoeion's back-to-back pilasters almost function as a peristasis.

³¹ Roux 1992, 92.

³² Accessed via a processional road, the Arsinoeion could be viewed from the south, west and north. Roux 1992, 29 and 216-21.

The Temple of Vesta, Forum, Rome (#57)

The Temple of Vesta (#57) experienced two distinct phases of development in the late Republic: the first, of early second century date, corresponded to an extension of the Temple's precinct as far as the Atrium Vestae and the Regia, while the second, dating to the mid-first century, saw the walls of the precinct repaired and its paving replaced.³³ Also in the second phase, an arch was added to buttress the Temple's foundations, whose *favissa* was refaced with roof tiles.³⁴ Third century fire damage³⁵ may have necessitated improvements to the Temple's precinct, while the arch and work on the *favissa* may point to a rebuilding of the Temple in the first century BC, attributed by R. Scott to Julius Caesar, *pontifex maximus* from 63.³⁶

The late Republican Temple may be illustrated on a denarius of Q. Cassius, struck ca. 57 BC,³⁷ and on cistophoric tetradrachms minted by C. Fannius in 49-48.³⁸ Both depict the Temple as a round monopteros rising from a low podium with Ionic columns, grillwork,³⁹ and a rounded roof. A statue of the goddess appears on its roof⁴⁰ and, on Cassius' coin, a *sella curulis* or judge's seat is depicted in its interior. While the statue, like the legend, identifies the building as the Temple of Vesta,⁴¹ the seat may allude to a trial involving Vestals that took place under Cassius' ancestor, L. Cassius Longinus Ravilla in 113.⁴² However, even if Cassius' coins refer to this

³³ Scott 1999b, 126. The Archaic *lucus Vestae* located near or possibly within the precinct of the Temple may have survived through the late Republic. Cic. *div.* 1.45.101; Scott 1999c, 129-30.

³⁴ Scott 1993a, 11-3, and 1999b, 126.

³⁵ See Chap. III #57.

³⁶ Scott 1993a, 17. Van Deman (1912, 393) links this rebuilding to Augustus.

³⁷ See Cat. #57 and Cody 1973, 43-4.

³⁸ See Cat. #57 and Cody 1973, 44-7 and 49.

³⁹ The grillwork only appears on Fannius' coins.

⁴⁰ The *palladium* she may carry (see Cat. #57) underlines Vesta's links to Aeneas and consequently, to legends of Rome's foundation.

⁴¹ Fuchs 1969, 51-7; Hill 1989, 24. Due to the presence of a continuous fire (Varro *ling.* 6.32; Ov. *fast.* 6.297-8 and 713), it is highly unlikely that the Temple ever contained a cult statue.

⁴² Cody 1973, 43-4.

event, they probably reflect the first century Temple, which may have carried the bronze roof mentioned by Pliny.⁴³

Though possibly funded by Greek conquests, the late Republican Temple of Vesta has little in common with contemporary victory temples. Rather, as the city's hearth, the Temple was reconstructed in deference to Rome's cultural heritage.⁴⁴

The Mundus, Rome (#49)

The Mundus (#49), a round pit in the Archaic period, was covered with a permanent structure in the late second century BC. Attested by its foundations and fragments of its Ionic entablature, this monopteros⁴⁵ was sited within a contemporary or first century precinct.⁴⁶ F. Coarelli has suggested that, by capping its pit or *penus inferior*, the Mundus' rebuilding marked a change in the way its function was conceived and understood.⁴⁷ No longer emphasized for its role in Rome's colonization, he suggests that it was celebrated for its location at the center of the city, much like a Greek *omphalos*. Coarelli's comparison of the Mundus to a Greek 'navel' or geographic center is supported by its Imperial appellation of *Umbilicus Urbis*,⁴⁸ as well as by likely parallels for its form and function in Greece and Greek-influenced Etruria.⁴⁹

⁴³ Plin. *nat.* 34.14. Alternatively, this roof may pertain to the Temple's rebuilding just before Pliny's death, see Chap. V #57.

⁴⁴ Although her cult is related to the Greek goddess Hestia's, Vesta's Temple does not find a parallel in Greece, where Hestia was worshipped at open-air altars. Robert 1939, 12 and 365-8; Hautecoeur 1954, 6.

⁴⁵ The Mundus' reconstruction as a monopteros is based on a drawing of P. Ligorio (*Cod. Neap.* 35 p. 145). Lanciani 1967, 281; von Sydow 1973, 573-4.

⁴⁶ See #49.

⁴⁷ Coarelli 1996k, 289, and 1999i, 95.

⁴⁸ *Not. Reg.* 8; *An. Eins.* 1.5, 7.7, 8.8; cf. Fest. p. 144L and Coarelli 1976-1977, 361-4, and 1996k, 289; vs. 1999i, 95 (*Umbilicus Urbis* from the late Republic).

⁴⁹ See below for Greek *omphaloi*, and Verzar 1976-1977, 393-7, for Etruscan urns representing tholoi atop *omphaloi*. Although not an *omphalos*, the fourth century BC tholos in the Sanctuary of the Chthonic Divinities at Agrigento provides a good parallel. Coarelli and Torelli 1984, 146-9; Holloway 1991, 63.

The Monopteros, Pompeii (#28)

Built in the style of its sixth century BC neighbor,⁵⁰ Numerius Trebius' Doric Monopteros (#28) may have replaced an earlier structure that stood above a pit in the Foro Triangolare, one of Pompeii's most ideologically important areas. As its plan and location support comparison with the Mundus at Rome (#49), it is possible that the Monopteros also recalled it in function.⁵¹ It seems reasonable that a political leader like Trebius might build or rebuild a shelter for the Mundus of his city, especially as his family's trading activities throughout the Mediterranean⁵² could have exposed him to Greek *omphaloi*.⁵³

Round temples founded in the second century BC:

Like the Mundus (#49) and the Monopteros at Pompeii (#28), round temples built in the late Republic demonstrate an awareness of the power and extent of Greek influence on Roman social, political and intellectual life. Although some prefer Roman traditions to Greek ideals, like the Temple of Vesta (#57), most round temples effect a balance between Greek and Roman elements in their design and construction.

The Temple of Hercules and the Muses and the Shrine of the Camenae, Rome (#42 and 33)

The Temple of Hercules and the Muses (#42), founded by M. Fulvius Nobilior,⁵⁴ active in Aetolia, and rebuilt by the consul L. Marcius Philippus,⁵⁵ was

⁵⁰ See #28.

⁵¹ Coarelli 1976-1977, 371-2; Verzar 1976-1977, 393-7.

⁵² La Rocca, de Vos, and de Vos 1994, 151.

⁵³ Coarelli (1983b, 219; cf. Catalano 1978, 463) cites the *omphalos* at Norba as comparable in both form and location. *Omphaloi* have also been identified at Greek Delphi, Eleusis, Bolsena (Coarelli 1983b, 215 and 219-20; cf. Hautecoeur 1954, 8), and Artena (Morel 1999, 483-4).

⁵⁴ *RE* VII Fulvius 91.

both a victory monument⁵⁶ and a testament to M. Fulvius' commitment to culture and the arts.⁵⁷ The Temple, whose dedication may have coincided with Fulvius' triumph in 187,⁵⁸ was enclosed within the Porticus Philippi in 33 BC.⁵⁹ Both the Temple and the Porticus, which aligned the Temple precinct with the Circus Flaminius⁶⁰ and the Porticus Octaviae,⁶¹ can be reconstructed on the basis of the Severan Marble Plan and of literary and iconographic sources that relate details of their decoration.

On the Plan, the Temple is shown as a drum with a rectangular pronaos and a flight of four steps.⁶² Resting on a platform, it is preceded by the Shrine of the Camenae (#33),⁶³ which appears on a lower level,⁶⁴ and is backed by a semicircular exedra. The Porticus bounds the Temple platform with a double colonnade⁶⁵ and a wall on four sides. While its entrance façade is obscured by breaks in the Marble Plan, the Porticus' back wall is punctuated by an opening leading to a flight of steps, a square court, and a triangular enclosure.⁶⁶

⁵⁵ Most scholars would agree that L. Marcius Philippus, Augustus' stepbrother and *consul* in 38 BC (*RE* XIV Marcius 77), built the Porticus Philippi (see Martina 1981, 54, and Viscogliosi 1996c, 17), though Richardson, jr. (1977, 359, and 1992, 187) believes Philippus, Augustus' stepfather and *consul* in 56 BC (*RE* XIV Marcius 76), responsible for the Porticus and the reconstruction of the Temple.

⁵⁶ This is one of several victory temples dedicated to Hercules in the Campus Martius, possibly as payment of the *decuma Herculis*. Others include the Temple of Hercules Magnus Custos near the Circus Flaminius, built prior to 218 BC (see Viscogliosi 1996b, 13-4), and Sulla's shrine to Hercules Sullanus (see Palombi 1996a, 21-2).

⁵⁷ See Cic. *Tusc.* 1.3, below and Boyancé 1955, 180-1, Pötscher 1979, 1477-9, and Pietilä-Castrén 1987, 100.

⁵⁸ Eumen. *Paneg.* 9.7.3 (quoted in #42); Viscogliosi 1996c, 17. Eumenius is incorrect in suggesting that its construction was paid *ex pecunia censoria*.

⁵⁹ Roman calendars record two *dies natalis* for this Temple; the first, 13 June (*CIL* I 344-5), has been associated with Fulvius' construction, while the second, 30 June (*Ov. fast.* 6.797; cf. *Mart.* 4.49.13), may refer to Philippus' restoration. Viscogliosi 1996c, 17.

⁶⁰ Its location fits with Vitruvius' suggestion (1.7.1) that temples of Hercules should be sited near circuses; cf. *Plin. nat.* 34.33 and Frazer 1964, 55-7 (statue of Hercules Triumphator beside the starting gates of the Circus Maximus).

⁶¹ Gros 1976a, 82-3.

⁶² This depiction is supported by some building remains, see #42.

⁶³ See Chap. III #33.

⁶⁴ Viscogliosi (1996c, 18; cf. Castagnoli 1983a, 96) proposes that this area was landscaped or functioned as a podium or platform.

⁶⁵ Though it seems more likely that Philippus was responsible for the entire Portico, Marabini Moevs (1981, 46) views the first row of columns as the *porticus ad fanum Herculis* erected by M. Fulvius Nobilior (*Liv.* 40.51.6) and the second as that built by Philippus.

⁶⁶ Richardson, jr. (1977, 361) identifies the enclosure as the wig market mentioned by Ovid (*am.* 3.167-8) and Martial (5.49.12-3).

According to ancient authors, the Temple's decorative scheme included nine statues of the Greek Muses taken as booty from Ambracia,⁶⁷ a statue of Hercules Musagetes,⁶⁸ and the Shrine of the Camenae.⁶⁹ In addition, an annotated copy of the *Fasti*,⁷⁰ paintings by Zeuxis and Theorus, and three statues by Antiphilus can be linked with the Temple complex.⁷¹ Of these features, the *Fasti* may have been incorporated into the Temple platform,⁷² and the paintings would have been sheltered by the Portico.⁷³

A Campana plaque, which may illustrate part of the complex, places a statue of Heracles Musagetes directly beneath the marine frieze of the Temple's pronaos⁷⁴ and athletic statues in the intercolumnations of the Portico.⁷⁵ Depicting the rear third of the Temple complex, the plaque implies that the cult image of Hercules stood in the Temple's cella, while the statues, possibly by Antiphilus, decorated the rear wall of the Porticus.

Absent from the plaque, the Ambracian Muses may appear together with Hercules on denarii minted by Q. Pomponius Musa in 64 BC.⁷⁶ These show the nine Muses with accompanying attributes and Hercules, identified as *Hercules Musarum*, with a club and a lyre. While it is generally assumed that the prototypes for these images were Fulvius' statues, M. T. Marabini Moevs rejects this comparison on the

⁶⁷ See #42. However, ancient authors (M. Porcius Cato Censorius in Prisc. *gramm.* 2.367.14 K; Cic. *Tusc.* 1.3, and *Arch.* 27; Liv. 39.4.3-7) disputed his right to appropriate the Muses following Ambracia's surrender. Martina 1981, 58 fol.; Viscogliosi 1996c, 17.

⁶⁸ See #42. No ancient author writes of a statue of Hercules brought from Ambracia. Marabini Moevs 1981, 5.

⁶⁹ Serv. *Aen.* 1.8.

⁷⁰ See #42. This may be the first of its kind. Viscogliosi 1996c, 17.

⁷¹ See #42.

⁷² Lundström (1929, 106 fol.) prefers to site the *Fasti* along the base of the exedra.

⁷³ If correctly located, the paintings and statues by Antiphilus (see below) may have been introduced to the complex by Philippus.

⁷⁴ The relief does not support Viscogliosi's (1996c, 18) tetrastyle pronaos.

⁷⁵ Marabini Moevs 1981, 5 and 47. Olinder (1974, 64) dates the marine frieze to Philip's restoration.

⁷⁶ RE XXI Pomponius 23. Richardson, jr. (1977, 358-9) suggested that Musa revived the cult of Hercules and the Muses to explain his unusual cognomen.

basis of stylistic anomalies.⁷⁷ Instead, she prefers to see images of the Muses on a late Republican crater from Cerdo⁷⁸ and of Hercules on first century BC Arretine ware⁷⁹ as imitations of Fulvius' hoard.

The sources relate that Fulvius introduced the combined cult of Hercules and the Muses to Rome⁸⁰ after he and the poet Ennius, who joined and recorded his campaigns,⁸¹ discovered a cult of Herakles Musagetes in Greece.⁸² This cult, if imbued with current philosophical ideas, would have honored Hercules for his wisdom and insight and the Muses for their poetic inspiration.⁸³ In a Roman context, a temple dedicated to these deities may have served as a place where poets could meet, compose and recite their poetry. If a *Collegium Poetarum*,⁸⁴ Fulvius' Temple would have recalled the Mouseion at Alexandria and possibly, the Temple of the Muses at Thespieae.⁸⁵

In light of the Greek roots, function, and content of the Temple of Hercules and the Muses, it is appropriate that its form and decoration had clear Greek precedents. Herakles was honored with tholoi at Aigai, Thasos, and Pella (#25).⁸⁶ He may also have been venerated together with the Dioskouroi in a tholos at

⁷⁷ Marabini Moevs (1981, 10-48) considers the images' baroque style incompatible with Classical Greek works.

⁷⁸ Marabini Moevs (1981, 10-48) also discredits Eumenius' testimony of nine Muses, proposing five for which she finds clearly defined types on the Cerdo and related vessels.

⁷⁹ A number of Arretine pots show a Hercules figure wearing a chiton and chlamys and carrying a cithara. Marabini Moevs 1981, 21-2.

⁸⁰ Cic. *Arch.* 27 and Martina 1981, 57 fol.

⁸¹ Cic. *de iur. ill.* 52.2.

⁸² Eumen. *inst. schol.* 7-8 and Marabini Moevs 1981, 5 and 48; vs. Martina 1981, 51-2.

⁸³ Boyancé 1955, 182-3; Martina 1981, 64. See Pietilä-Castrén 1987, 102, for possible links between Pythagoras, Numa, and the annotated *Fasti*.

⁸⁴ Silher (1905) and Crowther (1973, 576-9) trace the history of the *Collegium Poetarum* at Rome and suggest other locations for it, including the Temple of Minerva on the Aventine.

⁸⁵ Silher 1905; Tamm 1961; Cancik 1969; Crowther 1973. Horsfall (1976) provides the fullest examination of the evidence supporting a *Collegium Poetarum* at Rome.

⁸⁶ Aigai: Price 1973, 70, and Seiler 1986, 160 nos. 1-2; Thasos: Seiler 1986, 162. The complex at Pella, which consisted of three tholoi flanking a round court, may have commemorated Herakles Phylakos, a guardian god and protector of the Macedonian state. Price (1973, 68 and n. 19) suggests that the Classical tholos at Delphi (#12) also served as a heroon of Phylakos.

Samothrace.⁸⁷ While Fulvius may have chosen to emulate the round form of these temples, it is also possible that the Shrine of the Camenae, to which he gave a prominent position on the platform, served as a model for his Temple. Fulvius also combined Roman and Greek elements in the layout and content of his decorative program. Balanced against Numa's Shrine and the Fasti were Greek statues and paintings, some of which, like the Muses if placed on top of the semicircular exedra,⁸⁸ would have recalled the statue displays of Classical and Hellenistic Greece.⁸⁹

The Temples of Hercules Victor in the Forum Boarium area (#43 and 44)

Ancient authors record the existence of two round Temples dedicated to Hercules Victor in Rome: *una ad portam Trigeminam, alia in foro Boario*.⁹⁰ Modern scholars have identified these with the round Temples built in and beside the Forum Boarium. The forum served as both the cattle market and the primary cult center of Hercules in Rome. Its association with the Hercules cult dates back to the prehistoric period,⁹¹ when the hero received an altar in the forum to commemorate his victory over the local tyrant Cacus.⁹² The Ara Maxima Herculis⁹³ may represent a replacement of this altar in the Republican period,⁹⁴ while statue dedications,

⁸⁷ Price 1973, 68-70.

⁸⁸ However, Marabini Moevs (1981, 46) would like to set the Ambracian Muses in the Portico's NE intercolumnations.

⁸⁹ For the Hellenistic period, the hemicycle of the poets and philosophers in the Serapeion at Saqqarah, constructed by Ptolemy I Soter, and the *schola* at Phyrus' court in Alexandria provide good comparative examples. Marabini Moevs 1981, 43 and 46.

⁹⁰ Serv. *Aen.* 8.363; cf. Macr. *Sat.* 3.6.10.

⁹¹ It seems likely that Greek merchants introduced Herakles to the Etruscans in the Archaic period. Sichtermann 1960b, 388; vs. Van Berchem 1959-1960, 61-8, who derives Hercules from the Phoenician god Melkart. The first epigraphic evidence to link him to the forum dates to 399 BC. Liv. 5.13.5-6, 7.2.2 and 27.1, and 8.25.1; Dion. Hal. 12.9 fol.; Aug. *civ.* 3.17; cf. Bayet 1926a, 260.

⁹² For the myth, see Coarelli 1992a, 130-9.

⁹³ Tac. *ann.* 12.24; Schol. Iuv. 8.13.4; Dion. Hal. 1.40-4; Schol. Veron. *Aen.* 8.104; Serv. *Aen.* 8.271; cf. Liv. 9.29.9, Val. Max. 1.1.17, and Dion. Hal. 1.40 (*Ara Maxima* incorporated into State religion).

⁹⁴ Its 2nd c. BC remains, consisting of an Anian tufa podium found beneath and behind S. Maria in Cosmedin, can be attributed to Scipio Aemilianus. He may have restored the Altar as a means of paying the *decuma Herculis*. Bayet 1926b, 127, 141, 239-42 and 248-56; Jaczynowska 1981, 633-4;

inscriptions and votive offerings found nearby, like the round Temples, attest to a continued interest in his cult at the forum Boarium through the Imperial period.⁹⁵

The first of these Temples (#44) has been associated with the surviving round Temple by the Tiber based on the location of the Servian walls and the Porta Trigemina,⁹⁶ the *dies natalis* of the Temple,⁹⁷ and the Portunus relief, which may illustrate its urban context.⁹⁸ The second Temple (#43) may be identified with the round Temple destroyed by Sixtus IV. Modern scholars, aided by Livy and Festus, have placed this Temple to the north of S. Maria in Cosmedin on a site now occupied by the ex-Palazzo dei Musei di Roma.⁹⁹

Many of the same passages in which ancient authors provide evidence for the existence and the location of round Temples to Hercules Victor give insight into the founders of these Temples and the motivations behind their founding.

The Temple of Hercules Victor in foro Boario, Rome (#43)

The Temple of Hercules Victor in *foro Boario* (#43) has been identified with the Temple destroyed in the fifteenth century through references in the ancient sources. In addition to locating the Temple, a passage of Festus may reveal its

Coarelli 1992a, 130-9 and 165, and 1995k, 351. For a discussion of its original founders, see Bayet 1926, while its form is reminiscent of the monumental altar at Pergamon.

⁹⁵ For praetorian inscriptions and inscribed votives from the Imperial period, see Bayet 1926, 241, and Cressedi 1984, 264. The last recorded mention of the altar dates to 321 AD. Cressedi 1984, 285.

⁹⁶ For the debate surrounding the location of the Servian walls and the Porta Trigemina, see Säflund 1998, Andreussi 1996b, 319-24, Coarelli 1992a, passim and 1996l, 332-3.

⁹⁷ See #44 and below. For the differences in epithet, see Ziolkowski 1988, 311 n. 6, and Coarelli 1992a, 180-1 and 188-92.

⁹⁸ According to Coarelli (1992a, 95-6, and 1996c, 15), this relief, which appears on the Arch of Trajan at Benevento, depicts a procession of gods as topographical indicators in the forum Boarium. He sees Portunus as a personification of the Temple of Portunus, Hercules as the round Temple of Hercules Victor, and Apollo as the statue of Apollo Caelispex.

⁹⁹ Livy (10.23.3) and Festus (p. 282 L) locate a round temple of Hercules near a *signum* or *sacellum* of Pudicitia.

founder. Based on his text,¹⁰⁰ Scaliger has proposed L. Aemilius Paulus, who is known to have pledged a hecatomb and games to Hercules before the Battle of Pydna.¹⁰¹ Better however is Coarelli's suggestion of his son, P. Cornelius Scipio Aemilianus, consul in 146 and 134 BC.¹⁰² Scipio Aemilianus, who oversaw work on the nearby Pons Aemilius,¹⁰³ and knew Pacuvius, credited with decorating a temple of Hercules,¹⁰⁴ may have founded it during his censorship in 142.¹⁰⁵ Alternatively, though less likely, the Temple may have been vowed by the *familia* or servile clergy of Hercules at the Ara Maxima¹⁰⁶ or by the military victor, T. Quinctius Flamininus.¹⁰⁷

Numerous Renaissance authors attest to the excavation, restoration and destruction work carried out by Sixtus IV (1471-1484) in the forum Boarium. During this work, a seated bronze Hercules, shown holding the apples of the Hesperides,¹⁰⁸ was discovered near S. Maria in Cosmedin and the Temple was razed to the ground.¹⁰⁹ However, a drawing by B. Peruzzi preserves something of its appearance. From this drawing, G. B. Giovenale has reconstructed the Temple as a pycnostyle peripteros¹¹⁰ with eighteen Tuscan columns rising from a stepped krepis. Its cella is punctuated by a tall door and a small window, while a low stepped dome serves as its

¹⁰⁰ Festus p. 282 L quoted in #43. Scaliger's emendation (see #43) implies that a member of the *gens Aemilia* was responsible for the Temple's construction.

¹⁰¹ Plut. *Aem. Paul.* 17.19.

¹⁰² Liv. 40.51.4; Plut. *praec. ger.* 20.4.

¹⁰³ Its construction coincided with his censorship. Coarelli 1995k, 351.

¹⁰⁴ Plin. *nat.* 35.17, 19 and 22; cf. Toynbee 1951, 37. Lyngby (1954, 20-3) connects Pacuvius' paintings with an unknown temple to Hercules.

¹⁰⁵ Pais (1920, 520; cf. Ziolkowski 1992, 46, vs. Palmer 1990, 236-40) suggested Scipio Aemilianus based on a passage of Plutarch (*praec. ger.* 20.4), which reveals that he dedicated a temple to Hercules during his censorship, probably following his conquest of Carthage.

¹⁰⁶ For Mommsen's alternative reading of Festus, see #43.

¹⁰⁷ Based on a third reading of Festus (see #43), Palmer (1990, 237-8) dates the Temple to the 190s-180s BC with a *dies natalis* of 29 June or 21 December. Like Scipio Aemilianus, Quinctius Flamininus was a known philhellene. Gruen 1992, 101.

¹⁰⁸ This statue may represent a Hercules Triumphalis, see Plin. *nat.* 34.33 (Evander's Hercules), above and Cressedi 1984, 268.

¹⁰⁹ The site as identified by Renaissance topographers corresponds to the zone of the ex-Pastificio Pantanella, occupied in the eighteenth century by the warehouses and granaries of Ottavio Gracchi.

¹¹⁰ See Chap. II 'Vitruvius on round temple design' and Gros 1976a, 214.

roof.¹¹¹ His reconstruction, especially the cupola, is hypothetical and may reflect renovations of the Imperial period.¹¹²

In addition to the bronze Hercules,¹¹³ Servius and Macrobius attest to a second statue connected with the Temple.¹¹⁴ Depicted wearing the Nemean lion skin,¹¹⁵ this Hercules, like the bronze statue, recalls one of the hero's labors. Hercules, whose success depended on his resourcefulness and might,¹¹⁶ was an ideal role model for late Republican generals and political leaders and by extension, the preferred god for victory dedications.

The Temple of Hercules Victor *ad portam Trigeminam*, Rome (#44)

The second round Temple of Hercules Victor (#44) stands together with a rectangular temple on a fill layer between the forum Boarium and the banks of the Tiber. This layer, which may be limited by the Servian walls, contains ceramic remains from the early second century BC.¹¹⁷ The contents of the layer constitute a *terminus post quem* for both Temples, while its date and location suggest a link with M. Fulvius Nobilior's expansion of the port in 179 BC.¹¹⁸ Despite their physical proximity and late Republican date,¹¹⁹ the two Temples are radically different in form and decoration. While the rectangular temple shows strong Italic influences in its

¹¹¹ Giovenale 1927, 378-9. As it is difficult to conceive that the weight of a dome could be supported by columns, it seems more reasonable to reconstruct a wooden truss roof.

¹¹² Coarelli 1992a, 91-2. Much of the Temple's elevation may have been invented by Peruzzi.

¹¹³ Giovenale (1927, 380) places this statue in an interior niche.

¹¹⁴ Serv. *Aen.* 3.407 and 8.288, and Macr. *Sat.* 3.6.17. Lyngby (1954, 32-6 and 59-60) finds parallels to this Hercules on the Portunus relief and on a series of medallions labeled *Herculi Victori*.

¹¹⁵ Varro in *Schol. Dan. Aen.* 8.363 quoted in #43; cf. Lyngby 1954, 16.

¹¹⁶ Sichtermann 1960a, 378-87 (in Cynic and Stoic philosophy).

¹¹⁷ Coarelli 1995k, 360. For the course of the Servian walls, see above.

¹¹⁸ Palmer 1976-1977, 141. By extension, the Temple's placement may imply some involvement in the life and trading activity of Fulvius' port. See below for its potential commercial links, while the rectangular temple is generally attributed to the god Portunus, the patron god of harbors and ports. Adam 1994b, 5-30, 56-78 and 101.

¹¹⁹ For the Temple's date, see below. The late 2nd c. BC date of the Temple of Portunus is secured by the fill layer and by the materials and techniques employed in its construction. Adam 1994b, 46-9.

style and stucco-covered decoration,¹²⁰ the Temple of Hercules Victor resembles temples of the Greek East in its materials and design.

The Temple rises from tufa foundations¹²¹ with a cella of marble-revetted travertine and a marble peristasis. Its twenty columns, resting on a marble-covered krepis and travertine euthynteria, comprise Ionic bases, fluted shafts and Corinthian capitals. Unusually slim and densely packed, its columns differ among themselves in height, material and number of drums.

The Pentelic columns known as Group A pertain to the original Temple. In view of their closest comparanda, the late Hellenistic capitals of the Hekateion at Lagina in Caria, ca. 128-81 BC, W.-D. Heilmeyer has proposed that the Group A capitals were transported partially carved from Greece¹²² and put in place by local workmen.¹²³ The Luna marble columns of Group B and Luna capitals of Group C, supported on original shafts, by contrast, are of Italian manufacture. Precise copies of the Group A capitals,¹²⁴ the Groups B and C capitals were produced in Rome, probably following the Tiber flood of 15 AD, which may have destroyed parts of the Temple's sub- and superstructure.¹²⁵

The Temple's peristasis supported a Corinthian-Ionic entablature,¹²⁶ while ceiling coffers, decorated with acanthus plants and flowers, spanned its ambulatory. Its cella wall, heavily repaired in the Imperial period, consists of a tall socle of finely dressed header and stretcher courses and, above its cornice, marble blocks clamped to

¹²⁰ While the frontal, symmetrical plan and materials used in the Temple of Portunus are purely Italic, its peripteros of pilasters betrays some Greek influence.

¹²¹ The presence of a *bothros* or pit in the Temple's foundations, like at the Tholos at Epidauros (#13), may strengthen the Temple's links with Hercules' early chthonic ideology. Robert 1939, 372-3.

¹²² Finds from the Mahdia shipwreck attest to the shipping of architectural elements from the Greek world to Rome.

¹²³ As the acanthus leaves of the Temple's coffering are similar in style to the capitals of Group A, Rakob and Heilmeyer (1973, 19, 23, and 30) suggest that they are products of a Greek workshop.

¹²⁴ Rakob and Heilmeyer 1973, 22.

¹²⁵ Rakob and Heilmeyer 1973, 6-8, 19 and 21-3.

¹²⁶ This reconstruction is supported by the Ionic slope of the cornice fragments, suggesting the use of modillions and a continuous frieze course. von Hesberg 1980, 119 and 169.

a travertine backing.¹²⁷ Though characteristic of late Classical and Hellenistic building practices, the drafting and masonry techniques used in its construction appear rarely in Roman architecture prior to the late Republican or Augustan periods.¹²⁸ As a result, they, like the fill layer, help to narrow the Temple's date to the second or first centuries BC.¹²⁹ Moreover, like the Temple's marble-tiled, wooden truss roof,¹³⁰ they underline the strength and breadth of Greek influence on its form, materials and design.

Based on dating limitations¹³¹ and evidence provided by the ancient sources, modern scholars have sought to assign a founder to the Temple. Servius and Macrobius¹³² credit M. Octavius Hersennus¹³³ with the introduction of the cult and the construction of a temple to Hercules Victor in Rome. Based on Hersennus' connections to the olive trade,¹³⁴ F. Coarelli identifies the Temple by the Tiber as this foundation. The Temple, sited in a marketplace and port, may represent a tribute to Hercules Victor Olivarius, the patron god of olive merchants.¹³⁵ Supported by an

¹²⁷ Strong and Ward-Perkins 1960, 9; Rakob and Heilmeyer 1973, 10 and 12.

¹²⁸ Strong and Ward-Perkins 1960, 11-8 and 31-2. Comparable examples of drafting include the Hieron at Samothrace (late 4th c. BC), the Mausoleum of Caecilia Metella (60 BC) and the Temple of Mars Ultor in the Forum of Augustus (dedicated in 2 BC). According to Ward-Perkins, the pattern of tall-and-short courses used above the socle, though commonplace in the late Hellenistic architecture of Asia Minor, is without parallel in Rome.

¹²⁹ Strong and Ward-Perkins (1960, 18-20) argue for a late Republican date as comparable Augustan examples employed a much thinner marble veneer and as few if any Roman buildings were constructed of imported marbles after the opening of the Luna marble quarries.

¹³⁰ Rakob and Heilmeyer 1973, 32-3.

¹³¹ In addition to the fill layer and the Temple's Greek style and construction, its dating is restricted by the limits of Grotta Oscura tufa use, ca. 396-early 1st c. BC, chronological listings in the *Fasti*, 173-67 BC (see Coarelli 1992a, 101-2), and the date of the first marble temple in Rome (for the Temple of Jupiter Stator, ca. 146 BC, see 'Introduction' above).

¹³² Serv. *Aen.* 8.363; Macr. *Sat.* 3.6.10. For difficulties regarding the sources from which these authors drew and hence the reliability of their material, see Ziolkowski 1988, 318-24.

¹³³ M. Octavius is alternately known as Hersennus and Herennus.

¹³⁴ Coarelli (1992a, 193-6 and 199; vs. Ziolkowski 1988, 320-1) also identifies Hersennus as an author with Tiburtine connections suitable for the transfer of a Tibur-based cult (Macr. *Sat.* 3.12.7), and a *tribunus plebis* who may have abolished the *lex Frumentaria* of C. Gracchus.

¹³⁵ Inscriptions from Delos suggest that Hercules was the patron of Italian *olearii*. Ziolkowski 1988, 317; Coarelli 1992a, 203-4.

inscribed statue base,¹³⁶ Coarelli's attribution of Hercules Victor Olivarius is additionally significant as his cult statue was crafted by the Greek artist, Scopas Minor. Linked with such a famous name, it is not impossible that the renowned Greek architect, Hermodorus of Salamis, was responsible for the Temple's design.¹³⁷

It is also possible however that Hermodorus designed a temple for L. Mummius Achaicus, the prominent military figure whom A. Ziolkowski proposes as founder.¹³⁸ Mummius is cited on an inscription as constructing an *aedem et signu(m)* to Hercules Victor.¹³⁹ As a general, consul and censor together with Scipio Aemilianus,¹⁴⁰ who may have built the nearby Temple of Hercules Victor *in foro Boario*, it seems likely that Mummius founded a temple worthy of his status. Like Metellus Macedonicus and Brutus Callaicus, who constructed temples in Pentelic marble,¹⁴¹ Mummius may have dedicated the Greek-inspired, marble-revetted round temple to the god who ensured his victory.¹⁴²

The Temple of Fortuna Huiusce Diei, Rome (#38)

Architectural and decorative remains of Temple B found in the gardens of S. Nicola ai Cesarini as well as the Severan Marble Plan illustrating it, its northern

¹³⁶ Hercules Olivarius is named on the statue base (*CIL* VI 33936 quoted in #44), while Hercules Victor and Invictus appear in the Regionary Catalogues (see #44 and Degraffi 1963, 16, 180-1, and 494-6). Coarelli 1992a, 93 and 96-7. Palmer (1976-1977, 150) interprets the Catalogue reference as a street name.

¹³⁷ Coarelli 1970-1971b, 263; cf. Cic. *de orat.* 1.62, Plin. *nat.* 36.35, Vitruv. 3.2.5, and Wilson Jones 2000, 20 (Hermodorus' projects in Rome).

¹³⁸ Ziolkowski (1988, 317-27) doubts whether Hersennus had the funds or the political clout necessary to build this Temple. Moreover, he considers it likely that the *lex Papiria* would have limited Hersennus' ability, as a private individual, to found a temple on public land.

¹³⁹ It should be noted that the inscription (*CIL* I² 626 = *CIL* VI 331 = *ILLRP* 122), discovered on the Caelian, was cut into a low quality, travertine slab. Hardly a dedicatory plaque, Coarelli (1992a, 186) would link it to a shrine built near its find spot.

¹⁴⁰ For L. Mummius' career, see Ziolkowski 1988, 328-9, and for a modern review of his aesthetic sentiment, see Gruen 1992, 123-7.

¹⁴¹ See 'Introduction' above. Like them, Mummius adopted a surname reflective of his conquest.

¹⁴² As Mummius was the only general to be labeled *victor* by Vergil (*Aen.* 6.836-7), it seems appropriate that Hercules' cult should bear his epithet. Ziolkowski 1988, 330; cf. Wilson Jones 2000, 138 (re. the appropriateness of the Corinthian order for a victory monument).

neighbor Temple A, and a portion of Temple C, have aided archaeologists in identifying the location of Temple B at a site known as the Area Sacra di Largo Argentina. The Temples of the Area Sacra, A, B, C, and D at its southern limits, are bounded by a rectangular portico that backs onto the *porticus Pompei* with its theater to the west and fronts onto the porticus of the Via delle Botteghe Oscure, which F. Coarelli considers the Imperial *porticus Minucia Frumentaria*.¹⁴³ Coarelli identifies the enclosure of the Area Sacra as the *porticus Minucia Vetus*, constructed by M. Minucius Rufus, consul in 110 BC, following his victory over the Scordisci in 107.¹⁴⁴

Of the Temples located within the Area Sacra, Temple B is the most recent. It follows the first period of building work in the Area, from the late fourth to the mid-third century BC, which saw the construction of Temples A, C and D. In the second period, from the mid-second to the mid-first century BC,¹⁴⁵ the ground level of the Area Sacra was raised with a tufa paving, the *porticus Minucia Vetus* was erected, and Temple B experienced the first and second phases of its development in unison with the second phase of Temples C and D and the second and third phases of Temple A.

The construction of Temple B is contemporaneous with a general unification of the Area Sacra. The addition of tufa paving brought the four Temples, conceived and built separately, together on a common ground level, while the erection of Minucius' Portico gave shape to the Area and defined its outer limits. In its first phase, ca. late second century BC,¹⁴⁶ Temple B rose from two stone and concrete foundation rings¹⁴⁷ with a cella wall and peripteros of tufa and travertine. A base, embedded in its inner ring, supported a colossal cult image, of which fragments have

¹⁴³ Coarelli et al. 1981, 32; vs. Manacorda 1999, 132-7.

¹⁴⁴ See *CIL* VI 10223 and Coarelli et al. 1981, 35, and 1995k, 318; vs. Wall 1932, *passim*, and Rickman 1983, 106-7.

¹⁴⁵ Coarelli et al. 1981, 13-4.

¹⁴⁶ For this date, see #38 and below.

¹⁴⁷ Coarelli et al. 1981, 19. A sewer was discovered underneath the Temple's foundations. Marchetti-Longhi 1956-1958, 45-8.

been found beside the Temple.¹⁴⁸ On stylistic grounds, Coarelli has attributed this statue to Scopas Minor.¹⁴⁹

The Temple's podium was preceded by a set of travertine-revetted steps and supported eighteen Corinthian columns.¹⁵⁰ The columns, resting on Attic-Asiatic bases, carried a richly detailed, Pentelic marble entablature¹⁵¹ and a marble-plated, wooden truss roof.¹⁵² The original cella wall, destroyed in the mid-first century BC,¹⁵³ was replaced by a new wall rising from the outer foundation ring. This new wall, formed by interposing tufa blocks between the columns, greatly increased the dimensions of the cella¹⁵⁴ and occasioned the restructuring of its podium. Now faced with peperino, the podium was enlarged and received new base and cornice moldings. Simultaneous with this reconstruction was the introduction of two oblong bases placed on either side of the Temple's stairs.¹⁵⁵ These were presumably intended for the sculptural groups mentioned by Cicero and Pliny.¹⁵⁶

Though common decorative elements and the introduction of tufa paving and Minucius' portico went far to unify the Temples of the Area Sacra, raised platforms with altars built in front of Temples A, C and D in the first period and B in the second¹⁵⁷ resulted in much of their independent flavor being retained until the massive renovations of Domitian's era.¹⁵⁸

¹⁴⁸ Marchetti-Longhi 1956-1958, 51-2 and 64-6; Coarelli et al. 1981, 19-20.

¹⁴⁹ Gros 1996, 269-70.

¹⁵⁰ Marchetti-Longhi 1956-1958, 53-9; Coarelli et al. 1981, 19.

¹⁵¹ Coarelli et al. 1981, 20 pl. 5.2; vs. Schorner 1995, 9. If correctly identified, this plaque would be the earliest example of an ornamental stone frieze found in Rome.

¹⁵² Marchetti-Longhi 1956-1958, 63-5.

¹⁵³ See #38 and Gros 1996a, 270.

¹⁵⁴ See Chart #38.1.

¹⁵⁵ Marchetti-Longhi 1956-1958, 60-2, and 1970-1971, 21 and 52-3; Coarelli et al. 1981, 20-1; Gros 1996a, 270.

¹⁵⁶ Cic. *Verr.* 2.4.4.126, Plin. *nat.* 34.54 and 60, and see #38.

¹⁵⁷ Marchetti-Longhi 1970-1971, 20-1.

¹⁵⁸ Marchetti-Longhi 1970-1971, 9-13; cf. Chap. VI #38.

Set apart from its neighbors, Temple B has been identified based on Varro's description of his aviary at Cassinum.¹⁵⁹ Likening it to a *tabula literaria ... cum capitulo*, Varro notes that his birdhouse ... *est ultra rutundus columnatus, ut est in aede Catuli, si pro parietibus feceris columnas*.¹⁶⁰ Prior to incorporating its peripteros within a new cella wall, Temple B, referred to as the *aedes Catuli*,¹⁶¹ corresponded perfectly to Varro's aviary.¹⁶²

One of two known temple dedications by a Catulus may coincide with this *aedes*. The first, a temple to Iuturna *in campo Martio*, has been associated with C. Lutatius Catulus, who defeated the Carthaginians in 241 BC. Coarelli has linked this construction with Temple A, while Ziolkowski sees it as Temple C.¹⁶³ The second dedication by a Catulus takes two forms: statues to Fortuna Huiusce Diei on the Palatine and a temple in the Campus Martius. Q. Lutatius Catulus,¹⁶⁴ consul in 102 BC and a possible descendant of C. Lutatius Catulus,¹⁶⁵ may have had a hand in both, following his victory at the Battle of Vercellae in 101.¹⁶⁶ Pliny records a dedication by this Catulus of statues at a shrine to Fortuna in the *vicus Fortunae Huiusce Diei* on

¹⁵⁹ Varro *rust.* 3.5.9-12; cf. Van Buren and Kennedy 1919, 61-2, and Coarelli 1980, 211.

¹⁶⁰ Varro *rust.* 3.5.12. Though possibly modeled after the Temple, Varro's aviary is not unique. Comparable aviaries may be found in wall paintings in the Villa of Julia Felix and Houses I.iv.25, VI.i.7, VI.ix.6, and VII.vii.16 at Pompeii, and in the gardens of the Villa at Diomed. Van Buren 1925, 111, and 1932, 10-2.

¹⁶¹ Boyancé 1940, 69; Coarelli 1981a, 37-9.

¹⁶² Moreover, a tufa wall separating Temples A and B, together with its statue bases, would have delimited an area in front of Temple B reminiscent of a *tabula literaria*. Marchetti-Longhi 1956-1958, 45, 48 and 70, and 1970-1971, 10 and 20.

¹⁶³ Coarelli 1981a, 42-6; Ziolkowski 1986, 624-39, and 1992, 94-6.

¹⁶⁴ For Catulus' philhellenism, see Cic. *nat. deor.* 1.28.79, Gell. 19.19.10, and Beard and Crawford 1985, 19.

¹⁶⁵ Regardless of their true relationship, Q. Lutatius Catulus would have claimed a blood connection, which presumably influenced the location of his temple (see below).

¹⁶⁶ Q. Lutatius Catulus is known to have dedicated a temple to Fortuna Huiusce Diei on the anniversary of his Battle vow. Plut. *Mar.* 26.2; cf. Boyancé 1940, 67, Coarelli 1981a, 38, and Richardson, jr. 1992, 156.

the Palatine,¹⁶⁷ which coincided with the founding of a new temple to Fortuna Huiusce Diei, most likely in the Campus Martius.¹⁶⁸

This temple foundation commemorated not only the fortune that favored Catulus' win,¹⁶⁹ but also, as Cicero explains, Fortuna *nam valet in omnes dies*.¹⁷⁰ Fortuna Huiusce Diei, acknowledged as a force intervening in the daily lives of all Roman citizens, shows clear elements of Tyche, the Greek goddess of Fortune and Fate. In the wake of Rome's first exposure to Greece, Fortuna's oracular abilities, once equal to her roles in fertility and transport,¹⁷¹ came to prominence. Like Tyche, with whom she was assimilated, Fortuna was acknowledged in victory dedications as the divinity whose favor might ensure Rome's success and continued prosperity.¹⁷²

The Round Temple, Tibur (#64)

Two late Republican temples crown the acropolis at Tibur, one of the most ancient and important cities of Latium.¹⁷³ A rectangular temple, dating to the first half of the second century BC,¹⁷⁴ stands to the north of the Round Temple (#64) added to its precinct when the acropolis was extended to the east with an artificial terrace.¹⁷⁵

¹⁶⁷ This shrine was probably set up by L. Aemilius Paulus. *Aust. de sacris aedibus* 26; Platner and Ashby 1929, 216.

¹⁶⁸ Plin. *nat.* 34.54 and 60; Boyancé 1940, 65-7.

¹⁶⁹ Based on its comparison to Varro's aviary, Coarelli (1997, 283-4; cf. Plut. *Mar.* 26.3) suggests that the Temple of Fortuna Huiusce Diei's ornament included astrological motifs connected with Catulus' victory and the Temple's dedication day.

¹⁷⁰ Cic. *leg.* 2.28. This can be contrasted with Q. Fulvius Flaccus' foundation to Fortuna Equestris in 180-174 BC, which commemorated Fortuna's role in his victory over the Celtiberi as an isolated event (Liv. 40.40.10, and 42.10.5; Vit. 3.3.2). Coarelli 1995d, 268-9.

¹⁷¹ See Chap. III #36.

¹⁷² Hamdorf 1964, 37-9; Kajanto 1981, 516-8 and 521-32. Trajan's Temple of Fortuna Omnium serves as a prime example. Aronen 1995f, 273.

¹⁷³ For a summary of Tibur's involvement with Rome, see Coarelli 1993a, 36-9.

¹⁷⁴ The rectangular temple is a prostyle, tetrastyle, pseudo-peripteral building of tufa and travertine with five engaged quarter-columns along its side walls, four along its back, and engaged half-columns at its corners. Its podium moldings and column bases are similar to those of the Round Temple. Delbrueck 1907-1912, 14-6; Giuliani 1970, 122-35; Coarelli 1993a, 90-2. For its date, see Giuliani 1970, 131-2.

¹⁷⁵ Prior to this addition, there was not enough space to accommodate a second temple between the first and the slopes of the acropolis. Clearly, the Round Temple was planned only after the rectangular temple was begun or built. Giuliani 1970, 122.

The terrace, supported on vaulted arcades excavated and built up from the slopes of the acropolis, together with the Round Temple, can be linked to a large-scale restructuring of the city in the late second century.¹⁷⁶

The Round Temple's podium, consisting of a tufa and concrete core revetted in travertine, is approached by a set of eleven steps on axis with its door.¹⁷⁷ The podium, ornamented with base and cornice moldings, supports a tufa and concrete wall, punctuated by a door and two windows, and a peristasis of ten of an original eighteen columns. The columns, with Attic bases and Corinthian capitals, are surmounted by an inscribed Ionic architrave and a frieze depicting garlands and bucrania. A simple cornice protrudes above the frieze, while ceiling coffers, engraved with flowers and acanthus leaves, span the ambulatory.¹⁷⁸ Though nothing remains of its roof, R. Delbrueck has reconstructed a two-tiered, wooden truss¹⁷⁹ in preference to the cupola shown in Renaissance drawings.¹⁸⁰

Inside the cella is a small treasury aligned with the Temple's door. Like the inscribed architrave, it may help in determining the divinity to whom the Round Temple was dedicated as well as its patron. Identifying the treasury as a repository for the Sibylline Books,¹⁸¹ F. Coarelli links the Round Temple with the tenth sibyl Albunea, whose cult site was located near the acropolis.¹⁸² He reconstructs its

¹⁷⁶ See Cat. #64 and Coarelli 1987, 104, and 1993a, 93. For contemporary buildings in Tibur, see Coarelli 1993a, 92.

¹⁷⁷ Coarelli 1993a, 92-3; cf. Giuliani (1970, 137-8), who incorporates a landing.

¹⁷⁸ Delbrueck 1907-1912, 18.

¹⁷⁹ Delbrueck 1907-1912, 22; cf. De Angelis d'Ossat 1930, 244.

¹⁸⁰ The drawings of G. da Sangallo and an anonymous artist whose work is in the Wiener Hofbibliothek portray a cupola, either egg-shaped with an oculus and surrounded by a balustrade or tiered like the Pantheon (#50). Delbrueck 1907-1912, 21-2; Giuliani 1970, 132.

¹⁸¹ Dion. Hal. 4.62.5; cf. Coarelli 1987, 105-6, and 1993a, 94. Albunea's cult statue was depicted holding the Sibylline Books (Lact. *inst.* 1.6.12).

¹⁸² Hor. *carmin.* 1.7.11; Stat. *silv.* 1.3.70 fol. For difficulties arising from the confusion between Albunea and Albula, see Tilly 1934, 29, Lyngby 1965, 95-8, and Coarelli 1987, 105. Coarelli (1987, 105-7) ascribes the rectangular temple to Tibur's founder, Tiburnus.

inscription to refer to L. Gellius Poplicola, praetor in 94 and consul in 72 BC.¹⁸³ As part of his political and religious duties, Poplicola may have transferred the Sibylline books from Tibur to the Temple of Jupiter Capitolinus at Rome in 83.¹⁸⁴ If Coarelli is right in suggesting that Gellius' name replaces an earlier inscription and signifies a consular date,¹⁸⁵ its present inscription may indicate a re-dedication of the Temple following the *damnatio memoriae* of its founder.¹⁸⁶ Although Coarelli's interpretation is appealing, it is more prudent, like C. F. Giuliani,¹⁸⁷ to leave the question of the Round Temple's attribution open.

The Shrine and Temple of Fortuna Primigenia, Praeneste (#30-1)

The Sanctuary of Fortuna Primigenia at Praeneste is a vast, terraced complex that rises from the forum of the city into the hill behind it.¹⁸⁸ The religious buildings of the forum constitute the "lower Sanctuary," while the "upper Sanctuary" comprises the terraced area, the hemicycles, and the Shrine (#30) and Temple (#31) of Fortuna.¹⁸⁹ The upper Sanctuary was probably constructed between 110 and 100 BC,¹⁹⁰ decades before Sulla conquered the city and transformed it into a colony of

¹⁸³ For Gellius' career, see Coarelli 1987, 107.

¹⁸⁴ Tagliamonte 1996, 144-8.

¹⁸⁵ Coarelli 1987, 106-7. The ablative case would suggest such a solution, though as it reads now, the inscription is almost impossible to reconstruct.

¹⁸⁶ Coarelli 1987, 110. This would be unlikely if the original founder was a priestly college acting under a Sibylline mandate.

¹⁸⁷ Giuliani 1970, 133.

¹⁸⁸ The layout of the complex is comparable to the Hellenistic sanctuary at Kos and the city of Pergamon at its height under Eumenes II (197-159 BC). Taken by itself however, the upper Sanctuary, with its three-sided portico, theatral cavea and terminal Temple, resembles Italic sanctuaries at Tibur (Hercules Victor) and Gabii (Juno). Coarelli 1987, 52-3.

¹⁸⁹ These function as separate and self-sufficient units. For the lower Sanctuary, see Coarelli 1993a, 131-7, while among its more significant features are the 4th c. BC "Antro delle Sorti" (see Mingazzini 1978, 211-7), a site linked with Fortuna's oracular abilities (see Brendel 1960, *passim*, and Coarelli 1987, 67-79), and the late 2nd c. Temple of Isis, a goddess ideologically related to Fortuna (Vitr. 1.7.1; cf. Coarelli 1976, 339, 1987, 79-82, and 1993a, 135-6, and below).

¹⁹⁰ Degraffi 1978, 149-63; Coarelli 1976, 337-9 (last quarter of the 2nd c. BC); vs. Gullini 1973, 760-4 and 778-9 (mid-2nd c.).

Rome.¹⁹¹ This date is supported by architectural and sculptural remains from both Sanctuaries¹⁹² as well as inscriptions, which record the involvement of local merchants¹⁹³ and magistrates¹⁹⁴ in founding Praeneste's upper Sanctuary and elaborating her forum.

The Shrine was located on the Terrace of the Hemicycles, while the Temple stood behind the large hemicycle that crowns the complex. The Shrine, sited in front of the Terrace's eastern exedra,¹⁹⁵ rose from a well revetted in tufa *opus incertum*.¹⁹⁶ Its podium supported seven Corinthian columns,¹⁹⁷ a Doric entablature and a conical roof,¹⁹⁸ while a stone transenna topped by metal grillwork filled out its intercolumnations. A large circular altar and a base, which may have supported a marble cult image,¹⁹⁹ stood next to the Shrine and were accompanied by a set of fountains or lustral basins placed beside the Terrace's stairs.²⁰⁰

From an architectural standpoint, the Shrine most closely resembles the late Hellenistic Rotunda at Ilion (#14). Consisting of a drum with Doric pilasters, windows and a cone-shaped roof, the Rotunda is recalled by the Shrine in size, composition, and very possibly, function. Sited on the city's acropolis, it served as

¹⁹¹ Several scholars date the building work at Praeneste to Sulla's occupation: Magoffin 1978, 85-6 (the upper Sanctuary only); Lugli 1954a, 305-8, Kähler 1978, 241, and Romanelli 1967, 51-5 (both Sanctuaries). For a summary of their arguments, see Lugli 1954a, 308, and for a refutation, see Gullini 1954 and 1973, 779-95.

¹⁹² See #30-1.

¹⁹³ A number of *negotiatores*, whose names are preserved on Delos, are of Praenestine origin. Coarelli 1976, 338; Degrassi 1978, 163.

¹⁹⁴ Using these inscriptions, the municipal *Fasti*, dedications of freedmen, and epigraphs from tombs, Degrassi (1978, 149-63) compiled a list of the ancient Praenestine *gentes*, among whom he discovered a close correspondence with the Sanctuary's benefactors.

¹⁹⁵ Bronze coins taken from the well, which date between the reigns of Vespasian and Constantine II, attest to the longevity of the Sanctuary. Fasolo and Gullini 1953, 148.

¹⁹⁶ Lacking evidence for drainage, it seems unlikely that the well held water. Fasolo and Gullini 1953, 147-8.

¹⁹⁷ Coarelli (1987, 52) attaches ritual importance to the number seven, since the exedrae also employ seven columns.

¹⁹⁸ Fasolo and Gullini 1953, 149-52 (entablature); Coarelli 1987, 50 (roof).

¹⁹⁹ Coarelli 1987, 50.

²⁰⁰ Based on these and the high number of votive objects discovered on the Terrace, Coarelli (1987, 52) concludes that this area was of particular importance to Fortuna's cult.

Ilion's *omphalos*, while F. Coarelli suggests that, like the Mundus at Rome (#49) and the Monopteros at Pompeii (#28), the Shrine constituted the *mundus* of Praeneste.²⁰¹

Accessed via stairs from the Terrace of the Hemicycles, a second terrace and a hemicycle, formed from a curved portico and theatral cavea, fronted the Temple of Fortuna Primigenia. Traces of this Temple, visible inside the Palazzo Barberini, include foundations and two concentric walls of *opus incertum*. Drawing from a record of its destruction in 1298²⁰² and Renaissance sketches by P. Ligorio and fra' Giacondo, Coarelli reconstructs the Temple as a large circular structure roofed with a cupola.²⁰³ This drum, he suggests, was approached via an opening at the back of the hemicycle, which provided access to a set of ramps running perpendicular to the Temple²⁰⁴ and possibly, to ramps or stairs sited in-between the Temple's outer and inner cella walls.²⁰⁵ Recognizing that the narrow width and flat gradient of this area is antithetical to Coarelli's reconstruction, F. Rakob puts forward a simpler solution.²⁰⁶ To account for its elevated cella, he places a stairway between the entrance to the Temple precinct via the portico and the Temple's perimeter wall.²⁰⁷

Remains and ancient sources suggest that the Temple contained a bronze cult statue, a black marble statue, and an olive tree that produced honey.²⁰⁸ Fortuna's role as an Italic mother goddess is emphasized by the bronze statue, which shows her

²⁰¹ Coarelli (1993a, 200) cites a pre-Republican phase in the well's construction, which he links with Praeneste's foundation (see below).

²⁰² This text (quoted in #31) compares the Temple to the Pantheon (#50).

²⁰³ Coarelli 1987, 43 and 56; vs. Rakob and Kleibrink 1990, 69-71 and 76. All three rightly reject Kähler's (1978) proposal of a monopteros.

²⁰⁴ These ramps, possibly intended as service entrances, would have provided a way of approaching the Temple from outside the upper Sanctuary. Coarelli 1987, 58 and 61.

²⁰⁵ This reconstruction is based primarily on fra' Giacondo. Coarelli 1987, 58-60 fig. 20.

²⁰⁶ Rakob 1992, 87 figs. 19-25.

²⁰⁷ Lauter (1979, 410) is unclear about the existence of a perimeter wall, while Rakob (1992, fig. 13) rejects it entirely.

²⁰⁸ See #31 (marble statue), Plin. *nat.* 33.61 (bronze cult statue), and Cic. *div.* 2.41.85-7 (olive tree). For dating reasons, Sulla's *lithostroton* (Plin. *nat.* 36.189; vs. Champeaux 1987, 216-35) cannot be located inside the Temple.

seated and suckling the infants Jupiter and Juno.²⁰⁹ The marble statue, incorporating elements of Tyche and Isis,²¹⁰ accentuates Fortuna's oracular abilities, brought to prominence through her assimilation with Tyche. This duality²¹¹ is supported by the existence of two buildings commemorating Fortuna: the Shrine, if correctly identified as the Mundus, associated with the Praeneste's origins,²¹² and the Temple linked with the Sanctuary's construction during a period of intense Greek influence.²¹³ To this period can be dated the first mention of Praeneste's Fortuna as an oracular goddess, and of the yearly festival which recognized both roles by commemorating Fortuna's relationship to Jupiter, her oracular abilities, and her maternal gifts.²¹⁴

The Shrine of Hermes and Maia, Delos (#10)

In the late second century BC, religious fraternities representative of the Italian merchant classes dedicated a series of monuments in the so-called 'Agora of the Compétaliastes' or 'the Italians' on Delos.²¹⁵ Foremost among them were the Hermaists, founded in honor of Hermes-Mercury some thirty or forty years before, when the Italian community first became prominent on the island.²¹⁶ Their

²⁰⁹ Fortuna is represented as Jupiter's nurse in Servius Tullius' Temple of Fortuna Primigenia on the Capitoline (Plut. *quaest. Rom.* 74.106, and *fort. Rom.* 10; Aug. *civ.* 6.7.1; cf. Sabbatucci 1988, 172-4, and Aronen 1995g, 273-5) and conversely, as Jupiter's daughter on inscriptions (*CIL* XIV 2852-3, 2856-8, 2860, and 2863-72; cf. Pease 1923, 491, and Champeaux 1982, 24). The dualities inherent in her cult are reflected in the cult images of the two Fortunaes of Antium and on coins minted by Quintus Rustius, magistrate in 19 BC. Brendel 1960; Simon 1990, 63-4.

²¹⁰ Isis is particularly appropriate as the deity of maritime commerce, the means by which the Sanctuary's construction was probably financed (see above). Fasolo and Gullini 1953, 259-60; Gullini 1973, 766-7; Coarelli 1993a, 135. For other cult images of Fortuna with oracular connections, see Brendel 1960, *passim*, and Coarelli 1987, 74-9.

²¹¹ Similar are the two Venuses honored at the Shrine of Venus Cloacina. Coarelli 1993e, 290-1.

²¹² The Shrine may also have fulfilled an oracular role, if it held *sortes* or lots (cf. Cic. *div.* 2.41.85-6).

²¹³ It is possible, as Hanson (1959, 34) suggests, that Temple began as a cave shrine, like the "Antro delle Sorti" in Praeneste's forum (see above), and was rebuilt as an oracular site in the late Republic.

²¹⁴ The maternal component of her festival rivaled the *Matralia* celebrated at the Temples of Fortuna and Mater Matuta in the Forum Boarium. Champeaux 1982, 60.

²¹⁵ See #10.

²¹⁶ For the Hermaists, see Hatzfeld 1975, 349. Other fraternities include the Apollonaists and the Poseidonaistes, honoring Apollo and Poseidon-Neptune respectively.

dedications in the Agora, identified on a large commemorative plaque,²¹⁷ include a round Shrine to Hermes, the god of commerce, and his adoptive mother Maia (#10).

According to the Shrine's bilingual inscription,²¹⁸ it formed the focal point of a small sanctuary to Hermes, surrounded by a peribolos²¹⁹ and embellished with a Doric and an Ionic monument, altars and cult statues.²²⁰ The Shrine rose from gneiss foundations and a two-step podium of Naxian marble with four Doric columns, an inscribed Ionic entablature, and a conical roof.²²¹ Though little more than a treasury,²²² the Shrine serves as an elaboration of a more modest monument erected to Hermes and Maia in the Sanctuary of Apollo in the mid-second century.²²³

This divine pair were frequently worshipped together both in Rome, where Maia originated, and in the Greek world, the home of Hermes who became assimilated with the Roman god Mercury.²²⁴ As a dedication to Hermes, the Shrine recalls a Hellenistic tholos linked with Hermes and the Muses at Knidos²²⁵ and the fifth century BC Temple of Mercury at Rome (#47).²²⁶ More generally, as a dedication intended to promote commercial interests, it may be compared to tholoi in market buildings or *macella* found throughout the Roman world, which, by the Imperial period, may have had religious as well as mercantile associations.²²⁷ On Delos, the construction of this sanctuary points to the increased importance of the

²¹⁷ Hatzfeld 1912, 103. By extension, the Shrine, as a round commemorative monument, is comparable to the Hellenistic Monument of Lysicrates (#3).

²¹⁸ This inscription (*ID* 1738 = *CIL* III² 14203) is remarkable in so far as the Greek and Latin texts are not equivalent; one mentions the divinities honored by the dedication and the other establishes the nature of the offering.

²¹⁹ Hatzfeld 1912, 165.

²²⁰ See #10, Ardaillon 1896, 436, Hatzfeld 1912, 103, and Bruneau-Ducat 1983, 117.

²²¹ Salviat 1963, 260; Binder 1969, 94-7. Its roof, carved to represent radiating bands of tiles, finds parallels in the Monument of Lysicrates at Athens (#3) and the Arsinoeion at Samothrace (#58). Salviat 1963, 260.

²²² Seiler 1986, 146.

²²³ Hatzfeld 1912, 163-4.

²²⁴ Hatzfeld 1912, 349-50; Roussel 1987, 272. For an examination of their possible chthonic and agrarian symbolism, see Robert 1939, 89.

²²⁵ See Passuello-Disegna 1976, 21, for the Heroon of Antigonas Gonatas.

²²⁶ See Chap. III #47.

²²⁷ De Ruyt 1983, 300.

Hermaist fraternity by the end of the century, further enhanced in the mid-first century BC, when they dedicated the Shrine to Hermes-Mercury.²²⁸

Round temples founded in the first century BC:

While examining the evidence for late Republican round temples, it is possible to lose sight of other, equally significant, ways in which the round form was used in contemporary architecture. With varying amounts of Greek input, the form appeared in funerary, commercial and bath buildings both in and outside of Rome, as well as in second style wall painting. Cylindrical tombs like the Mausoleum of Caecilia Metella, domed drums that number among the bath buildings at Baiae, and the first peripteral market buildings at Pompeii and Morgantina,²²⁹ like round temples, reveal the form's amazing range and versatility. Wall paintings, which depict round buildings in urban or rural settings,²³⁰ demonstrate the array of contexts suitable for the form.

The wall paintings are additionally significant for recording a class of round buildings, including temporary shrines and pavilions, too ephemeral to be preserved by the archaeological record.²³¹ Though intended as permanent temples, little more evidence can support the existence of three late Republican temples cited by W. Altmann: the Heroon of Eumelos, Vesta or Ceres near Naples (#20), the Temple of Feronia at Nazzano (#21), and the Temple of the Genius near Stabiae (#60). More substantial evidence points to the foundation of round shrines to Cybele (#34), Bacchus (#32) and Venus (#55) at Rome.

²²⁸ Hatzfeld 1975, 349.

²²⁹ De Ruyt 1983, 137-49 (Pompeii, late 2nd c. BC), 102-14 (Morgantina, late 3rd c.-180 BC).

²³⁰ For round shrines shown in urban and rural contexts, see Robert 1939, 82-8, and for depictions of round shrines to Venus-Aphrodite, see #55 below.

²³¹ It should be noted that most buildings illustrated in wall paintings were partly, if not wholly imaginary.

The Tholus of Cybele and the Shrine of Bacchus, Rome (#34 and 32)

In one of his epigrams,²³² Martial traces a route from the Roman Forum to the house of Proculus.²³³ As he advises the way, he points out notable landmarks along it, including the Temple (#57) and Atrium of Vesta in the Forum and the colossus of Sol, formerly of Nero, which stood on the site of the later Temple of Venus and Roma. Instead of delaying in front of the colossus, he suggests that the traveler make a turn *hac qua madidi sunt tecta Lyaei / et Cybeles picto stat Corybante tholus*.²³⁴ These words of Martial imply that a Shrine of Bacchus (#32), a “dwelling of Lyaeus,” existed near the top of the via Sacra and was accompanied by a Tholus of Cybele (#34).²³⁵ Cassius Dio may make another passing reference to the Tholus, when he relates a decision to reorientate its cult statue after the death of Julius Caesar.²³⁶ If taken together, these passages define a span during which the Tholus existed, namely from the middle of the first century BC through the late first century AD, while some archaeological evidence connected with it and the neighboring Shrine of Bacchus extends this span through the mid-second century.²³⁷

Based on the topographical information supplied by Martial, the Tholus has been linked with a set of circular foundations discovered near the later Basilica of Constantine.²³⁸ With a modest diameter, these foundations recall the dimensions of

²³² Mart. *epigr.* 1.70.9-10.

²³³ His house may have stood on the Palatine or the slopes of the Velia (Mart. *epigr.* 1.70.6). For analyses of the route, see Graillet 1912, 333, Lugli 1947, 175-6, and Bruhl 1953, 197-8.

²³⁴ Mart. *epigr.* 1.70.9-10. For Martial’s use of *tholus*, see Chap. II ‘Ancient terminology and conceptions of the round form.’

²³⁵ The topographical context of Martial’s poem, as well as the archaeological evidence, makes it difficult to believe that he is referring to the Temple of Magna Mater on the Palatine (as suggested by Rodríguez Almeida 1993e, 338).

²³⁶ Cass. Dio 46.33.3; cf. Lugli 1947, 174. This decision would be illogical in the context of the south-facing Temple of Magna Mater on the Palatine. Coarelli 1982, 36. For the cult statue of the Palatine temple, which incorporated the black stone from Pessinous, see Esdaille 1908, 368-74, Pensabene 1996a, 206-8, and below.

²³⁷ While Cassius Dio wrote in the mid-1st c. BC, Martial’s epigram has been dated to 85-86 AD. For Imperial evidence pertaining to both buildings, see Chap. VI #32 and 34.

²³⁸ These may date to the Domitianic period. See Chap. VI #34.

other roadside shrines, most notably that of Venus Cloacina on the lower via Sacra.²³⁹

For the Shrine of Bacchus, F. Coarelli proposes a semicircular exedra opposite the Medieval porch. He relates the two buildings based on an Antonine medallion, which may illustrate a temple of Liber set within a curved portico.²⁴⁰ Coarelli's hypothesis is flawed in that, although Antoninus Pius restored the Shrine, the exedra does not enclose a building of comparable size to his entablature,²⁴¹ nor does its location to the south of the via Sacra make it a likely pair for the Tholus of Cybele.²⁴²

Beyond the Tholus' possible diameter, little is known about the appearance of either building in the late Republic. Martial describes the Tholus as painted with images of the Corybantes, possibly on its ceiling,²⁴³ while Cassius Dio implies that its cult statue was visible from the road.²⁴⁴ The exact date of and motivations behind the foundations of both buildings are equally ill-documented. Coarelli has speculated that P. Cornelius Scipio Corculum built the Tholus in recognition of the role his father, P. Cornelius Scipio Nasica, played in introducing Cybele's cult to Rome in 204 BC.²⁴⁵ Although Nasica's popularity surged in the late Republic and early Imperial period, Coarelli's proposed relationship between Corculum's house and the exedra he mistakenly attributes to Bacchus' Shrine can lend no support to his hypothesis.²⁴⁶ Similarly, Palmer's identification of the Shrine with the 36 BC rebuilding of a shrine

²³⁹ Like the Tholus, the Shrine faced west. Coarelli 1993e, 290-1.

²⁴⁰ Coarelli 1982, 35; cf. Chap. VI #32, Nash 1961-1962, Vol. 1: 165, and Roller 1999, 314.

²⁴¹ See #32.

²⁴² It was probably located farther up the Palatine or the Velia. Paus. 8.46.5; Bruhl 1953, 199.

²⁴³ With an ornamented ceiling, the Tholus may have resembled the Rotunda at Termessos (#62) or the Hadrianic Temple of Tyche at Side (see Chap. VI #59).

²⁴⁴ The cult statue was presumably visible enough from the exterior for Cassius Dio to remark on a change in its orientation. Whether this suggests that the Tholus lacked cella walls is debatable.

²⁴⁵ Coarelli 1982, 37-9. For P. Cornelius Scipio Nasica, see Val. Max. 8.15.3, *Vir. ill.* 46.3, Schol. *Iuv.* 3.137.2, Simon 1990, 147, and Roller 1999, 288, 311 and 313-4.

²⁴⁶ For alternative dating theories, see Jordan and Hülsen 1907, 103, and Graillot 1912, 332.

to Mutinus Titinus, an Etruscan god whom he associates with Liber, is purely speculative.²⁴⁷

The Tholus' location on the via Sacra, between the Temples of Vesta and the Penates,²⁴⁸ seems appropriate in light of Cybele's Anatolian origins.²⁴⁹ More generally however, the prime position of both the Tholus and the Shrine reveals the esteem in which Cybele and Bacchus were held in the late Republic.²⁵⁰ As a protector of the State and the mother of the gods,²⁵¹ Cybele and her neighbor Bacchus, who oversaw young men's transition into adulthood,²⁵² played prominent roles in first century and early Imperial Rome. Although both gods are ultimately derived from the Greek world, their round shrines have no direct Greek precedents. In view of their size and location however, they recall the Monument of Lysicrates in Athens (#3) and the Rotunda at Termessos (#62),²⁵³ while as shrines to Cybele and Bacchus, they look forward to Imperial dedications both in and outside of Rome.²⁵⁴

The Shrine of Venus, Rome (#55)

The Shrine of Venus (#55) formed part of the vast *horti Sallustiani*, gardens created in the late Republic, which numbered among the most favored Imperial residences from the first century AD.²⁵⁵ Excavated in the sixteenth century, the

²⁴⁷ For Mutinus Titinus, see Fest. p. 142 L, Bruhl 1953, 26, and Palombi 1997, 439-41. Palmer's (1974, 199) attribution of the Shrine to Cn. Domitius Calvinus is hampered by the *terminus ante quem* (43 BC) supplied by Cassius Dio (46.33.1-3).

²⁴⁸ For the Temple of the Penates, see Chap. VII #52.

²⁴⁹ Coarelli 1982, 37.

²⁵⁰ For the cults of Cybele, see Roller 1999, and of Liber, see Bruhl 1953. That her cult was strong is attested by Magna Mater's temple on the Palatine, built to accommodate her cult image in 191 BC (Liv. 29.14.13-4, 36.36 and 37.2; Vir. ill. 46.3; Prud. mart. Rom. 206; Serv. Aen. 7.188; Iuv. 3.138 fol.), rebuilt in 111 (Val. Max. 1.8.11; Obseq. 39; Ov. fast. 4.348) and enlarged in 3 AD (R.Gest.div.Aug. 19; Cass. Dio 4; Suet. Aug. 57; Mon. Ancyr. 4.19). Roller 1999, 288, 311 and 313-4.

²⁵¹ Roller 1999, 1-2 and 108-14.

²⁵² Bruhl 1953, 16; Sabbatucci 1988, 105.

²⁵³ However, the Tholus of Cybele lacked the high socle that characterizes both Greek shrines.

²⁵⁴ In particular, Commodus dedicated a round shrine to Liber Pater Commodianus at Portus (#29).

²⁵⁵ For the Horti Sallustiani, see Santangelo 1941, 177-91 and Castelli 1988, 60.

Shrine was described by Flaminio Vacca,²⁵⁶ drawn by Pirro Ligorio or Onofrio Panvinio, based on a sketch of Ligorio,²⁵⁷ and illustrated on contemporary maps.²⁵⁸ Taken together, these sources, possibly supplemented by Pietro Sante Bartoli's remarks of 1620, enable the building to be reconstructed with reasonable certainty.

Vacca discusses the remains of a shrine “di forma ovata,”²⁵⁹ which he discovered near the Porta Salaria.²⁶⁰ He describes it as surrounded by a peripteros of yellow Corinthian columns, while, inside the shrine, he remarks on pairs of alabaster columns flanking its four entrances and a set of steps descending to its elaborate, marble pavement.

Although neither Vacca nor Bartoli, who may comment on the Shrine's use of materials,²⁶¹ ascribes it to Venus, R. Lanciani has connected the plan by Ligorio or Panvinio, cited as depicting the Shrine of Venus *hortorum Sallustianorum*, with their reports.²⁶² It shows half of a round building ornamented with interior and exterior niches and colonnades. Using measurements provided by Panvinio,²⁶³ C. Hülsen has filled out the plan to include a peristasis of sixteen columns, twelve exterior niches,²⁶⁴ four entrances flanked by pairs of interior columns, and a set of interior steps.²⁶⁵ Though substantially in keeping with the Renaissance plan, Hülsen follows Vacca's

²⁵⁶ Vacca, Nardini and Flaconiere 1704, 58, quoted in #55.

²⁵⁷ *Cod. Vat. Lat.* 3439 f. 28r; cf. Hülsen 1889, 271-2.

²⁵⁸ See #55.

²⁵⁹ In the absence of evidence to suggest that Romans built “oval” temples, Vacca's shrine should be understood as round.

²⁶⁰ Vacca uncovered the Shrine in the vigna of his father Gabriele Vacca, see #55.

²⁶¹ It has been questioned whether Bartoli is referring to this or another temple, see Hülsen 1889, 271, and Castelli 1988, 54-5; vs. Lanciani 1888, 3-4.

²⁶² Lanciani 1888, 3-4. For the description appended to the plan, see *Cod. Vat. Lat.* 3439 f. 28r, *Cod. Par. fonds St. Germain* 86 = *Cod. Ital.* 1129, and Hülsen 1889, 271-2.

²⁶³ Hülsen 1889, 271-2.

²⁶⁴ The round Temple of Tyche at Alexandria also had 12 exterior niches. *Lib. descr.* Foerster VIII, p. 529-31; *Cod. Theod.* 14.27; cf. Will 1951, 239 and La Rocca 1999b, 283.

²⁶⁵ The existence of interior steps has led Hülsen (1889, 271-3) to compare this building to the ‘Temple of Minerva Chalcidica’ (#48), concluding that it was a nymphaeum.

description in reconstructing the Shrine's doors and interior, and moreover, does not include the platform, which Panvinio claims raised it above the surrounding area.²⁶⁶

In addition to the Shrine's dedication cited by Ligorio,²⁶⁷ other inscriptions have come to light which relate to this building. They record dedications made by Imperial freedmen or slaves at the Shrine.²⁶⁸ Moreover, Renaissance maps may depict the Shrine as a domed round building²⁶⁹ set within a rectangular portico, apsidal at one end.²⁷⁰

In view of its location, F. Coarelli has proposed that Julius Caesar, whose gardens were incorporated into the Horti Sallustiani following his death,²⁷¹ either built the Shrine or was gifted it by Julius Theopompus.²⁷² Moreover, he suggests that the Shrine, if designed after the Temple of Aphrodite at Theopompus' native Knidos (#16),²⁷³ may have celebrated a Greek-style Venus-Aphrodite. While the Roman Venus was recognized as the mother of Aeneas and the patron of the *gens Iulia*, most notably in Caesar's Temple of Venus Genetrix,²⁷⁴ in the late Republic, a new Venus emerged through association with the Greek goddess of love and fertility.

²⁶⁶ See above.

²⁶⁷ See above and Lanciani 1888, 6. Though occasionally doubted, as Ligorio saw the Shrine shortly after its excavation (demonstrated by its inclusion in his 1561 plan of Rome) and as A. Fulvio (1527, 14) reported the discovery of a similar inscription, it is unlikely that the dedicatory inscription was fabricated. Castelli 1988, 57.

²⁶⁸ For these inscriptions, found in the Horti's necropolis on the via Salaria, see *CIL* VI 122 and 4327 = 30699 = *ILS* 3184 and 32451, and *CIL* VI 32468 quoted in #55, Lanciani 1888, 10-1, and Coarelli 1999k, 116.

²⁶⁹ A comparable roof appears in Peruzzi's drawing of the Temple of Hercules Victor *in foro Boario* (#43).

²⁷⁰ Although the Shrine is often confused with the Temple of Venus Erycina (see #55), Renaissance maps (see Castelli 1988, 57 fig. 4) demonstrate that the two are not equivalent. Using these maps, Coarelli (1999k, 115-6) links a rectangular temple found at the intersection of Via Gaeta and Via Curatone to the Temple.

²⁷¹ Obseq. 71; Cass. Dio 42.26.3; Ps. Cic. *in Sall.* 7.19; cf. Coarelli 1983b, 215 n. 52, and Castelli 1988, 59.

²⁷² Coarelli 1983b, 215, 1995k, 10-1, and 1999k, 117.

²⁷³ Comparable in this respect is the Temple of Venus Erycina (see above), to which Strabo (6.2.6) refers as a "copy" of the Temple of Aphrodite at Eryx. See *RRC* I 448 (denarius, minted by Considius Nonianus in 63-57 BC, which depicts the Temple as rectangular) and Castelli 1988, 53-4, 59 and fig. 1.

²⁷⁴ For Venus' cult, see Schilling 1954.

Coarelli's identification may be supported by the Shrine's use of Greek images of Aphrodite, including an Archaic head,²⁷⁵ and lavish materials, evocative of Hellenistic palaces, in its decorative program. More generally, the abundant precedents for tholoi to Aphrodite as well as evidence for her and Venus' worship in garden settings make viable the dedication of a round shrine to Venus-Aphrodite.²⁷⁶

In addition to her Temple at Knidos, Aphrodite was honored with a round shrine in her sanctuaries at Aegina and Paestum.²⁷⁷ In literature, she is documented as the recipient of an Aphrodision beside gardens on Hieron II's ship,²⁷⁸ a tholos next to sleeping compartments on Ptolemy Philopater's yacht,²⁷⁹ and a shrine, together with Zeus, in the Agora at Sparta.²⁸⁰ Tholoi were set up in gardens throughout the Greek world to honor Aphrodite Ourania,²⁸¹ while Venus Fisica is depicted in Pompeian wall paintings as the recipient of round shrines.²⁸² Moreover, inscriptions note that Venus received a temple in the Horti Serviliani²⁸³ and remains point to a round temple

²⁷⁵ Santangelo 1941, 139-40; Simon 1990, 214-5. Additionally, pieces of two Classical "thrones" or altars have been uncovered which, if genuine, are significant for their depiction of scenes integral to Venus' cult. de Franciscis 1958, 119-20. Coarelli (1999k, 116) links them and the Archaic head to the Temple of Venus Erycina.

²⁷⁶ Also unlike the Temple of Venus Genetrix, the Shrine may have honored a private cult, which would explain its omission from the Regionary Catalogues.

²⁷⁷ Aegina: Robert 1939, 6 and 423; Paestum: Sestieri 1953, 131-3 fig. 39.

²⁷⁸ Athen. 5.207d-e; Vit. 6.3.10. La Rocca (1986, 20-1) suggests that this room, dated ca. 275-215 BC, functioned as a *cenatio*.

²⁷⁹ This shrine (Athen. 5.205d-e) may be dated to 222-204 BC. Moreover, K. Fittschen (1978, 544-7) suggests that Athenaeus' descriptions of the decoration and layout of both shrines inspired paintings in Room 2 of Casa dei Grifi at Pompeii, the atrium of the Villa dei Misteri, and the villa at Torre Annunziata.

²⁸⁰ This *oikodomema peripheres* (Paus. 3.12.11) contained statues of both gods.

²⁸¹ There were garden sanctuaries of Aphrodite at Athens, Tamasos, Myrikai, Idalion on Cyprus, Samos, Knossos, and Kephistos. Ver. *Aen.* 1.92; Ov. *met.* 10.644 fol.; Athen. 13.572 fol.; Eur. *Med.* 835 fol.; cf. Ziegler and Sontheimer 1979a, 430.

²⁸² Plin. *nat.* 19.50; cf. Charbonneaux 1966, 1125. For examples, see Lehmann 1953, 199 fol., Moorman 1988, 68, 73, 106 (in tholoi), and 152-3, 183, 198, 219, 240 (in garden scenes), Weber 1990, 108-9 Cat. M7-11, and Roux 1992, 198-9 n. 221 (in tholoi); cf. Weber 1990, 109-10 Cat. M12-3 (on terracotta lamps).

²⁸³ Plin. *nat.* 36.23, 25, and 36; NA 28 = AE 1959, 145 and 300; vs. Degrassi cited in Chioffi 1996b, 84.

or nymphaeum on the Viminal,²⁸⁴ ornamented with a copy of Praxiteles' Aphrodite from Knidos.²⁸⁵

Even without evidence to affirm the link between Theopompus and Caesar, and hence the Temple at Knidos and the Shrine in the Horti Sallustiani, the Roman building was undoubtedly influenced by the Knidian Temple and Greek shrines to Aphrodite in its form and decoration. Its garden setting moreover fits within the Greek tradition of celebrating Aphrodite for her role in ensuring both human and agricultural fecundity. Although not foreign to the Italic goddess, this aspect of Venus' character was reinforced through her assimilation with Aphrodite.²⁸⁶

III ANALYSIS

TEMPLE FOUNDATION AND LOCATION

In addition to the availability of funds and space, a variety of factors influenced the foundation and siting of late Republican round temples. The founding of a temple required a *votum*, a *locatio* and a *dedicatio*.²⁸⁷ A *votum* or vow signified a contract made between the vow maker and a divinity, whereby the vow maker obliged himself to build a temple in the divinity's honor.²⁸⁸ Through the process of *locatio*, he joined forces with augurs and magistrates to locate the temple as well as to arrange

²⁸⁴ Its remains have been uncovered near the intersection of via Palermo and via Venezia. Mancini 1913, 170; Neuerberg 1960, Cat. 159.

²⁸⁵ For the original, see #16. The statue and Temple at Knidos may be depicted in some Pompeian wall paintings, see Moorman 1988, 204 and 225-6.

²⁸⁶ Simon 1990, 213-28.

²⁸⁷ These were commonly followed by an *inauguratio* for a *templum* and a *consecratio* for an *aedes*. Ziolkowski 1992, 203-9.

²⁸⁸ See Liv. 5.21.2-3, 8.9.6-8 and 10.19.17, Macr. *Sat.* 3.9.7-11, and Ziolkowski 1992, 193-7, for the formula employed by vow makers.

for its design and construction. On its completion, a magistrate²⁸⁹ oversaw its *dedicatio*, a ceremony that marked the temple's *dies natalis* or dedication day.²⁹⁰

Temples were usually vowed and constructed by local magistrates and occasionally by priestly colleges,²⁹¹ though in the late Republic, a number of victorious generals vowed and built temples in commemoration of their campaigns.²⁹² Booty won in the Hellenistic East financed and ornamented many of these new "victory monuments." The Mundus (#49) attributed to Romulus, Numa's Temple of Vesta (#57) and Shrine of the Camenae (#33), and the Temple of Hercules Victor *in foro Boario* (#43), if built by the consul and censor, P. Cornelius Scipio Aemilianus,²⁹³ represent more traditional foundations, as may the Temple of Hercules Victor *ad portam Trigeminam* (#44), the work of the consul and censor L. Mummius Achaicus or the prosperous olive merchant M. Octavius Hersennus.²⁹⁴

M. Fulvius Nobilior's dedication to Hercules and the Muses (#42) is a prime example of a Temple constructed *ex manubiis*²⁹⁵ to house a sculptural collection acquired as plunder from foreign campaigns.²⁹⁶ Similarly, the Temple of Fortuna Huiusce Diei (#38), if built by Q. Lutatius Catulus, the champion at Vercellae and consul in 102 BC, would provide evidence for the phenomenon of temples vowed on campaign and constructed when the vow maker had obtained a position of political importance at home.

²⁸⁹ This magistrate could be the vow maker elevated to the status of censor or *duumvir*.

²⁹⁰ The *dies natalis* marks the date of future festivals celebrated in connection with the temple. Ziolkowski 1992, 203-9.

²⁹¹ Ziolkowski 1992, 198-9.

²⁹² For a list of mid-to-late Republican temples vowed and constructed by victorious generals, see Ziolkowski 1992, 200.

²⁹³ See #43 above.

²⁹⁴ Servius (*Aen.* 8.363) and Macrobius (*Sat.* 3.6.11) relate that Hersennus, as a private individual, asked for public land on which to build a private shrine (*impetrato a magistratibus loco*). Ziolkowski 1992, 218, and see #44 above.

²⁹⁵ Though funded by booty, temples built *ex manubiis* required the approval of the Senate to commemorate public cults. Ziolkowski 1992, 235-6 and 241-50.

²⁹⁶ Though vowed on campaign, the Temple can be linked to his consulship.

Like the Temple of Hercules Victor by the Tiber, if vowed by M. Octavius Hersennus, the Shrine of Venus (#55) may mark a dedication made by a private individual. F. Coarelli has proposed that Julius Theopompus, a prominent citizen of Knidos, gifted the Shrine to Julius Caesar.²⁹⁷ For its location in Caesar's Horti, the Shrine may be a private foundation²⁹⁸ in contrast to other late Republican round temples, which honored public cults.²⁹⁹

Outside of Rome, epigraphical evidence suggests that the Shrine and the Temple of Fortuna Primigenia at Praeneste (#30-1) were built by magistrates and *negotiatores* drawn from noble Praenestine *gentes*. Similarly, a local magistrate constructed the Monopteros at Pompeii (#28), while on Delos, the Hermaists, a fraternity drawn from the Italian merchant classes, dedicated the Shrine of Hermes and Maia (#10).³⁰⁰ By contrast, the Round Temple at Tibur (#64), if an *aedes* of the sibyl Albunea, may have been mandated by the Sibylline books and constructed by a priestly college.

Once a temple was vowed, the vow maker attended to its *locatio*. This procedure consisted of choosing a site, determining the boundaries of its inaugurated area,³⁰¹ locating the temple within this area, and arranging for its construction.³⁰² Frequently, the temple would be sited within an existing religious district like the Porticus Minucia, the whole of which was probably inaugurated prior to the addition of the Temple of Fortuna Huiusce Diei.³⁰³ Similarly, a temple might be founded in a

²⁹⁷ See #55 above. It is possible that Theopompus, as a foreigner, was not in a position to dedicate a shrine which he was legally entitled to vow.

²⁹⁸ The Temple of Bona Dea, built by a Vestal virgin, was also a private foundation. Chioffi 1993, 197-9.

²⁹⁹ Even if P. Cornelius Scipio Corculum founded the Tholus of Cybele as a private individual, as it is sited on the via Sacra, it almost certainly commemorated a public cult.

³⁰⁰ As at Praeneste and possibly Pompeii, it is likely that the Hermaists used income from trade to finance their Shrine.

³⁰¹ See Chap. III part II.

³⁰² Ziolkowski 1992, 203-9.

³⁰³ Ziolkowski 1992, 212-4; cf. Chap. III part II.

region with long-standing ties to the divinity to whom it was dedicated. Examples include the Temples of Hercules Victor in and around the forum Boarium and the Mundus and Temple of Vesta in the Roman Forum, since the forum Boarium's connections to Hercules can be traced back to the Archaic period as can the Mundus' and Vesta's links to the Forum.³⁰⁴

Further, a temple's location could be determined by law³⁰⁵ or by political ambition. Locations along the "via triumphalis," the route followed by the triumphal *pompa*, were especially valuable for victorious generals who wished to boast of their power and prestige.³⁰⁶ Finally, the nature of the cult played a role in site selection. Only the temples of native or long assimilated cults could be located within the city pomerium.³⁰⁷ As a result, most of the late Republican temples in Rome, both round and rectangular, stood outside the city walls.

In the late Republic, building work in Rome focused on temples and private victory monuments³⁰⁸ in the zone of the Campus Martius.³⁰⁹ In addition to accommodating foreign cults, the Campus Martius provided more space than was available within the pomerium³¹⁰ for the temples of established cults and deities. Among its added attractions was the Circus Flaminius, a grand monument built by the democratic leader C. Flaminius Nepos in 220 BC, and its access to the triumphal route. The Temple of Hercules and the Muses occupied a prime location along the

³⁰⁴ Moreover, both show the strict adherence to the cardinal points that was characteristic of 7th c. building. Scott 1993b, 162-4; cf. Coarelli 1983b, 219 (the Mundus' W orientation). For the principles behind temple orientation, see Chap. III and Gros 1976a, 147-53.

³⁰⁵ Ziolkowski 1992, 219-33 (the *lex Papiria*).

³⁰⁶ This would explain why the foundations of the bitter enemies M. Fulvius Nobilior and M. Aemilius Lepidus, who built the Temple of Juno Regina *in circo Flaminio*, stood beside each other. Ziolkowski 1992, 218.

³⁰⁷ Cass. Dio 40.47.3-4 and 53.2.4; cf. Ziolkowski 1992, 266-7 and 276-7. Ziolkowski (1992, 275) considers this due to a shortage of space, rather than hostility towards foreign cults.

³⁰⁸ The Theater of Pompey, ca. 61-55 BC, is a prime example as is the rebuilding of the Temple of Jupiter Optimus Maximus employing marble columns from the Olympeion at Athens (Plin. *nat.* 36.45 and Gell. 2.10). Zanker 1988, 21-4.

³⁰⁹ Ziolkowski (1992, 292 and 300) details other reasons why the Campus Martius may have appealed to late Republican temple builders.

³¹⁰ For disputes surrounding the limits of the pomerium, see Andreussi 1999, 96-105.

triumphal route and opposite the Circus Flaminius.³¹¹ Likewise, the Temple of Fortuna Huiusce Diei benefited from its proximity to the Circus Flaminius, as did the Temples in and around the forum Boarium, which were near the Circus Maximus. The Temple of Vesta and the Mundus, by contrast, filled highly prominent positions within the pomerium in the midst of buildings essential for the political and religious guidance of Republican Rome.

Adjacent to the Roman Forum, the Shrine of Bacchus and the Tholus of Cybele were sited on the via Sacra. Though not as ancient as Vesta's cult, Bacchus received his first temple at Rome in 493,³¹² and Cybele was introduced into the Roman pantheon in 204 BC.³¹³ Moreover, the prominent positions of their Shrines may be explained as a factor of their size, whereas its function as a tribute to the patron of the *gens Iulia* probably determined the setting of the Shrine of Venus.

Like Rome's Campus Martius, the cities of Latium underwent a vast reorganization in the late Republican period. The Round Temple at Tibur and the Shrine and Temple of Fortuna Primigenia at Praeneste reveal the extensive planning involved in the layout of cities throughout Latium. An elaborate substructure was built to accommodate the Round Temple on the acropolis at Tibur, the most prominent area of the city. Its location may have been inspired by cult factors, as the goddess Albunea had both a *domus* and a *nemus* near the Anian falls that flow beneath the acropolis.³¹⁴

³¹¹ In addition, both temples are near the Circus Flaminius as Vitruvius (1.7.1) suggests, (*templa Herculi, in quibus civitatibus non sunt gymnasia neque ampitheatra, ad circum*. Ziolkowski 1992, 299.

³¹² The Temple of Ceres, Liber, and Libera was ordered by the Sibylline books in 499 or 496 BC (Dion. Hal. 6.17.2-3; Tac. *ann.* 2.49.1), constructed, and dedicated in 493 (Dion. Hal. 6.94.3). Moreover, the festivals associated with it, the *Ceralia* and the *Liberalia*, formed part of an Archaic or "Numan" cycle of ca. 6th c. date. Coarelli 1993d, 260.

³¹³ Ov. *fast.* 4.343 fol. Roller 1999, 263-71 and 275-8. For the Palatine temple built in 191 BC, see #34 above.

³¹⁴ If the nearby rectangular temple is dedicated to Tiberinus, a god frequently connected with Albunea, then religious arguments for the Round Temple's location gain greater support.

Similarly, the terraced Sanctuary of Fortuna Primigenia at Praeneste showcases its Shrine and Temple on the slope of a hill near a *nemus* of the goddess.³¹⁵ The Shrine acts as a prelude to the Temple, which crowns the complex. The whole of the terraced sanctuary, built to link both buildings, relies on the symmetric, axial and theatrical qualities of Greek sanctuaries³¹⁶ to manipulate the ascent of its visitors and impress them with its grandeur.

The Monopteros at Pompeii and the Shrine on Delos, comparable in size to the Shrine at Praeneste, occupied less prominent positions. Both stood in fora, the former in the Foro Triangolare, a crowded precinct next to Pompeii's theater and athletic district, and the latter, together with other shrines, altars, and statues, in the Agora of the Hermaists near Delos' port.³¹⁷

Whereas these Shrines balance their proximity to significant monuments against available building sites, the patrons at Tibur and Praeneste placed such a high value on dramatic locations and established cult sites that they manipulated natural areas to provide settings for their round temples.³¹⁸ In-between these two extremes are the round temples of Rome. As at Pompeii and Delos, some were sited in areas considered politically and socially desirable based on their relationship to specific monuments³¹⁹ and, as at Latium, religious sites. While, thanks to Rome's expansion into underdeveloped areas like the Campus Martius, others were allowed considerable freedom in their site selection as well as scope for sophisticated layouts.³²⁰

³¹⁵ The Temple of Feronia at Nazzano (#21) is comparable to both sites since a *lucus* (Cato frg. 30; cf. Verg. *Aen.* 7.697) provided the principal impetus for its foundation.

³¹⁶ See #30-1 above.

³¹⁷ This area would have held strong appeal for a merchant fraternity.

³¹⁸ Prior to the 2nd c. BC, there is no evidence for any significant development on the hillside at Praeneste. With a "blank slate," the Sanctuary's architects and patrons enjoyed almost unlimited choice in designing and laying out the site.

³¹⁹ For example, Q. Lutatius Catulus' desire to link the Temple of Fortuna Huiusce Diei with that of his illustrious "ancestor", C. Lutatius Catulus, motivated its awkward placement in-between two rectangular temples in the Porticus Minucia Vetus.

³²⁰ The Temple and Porticus complex of Hercules and the Muses provides a good example.

Whatever their environment, the shape of late Republican round temples sets them apart from their surroundings. This is most notable in the forum Boarium, where the two Temples of Hercules Victor, lacking boundary walls, showcase their circularity from every angle. Moreover, like its round form, the style and orientation of the Temple of Hercules Victor *ad portam Trigeminam* distinguishes it from the nearby Temple of Portunus, as the Round Temple at Tibur forms a marked contrast to the rectangular temple. Whether chosen for religious or aesthetic reasons, the round form is well suited to temples of the late Republic built in settings determined by cult, political and personal considerations as well as finances and available space.

BUILDING MATERIALS AND TECHNIQUES

Masonry techniques

The materials and techniques used in the construction of late Republican round temples accord well with building trends current in Roman Italy in the second and first centuries BC. Among these trends, the use of *opus quadratum* masonry, consisting of stone blocks laid as headers and stretchers, is most notable in the walls of the Temple of Hercules Victor *ad portam Trigeminam* (#44),³²¹ while *opus incertum* and *opus reticulatum*, types of stone-faced cement work, can be found in the foundations and walls of round temples in Rome, Tibur, and Praeneste. The former technique, Vitruvius claims³²² and the archaeological record suggests, is typical of Classical and Hellenistic Greek practice,³²³ while the latter two are native to Italy.³²⁴

³²¹ As in the Temple by the Tiber, one may assume that *opus quadratum* was used in the marble Temples of Jupiter Stator and of Mars *in Circo*, see ‘Introduction’ above.

³²² Vit. *arch.* 2.8.5-7. For Vitruvius’ opinions on building materials, see below and Gros 1982, 673 and 675-9.

³²³ For examples in Greece and the Greek East, see Lugli 1957, 179.

³²⁴ Vit. 2.8.1: *Structurarum genera sunt haec: reticulatum quo nunc omnes utuntur, et antiquum quod incertum dicitur.*

Prevalent in the second century BC, *opus incertum* was gradually replaced by *opus reticulatum* in the first century.³²⁵ It is not surprising therefore that, while most round temples employ *incertum* work, only one, the Temple of Fortuna Huiusce Diei (#38), makes extensive use of an early *reticulatum*.³²⁶

These two methods, coursed stone and cement work, were employed by Roman architects to simulate Greek temples, whose marble construction they admired, though found costly and impractical to recreate. Stone blocks with a marble facing were used in the Temples of Hercules Victor by the Tiber, and possibly of Vesta (#57), Hercules and the Muses (#42), Hercules Victor *in foro Boario* (#43), and Venus (#55).³²⁷ The walls of the Tiber Temple consist of a socle, formed from header and stretcher blocks of marble and travertine, and courses of travertine revetted with marble plates.³²⁸ The marble plates, in turn, are drafted to resemble a pattern of taller and shorter courses.³²⁹ With a tall socle and coursed masonry, the Temple's elevation closely recalls that of Hellenistic buildings like the Tholos at Epidauros (#13) and the Hieron and Arsinoeion (#58) at Samothrace.

In their composition and ornament, late Republican or early Augustan travertine-faced mausolea, like the round tomb of Caecilia Metella, draw from the same sources. Buildings like these may have influenced the development of First style wall painting, which depicts varied masonry courses resting on a plinth or

³²⁵ Coarelli (1977, 16-8) postulates that population pressures of the late 2nd c. BC necessitated the development of building materials that could be quickly, easily and cheaply produced by a large slave-powered work-force and used for projects for which they were not specifically tailored.

³²⁶ Coarelli 1977, 13. Other examples of early or *quasi-reticulatum* work include the Lacus Iuturnae as rebuilt in 116 BC, the Horrea Galbana, ca. 108, and the House of the Griffins, ca. 100 BC, while the first fully developed example of *opus reticulatum* is the Theater of Pompey, ca. 61-55 BC. Coarelli 1977, 10-5; Sear 1982, 75-6; Adam 1994a, 129-30.

³²⁷ B. Peruzzi's drawing (see #43) suggests that the Temple of Hercules Victor *in foro Boario* was either constructed of ashlar masonry or stuccoed to mimic marble.

³²⁸ The revetment was adhered to its backing with U-shaped clamps following Hellenistic practice. Rakob and Heilmeyer 1973, 12.

³²⁹ In its original form, the cella wall had seventeen courses of tall and short masonry above the socle. Strong and Ward Perkins 1960, 11.

socle.³³⁰ As a complement to this influence, the drafted margins of the Temple by the Tiber may imitate a style that originated in stucco work.³³¹

Stuccoed wall paintings provide a perfect analogy with late Republican round temples that used the new Italic techniques of *opus incertum* and *opus reticulatum*. While most temples employed *opus incertum* in their foundations,³³² the Round Temple at Tibur (#64) and the Temple of Fortuna Primigenia at Praeneste (#31) had cella walls constructed of this material and stuccoed to approximate the forms and styles of Greek masonry.³³³ Creating these walls required both the skills of a master craftsman and the talents of an architect. Accounting for personal styles, it seems probable that, like First style wall paintings preserved in building interiors, their work was varied enough in its components and colors to produce wall surfaces that were more representational than realistic.³³⁴

Roofing techniques

With few exceptions, the roofs of late Republican round temples are not sufficiently preserved to reveal their form and the materials and techniques used in their construction. Those that are extant, namely the roofs of the Shrine of Fortuna Primigenia at Praeneste (#30) and the Shrine of Hermes and Maia on Delos (#10), follow Greek precedents in their design. Comparable to the Monument of Lysicrates at Athens (#3) and the Rotunda at Termessos (#62), their roofs consist of marble plates, sculpted to resemble an overlapping network of tiles.³³⁵ For both structural

³³⁰ Ling 1973, 15 and 22-3, and 1991, 13.

³³¹ Ling (1973, 23) points to other examples of cross-influences between real and painted architecture.

³³² See 'Building components' below.

³³³ While stucco both protected and regularized wall surfaces (see Adam 1994a, 121-2 and 245), Vitruvius (7.17) considered it a second rate alternative to marble for well-designed buildings.

³³⁴ See 'Stucco and mosaic work' below.

³³⁵ These were meant to mimic the roofs of larger Greek tholoi, see below.

and aesthetic reasons, it seems likely that most late Republican round temples followed suit in preferencing Greek to Roman methods of roof construction.

A Greek roof consisted of a wooden ridge beam or truss³³⁶ and a system of wooden rafters,³³⁷ anchored to the top masonry course and cornice of a temple's walls. The rafters determined the roof's slope, while terracotta or marble tiles comprised its ornament.³³⁸ By contrast, some Roman roofs took the shape of domes, formed from closely-fitted stone blocks³³⁹ or a matrix of concrete.³⁴⁰ While both Greek and Roman roofs relied on a temple's foundations and cella walls to carry their weight, domes, made of much heavier materials, required additional support. Of the round temples, only the Temple at Praeneste (#31) had thick enough foundations, walls and, as reconstructed by F. Rakob, buttresses to sustain a domed roof.³⁴¹

Also in favor of timber roofs are slots for roofing supports found on the coffer blocks of the Round Temple at Tibur (#64) and remains of marble protomes and antefixes discovered near the Temples of Fortuna Huiusce Diei (#38) and of Hercules Victor *ad portam Trigeminam* (#44). Employed in Greek tholoi like the Philippeion at Olympia (#22), these features would not be out of place in late Republican round temples, which favored Greek models in other aspects of their form and design.

BUILDING COMPONENTS

³³⁶ In the prop-and-lintel system, the ridge beam was supplemented by perpendicular props that supported the apex of the roof. Hodge 1960, 35 and 39.

³³⁷ The top of the rafters were secured with tie beams to maintain the shape of the roof. Hodge 1960, 45.

³³⁸ Hodge 1960, 61-8.

³³⁹ For details concerning the construction of stone arches, vaults and domes, see Adam 1994a, 158-73.

³⁴⁰ *Opus caementicium* was modeled on wooden scaffolding, mirroring the shape of the dome. Adam 1994a, 174-81.

³⁴¹ While the domes shown in Renaissance drawings on the Temple of Hercules Victor *in foro Boario* and the Shrine of Venus may mark Imperial reconstructions, the foundations and *opus reticulatum* walls of the Temple of Fortuna Huiusce Diei would have been strong enough to support the lighter domes of the mid-Imperial period, see Chap. VI 'Roofing techniques.'

The building components of late Republican round temples are derived from a variety of sources. Their foundations, where known, are Greek in form, yet employ Roman materials.³⁴² The foundations of the Temples of Hercules Victor *ad portam Trigeminam* (#44) and of Fortuna Huiusce Diei (#38), like those of the Tholos at Epidauros (#13) and Philippeion at Olympia (#22), consist of two stone rings, placed below the Temples' cella and colonnade. In the Temple of Hercules by the Tiber, this second ring extends beneath its stairs, like the radial bands that support the Shrine of Hermes and Maia on Delos (#10). Also of stone are the foundations of the Temple of Hercules and the Muses (#42), while *opus incertum* is used in the rings of the Temple of Fortuna Primigenia at Praeneste (#31) and the core of both the Temple of Vesta (#57) and the Mundus (#49).³⁴³ Though of Italic fabric, the latter temples, like the Tiber Temple, incorporate a pit for ashes and offerings, comparable to that at Epidauros. By extension, the Monopteros at Pompeii (#28) includes a substantial well in its foundations, while the Shrine of Fortuna Primigenia at Praeneste (#30) rests on the opening to a well, much like the Rotunda at Ilion (#14).

While the krepides of the two Temples of Hercules Victor and the Shrine on Delos are highly Greek in flavor,³⁴⁴ the high podia and frontal stairs that characterize the majority of round temples recall Italic practice.³⁴⁵ Though influenced by Etruscan styles, high podia, when elaborated with base and cornice moldings drawn from the Greek repertory, form pedestals that depart from the Etruscan conception of a podium as an integral part of a temple.³⁴⁶ This Roman innovation, most evident in the Temple of Fortuna Huiusce Diei and the Round Temple at Tibur (#64), extends to the podia of

³⁴² While arcaded terraces are common features of Greek and late Republican sanctuaries, Tibur preserves the only example used in connection with a round temple.

³⁴³ To facilitate the laying of the foundations, their trenches were probably lined with a wooden frame. Adam 1994a, 81-6.

³⁴⁴ The Tholoi at Delphi (#11-2) and Olympia (#22) provide good examples.

³⁴⁵ Both the Monopteros at Pompeii and the Shrine at Praeneste lacked podia.

³⁴⁶ Shoe 1965, 23.

contemporary rectangular temples such as the Round Temple's pair at Tibur and the Temple of Portunus.³⁴⁷

Like the moldings which decorate Roman podia, the round temples' columns adapt ornaments derived from Greek sources to Italic tastes. While this is most notable in their bases and capitals, the columns' shafts demonstrate both an acceptance of Greek practice and a willingness to vary and experiment with Greek forms. Following Greek models, the shafts of the Temple of Fortuna Huiusce Diei and the Round Temple at Tibur are independent of their column bases. In the Temple of Hercules by the Tiber and the Shrine at Praeneste however, the column bases are carved of one piece with the tip of the shafts' flutings. This method of extending the base is characteristic of late Republican practice.³⁴⁸

Ornamental grillwork set into the intercolumnations of a peristasis, as in the Temple of Vesta and the Shrine of Fortuna Primigenia, is drawn from Greek sources, but finds wider use in the buildings of Republican Italy. In the Greek world, this means of obstructing interior views is confined to temple architecture like the Parthenon and, on a smaller scale, the Rotunda at Ilion. In Roman Italy however, modest secular constructions like Varro's aviary at Casinum³⁴⁹ as well as temples employed this treatment.

Though the cella walls of late Republican round temples could follow either Greek or Roman practice in their construction and decoration, their form was without doubt based on Greek models. The peripteral Tholoi at Delphi (#12), Epidauros, and Olympia are reflected in the Temples of Vesta and Hercules Victor, in the first phase of the Temple of Fortuna Huiusce Diei, in the Round Temple at Tibur, and in the

³⁴⁷ Adam 1994b, *passim*.

³⁴⁸ For additional examples, see Rakob and Heilmeyer 1973, 6. While the Monopteros at Pompeii lacked bases, it is impossible to determine which method the remaining round temples followed.

³⁴⁹ Varro *rust.* 3.5.9.

Shrine of Venus in the Horti Sallustiani (#55), while the Temple of Hercules and the Muses,³⁵⁰ the second phase of the Temple of Fortuna Huiusce Diei, and the Temple of Fortuna Primigenia recall the closed drums of the Skias at Athens (#6) and the Arsinoeion at Samothrace (#58). Smaller tholoi like the Monument of Lysicrates (#3) and the Rotunda at Ilion may have provided precedents for the Shrine at Praeneste, the Mundus and the Shrine of Hermes and Maia.³⁵¹

Moreover, the large doors³⁵² flanked by windows and framed with travertine of the two Temples of Hercules Victor and of the Round Temple at Tibur may be based on a similar arrangement in the Philippeion. Although there is much that is specifically Greek or Roman about these temples, their final design results from a skillful amalgamation of Greek models and Roman technical innovation that heralds the development of a new indigenous architecture.

DECORATIVE DETAILS

The podium molding

Although the high podia of the late Republican round temples are a legacy of the Etruscans, the moldings used to ornament the bases and crowns of these podia are drawn from a Greek repertory of styles and motifs. The most common decorative element in Roman podium molding is the cyma reversa, an inverted S-curve, that is visible in its pure form in the crown moldings of Temple C of the Area Sacra di Largo Argentina and of the Temple of Portunus by the Tiber.³⁵³ It is also used as both the

³⁵⁰ Of the Greek tholoi, only the Tholos at Epidauros with its rectangular ramp and the Temple of Artemis at Stymphalos (#61) with its two-roomed pronaos employ both round and rectangular forms.

³⁵¹ In view of their size, these tholoi may also have inspired the design of the Shrine of Bacchus (#32) and the Tholos of Cybele (#34).

³⁵² See Vitr. 4.6, for a discussion of the orders and proportions of doors and their architraves.

³⁵³ Shoe 1965, 144.

crown and base moldings of the rectangular temple at Tibur and as the base molding of the Round Temple (#64).

The crown molding of the Round Temple at Tibur, by contrast, combines a cyma recta, an S-curve, with a cyma reversa and a fascia or vertical rise.³⁵⁴ The cyma recta, a favorite motif of the Romans from the late second century BC,³⁵⁵ is frequently used with other standard forms to produce highly ornate moldings.³⁵⁶ The crown molding of the Shrine of Fortuna Primigenia at Praeneste (#30), like the crown molding of the Round Temple at Tibur, employs a combination of a cyma recta, a cyma reversa and a fascia.³⁵⁷ Similarly, a cyma recta is the dominant element of the crown molding of the Temple of Fortuna Huiusce Diei (#38) in its first phase,³⁵⁸ while, in the simplified moldings of its second phase, the cyma recta is retained together with a cyma reversa.³⁵⁹

The base moldings of the podia of Roman round temples receive a variety of treatments involving the same decorative elements that shape their crown moldings. While the base moldings of the Round Temple at Tibur and the Shrine at Praeneste are simple cyma reversas,³⁶⁰ those of the third phase of Temple A and of the first phase of the Temple of Fortuna Huiusce Diei are complex combinations of cyma reversas, tori and scotias. Even the cyma recta topped by a fillet and concave cavetto of the Temple of Fortuna Huiusce Diei's second phase, much like the base molding of

³⁵⁴ Projecting significantly, it closely resembles the cornice moldings of the Forum Holitorium's Temples of Janus and of Juno Sospita, as rebuilt in the 1st c. BC, see Shoe 1965, 157, 162-4 and 173, and Giuliani 1970, 136-7.

³⁵⁵ Shoe 1965, 33.

³⁵⁶ The Temple of Portunus by the Tiber explores the potential of this form to its fullest with a complex crown molding uniting several cyma rectas, cyma reversas and fascias with fillets.

³⁵⁷ Shoe 1965, 174.

³⁵⁸ The cyma recta is combined with two fascias and a cyma reversa. In composition, it is similar to, though more elaborate than, the equivalent moldings on Temple A's podium in its third phase (see #38 above), and the moldings of the Temple of Veiovis in Rome, ca. 78 BC, and of the Temple of Hercules in Ostia, ca. 100-80 BC. Shoe 1965, 175, 177-8 and 182-3.

³⁵⁹ Shoe 1965, 175, 181 and 184

³⁶⁰ They are comparable to the base moldings of the rectangular temple at Tibur and the Temple of Iuno at Gabii. Shoe 1965, 157.

the Temple of Portunus, shows a skillful manipulation of available forms. The cyma reversa and the cyma recta, though based on common Greek motifs, shape moldings in Italy that are unparalleled in the Greek world.³⁶¹

The column base

The column bases of late Republican round temples³⁶² show variations on the Greek Ionic base.³⁶³ The Greek base, characterized by two tori flanking a fully defined scotia, is approximated in the first Italic examples of the late third century BC with two half rounds separated by a curved or vertical section.³⁶⁴ By the end of the second century, nearly all Italian column bases show some evidence of a scotia. This scotia or inverted half round is usually defined by fillets along the interior of the two tori.³⁶⁵ The bases of the Round Temple (#64) and the rectangular temple at Tibur include scotias shaped by a full lower fillet but lacking an upper fillet,³⁶⁶ while the bases of the Shrine of Fortuna Primigenia at Praeneste (#30), the Temple of Hercules Victor *ad portam Trigeminam* (#44), and the Temple of Portunus have scotias flanked by two full fillets.³⁶⁷

By contrast, the bases of the Temple of Fortuna Huiusce Diei (#38) and of Temple A in the Area Sacra di Largo Argentina include two well-defined scotias between tori. The double scotia has clear markings of Asiatic influence.³⁶⁸ A later

³⁶¹ The cyma recta employed as a base molding in Italy, where it is rarely if ever used in Greece, gives an idea of the inventiveness of Italian craftsmen. Shoe 1965, 182.

³⁶² For Vitruvius' opinions on contemporary column bases, see Gros 1982, 684-5.

³⁶³ The Temple of Nike and the Erechtheion at Athens preserve good examples of the Greek Ionic base. Strong and Ward-Perkins 1962, 5. As a Doric temple, the Monopteros at Pompeii (#28) lacks column bases.

³⁶⁴ Shoe 1965, 191-3; Gros 2001, 495.

³⁶⁵ Examples of scotia both with and without defining fillets can be found in the lower Sanctuary at Praeneste. Shoe 1965, 193.

³⁶⁶ Strong and Ward-Perkins 1962, 8; Shoe 1965, 191-8

³⁶⁷ Shoe 1965, 196.

³⁶⁸ Shoe 1965, 198. The columns of the Temple of the Nymphs in the Via delle Botteghe Oscure provide comparable examples of Attic-Asiatic bases. Strong and Ward-Perkins 1962, 11.

reworking in stucco of the Temple of Fortuna Huiusce Diei's bases to the Attic model betrays the trend towards more conventional forms that will characterize Imperial column bases.³⁶⁹ The standard Attic bases of the Shrine at Praeneste and of the Temples of Hercules Victor and Portunus in Rome are precursors of this trend.

The Corinthian capital in the late Republic

With the exception of the Tuscan Temple of Hercules Victor *in foro Boario* (#43), the Doric Monopteros at Pompeii (#28), and the Doric Shrine of Hermes and Maia on Delos (#10),³⁷⁰ late Republican round temples favored the Corinthian order for their column capitals. In their form and design, they owed much to the Corinthian capitals of late Hellenistic Greece and Asia Minor. In the fifth century BC, the order was developed in Greece for use in the interior of religious buildings like the Temple of Apollo at Bassae. The victory Monument of Lysicrates in Athens (#3) is the oldest surviving structure to employ an external Corinthian colonnade, a fashion that became popular in the third century. The order continued to evolve with great variation until the second century, when a canonical form developed.³⁷¹ This form, used in buildings of the late Hellenistic period like the Arsinoeion at Samothrace (#58),³⁷² the Olympeion at Athens and the Hekateion at Lagina, finds close parallels in the Corinthian capitals of late Republican Italy.

The "normal" or canonical Corinthian capital of the Hellenistic world was exported to Rome and Latium in the late second century BC. Where a capital carved by Greek workmen from Greek materials was not transported directly, imitations

³⁶⁹ Strong and Ward-Perkins 1962, 11-2.

³⁷⁰ The capitals of the Shrine of Venus in the horti Sallustiani (#55) are recorded as both Corinthian and Composite.

³⁷¹ Gros 2001, 471-2.

³⁷² These are the first "normal" Corinthian capitals known from Greek architecture. Roux 1992, 93.

worked by Italian craftsmen were employed in its place. The early history of the Corinthian order in Rome can be reconstructed from examining a few preserved examples. Among them are the Group A capitals of the Temple of Hercules Victor *ad portam Trigeminam* (#44), a capital in the Antiquario Communale,³⁷³ and fragments of capitals from the Temple of Fortuna Huiusce Diei (#38). These employ forms like highly ribbed leaves accentuated with points and hollows, vertical calyces, and curving helices.³⁷⁴ The naturalistic shapes of the Corinthian capitals from the Round Temple at Tibur (#64) and the Shrine at Praeneste (#30) are close in form and ornament to these Roman examples.

After this early blossoming of the order in Rome and Latium, few capitals may be found in the area until the late first century BC.³⁷⁵ Provincial buildings fill this gap with a range of Corinthian capitals, both richly ornamented with organic forms like the late second century BC examples and flatter and more stylized in line with capitals of the early Imperial period.³⁷⁶ Major efforts of the early Empire, like the Temple of Apollo on the Palatine, as well as the capitals of Groups B and C of the Temple of Hercules Victor by the Tiber, point to a trend in the design of Corinthian capitals towards less rounded and more ornamental shapes. The richness and adaptability of the Corinthian order held a lasting appeal for Italian craftsmen, who modified the Greek form with Italic motifs in a near endless array of examples from the late Republic through the end of the Empire.

The Corinthian capitals of the round temples

³⁷³ Rakob and Heilmeyer 1973, pl. 34.2; Gros 2001, 473.

³⁷⁴ von Hesberg 1981a, 21.

³⁷⁵ It is likely that the political chaos of the 1st c. had some influence on the number of public buildings built with the Corinthian order in Rome. von Hesberg 1981a, 22; Gros 1987, 57.

³⁷⁶ Gros 2001, 473.

The Corinthian capitals of the round temples of Rome and Latium provide a fairly coherent picture of the origins of the order in Rome. The Group A capitals of the Temple of Hercules Victor *ad Portam Trigeminam* (#44) rely heavily on late Hellenistic models. Like the capitals of the Hekateion at Lagina and the Church of the Apostles in the Athenian Agora, the Group A capitals are strikingly high and narrow with a 1:0.63 ratio of height to diameter.³⁷⁷ Similarly, they share an interest in the development of naturalistic forms and in the exploration of effects achieved with light and shade.³⁷⁸ All three capitals mark a clear division between the two lower tiers of overlapping acanthus leaves and the well articulated volutes and helices that scroll beneath the abacus.

The striking similarities between the Group A capitals and capitals produced in Greece and Asia Minor, as well as their material, has inclined F. Rakob and W.-D. Heilmeyer to propose a Greek origin. They believe that, like the capitals discovered in the Mahdia shipwreck, the Group A capitals were produced in Greece by Attic craftsmen and then transported with bosses to Rome, where finishing details were worked *in situ*.³⁷⁹ The preserved lower half of a capital from the Temple of Fortuna Huiusce Diei (#38),³⁸⁰ although produced of local Italic stone, shows the same definition, arrangement of acanthus leaves and use of space that characterizes the capitals of Group A.³⁸¹

³⁷⁷ Both the Hekateion and the Church of the Apostles have ratios of 1:0.66. Rakob and Heilmeyer 1973, 24.

³⁷⁸ Heilmeyer 1970, 35-6 and 123; Leon 1971, 155-7 pls. 55.2-3; Rakob and Heilmeyer 1973, 24; Gros 2001, 472.

³⁷⁹ The Gymnasium at Miletus boasts a late Hellenistic capital, similar in style to the Group A capitals, which preserves evidence of bosses. Rakob and Heilmeyer 1973, 23.

³⁸⁰ Like most capitals employed in large, late Republican buildings, those of the Temple of Fortuna Huiusce Diei were carved from two separate blocks. Strong and Ward-Perkins 1962, 12.

³⁸¹ Though stylistically similar, the capitals of the Temple of Fortuna Huiusce Diei show more rounded and less precise carving. This may be due to the relative softness of their material (Anian tufa) and to their intended coating of stucco, which would dull more carefully articulated designs. Comparable capitals may be found in the Agora at Messene and the Tetrastilum at Ostia. Heilmeyer 1970, 36 and 53; von Hesberg 1981a, 21; cf. Leon 1971, 156-7.

Corinthian capitals from the forum, the upper Sanctuary, and the Shrine of Fortuna Primigenia at Praeneste (#30) include tiers of naturalistic leaves that begin to invade the zone of the thick, yet plastically modeled volutes and helices.³⁸² The capitals of the Round Temple at Tibur (#64), though less organic in form, mirror the decorative qualities and spatial effects of the Praeneste capitals.³⁸³ The Tibur capitals have proportions and a decorative scheme that are comparable to the capitals of the Olympeion in Athens.³⁸⁴ At Praeneste and Tibur, the architectonic elements of the capital, the volutes and helices, become secondary to natural forms.

Like the capitals of Group A of the Tiber temple and the Temple of Fortuna Huiusce Diei, the Groups B and C capitals, which date to the Tiberian period, lay a greater emphasis on structural elements, while simplifying and ornamentalizing the organic qualities of the late Republican examples.³⁸⁵ Moreover, like Groups B and C, the Imperial capitals of the Tabularium and the Basilica Aemilia in Rome, which draw clear inspiration from Group A,³⁸⁶ give evidence of the far reaching influence had by the capitals of late Republican round temples on the development of the Corinthian order.

The entablature

In their design and ornament, the entablatures of late Republican round temples rely as much on Greek precedent as on Italic innovation. As Vitruvius

³⁸² Lauter-Bufe 1987, 51 and 82.

³⁸³ Moreover, comparable capitals are preserved from the Temple of Castor and Pollux at Cori and the "Temple of Jupiter" at Terracina. Fasolo and Gullini 1953, 436; Giuliani 1970, 139.

³⁸⁴ Fagerlind 1932, 125; Rakob and Heilmeyer 1973, 27; Gros 2001, 474-5.

³⁸⁵ The flatness of their leaves finds parallels in Augustus' reconstruction of the Temple of Magna Mater in Rome, while their abacuses, volutes and helices recall the capitals of the Forum of Augustus and its Temple of Mars Ultor. Rakob and Heilmeyer 1973, 21-2; cf. Gros 2001, 473.

³⁸⁶ Rakob and Heilmeyer 1973, 28.

testifies,³⁸⁷ Roman architects inherited the Doric entablature, with its plain architrave, triglyph-and-metope frieze, mutules, and cornice, and the Ionic entablature, with its divided architrave, continuous frieze, dentil course, and cornice, from the Greeks. While both forms proved suitable complements to a Corinthian colonnade,³⁸⁸ the Romans made improvements to the Ionic entablature, substituting modillions or brackets for Attic dentils.³⁸⁹ The modillion, inspired by traditional Hellenistic versions of the Doric mutule,³⁹⁰ may have found its first expression in the stucco work of First and Second style wall paintings.³⁹¹ Coupled with Greek Ionic, it defined the Corinthian entablature that would inform the shape of the order in the Imperial period.³⁹²

Of the round temples, the Shrine of Fortuna Primigenia at Praeneste (#30) preserves the only Doric entablature³⁹³ and the Mundus (#49) retains the only Ionic,³⁹⁴ while the Round Temple at Tibur (#64), the Shrine of Hermes and Maia (#10), and possibly the Temples of Fortuna Huiusce Diei (#38) and of Hercules Victor *ad portam Trigemina* (#44) provide early examples of Corinthian. The Doric friezes of the podium and entablature of the Shrine at Praeneste³⁹⁵ show an alternating pattern of triglyphs and metopes with paterae and rosettes as well as bucrania in the podium

³⁸⁷ Vitr. 4.1.2-3 and 4.3.

³⁸⁸ Strong 1963, 171-2.

³⁸⁹ Strong 1963, 171.

³⁹⁰ Strong 1963, 177; Gros 1976a, 148 and 2001, 492-3; Wilson Jones 2000, 141. It is unlikely that the modillions of the Corinthian cornice represent an elongation of Doric triglyphs. Gros 1976a, 204; Adam 1994a, 206.

³⁹¹ The S-curved modillions in the tepidarium of the Casa del Criptoportico at Pompeii are examples of the form used in wall paintings. Strong 1993, 174-7; Ling 1973, 49-50. For other examples, see von Hesberg 1981a, 27-32, and Adam 1994a, 201-7. However, Gros (1976a, 203-7 and 2001, 492-3; cf. Hesberg 1981a, 27 fol.) suggests that modillions developed in an architectural context, which was merely reflected in wall paintings.

³⁹² Modillions were in general use by 50-40 BC. Strong 1963, 176.

³⁹³ As a Doric building, the Monopteros at Pompeii (#28) should be reconstructed with a Doric entablature.

³⁹⁴ The only ornament preserved from the Mundus' entablature is a band of Ionic cymatia or egg-and-dart, which runs below its fragmentary cornice.

³⁹⁵ The cornice which protrudes above the Shrine's entablature, worked on both sides, is identical to the crown molding of its podium. Fasolo and Gullini 1953, 149-52.

frieze.³⁹⁶ Though the rosettes and bucrania are drawn from the Greek repertory of styles and motifs,³⁹⁷ the paterae are a Roman creation of the late second century, only loosely based on Greek precedent.³⁹⁸ Further, Italic variation is notable in the way elements of the frieze are modeled. Among them, the rosettes with rays of pointed petals emanating from a central blossom assume a characteristically Italic form.³⁹⁹

The garland frieze of the Round Temple at Tibur's Corinthian entablature⁴⁰⁰ also introduces Italic innovations into a Greek decorative framework. The garlands of the frieze, which hang from the horns of bucrania and frame paterae and rosettes, are formed of acanthus-like leaves, blossoms and fruits.⁴⁰¹ Both the "acanthusizing" of the leaves and the shape of the garlands, which ride thinly over the bulls' horns yet fall in thick swags, are characteristic of the garland motif as it develops in Italy.⁴⁰²

A marble plaque which may form part of the Temple of Fortuna Huiusce Diei's frieze course is a delicate, highly stylized version of Tibur's frieze. Instead of compact, thickly set swags alternating with sacred objects, thin tendrils of an acanthus plant blossom into rosettes. Though it is difficult to surmise how the frieze of the Temple of Hercules Victor by the Tiber looked, fragments of its geison with an Ionic slope suggest that it, unlike the Round Temple at Tibur, employed modillions beneath

³⁹⁶ The base found nearby has a comparable Doric frieze, but a more complicated cornice. Fasolo and Gullini 1953, 49-50.

³⁹⁷ The Doric entablature of the Tholos at Epidauros (#13) preserves the earliest examples of rosettes in monumental stone architecture, while the northern Propylaion includes some of the earliest bucrania. Phiales, similar to paterae in shape, are first used in a frieze from the so-called Ptolemaion and the Arsinoeion at Samothrace (#58). Drawing from these examples, Kraus (1978, 456-7) proposes a Ptolemaic origin for some of the decorative motifs used in the Doric order.

³⁹⁸ Paterae may derive from Greek skyphoi. Steffanelli et al. 1991, 30-3.

³⁹⁹ Italic rosettes are more clearly visible on the Apsidal Hall at Praeneste. Kraus 1978, 458, 460 and 467 fig. 2.

⁴⁰⁰ A simple cyma reversa and fillet cornice protrudes above the frieze. Delbrueck 1907-1912, 18; Gros 1976a, 217.

⁴⁰¹ Delbrueck 1907-1912, 20.

⁴⁰² Kraus 1978, 460 and 464. Other early examples include friezes from the Temple of Portunus, the Tomb of Bibulus at Rome, and the round altar of Mercury in the Vatican. Honroth 1971, 12; Kleiner 1980, 42-3; von Hesberg 1981b, 204-5 and 209.

its cornice.⁴⁰³ Modillions, like the garlands, paterae and rosettes of the entablature's frieze course, are indicative of the inventiveness of late Republican craftsmen, who felt free to adapt the orders of the Greeks to suit native tastes.

Ceiling coffers

The Round Temple at Tibur (#64) and the Temple of Hercules Victor *ad portam Trigemina* (#44) are the only late Republican round temples to preserve ceiling coffers. Each coffer block at Tibur contains two recessed panels with a central motif of a four-petaled flower beneath a four-leafed acanthus plant. While the use of superimposed acanthus leaves is peculiarly Italic, a rosette framed within a coffer has strong Greek associations.⁴⁰⁴

The ceiling coffers of the Temple of Hercules Victor are very similar in style to those of the Round Temple, yet include bands of Ionic cymatia or egg-and-dart ornament around their recessed panels where the Tibur coffers have a plain strip. This carved enrichment of the coffer bands, though frequently used in Greek marble and wooden coffers,⁴⁰⁵ is exceedingly rare in Roman architecture before the end of the Republic.⁴⁰⁶ It demonstrates how the ceiling coffer developed gradually, transforming a Greek form with Greek and Italic elements as the coffer saw wider use.

Stucco and mosaic work

⁴⁰³ The late Republican Temple of the Dioscuri at Cori and the Tabularium in Rome also use modillions. von Hesberg 1980, 119 and 169.

⁴⁰⁴ The Tholos at Epidauros (#13) provides good examples of ceilings coffers decorated with rosettes. Strong and Ward-Perkins 1962, 25.

⁴⁰⁵ There are comparable examples in marble in the Tholos at Epidauros (#13) and the Temple of Athena Polias at Priene, and in wood, in the Hieron at Samothrace. Ling 1973, 50.

⁴⁰⁶ From the late Republic, stucco (see below) was commonly used to shape details of coffers, as in the vaulted hemicycles at Praeneste. Ward-Perkins 1989, 119-20.

Like carved and molded ornaments applied to architectural members, stucco and mosaic work enlivened the surface of late Republican round temples. R. Ling believes that the stucco work of the late Republic was born of Egyptian and Greek traditions of decorative plaster work. While the Egyptian tradition contributed molded relief ornaments, the Greek inspired a division of the stuccoed surface into forms drawn from monumental architecture.⁴⁰⁷ This combination resulted in the formation of a “Masonry style” in the fourth century BC,⁴⁰⁸ which developed into the First Pompeian style by the second century.⁴⁰⁹ Through depicting architectural elements like socles, masonry courses and cornices supported by modillions,⁴¹⁰ First style wall painting was used to simulate marble temples, like that of Hercules Victor *ad portam Trigeminam* (#44), which set the standard of luxury in the late Republic.

The Round Temple at Tibur (#64) preserves some traces of First style stucco work on its exterior. Similarly, the column bases of the Temple of Fortuna Huiusce Diei (#38) show a later reworking in stucco.⁴¹¹ In addition to facing external walls and architectural members, stucco work was used to shape frieze details. The garland frieze of the Round Temple at Tibur, for example, employed a layer of stucco to elaborate stone forms, while the contemporary Temple of Portunus used stucco, without the benefit of stone, to mold elements of its frieze course.

Fragments of painted stucco discovered inside the cella of the Temple of Fortuna Huiusce Diei indicate that wall paintings formed part of the round temples’ interior decoration. This decoration took the form of either architectural ornament in

⁴⁰⁷ Egyptian plaster casting dates back to the Eighteenth Dynasty (ca. 1570-1320 BC), while Greek stucco work has its origins in the Mycenaean period. Ling (1973, 12-4) has suggested that the two strains merged when Egypt became part of the Hellenistic world.

⁴⁰⁸ Fourth century examples can be found in the Athenian Agora, at Samothrace and at Olynthos, though by the third century, the style had spread throughout the Hellenistic world and remained the most widely used form of interior decoration until the 1st c. BC. Ling 1973, 15.

⁴⁰⁹ Ling 1973, 21.

⁴¹⁰ For the Eastern and Western variations on this pattern, as well as additional types of molded decoration, see Ling 1973, 15-9 and 23.

⁴¹¹ The bases were reworked prior to their incorporation into the cella wall, ca. the mid-1st c. BC.

the First style or pictorial depictions in the Second.⁴¹² A reference to historical paintings by Pacuvius,⁴¹³ which F. Coarelli links with the Temple of Hercules Victor *in foro Boario* (#43),⁴¹⁴ and to images of the Corybantes that adorned the Tholus of Cybele (#34),⁴¹⁵ provide support for the use of Second style painting in cella interiors.

While paintings on stucco covered the temples' walls and architectural ornament, mosaic pavements adorned the floors of their cellas and ambulatories. Fragments of black and white *tesserae* discovered on the cella floor of the Temple of Fortuna Huiusce Diei and possibly the mixed marble pavement of the Shrine of Venus (#55)⁴¹⁶ signal the use of mosaics in late Republican round temples. Mosaic flooring, with origins in the Hellenistic East, continued to be employed in a wide variety of patterns and colors throughout the Imperial period. Similarly, the First and early Second style wall paintings of this period prefigure the development of painted stucco work under the Empire.

Statuary

In addition to exposing Rome to a rich and varied architectural tradition, conquests enabled her to benefit from Greece's highly developed sculptural repertory. Roman generals, now able to experience Greek sculptural displays first hand, by their right as victors, seized statues of religious importance or aesthetic appeal to fund and decorate their own temple foundations. Round temples, like other victory temples of

⁴¹² In the Second style, figural scenes or illusionistic vistas are played out within an architectural framework similar to that of the First style.

⁴¹³ Plin. *nat.* 35.4.19. The Greek paintings displayed in the Porticus Philippi (Plin. *nat.* 35.66, 114 and 144; cf. #42) should not be understood as examples of Second Style stucco work.

⁴¹⁴ Coarelli (1992a, 86 and 164-80; cf. Gruen 1992, 118) speculates that these paintings, like the *tabulae* of Hostilius Mancinus (Plin. *nat.* 35.23), depicted episodes from the Third Punic War and the siege of Carthage.

⁴¹⁵ Mart. *epigr.* 1.70.9-10 quoted in #34.

⁴¹⁶ Vacca, Nardini and Flaconiere 1704, 58, quoted in #55. However, this pavement cannot be dated with certainty.

the late Republic, exhibited Greek statues to underline the prestige and military might of their founders. Among those used in Roman round temples were the statue groups plundered from Greece and Ambracia to decorate the Temple of Fortuna Huiusce Diei (#38) and the Temple and precinct of Hercules and the Muses (#42). The Greek artist Scopas Minor, working in Rome,⁴¹⁷ may have been responsible for the cult images of the Temples of Hercules Victor *ad portam Trigemina* (#44) and of Fortuna Huiusce Diei. Due to their material, the bronze statues of Hercules discovered near his Temple *in foro Boario* (#43) and of Fortuna from her Temple at Praeneste (#31) are likely to have been Greek, as may have been, for their links to Greek religion, the second statue of Hercules in the forum Boarium and the statues of Isis-Tyche from Praeneste and Albunea from Tibur.⁴¹⁸

As in Greece, these statues were displayed both inside temples and in their immediate precincts. With few exceptions, most notably the Temple of Vesta (#57), the Shrine at Praeneste (#30), and the Shrine of Hermes and Maia on Delos (#10),⁴¹⁹ each temple's cult image was exhibited in its cella, while statues related in theme or artistic significance were displayed on adjoining statue bases. The forum Boarium, for example, as the principal cult site of Hercules in Rome, was arrayed with a variety of statues, altars and offerings, in addition to the Ara Maxima and the two Temples of Hercules Victor.⁴²⁰ Emphasizing different aspects of his cult, the statues associated with the Temples helped to fill out an area devoted to his worship.⁴²¹ Similarly, the

⁴¹⁷ According to Pliny (*nat.* 36.25-7), Scopas is particularly known for a large group of Neptune, Thetis, Achilles and a sea *thiasus* displayed in a sanctuary dedicated by Cn. Domitius near the Circus Flaminius, as well as for statues of Apollo on the Palatine and Vesta in the horti Serviliani. Isager 1991, 154-5.

⁴¹⁸ See Serv. *Aen.* 3.407 and 8.288, and Macr. *Sat.* 3.6.17 (forum Boarium), #31 (Praeneste), and Lact. *inst.* 1.6.12 (Tibur).

⁴¹⁹ Its continuous fire prohibited the display of statues inside the Temple of Vesta, while the well beneath the Shrine at Praeneste and the limited floor space of the Shrine on Delos restricted their use of statuary. Instead, nearby bases may have supported the Shrines' cult images.

⁴²⁰ See 'The Temples of Hercules Victor in the forum Boarium area' above.

⁴²¹ See #43-4 above.

statues of Fortuna, linked with the Temple at Praeneste, focus on contrasting facets of her cult.⁴²²

In its second phase, several Greek statues were added to the sculptural program of the Temple of Fortuna Huiusce Diei. While her main cult image remained inside the Temple's cella, two bases were added to flank its stairs. These bases, which may have supported up to twelve statues, could have precipitated the rebuilding of its podium and cella wall. Brought forward to replace its peripteros, this cella wall doubled the Temple's floor space,⁴²³ creating a more imposing structure to visually balance its new sculptural displays.

While these statues were not thematically related to Fortuna Huiusce Diei,⁴²⁴ the statues incorporated into the Temple and precinct of Hercules and the Muses were directly linked to its cult and function. Introduced by M. Fulvius Nobilior, the Italic Hercules and Ambracian Muses served as the cult images of his Temple, the former placed inside its cella and the latter on an adjacent Greek-style *schola*. Numa's Shrine of the Camenae (#33) positioned in front of the Temple counterbalanced the Greek Muses, while the Greek athletic statues introduced by L. Marcius Philippus set Hercules' physical strengths in harmony with his mental acuity.⁴²⁵

More so than the sculptural displays of other round temples, the array of statuary exhibited in the Temple of Hercules and the Muses and the Porticus Philippi conveyed the clout and convictions of their founders. Through his use of plunder,⁴²⁶ Fulvius sought to legitimize his victory, while demonstrating to a wide audience the extent of his Greek tastes and literary ideals. Through building and adorning his

⁴²² See #31 above.

⁴²³ See Chart #38.1.

⁴²⁴ See Cic. *Verr.* 2.4.4.126 and Plin. *nat.* 34.54 and 60; cf. Procop. *bell.* 1.15.11 outlined in #38.

⁴²⁵ See #42 above.

⁴²⁶ Though the extent of Fulvius Nobilior's plunder was enormous (Liv. 39.5.15; cf. Liv. 38.9.13, Polyb. 21.30.9, *Vir. ill.* 52.2, and Gruen 1992, 108), he showed refined sensibilities in the Temple he dedicated and the objects he chose to display.

Porticus to complement Fulvius' Temple, Philippus endorsed his claims and followed suit by using Greek statues to fuel his own political propaganda. While not uncommon in the late Republic,⁴²⁷ the desire to showcase booty with purpose-built spaces did not dominate the selection and display of statuary in round temples.

PROPORTIONAL ANALYSIS (Charts IV.1-16)

Vitruvius' recommendations regarding the design of round temples and the columnar orders⁴²⁸ may be taken as a starting point for an analysis of the proportions employed in late Republican round temples. Greek tholoi provide another starting point as their influence on Roman round temples was widely felt. However, when Vitruvius' prescriptions for monopteroi are applied to both Greek and Roman examples, only the Shrine of Fortuna Primigenia at Praeneste (#30) echoes his 1:10 correlation between lower column diameter and column height.⁴²⁹ Greek and Roman peripteroi are closer to his guide, with most showing a 3:5 relationship between their cella exterior and stylobate diameter, while, as reconstructed on the basis of B. Peruzzi's drawing, the cella exterior and column height of the Temple of Hercules Victor *in foro Boario* (#43),⁴³⁰ and the finial and capital diameter of the late fifth and fourth century Tholos at Delphi (#12), have a 1:1 correspondence.

Similarly, when applied to Greek drums,⁴³¹ the lower column diameter to column height ratio is usually ca. 1:10,⁴³² while the drum exterior is equal to the

⁴²⁷ Similarly, the *porticus Metelli* was built by Q. Caecilius Metellus Macedonicus in 146 BC to house Lysippos' Granikos Monument. Isager 1991, 160-1.

⁴²⁸ See Chap. II 'Vitruvius on round temple design' for all references to Vitruvius' text used below.

⁴²⁹ Cf. Wilson Jones 1989a, 42-3. Although they do not reflect Vitruvius' 1:1 relationship between column height and stylobate diameter, both the Monopteros at Pompeii (#28) and the Shrine at Praeneste have a 3:4 correspondence regarding their total exterior measurements (both lack stylobates).

⁴³⁰ At 19:20 and 9:10, the Temple of Hercules Victor *ad portam Trigemina* (#44) and the Temple of Fortuna Huiusce Diei (#38) come close.

⁴³¹ The drum exterior has been substituted for the stylobate diameter, and the stylobate diameter to cella diameter relationship excluded.

column height of the Rotunda at Ilion (#14). Moreover, though not Vitruvius' 1:2, most of the roof height to drum exterior measurements average at 1:5.⁴³³ On columnar proportions, namely column height and intercolumnation to lower column diameter, neither the tholoi nor the round temples follow Vitruvius' design. Within the columnar orders however, both the Doric tholoi and the Monopteros at Pompeii (#28) show a high correlation.⁴³⁴ This does not apply to the Ionic order, where only the Philippeion's (#22) base height to lower column diameter fits Vitruvius' specifications, while for the Corinthian order, most employ capitals of a height equivalent to their lower column diameter.⁴³⁵

When elements of the columnar orders not discussed by Vitruvius are compared to the lower column diameter, new patterns emerge.⁴³⁶ For example, Greek tholoi show a considerable range in shaft height ratios, while for round temples, the range is less broad with the Temple of Fortuna Huiusce Diei (#38), the Round Temple at Tibur (#64), and the Shrine of Fortuna Primigenia approximating an 8:1 relationship.⁴³⁷ With respect to interaxial dimensions between neighboring columns, most Greek and Roman examples range from three to four times the lower column diameter.⁴³⁸ The interaxial diameter between opposing columns shows no such correspondence.

⁴³² The columns of the Arsinoeion at Samothrace (#58) are closer to 1:6.

⁴³³ The one exception, the Rotunda at Termessos (#62), recalls Vitruvius.

⁴³⁴ Since Vitruvius (4.3.1-4) relates the Doric module to the façade of a rectangular temple, all ratios are defined for round temples based on the relationship of one lower column diameter to two modules.

⁴³⁵ The proportional relationships supported by their abacuses have not been tested, but see Wilson Jones 1989a, 47-9, and 2000, 145-6

⁴³⁶ While some of the smaller measures may appear comparable, it should be noted that, due to their size, any variation is more significant. Even so, the Greek capital diameters to lower column diameters are consistently close to 1 1/4:1.

⁴³⁷ Cf. Wilson Jones 1989a, 43, and 2000, 148-9. Of the tholoi, only the Philippeion at Olympia's (#22) interior columns have this ratio of shaft height to lower column diameter.

⁴³⁸ Exceptions include the Rotundas at Termessos and Ilion (#14), the external order of the Tholos at Epidauros (#13), and the Skias at Athens (#6).

M. Wilson Jones, who has made an extensive study of columnar proportions, notes that for the Ionic order, the column height to shaft height ratio is frequently 10:9 or 11:10.⁴³⁹ This holds true for the exterior order of the Philippeion and the interior order of the Arsinoeion, though also for the Doric sixth century Tholos at Delphi (#11), the Temple of Aphrodite at Knidos (#16), and the Rotunda at Ilion, and the Tuscan Temple of Hercules Victor *in foro Boario*. His recommendation of 6:5 for the Corinthian order is employed by most tholoi,⁴⁴⁰ while of the round temples, only the Shrine at Praeneste and the Temple of Hercules Victor *ad portam Trigemnam* (#44) show this relationship.

Moreover, instead of a Vitruvian module like the lower column diameter, Wilson Jones proposes that the “critical dimension” influenced the design of centralized buildings like tholoi and round temples.⁴⁴¹ He defines the critical dimension as an important element of the building’s plan, commonly the stylobate diameter, into which other significant dimensions can be divided.⁴⁴² Beyond the 3:5 relationship between cella exterior and stylobate diameter noted by Vitruvius,⁴⁴³ Roman round temples, with the exception of the Temple of Fortuna Huiusce Diei in its second phase,⁴⁴⁴ show a 1:2 correlation between their cella interiors and critical

⁴³⁹ Wilson Jones 1989a, 57 n. 56 (examples). Wilson Jones (1989a, 61) notes that this relationship is not compatible with Vitruvius’ recommendations, which fix the heights of the base and capital with regard to the lower column diameter.

⁴⁴⁰ Wilson Jones 1989a, 38, 1989b, 136, and 2000, 147. This ratio does not apply to the interior order of the Philippeion.

⁴⁴¹ Wilson Jones 1989b, 117 and 129. The critical dimension, based on foot measurements, cannot be determined for tholoi as Greek feet measurements are fairly unreliable.

⁴⁴² This concept is based on the idea that the use of simple, consistent foot measurements was integral to temple design. Coulton 1975, 58-66; Wilson Jones 2000, 83.

⁴⁴³ With stylobate as their critical dimensions, it is not surprising that many round buildings show a 1:1 correlation with their roof diameters.

⁴⁴⁴ As a drum, the Temple of Fortuna Huiusce Diei in its second phase has a 5:6 correspondence.

dimensions.⁴⁴⁵ Additionally, most are almost as tall as their critical dimensions are wide.⁴⁴⁶

In addition to significant variations in the proportional relationships among their parts, the tholoi and round temples differ among themselves with respect to their overall size, floor space and volume. Ranging from less than two meters to over twenty meters in diameter, the interior floor space of the Arsinoeion (#58), for example, is over three hundred times that of the Rotunda at Ilion,⁴⁴⁷ while its volume is over five hundred times greater. Though less dramatic, the Temple of Fortuna Huiusce Diei as a drum is one hundred times more spacious than the Shrine at Praeneste. The smaller cella of the Temple of Hercules Victor *in foro Boario*, at sixty-eight times the floor space of the Shrine at Praeneste, has thirty-nine times its volume.

While Vitruvius' module and Wilson Jones' "critical dimension" demonstrate that arithmetic relationships can exist between the major components of tholoi and round temples, Vitruvius raises the possibility that geometric relationships may also govern a building's design.⁴⁴⁸ To assess what role geometry played, Wilson Jones employs both methods in his analysis of the Round Temple at Tibur. He notes that, with a critical dimension of forty-eight feet based on its stylobate diameter, most major dimensions from the height of the podium, columns, and entablature to the total height, the stair width, and the cella diameter, result in simple fractions.⁴⁴⁹ By contrast, Wilson Jones reveals that a geometric analysis based on the cella exterior⁴⁵⁰

⁴⁴⁵ The wide range of ratios employed by Greek tholoi may be explained by the fact that several are drums.

⁴⁴⁶ While the round temples, with the exception of the Shrine at Praeneste, approach a 1:1 relationship, the Greek tholoi show a wider range.

⁴⁴⁷ Though not roofed, it is striking that the round court at Pella (#25) has one thousand times more floor space than the Rotunda at Ilion.

⁴⁴⁸ See Chap. II 'Vitruvius on round temple design.'

⁴⁴⁹ Wilson Jones 1989a, 63, 1989b, 114 and 131-2, and 2000, 103-6 figs. 5.28-9.

⁴⁵⁰ This analysis was first carried out by H. Geertman (1989).

is not only awkward for its incorporation of the square root of two, but also fails to predict the exact dimensions of the cella.

Both the critical dimension and Vitruvius' concept of the module show that establishing clear proportional relationships between the whole and its parts was a consideration for Greek and Roman architects. However, the dimensions of tholoi and round temples also reveal that, at least until the Imperial period, proportions were determined on a case-by-case basis as often as rules defined by Vitruvius or Wilson Jones are apparent in their design.

IV CONCLUSION

The round temple as it develops in Rome, Latium and on the island of Delos in the late Republic tempers a reliance on the traditional forms and styles of Greek architecture with the use of new Italic techniques and ornament. The round form is derived from Greek tholoi of the Classical and Hellenistic periods and may have been introduced to Italy by Greek architects. Following Roman conquests of the Hellenistic East in the second century BC, a number of Greek craftsmen immigrated to Rome in the train of victorious generals. Like Hermodorus of Salamis, who designed the Temples of Jupiter Stator and of Mars *in Circo*, and Scopas Minor, who may have crafted the cult images of the Temples of Hercules Victor *ad portam Trigemina* (#44) and of Fortuna Huiusce Diei (#38), Greek craftsmen played a significant role in the ornamentation of late Republican Italy. They brought and employed Greek materials, techniques, designs, and decorative styles to appeal to their philhellenic patrons. These Greek elements were in part transmuted by available resources and local tastes. The use of stuccoed cement work to approximate Greek

ashlar masonry or marble revetment, where marble was not available, is an example of the Roman readiness to adapt local products and techniques to Greek styles.

Though used as a base, Greek traditions of design and ornament did not determine the appearance of late Republican round temples. Like the methods used to simulate ashlar masonry, the decorative ornaments of the round temples recall Greek styles with Greek-inspired, yet native born motifs. New uses for the Greek cyma reversa and an experimental cyma recta characterize Roman podium moldings, while elements of the Corinthian order and its entablature bespeak Italic variations on Greek themes. The rounded tips of the acanthus leaves, in contrast to the spiky points of the Greek *acanthus spinosus*, point to the translation of Greek marble detailing into native Italic stones. Further, the introduction of modillions beneath an Ionic cornice signifies an indigenous development, which may have roots in stuccoed wall paintings.

Round temples also reflect Greek tholoi in their proportions and design. Even though they rarely employ the same proportional relationships, round temples follow the Greek principles of symmetry and proportion discussed by Vitruvius.⁴⁵¹ Like their building materials and techniques therefore, the decoration and design principles of late Republican round temples signal the careful amalgamation of Greek traditions and Italic innovations that defines much of late Republican architecture.

This inventive approach to the design and ornament of round temples extends to the use of the round form in other media. Unlike Greece, where the form is reserved for temple architecture, in Italy, round buildings run the gamut of functions from aviaries to mausolea. Moreover, the form is frequently picked up in the illusionistic architectural vistas of Second style wall paintings. Here, round temples are framed by walls, columns and pediments to create a feeling of depth. This three-

⁴⁵¹ More than using Vitruvius as a guide, Roman architects simply responded to ideas prevalent in their society.

dimensional space and the close conjunction of round and rectilinear forms reflect built architecture, where round temples and rectangular buildings stand side by side. Within the existing infrastructure of Republican Italy, populated with rectangular temples, porticoes, and civic, industrial and domestic structures, round buildings, be they aviaries, mausolea or temples, stood out as unique and eye-catching features of a Roman cityscape. As Greek-inspired forms, they acted as tributes to the glory of the Hellenistic world and to the refined tastes and skills of their patrons and architects, while as round buildings in an urban setting, they provided visual relief from a succession of rectangular forms and spaces.

In the late Republican period, round temples came to symbolize the power of Rome fresh from victories in the Hellenistic East. The design and decorative traditions of the Greeks provided a base on which Roman architects might build their own traditions of form and ornament. Consequently, the round temples of this period show the beginnings of a new architecture. Whether designed and built by Greek architects, possibly like the Temple of Hercules Victor *ad portam Trigeminam*, or crafted by Italic builders with native materials and techniques, round temples emphasize the extent of Greek influence on Roman architecture, while exploring new methods and styles of building that will find wide use in the Imperial period.

PART II: THE EARLY ROMAN EMPIRE

CHAPTER V: THE JULIO-CLAUDIANS

I INTRODUCTION

Augustus brought a new age of peace and prosperity to the Roman world. This “golden age” was celebrated in all aspects of Roman life, chief among which was religion. In the capital city, Augustus restored the temples of ancestral cults, while outside of Rome, the Imperial cult was established to proclaim his message of Roman rule.¹

Of the eighty-two temples he claims to have rebuilt at Rome,² many were restored in marble.³ These temples, together with those Augustus founded, became symbols for his new age. While his first foundations were experimental in their designs and the sources from which they drew,⁴ as his reign progressed, the architecture of Rome and her provinces became more conservative and the style, known as Augustan Classicism, was formalized.⁵ Combining the high podium and frontal emphasis characteristic of Italic temples with lavish ornamentation and materials drawn from Greece,⁶ Augustan temples created an impression of magnitude and opulence that surpassed most if not all Republican temples.⁷

¹ With its repertory of images developed for Hellenistic ruler cults, the Greek world provided a model for the Roman West to follow in honoring the Imperial cult. Zanker 1988, 297 and 304, and see below.

² *R.Gest.div.Aug.* 19-20; cf. *Ov. fast.* 2.61 and *Liv.* 4.20.7. This program was begun by Julius Caesar. Coarelli 1988, 71.

³ Augustus is said to have “found Rome a city of brick and transformed it into a city of marble” (*Suet. Aug.* 28).

⁴ Among these, the Temples of Divus Iulius, ca. 42-29 BC, included a variety of design elements, which fall short of canonical Augustan forms. Gros 1976a, 207-29.

⁵ Favro 1984, 206-8; Zanker 1988, 105 and 311.

⁶ The Temple of Roma and Augustus (#4) on the Athenian acropolis provides a good example of Greek influence on Augustan architecture.

⁷ Until the end of the Augustan period, temples readily increased in size, while their proportions became both broader and, through the use of the Corinthian order (see below), visually higher. Favro 1984, 221-4.

The principles of this style, crystallized in the Forum of Augustus,⁸ were upheld by his immediate successors. With the reign of Nero however, and the building opportunities opened up by Rome's devastating fire of 64 AD, new trends began to emerge. While rebuilding the city, Nero took advantage of newly available land to construct his most lavish palace, the Domus Aurea. In this palace, Nero departed from the rules that bound his predecessors to exploit the untapped potential of interior space, light and shade. His architects experimented with forms like domes,⁹ used to great effect in the Domus' octagonal room, which mark a significant step in the development of Roman architecture.¹⁰

II DISCUSSION

Augustus: (27 BC-14 AD)

During Augustus' reign, round temples were constructed at Rome and Athens.

The Pantheon, Rome (#50)

The Pantheon (#50), virtually intact thanks to its conversion into a church in 609 AD,¹¹ is one of the most remarkable architectural achievements of ancient Rome.¹² Although the present Pantheon is Hadrianic, its inscription,¹³ ancient

⁸ For the forum, see Kockel 1995, 289-95. After completing projects begun by Caesar, including the building program finished by Agrippa (see below), Augustus embarked on a series of new constructions, of which his forum and its Temple of Mars Ultor were among the most important. Coarelli 1988, *passim*.

⁹ Suet. *Nero* 16.1.

¹⁰ The dome of Nero's octagonal room prevised that of Hadrian's Pantheon (#50), see Chap. VI 'Roofing techniques.'

¹¹ At the request of pope Boniface IV, the Byzantine emperor Phocas transformed the Pantheon into S. Maria ad Martyres (*LPD* 1.317 and *VZ* 2.251).

¹² Among its admirers, the 4th c. emperor Constantius (Amm. 16.10.14) remarked that the Pantheon looked "like a rounded city-district, vaulted over in lofty beauty."

sources, and walls excavated beneath its porch, intermediate block and drum, date its foundation to the reign of Augustus. M. Vipsanius Agrippa¹⁴ is credited with erecting the Pantheon as part of his large-scale building program in the Campus Martius.¹⁵ This program, which included the completion of the Saepta Iulia to the east¹⁶ and the construction of the Basilica Neptuni and the Baths of Agrippa to the south,¹⁷ provided a frame for his Pantheon and emphasized the important position it occupied, both real and symbolic, in Augustan Rome.

In the late 1890s, L. Beltrami carried out a series of excavations beneath the Pantheon. He was able both to establish the Hadrianic date of the standing structure through brick-stamps¹⁸ and to uncover some information about previous building phases. Travertine and tufa blocks found under the porch and intermediate block and two levels of concrete paving discovered below the drum's floor, bounded by a round wall, serve as the principal evidence for any reconstruction of Agrippa's Pantheon.¹⁹ Without the means to date the pavement precisely, most scholars have assumed that the lower level pertained to Agrippa's building and the upper, faced with marble slabs, to a rebuilding under Domitian. E. La Rocca, however, links the former with work undertaken in the area prior to Augustus and the latter with Agrippa's Pantheon. Based on his alternative dating, he offers a new reading of the stone blocks, which formed the foundation of Agrippa's building, and of the round wall, generally

¹³ The inscription (*CIL* VI 896.1 = *ILS* 129) implies that Agrippa founded the Pantheon during his third consulate in 27 BC, though it is generally accepted on the basis of Cassius Dio (53.27.1-2) that the building was completed in 25 BC. Coarelli 1983b, 43-4; Ziolkowski 1999, 54.

¹⁴ *RE* IXA Vipsanius 2, 1248-50.

¹⁵ *Sen. benef.* 3.32.4. Platner and Ashby 1929, 382; Coarelli 1983b, 43-4, and 1995k, 301 and 327; Godfrey and Hemsoll 1986, 196-7; Richardson, jr. 1992, 283.

¹⁶ Remains of the Saepta Iulia, begun by Lepidus, include a Hadrianic niched wall running parallel to the Pantheon, see Gatti 1999, 228-9.

¹⁷ For the Basilica, see Viscogliosi 1996e, 341 and below, and for the Baths, see Ghini 1999b, 40-2. Agrippa's program also included the creation of an artificial lake and the construction of aqueducts, a retaining wall for the Tiber, and other utilitarian projects (Frontin. *aq.* 98 and Cass. Dio 49.31).

¹⁸ Chap. VI #50.

¹⁹ de Fine Licht 1966, 172-7; Ziolkowski 1999, 54-5; La Rocca 1999b, 281-2.

considered a perimeter wall or a buttress for the ring foundations of Hadrian's Pantheon.

According to Beltrami's reconstruction, the rectangular cella of the Augustan building lay beneath the Hadrianic porch and its pronaos extended under the intermediate block.²⁰ Its south-facing entrance corresponded to the door of Hadrian's drum, while it shared its successor's north-south axis and proportions, its width identical to the drum's diameter and its depth comparable to that of the Hadrianic porch and intermediate block.²¹ The paved area in front of Agrippa's Pantheon served as a forecourt shared by it and the Basilica Neptuni, which mirrored Agrippa's building both in its symmetrical placement and in its plan and design.²²

La Rocca, after a theory proposed by W. Loerke,²³ suggests instead that the first Pantheon prevised the form and orientation of Hadrian's building. Drawing from recent excavations, he identifies an Augustan pronaos of comparable form²⁴ incorporated into the Hadrianic porch.²⁵ Like its successor, this porch faced north instead of south, the traditionally-held orientation of Agrippa's Pantheon. La Rocca maintains that the porch, fronted with eight or ten columns,²⁶ extended underneath the intermediate block to join a round court. Bounded by a thin wall, this court was partly, if not entirely, open to the sky. In support of his reconstruction, he suggests

²⁰ Platner and Ashby 1929, 384-5; MacDonald 1976, 60-2; Ziegler 1979b, 473; Boatwright 1987, 43-4; Richardson, jr. 1992, 285; Coarelli 1995k, 327; Ziolkowski 1999, 54.

²¹ Ziolkowski 1999, 54.

²² Likely to have been identical in plan to the Agrippan building, the standing Hadrianic Basilica recalls the contemporary Pantheon in its use of apses, niches, semi-domes, and brick-faced concrete, as well as in the design of its pavement, cornices, and Corinthian columns. Moreover, under Hadrian, they were visually connected by a series of vaulted chambers. Gatti 1940; de Fine Licht 1966, 157-62; Boatwright 1987, 49-50; Richardson, jr. 1992, 285; Ziolkowski 1999, 55-6.

²³ Loerke 1982, 50-2; cf. Wilson Jones 2000, 182.

²⁴ Although higher and wider than the Hadrianic porch, Agrippa's pronaos may have been accessed by two sets of stairs and fronted by a row of columns. La Rocca 1999b, 281; cf. Virgili 1999, 284.

²⁵ La Rocca 1999b, 281.

²⁶ 8 columns and 2 antae: see Loerke 1982, 49; 10 columns: Virgili 1999, 284. Ziolkowski (1999, 55; cf. Gruben and Gruben 1997, 72 n. 217) claims that this area, wider than the Hadrianic pronaos, was too large to function as a porch.

that the marble pavement beneath Hadrian's drum was too fine for a public forecourt, and cites the court at Pella (#25) as a comparandum for the Pantheon's form.²⁷

Though the Hellenistic court to which he refers is both round and unroofed,²⁸ unlike La Rocca's building, it lacked a monumental entrance comparable to the Pantheon's porch.²⁹ Similarly problematic is M. Wilson Jones' suggestion of the fourth century Temple of Artemis at Stymphalos (#61). While it consists of a drum and a rectangular pronaos,³⁰ the Temple is too small to have served as a model for the Pantheon. His second proposal of the Skias at Athens (#6), rebuilt with a columnar porch in the Augustan period, is somewhat better but, like the Temple at Stymphalos, its drum was roofed. For Beltrami's reconstruction, the Temple of Concordia at Rome, whose transverse cella is bisected by a porch, serves as a close parallel, but does not reflect the court that would have linked the Pantheon and the Basilica Neptuni.³¹

By suggesting that the Pantheon faced north, La Rocca weakens its links to the Basilica Neptuni, though significantly, he opens up the possibility of a visual and ideological connection to the Mausoleum of Augustus. Cassius Dio suggests that Agrippa intended the Pantheon to function as a temple to Augustus. When he refused this honor, Agrippa commemorated the emperor and himself with statues set on the Pantheon's porch and placed a statue of Augustus' adoptive father, Julius Caesar, inside the building together with images of Mars and Venus.³² Further, Agrippa used

²⁷ La Rocca 1999b, 280-1.

²⁸ The court is abutted by two tholoi, while a third stands just outside.

²⁹ The court at Pella is similar in form to the Sanctuary of the Kabiroi at Thebes (ca. 1000 BC-400 AD), which locates three tholoi around an oval perimeter formed from a theater and boundary walls. Heyder and Mallwitz 1978, esp. 28-30, 38-40, 44-7, and 68; Seiler 1986, 25-8.

³⁰ At least in form, the Temple has some known parallels in Rome, including 3rd and 4th c. buildings like the Mausoleum of Maxentius (see Chap. VII #52) and probably Aurelian's Temple of Sol (#53).

³¹ Ferroni 1993, 316-20.

³² See #50.

Syracusan bronze capitals as well as caryatids³³ and pedimental sculpture crafted by Diogenes of Athens to decorate his Pantheon.³⁴ La Rocca proposes that, as in the Forum of Augustus, Agrippa may have incorporated the caryatids into an attic level, here to mask the springing of an annular vault that hemmed the round court.³⁵

In addition to outlining the Agrippan focus of the building, Cassius Dio speculates about its function. He suggests that, according to Greek precedent, the word ‘Pantheon’ signified a ‘temple to all the gods.’³⁶ In a Roman context however, he considers it more likely that ‘Pantheon’ referred to the building’s lofty dome, designed to imitate the heavens.³⁷ However, most scholars would refute this explanation on the basis that Dio responded to the dome of Hadrian’s Pantheon.³⁸

Despite Cassius Dio’s remarks, it seems likely that ‘Pantheon’ was only a nickname attributed to the building prior to 59 AD, when the *Acta* of the Arval Brethren record a meeting that took place *in Pantheo*.³⁹ Similarly, a tribunal of Hadrian was located inside the Pantheon,⁴⁰ suggesting that it functioned as an Imperial court or audience chamber.⁴¹ Coupled with this secular function,⁴² the

³³ Agrippa’s use of caryatids was inspired by the Athenian Erechtheion, which also served as the model for the Temple of Roma and Augustus at Athens (#4 and below). See Lloyd-Morgan 1990, 143-51 and Baldassarri 1998, 62 n. 79, for caryatids in Greek and Roman architecture.

³⁴ See #50. This could imply that Diogenes was Agrippa’s architect.

³⁵ While La Rocca (1999b, 281) models this reconstruction after vaults used in the Terrace of the Hemicycles at Praeneste and the Teatro Marittimo at Hadrian’s villa, it is problematic in so far as there are no parallels for a partially vaulted round court, and more fundamentally, no foundations for columns or pillars to support an annular vault have been discovered.

³⁶ Will 1951; de Fine Licht 1966, 192; Ziegler 1979b, 468-71; MacDonald 1982, 118-9. Although his interpretation is not generally accepted, it is significant to note that temples to the twelve gods, like the round Tychaion at Alexandria, were frequently linked to ruler cults. See Aristotle in Philo *Aet.* 3.10, Will 1951, *passim*, Gros 1996a, 178, and La Rocca 1999b, 283.

³⁷ Cass. Dio 53.27.

³⁸ Richardson, jr. 1992, 283.

³⁹ *CIL* VI 2041 = *ILS* 229. Through this connection, Ziolkowski (1999, 56) suggests that the Pantheon was afforded some sort of sacral status. For an analysis of Arval rites and practices, see Scheid 1990.

⁴⁰ Cass. Dio 69.7.1; *Cod. Theod.* 14.3.10. The Saepta also included a tribunal under Tiberius (Suet. *Tib.* 17; Cass. Dio 56.1). Gatti 1999, 288.

⁴¹ Secular precedents for Hadrian’s domed rotunda, namely free-standing round halls like the ‘Temple of Mercury’ at Baiae, a 1st c. bath building, or rotundas incorporated into larger complexes like the octagonal hall of Nero’s Domus Aurea, might support the idea that non-religious activities took place inside the Pantheon. MacDonald 1976, 44-60 and 68-9; Godfrey and Hemsoll 1986, 202-5.

Pantheon may have played a religious role, implied by the statues of Divus Julius, Mars and Venus displayed in its interior as well as by Agrippa's intention to build it as a temple to Augustus. Many scholars have proposed that, once thwarted, Agrippa founded a temple to the *gens Iulia*,⁴³ rebuilt by Hadrian as a means of renewing his links to Augustus.⁴⁴ However, A. Ziolkowski has pointed out that the Pantheon, built in Agrippa's private *horti*,⁴⁵ could not have been intended as a public temple,⁴⁶ that Augustus as a living emperor would not have been honored with a temple either public or private,⁴⁷ and that Mars, though the father of Romulus, was not a patron god of the Julian family.⁴⁸

Instead, Ziolkowski suggests that Agrippa's Pantheon served as a temple to Mars, a god associated with land victories, while the nearby Basilica Neptuni acted as its counterpart, namely a temple to commemorate Agrippa's sea victories.⁴⁹ His arguments are compelling, especially as Caligula's hatred of Agrippa⁵⁰ might explain why his grandfather's temple became known by a nickname, but they depend on the plan of the first Pantheon. While Beltrami's reconstruction supports his theory, if La Rocca is correct, it is hardly likely that Agrippa paired a building of modest proportions and the same orientation with his Pantheon.

⁴² The Basilica Neptuni, rather than the reported Pantheon, may have served as a library under Alexander Severus. *POxy* 3.412.63-8; Boatwright 1987, 49; vs. Gros 1993, 54-7 (libraries inside the Temple of Apollo Palatinus).

⁴³ In function, it would be comparable to Julius Caesar's Temple of Venus Victrix, dedicated in 46 BC. Gros 1996a, 140.

⁴⁴ Platner and Ashby 1929, 382; de Fine Licht 1966, 192-3, 198 and 201; MacDonald 1976, 76-92; Coarelli 1983b, 43, 1988, 74 and 1995k, 330; Richardson, jr. 1992, 283. As his statue was excluded from its cella, the Pantheon could not have been a temple to Augustus.

⁴⁵ Agrippa's *horti* only became public in 19 BC, when he ceded them to the Roman people on his death (*CIL* VI 39087). For the extent of his *horti*, see Coarelli 1997, 546-55.

⁴⁶ However, Ziolkowski (1999, 56) suggests that the Pantheon could have honored a private cult, which later became public.

⁴⁷ This would have been offensive to most contemporary Romans. Godfrey and Hemsoll 1986, 197-8.

⁴⁸ Ziolkowski 1999, 56.

⁴⁹ Ziolkowski 1994, *passim* and 1999, 56.

⁵⁰ Suet. *Cal.* 23.1-2.

Although not perfectly aligned, La Rocca's north-facing Pantheon could have been intended to complement the Mausoleum of Augustus. The Mausoleum, erected two years earlier, was built to serve as the resting place of Augustus and his descendants. The Pantheon may have marked the site where Romulus, with whom Augustus identified himself, ascended into the heavens. By including a statue of Divus Julius in its interior and by establishing a visual link between the Pantheon and the Mausoleum, Agrippa may have intimated that Augustus, like Romulus and Caesar, would be divinized on his death. This connection is strengthened by Hadrian's incorporation of an eagle, a possible symbol of Augustus' apotheosis, into the pediment of his Pantheon,⁵¹ and the recent discovery of a plan for the Hadrianic building on the grounds of the Mausoleum.⁵² While this evidence suggests that it served as a dynastic monument, much like the Mausoleum,⁵³ based on the unresolved form and orientation of Agrippa's building, it is best to conclude that he implied, but did not formalize, this function in his Pantheon.

The Temple of Mars Ultor, Rome (#46)

During the Battle at Philippi in 42 BC, where Octavian defeated the murderers of Julius Caesar, the young victor vowed a temple to Mars Ultor, the avenging god whose aid he felt had secured his victory.⁵⁴ While the ultimate outcome of this vow

⁵¹ Coarelli 1983b, 44.

⁵² Gros 1996a, 176; von Hesberg 1999, 276; Wilson Jones 2000, 50 and cf. 206-7 (close correspondences to Hadrian's Pantheon). La Rocca (1999b, 281-2) lists Augustan monuments between these two buildings (see 'Temple foundation and layout' below), which may strengthen their ideological links.

⁵³ It would also recall the Philippeion at Olympia (#22). Moreover, Wilson Jones (2000, 179; cf. Ziegler 1949, 741-2 and Will 1951, *passim*) notes that Agrippa's intention to group Augustus' statue with those of Venus and Julius Caesar is comparable to Hellenistic Pantheia, where the ruler's image was displayed amidst gods.

⁵⁴ Suet. *Aug.* 29. For an overview of the Augustan buildings in which Mars appears, see Siebler 1988, 153 and 158-60.

was an octastyle temple in the Forum of Augustus, dedicated in 2 BC,⁵⁵ literary and numismatic evidence has raised the possibility of a second temple to Mars Ultor (#46). Cassius Dio records Augustus' construction of a Temple of Mars on the Capitoline⁵⁶ "built on the model of Jupiter Feretrius."⁵⁷ Like the temple to Jupiter,⁵⁸ which housed war spoils from the times of Romulus and Marcellus,⁵⁹ the Temple of Mars may have stored Roman military ensigns and eagles recovered from Parthia.⁶⁰ Their return in 20 BC, though achieved by diplomatic means,⁶¹ was hailed as a victory for the Roman people, while Augustus was voted honors by the Senate⁶² and celebrated with commemorative coin issues throughout the empire.

In the absence of physical remains, these coins, in addition to Cassius Dio, form the principal evidence in favor of a Temple of Mars Ultor on the Capitoline. The first Roman issues minted by M. Durmius, like the cuirass of the Augustus from Prima Porta, show a kneeling Parthian soldier returning the ensigns to Rome.⁶³ This scene is replaced on cistophoroi from Ephesus and Pergamon with a triumphal arch, a

⁵⁵ Kockel 1995, 289-95.

⁵⁶ Cass. Dio 54.8.3. Like the Shrine of Vesta on the Palatine (#56 and below), this Temple of Mars Ultor is not mentioned in Augustus' *Res Gestae*. However, its omission may be explained as a result of the Senate having undertaken its construction.

⁵⁷ Cassius Dio's (54.8.3) "model" cannot refer to the form of the temple, if its identification with the round temple illustrated on Augustan coins (see below) is correct.

⁵⁸ For the Temple of Jupiter Feretrius, which Augustus rebuilt in 32-30 BC (*R.Gest.div.Aug.* 19.2, *Nep. Att.* 20.3, and *Liv.* 4.20.7), see Coarelli 1996h, 135-6.

⁵⁹ *Fest.* p. 202-4 L, *Val. Max.* 3.2.3-5, *Flor. anth.* 1.1.11 and 1.20.4-6, *Sol.* 1.20, *Vir. ill.* 2.4 and 25.1-2, *Serv. Aen.* 6.859, *Liv.* 4.20.3-11 and *perioch.* 20, *Plut. Rom.* 16 and *Marcell.* 8.3-6, *Hor. carm.* 4.15.6, and *InscrIt* XIII.3 70 no. 86.

⁶⁰ The ensigns and eagles, as well as Roman soldiers, were lost to the Parthians during the campaigns of Crassus in 53 BC, Saxa in 40, and Marc Antony in 36 and 33. See *R.Gest.div.Aug.* 29.1, *Suet. Aug.* 21, and *Vell.* 2.91.1 (ensigns lost), *R.Gest.div.Aug.* 29.2, *Strab.* 748, *Vell.* 2.91.1, *Suet. Aug.* 21.3, *Liv. perioch.* 141, *Cass. Dio* 54.8.1-2, *Iust.* 42.5.10-1, and *Hor. epist.* 1.12.28 (ensigns recovered), *Hor. epod.* 4.15.6-8, *epist.* 1.12.27-8 and 18.56-7, *Prop.* 4.6.79-84, *Ov. fast.* 5.580-94 and 6.465-8, *trist.* 2.227-8 (celebrations on their return), and van der Vin 1981, 117-8.

⁶¹ After Rome made several unsuccessful attempts, Augustus was able to recover the ensigns by convincing the Parthian king Phraates IV that a peaceful settlement was the best option for both powers. van der Vin 1981, 119.

⁶² These honors included *supplicationes*, *Augustalia* to mark the day of his return, the construction of an altar to Fortuna Redux, and the re-dedication of an arch (see below). Rich 1998, 125-7. For coins connected with these events, see Baldassarri 1998, 59-60 n. 70 and below.

⁶³ The Roman soldier depicted on the cuirass may represent Mars Ultor. Zanker 1988, 192.

hexastyle temple, and a round temple.⁶⁴ While the arch has been identified with an arch in the Forum, altered as part of Augustus' honors,⁶⁵ and the hexastyle temple may represent that of Roma and Augustus in Pergamon,⁶⁶ the round temple depicts the Temple of Mars Ultor on the Capitoline.⁶⁷ Celebrating Augustus' achievement, these coin issues helped to spread his personal and political propaganda. By emphasizing the ensigns, they enabled Augustus to court popular approval for the methods he used in their recovery,⁶⁸ while by associating him with Mars Ultor, the avenger of Caesar and Rome, they underlined his ability to withstand the threat of internal and foreign enemies.⁶⁹

Dated to 19-18 BC, the third type of cistophoroi shows a round temple set on a five-step podium with Corinthian columns, an architrave, antefixes, and a dome topped by a finial. Visible between its central columns is a military vexillum, while walls may fill out its remaining intercolumnations. A similar round temple appears on aurei and denarii minted at Colonia Patricia and Caesaraugusta in Spain. These issues, which also show the triumphal arch, depict a monopteros ornamented with a wide range of cult objects. On some coins, these objects, including chariots, eagles, ensigns, and a small quadriga,⁷⁰ are replaced by the figure of Mars Ultor. Mars, shown youthful, naked except for his helmet, and holding an eagle and ensign, is

⁶⁴ All three types share a common obverse in the head of Augustus. Sutherland et al. 1970, 36-7.

⁶⁵ Giard 1976, nos. 1228-32. The arch was initially erected to celebrate Augustus' victory at Antium (cf. Cass. Dio 53.8.3). Rich 1998, 106-8 and 114. For alternative attributions, see Rich 1998, 101-4.

⁶⁶ This temple was built prior to 20 BC by the Commune Asiae. van der Vin 1981, 125-7.

⁶⁷ Morawiecki (1976, 65 n. 53; vs. Rich 1998, 85) claims that the round temple represents the Temple of the Imperial cult at Ephesus. Her hypothesis is highly unlikely as the temple at Ephesus was rectangular, and moreover, the monopteros, which she identifies with it, probably formed the second story of a niched monument, see Bammer 1968-1970, 23 fol. figs. 14 and 39, and Torelli 1997, 152.

⁶⁸ van der Vin 1981, 132.

⁶⁹ Bonnefond 1987, 274. Here Mars Ultor is *bis ultro*, "twice avenged" (Ov. *fast.* 5.579-96), first for Caesar's murder and secondly, for the death and capture of Roman soldiers in Parthia.

⁷⁰ See #46. The Senate decreed that Augustus should re-enter Rome in a chariot. Although he refused this honor, and moreover, may have entered the city by night, it is likely that an empty chariot was set up in the Forum of Augustus (*R.Gest.div.Aug.* 35.1). Rich 1998, 115-25.

depicted both inside the round temple and on his own.⁷¹ Similarly, cult objects may appear as isolated images, intended to symbolize the temple or more generally, Augustus' success in Parthia.⁷²

As the best evidence for the Capitoline Temple's appearance, the coins may allow for its reconstruction. They depict it as round with a stepped podium, Corinthian columns, an ornate entablature, and a domed roof.⁷³ According to Cassius Dio, the Temple sheltered ensigns and eagles, possibly *in penetrale*.⁷⁴ Some scholars have suggested that they were accompanied by a cult image of Mars Ultor.

Contrasting the youthful Mars shown on Spanish issues with the older, bearded and armor-clad Mars of the Ara Pacis Augustae, considered the cult statue of the temple in Augustus' forum,⁷⁵ J. van der Vin and M. Siebler have identified the former as the cult image of the Capitoline Temple.⁷⁶ Although appealing, T. Kraus presents convincing arguments for seeing the youthful Mars as a symbolic device, like the cult objects and the legend MAR(T) VLT, used on coins to clarify the function and attribution of the round temple.⁷⁷

While both Cassius Dio and the coins support the existence of a second Temple of Mars Ultor,⁷⁸ other sources raise difficulties sufficient for many scholars to conclude that the round temple, though planned, was never built. Horace, for example, contradicts Cassius Dio's assertion that the Temple was erected to hold the ensigns and eagles recovered from Parthia. Instead, he states that the ensigns were

⁷¹ Giard 1976, nos. 1090a and 1095, and 169 fol. nos. 1115-20 pls. 44-5.

⁷² *BMCEmp* I 67 nos. 384-9 pl. 8.10; Giard 1976, 46-8 and 175 fol. nos. 1174-84 pls. 46-7.

⁷³ It is difficult to tell from the coins whether the Temple had cella walls.

⁷⁴ This term, which Augustus (*R.Gest.div.Aug.* 29) uses in the context of his forum temple, may connote a restricted area within its cella or simply the Temple's interior. Quicherat 1967, 860; Gros 1976a, 128-9.

⁷⁵ Simon 1981-1982, *passim*.

⁷⁶ van der Vin 1981, 127; Siebler 1988, 155.

⁷⁷ Kraus 1964, *passim*. The Temple of Jupiter Feretrius, to which the Capitoline Temple is compared, lacked a cult image.

entrusted to Jupiter Feretrius, until the completion of the Forum of Augustus.⁷⁹ To account for this discrepancy, scholars have labeled Horace's remark as a kind of "poetic license,"⁸⁰ whereby he intended Jupiter Feretrius to serve as a topographical indicator or as a personification of the Roman state.⁸¹

More troubling however are the problems that arise in connection with the *ludi Martiales* or games celebrated in honor of Mars. These games are noted in the sources as having been held on 12 May and 1 August.⁸² T. Mommsen proposed that both dates and sets of games were connected with the dedication days of the two temples of Mars Ultor,⁸³ the former with the round Temple and the latter with the temple in the Forum of Augustus.⁸⁴ Although widely accepted, F. Cassola criticizes Mommsen's premise, noting that none of the preserved *fasti* mention *ludi* occurring at the Capitoline Temple on either date.⁸⁵ Moreover, several ancient sources⁸⁶ record *ludi Martiales* celebrated to mark the dedication of the Temple of Mars Ultor in the Forum of Augustus on 1 August 2 BC. These *ludi* were repeated every year until 41 AD, when Claudius moved the festivities to celebrate his birthday on that day.⁸⁷

⁷⁸ It is possible that the statue or temple of Mars Ultor shown on the Sorrento base represents the god's Capitoline Temple. For difficulties connected with the base's interpretation, see #56 below.

⁷⁹ Hor. *carm.* 4.15.6: *et signa nostro restituit Iovi / derepta Parthorum superbis / postibus*; cf. Simpson 1977, 92-3, Cassola 1981, 107, and Rich 1998, 91.

⁸⁰ Bonnefond (1987, 272; vs. Rich 1998, 91) considers the transfer of ensigns from one god to another unusual, if not sacrilegious. However, it should be noted that, during its construction, the cult image of the Temple of Magna Mater on the Palatine (see Pensabene 1996a, 206) was placed inside the Temple of Victory.

⁸¹ Cassola (1981, 107-8; cf. Hor. *carm.* 4.15.6) suggests that "ensigns returned to Jupiter" signified "ensigns returned to Rome."

⁸² *InscrIt XIII*² 456 (*Fasti Maffeiiani*, 12 May). Ov. *fast.* 5.545-98; Suet. *Claud.* 4.1-3 (12 May). Vell. 2.100.2; Cass. Dio 55.10.6-8 and 60.5.3; *R.Gest.div.Aug.* 22.2 and 23 (1 August).

⁸³ Mommsen relies on Velleius Paterculus (2.100.2) and Cassius Dio (60.5.3) in constructing this argument. Cassola 1981, 105.

⁸⁴ While Alföldy agrees with Mommsen in principle, he reverses the Temples' dedication days, see Rich 1998, 84.

⁸⁵ Though the *fasti* do record 12 May (*InscrIt XIII*² 456; Ov. *fast.* 5.545-98), their reports are ambiguous and inconsistent. Cassola 1981, 102 and 112-4.

⁸⁶ See above.

⁸⁷ Cass. Dio 60.5.3 (Claudius' birthday on 1 August).

A reference to 12 May can be found in Ovid's *fasti* and indirectly in a letter from Augustus to Livia recorded by Suetonius.⁸⁸ Ovid portrays Mars as descending from the sky on 12 May to visit his temple in the Forum of Augustus. Cassola argues that this event refers solely to the forum temple and could not suggest a date for *ludi* held in commemoration of the Capitoline Temple's *dies natalis*.⁸⁹ Moreover, evidence pertaining to the date when the *ludi* were first celebrated shows that no games in honor of Mars took place before 2 BC.⁹⁰ The most compelling solution therefore, that of Cassola, would connect both dates and games with the forum temple as a celebration of its dedication on 1 August and of its *constitutio* or consecration on 12 May.⁹¹

Like Cassola, J. Rich concludes from this evidence that no Temple of Mars Ultor was ever erected on the Capitoline.⁹² He blames Cassius Dio for perpetuating the idea that the Temple, whose decree was commemorated on coins, was eventually built,⁹³ and notes the Temple of Clementia Caesaris as a comparable example of a building whose construction was agreed, but not completed.⁹⁴ Additionally, the interval between Augustus' recovery of the ensigns and the coin issues is too short to propose that the coins could have celebrated the Temple's completion.⁹⁵ It is best therefore to follow Horace in his placement of the ensigns and to consider the Temple

⁸⁸ Ov. *fast.* 5.545-98; cf. Cassola 1981, 103-4.

⁸⁹ Cassola 1981, 114; Rich 1998, 83-4.

⁹⁰ Augustus (*R.Gest.div.Aug.* 22.2) remarks that the *ludi* were first celebrated during his thirteenth consulship (2 BC). Cassola 1981, 114-5; Rich 1998, 84.

⁹¹ Cassola 1981, 116-8; Rich 1998, 84. Simpson (1977, 93; cf. Rich 1998, 84) suggests that the forum temple was dedicated on 12 May.

⁹² Rich 1998, 82-3.

⁹³ Rich 1998, 83-6.

⁹⁴ Rich 1998, 83; cf. Simpson 1977, 93 and Palombi 1993, 279-80.

⁹⁵ van der Vin 1981, 126. This raises the possibility that a temporary temple, made of perishable materials, was constructed to store the ensigns, only to be razed when the Forum temple was completed. The Temple of Diana, built in 36 BC to hold trophies won in the Battle at Nauloco and dismantled in 20, would be comparable, see Cic. *har. resp.* 32, *BMCEmp* I, 102 nos. 625 fol. pl. 15.9, 103 no. 634 pl. 15.15, and 104 no. 643, *RIC* I, 60 no. 4 pl. 3.50 and 63 no. 38 pl. 3.53 (coin evidence for the Temple of Diana), Coarelli 1968a, 191 fol., and Baldassarri 1998, 58; vs. Rich 1998, 82.

of Mars Ultor on the Capitoline an honor voted Augustus by the Senate, but refused in anticipation of the much grander temple to be erected in his forum.

The Temple of Roma and Augustus, Athens (#4)

Unlike much of Greece, Athens was granted the special status of a *civitas libera et foederata* in the late Republic.⁹⁶ The city remained free until 27 BC, when Octavian incorporated it into the Roman province of Achaia in the wake of the Battle at Actium. During his first visit to the city, he pardoned its inhabitants for siding with Marc Antony.⁹⁷ As a sign of their gratitude, the Athenian people may have erected a monopteros on the Acropolis (#4) in connection with this trip or to mark his third visit in 20 BC, when Augustus passed through Athens after recovering the ensigns and eagles from Parthia.⁹⁸

The monopteros, which honored both Roma and Augustus, was the first Temple dedicated to their combined cult at Athens. The cult of Roma, an outgrowth of Hellenistic city-state cults, was established at Smyrna in 195 BC,⁹⁹ but had spread throughout the Greek world by the Augustan period.¹⁰⁰ At Athens, Augustus Soter¹⁰¹

⁹⁶ Baldassarri 1998, 3; cf. Chap. IV 'Introduction.'

⁹⁷ Athens was sacked by Sulla, and its free status revoked, in an uprising against Rome in 88 BC. Funded by wealthy Romans, the city was gradually rebuilt and its status restored in the 2nd half of the 1st c., before its involvement at Actium. For an overview of Roman rule in the Julio-Claudian period, see Baldassarri 1998, 3-40.

⁹⁸ The Temple's dedicatory inscription (*IG* II² 3173 = *CIG* 478 and *IG* III 1276) narrows the date of its construction to 27-19 BC. Baldassarri (1998, 51-4) supports 19 BC on the basis of formal similarities between the monopteros and the Temple of Mars Ultor on the Capitoline (#46 and above), which, he believes, served as a model for the Temple at Athens.

⁹⁹ Tac. *ann.* 4.56; cf. Mellor 1981, 954-72. From the middle of the 2nd c. BC, a festival known as the *Romaia* was held at Athens. *IG* II² 1054 and 1938; cf. Baldassarri 1998, 53 n. 43.

¹⁰⁰ In 30-29 BC, Octavian sanctioned the construction of temples to Roma's cult at Pergamon, Ephesus, Nicomedia, and Nicea, while inscriptions attest to temples of Roma and Augustus on Samos (see Herrmann 1961, 71 no. 1), Lesbos (*IG* XII² 58), and Thasos (*IG* XII.8 380) built during his lifetime. Mellor 1981, 977 and 982; Zanker 1988, 302. This trend can be contrasted with Augustus' refusal to be honored with a temple in Rome, see Cass. Dio 53.27 and #50 above.

¹⁰¹ For this epithet, see Baldassarri 1998, 28 and 54-5.

was celebrated together with Roma in the Agora and the Theater of Dionysos¹⁰² as well as on the Acropolis, the most sacred area in the city. Through its location, the Temple best conveyed Augustus' message of Roman rule, while, in its architecture, it acted in sympathy with its Greek neighbors.

The Temple stood in front of the Parthenon and near the Erechtheion,¹⁰³ with which it had ideological and structural ties. As the Parthenon and Erechtheion commemorated Athena, the patron goddess of Athens, the Roman monopteros glorified both the personification of Rome and Augustus as the city's protector and principal representative.¹⁰⁴ Like the Erechtheion, the Temple employed the Ionic order, which, rare for round temples, demonstrates one of many architectural links.¹⁰⁵ Based on their similarities, P. Baldassarri has even proposed that the same architect, who restored the Erechtheion in the Augustan period, may have designed and built the Temple.¹⁰⁶

Resting on a three-step krepis,¹⁰⁷ the monopteros rose with a screen wall, nine columns and an inscribed entablature to a conical roof.¹⁰⁸ The columns, notable for their Ionic capitals and fluted shafts with lotus and palmette collars, were evenly spaced, apart from the intercolumnation beneath the inscription that marked the Temple's entrance. With this wide opening, the Temple could easily have displayed

¹⁰² Two annexes of the Stoa of Zeus Eleutherios were connected with their cult, whose priest had a seat in the Theater (*IG* II² 5047 and 5114). Mellor 1981, 982; Baldassarri 1998, 53.

¹⁰³ 3rd c. coins (see #4), which provide 'bird's eye' views of the Acropolis, underline the proximity of the monopteros to these temples. Binder 1969, 45-7 and 125.

¹⁰⁴ Binder 1969, 43-4.

¹⁰⁵ See 'Analysis' below.

¹⁰⁶ Baldassarri (1998, 62-3) suggests that Diogenes of Athens, who designed the caryatids and capitals of Agrippa's Pantheon (Plin. *nat.* 34.13 and 28; cf. #50 above), may have been in charge of these projects.

¹⁰⁷ The Temple's foundations have been identified with either a poros platform or a circular indentation cut into native rock. Baldassarri 1998, 48-9.

¹⁰⁸ The roof is reconstructed as conical on the basis of Imperial coins (see #4 and above) and by analogy with the Rotunda at Corinth (see #9 below). Baldassarri 1998, 46-7.

cult statues of Augustus and Roma.¹⁰⁹ These, in addition to an altar that may have preceded the Temple,¹¹⁰ would have emphasized the presence of their cult on the Acropolis.¹¹¹

The Shrine of Vesta, Rome (#56)

On his election to Pontifex Maximus on 6 March 12 BC, Augustus donated the *domus publica*¹¹² to the Vestals and established a sanctuary of Vesta in his house on the Palatine. This not only allowed him to fulfill the requirements of the office, namely to live in the public domain¹¹³ and oversee the cult of Vesta, but also to enlarge the Vestals' living quarters in the Forum.¹¹⁴ Ovid notes in his entry for 28 April how Augustus allotted space for Vesta in his house (*fast.* 4.949-50): *Phoebus habet partem, Vestae pars altera cessit; / Quod superest illis, tertius ipse tenet.* The parts occupied by the cults of Apollo and Vesta, in this context, appear comparable in importance and size. As a temple filled out the area of Apollo,¹¹⁵ some scholars have suggested that the area of Vesta received a similar treatment (#56).

In addition to Ovid's *fasti*, two ancient calendars record a dedication made to Vesta in Augustus' house. On 28 April, the *fasti Caeretani* note that a *sig(num)* *Vest(ae)* was set up *in domo P(alatina)*, while the *fasti Praenestini* remark on the

¹⁰⁹ Binder 1969, 85. A statue of Augustus (or of Nero, see Coarelli 1978, 233) may have been displayed on the round base in the Sanctuary of Athena Nikephoros at Pergamon. For bibliography pertaining to this base, erected in honor of Attalos I's victory over the Gauls, see Baldassarri 1998, 61 n. 75.

¹¹⁰ Robert 1939, 369-70; Baldassarri 1998, 50.

¹¹¹ Augustus first used the Acropolis to demonstrate Roman supremacy when he turned the statue of Athena Parthenos westward to face Rome. Baldassarri 1998, 20.

¹¹² The *domus publica*, previously known as the *domus rex sacrorum*, was the official residence of the Pontifex Maximus. Papi 1995, 169-70; Scott 1995, 165-6.

¹¹³ This was achieved by making part of his house public with the addition of Vesta's and Apollo's sanctuaries (Cass. Dio 54.27.2; Ov. *fast.* 4.949-50). Cappelli 1999, 128.

¹¹⁴ The *domus publica* was incorporated into the Atrium Vestae. Scott 1995, 165-6; Cappelli 1999, 128.

¹¹⁵ This temple, vowed in 36 and dedicated in 28 BC, was constructed in an area of Augustus' house struck by lightning, see Gros 1993b, 54-7.

erection of a [.....] ET [...] / VESTAE.¹¹⁶ For these lacunae, T. Mommsen reconstructed [AEDICVL]A ET [ARA]. Although once widely accepted, A. Degrassi has shown that [SIGNV]M ET [ARA] fits more comfortably into the space provided.¹¹⁷ This emendation accords well with the *fasti Caeretani*, while, as Degrassi has pointed out, it is more feasible that a statue, than a shrine, was erected together with an altar in the interval between Augustus' election and their dedication day.¹¹⁸

Though M. Guarducci agrees with Degrassi's substitution of SIGNVM for [AEDICVL]A, she proposes [AEDIS] for the second lacuna, noting occasions when a temple's dedication preceded its completion.¹¹⁹ Further, she responds to the absence of an *aedis* in the *fasti Caeretani* by remarking that, while the statue was set up in 12 BC, the Shrine was more likely to have been visible when the early Imperial *fasti Praenestini* were composed than when the *fasti Caeretani*, whose composition predated 12 BC, were amended.¹²⁰

In addition to the *fasti*, which may suggest that this sanctuary had a temple, two other written sources dealing with the contents of a shrine of Vesta may refer to this site. Augustus' *Res Gestae*, intended as a compilation of his achievements, is silent about the Shrine's construction, but does mention *dona ex manubiis* or war booty he set up at a shrine to Vesta.¹²¹ According to Guarducci, this passage fits with the Shrine on the Palatine and with the coins and reliefs, discussed below, which may

¹¹⁶ *Fasti Caeretani: InscrIt XIII*² 66 = *CIL I*² 213; *Fasti Praenestini: InscrIt XIII*² 132-3 = *CIL I*² 236. For both, see #56.

¹¹⁷ Although this inscription is badly preserved, it appears that 5 letters fit better than 7 and that M can be reconstructed as reliably as A.

¹¹⁸ *Ov. fast.* 6.295-6 (statue of Vesta). Degrassi 1955, 147.

¹¹⁹ Guarducci 1964, 165-6, and 1971, 100; vs. Kolbe 1966-1967, 95-9, and Cody 1973, 48-9. The Temple of Mars Ultor in the Forum of Augustus may provide a comparable example, see Kockel 1995.

¹²⁰ Guarducci 1964, 159 and 167.

¹²¹ *R.Gest.div.Aug.* 21.2.

represent Augustus' gifts.¹²² Further, she notes an epitaph from Privernum, which lists among the titles of a benefactor, *praepositus palladii Palatini*,¹²³ as proof that Augustus stored a copy of the Forum temple's Palladium in this Shrine on the Palatine.¹²⁴ In response, Degrassi identifies the inscription as referring to Elagabalus' transfer of the Palladium to his Palatine temple of Sol,¹²⁵ and notes the unlikelihood of Augustus or the Senate having built the Shrine without recording its construction.

The coins to which Guarducci refers are dupondii minted under Tiberius, ca. 22-23 AD, and aurei of Vespasian, Titus and Domitian, 71-74 AD.¹²⁶ Both series depict a round shrine with Ionic columns, grillwork, and a conical roof. Set between pillars that support a bull and a ram, the shrine appears on the Tiberian coins with a statue of Vesta and on the Flavian, with the Palladium and two Vestals. A base from Sorrento and a relief discovered in Palermo, both of Julio-Claudian date, illustrate a shrine with similar attributes placed before an Ionic portico. Scholars have sought to identify both the shrine and the portico by examining the base, which includes them in one of four scenes set at religious sites in Rome.

Though not complete, the base preserves a sacrificial rite played out before various buildings. The scene on side A sets a round altar, Vesta, five Vestals, and two goddesses¹²⁷ against a backdrop of an Ionic portico and a round shrine, while side B

¹²² Guarducci 1964, 161, and 1971, 104; cf. Rizzo 1932, 33-5.

¹²³ *CIL* X 6441.

¹²⁴ As support, Guarducci (1964, 161 and 169) cites the discovery of an Archaic head of Athena on the Palatine and depictions of the Palladium inside a shrine of Vesta (see #56 and below), only to retract her arguments (1971, 109-10) in agreement with Kolbe (1966-1967, 103-4), who considers it inappropriate that the Palladium, as a symbol of Rome's power, should have been duplicated.

¹²⁵ Degrassi (1955, 149-51; see Fraschetti 1990, 345 and Cappelli 1999, 128) bases his view on sources which note that the Palladium remained in the Forum until the time of Elagabalus (*Hist.Aug.Heliog.* 3.4-7 and 6.9).

¹²⁶ See #56.

¹²⁷ They have been identified by Rizzo (1932, 46-7; cf. Guarducci 1971, 104-8) as the Roman counterparts of Demeter and Kore, Ceres and Libera.

shows the Temple of Apollo Palatinus. The House of Augustus¹²⁸ and a statue or temple of Mars Ultor appears on side C and a temple of Magna Mater is depicted on side D.¹²⁹ The Palermo relief is similar in content,¹³⁰ while it also incorporates the Palladium and Augustus in the role of Pontifex Maximus.¹³¹ Like the coins, both reliefs include pillars supporting a bull and a ram,¹³² whose placement may mirror that of the *armenta Myronis*, four bull statues by Myron displayed before the Temple of Apollo Palatinus.¹³³

G. E. Rizzo, the first to study the Sorrento base in any depth, noted that, as scenes B, C and D take place on the Palatine, side A must represent the Shrine in the Palatine sanctuary of Vesta. He concluded that the base commemorated the dedication of the Shrine, its statue and altar.¹³⁴ Guarducci concurred, stressing marked differences between these sources and the coins, reliefs and Renaissance drawings linked with the Forum temple.¹³⁵ Their disparities, she suggested, prove the existence of two temples to Vesta in Rome.¹³⁶ Although satisfied with most of Rizzo's analysis, Degrassi followed S. Stucchi in identifying the round shrine on side A with the Temple of Vesta in the Forum.¹³⁷ Unlike both Rizzo and Stucchi

¹²⁸ Augustus' house is identified by a *corona civica* or crown of oak leaves granted him by the Senate on 13 January 27 BC as thanks for his role in the Civil Wars. Rizzo 1932, 80.

¹²⁹ For a fuller description, see Rizzo 1932, 51-99.

¹³⁰ A fragmentary relief in the Villa Albani shows a seated Vesta and four Vestals sacrificing over a round altar, though omits the round shrine and Ionic portico in favor of a Corinthian peripteros. Cain 1989b, 421-5.

¹³¹ It is possible that Augustus was represented similarly on a lost fragment of the Sorrento Base. Cappelli 1999, 128.

¹³² Rizzo 1932, 32. Guarducci (1971, 102-8; see Cecamore 1994-1995, 21) connects the bull and ram statues to zodiac signs, under which she believes most of the work on the Palatine Shrine was completed.

¹³³ Prop. 2.31.7 fol. If the base shows the Palatine Shrine of Vesta (see below), it is reasonable to assume that Augustus employed similar statue displays to unite the neighboring temples.

¹³⁴ Rizzo 1932, 40 and 50.

¹³⁵ See Chap. VII #57.

¹³⁶ Guarducci 1964, 163-5.

¹³⁷ Stucchi (1959, 90-1) links the Ionic portico with the Temple of Divus Iulius, whose inauguration may have been celebrated with the sacrifice on side A.

however,¹³⁸ he suggested that the base, an illustration of Augustus' religious devotion, included monuments from both the Forum and the Palatine.¹³⁹

Even if Rizzo and Guarducci are correct in locating the round shrine on the Palatine, the coins and reliefs they link with it might as easily commemorate the building's vow as its completion. At most therefore, these sources reveal the intended appearance of the Shrine. In support of its construction, C. Cecamore points to a circular structure and a portico discovered near the Temple of Apollo Palatinus.¹⁴⁰ These remains, which may incorporate Vespasianic brick stamps and a *fistula*,¹⁴¹ she suggests, pertain to a Flavian rebuilding of the Shrine and its portico commemorated on the aurei.¹⁴² However, like the bricks, which may have been used during or after the Flavian period, the number and variety of finds on the Palatine¹⁴³ work against identifying any individual building with certainty.¹⁴⁴ Similarly, as both the written and the iconographic sources are ambiguous about the existence of a temple in Vesta's sanctuary, it is best to conclude that the Shrine was never built.

Tiberius: (14-37 AD)

¹³⁸ Rizzo 1932 and above; Stucchi 1959, 11, 14, 25, and 90-1.

¹³⁹ Degrassi 1955, 154 and cf. 1966-1967, 103-8.

¹⁴⁰ These are located below the triclinium and nymphaea of the *domus Flavia*. Cecamore 1994-1995, 9-11 and 15-7.

¹⁴¹ Brick stamps: *CIL* XV 664, 1449, and 1, 1248a; *fistula*: Carettoni 1949, 71 and Cecamore 1994-1995, 9-10.

¹⁴² Cecamore 1994-1995, 18-9. Architectural fragments from the round building may be illustrated on a drawing by G. A. Dosio (see #56 and Cecamore 1994-1995, 12-3).

¹⁴³ See Degrassi (1966-1967) for the topography of the Palatine, especially in relation to Augustus' house.

¹⁴⁴ The round building is usually identified as a *cenatio*. Cecamore 1994-1995, 18. Other round structures used for this purpose are the Skias at Athens (#6), the tholoi in the Sanctuary of the Kabiroti at Thebes (see Heyder and Mallwitz 1978, 46), the court at Pella (#25), and Varro's aviary (see Varro *rust.* 3.5.9-12 and Chap. IV #38).

As Tiberius focused his building activity on Rome,¹⁴⁵ it is unlikely that he had any direct involvement with the construction of the Rotunda at Corinth (#9), a Roman possession from 146 BC.¹⁴⁶

The Rotunda, Corinth (#9)

The Western terrace of the Lower Agora at Corinth was lined with a series of small monuments that faced onto the market place, its Central and Northwest shops, two basilicas, and the Peribolos of Apollo. From a detailed description of Pausanias and archaeological remains, R. Scranton has pieced together the appearance of this terrace, reconstructing six monuments erected over a span of nearly two hundred years. Among them is a Rotunda (#9) set on a rectilinear platform that can be linked to the prosperous Corinthian, Cn. Babbius Philinus. While inscriptions indicate that Babbius was responsible for other buildings in the area, the prominent location, size, and design of the Rotunda suggest that it was his principal donation.

Based on Pausanias,¹⁴⁷ Scranton has envisaged the Western terrace as consisting of, from the south, the Temple of Tyche, the Pantheon, a ramp leading to a row of shops and Temple E, two temples probably of Herakles and Poseidon, Babbius' Rotunda, and a temple to Hermes.¹⁴⁸ As well as their remains, the terrace's retaining wall¹⁴⁹ and changes to the ground level of the Agora help to establish a chronology for these monuments.¹⁵⁰ To the ramp and entrances by the Central and

¹⁴⁵ While Tiberius completed the Augustan Temples of Castor and Concordia at Rome, few provincial buildings beyond the Temple of Roma and Augustus at Ankara can be dated to his reign. Gros 1996a, 161.

¹⁴⁶ For L. Mummius' conquest of Corinth, see Chap. IV 'Introduction.'

¹⁴⁷ Paus. 2.2.6-8 and 3.6.

¹⁴⁸ Scranton 1951, 3-4 and 67-9.

¹⁴⁹ The Western Terrace, in use since Greek times, was leveled, then regularized through the addition of this wall in the 2nd c. BC. Scranton 1951, 64.

¹⁵⁰ The construction of the Rotunda coincides with one of these changes in the level of the Agora and the height of the terrace wall. Scranton 1951, 23-4.

Northwest shops, which formed part of the original terrace,¹⁵¹ the Temple of Hermes and the Pantheon were added in the early first century AD. These were followed by the Temple of Tyche, Babbius' fountain to the north of the Temple of Hermes, his Rotunda, and his fountain to Poseidon.¹⁵² The first century also saw the construction of Temple K, sited behind the Rotunda, while the Temple of Poseidon replaced Babbius' fountain in 185 AD, a few years before the Temple of Herakles was built.

Babbius' Rotunda was set on a large platform that jutted out from the terrace wall and defined a kind of precinct for the building. The platform, comprising a concrete core and marble revetment, was flanked by stairs, which provided access to both the terrace and the monument.¹⁵³ While its revetment bore Babbius' main dedicatory inscription,¹⁵⁴ the platform supported the stylobate, eight Corinthian columns, entablature, and cone-shaped roof of his monopteros. Like the platform's base and cornice moldings, the carving of both the architrave and the roof cornice is ornate as are the blocks fashioned to represent wedge-shaped tiles, which, together with a finial, formed the roof's ornament.¹⁵⁵

From its elevated position, this finely detailed monopteros would have been ideal for displaying statuary. In addition to its height, its location set apart from both the Temple of Hermes and the Fountain of Poseidon, would have enabled any statue it exhibited to be viewed from the Agora below, the West shops above, and the neighboring precinct of Hermes. Even with the construction of Temple K and the Temple of Poseidon, which framed its back and south sides, the Rotunda remained an effective means of displaying statues.

¹⁵¹ Scranton 1951, 64.

¹⁵² Robert 1939, 89; Scranton 1951, 16, 34 and 66.

¹⁵³ The last means of access to the terrace was a set of stairs, preceded by columns, in front of the Temple of Hermes. Scranton (1951, 16) assigns these a late date.

¹⁵⁴ Another, secondary inscription appears on the frieze course of the Rotunda. Scranton 1951, 32.

¹⁵⁵ Scranton (1951, 30 pl. 12.4) suggests that the pinecone finial was sheathed in bronze.

While Babbius' inscription does not mention the god to whom the Rotunda was dedicated,¹⁵⁶ Pausanias lists statues of several divinities displayed on the Western terrace.¹⁵⁷ Of these, Scranton has attributed all but the statue of Aphrodite, sculpted by Hermogenes of Kythera, to other temples.¹⁵⁸ If a round shrine to Aphrodite,¹⁵⁹ Babbius' Rotunda would recall the famous Temple at Knidos (#16) as well as a monopteros erected near the agora at Sparta.¹⁶⁰ This monopteros, mentioned by Pausanias, honored Aphrodite and Zeus, both of whom received temples on or near the Western terrace.¹⁶¹ Despite this Greek parallel and the proximity of the two monuments at Corinth, it seems likely that Babbius' Rotunda celebrated Aphrodite independent of Zeus¹⁶² in the context best suited to display her striking Greek cult image.¹⁶³

Claudius: (41-54 AD)

Although he expanded the Empire, Claudius also retained an Italian focus, emphasized by his repair program that spanned temples, roads, aqueducts, and harbors. Notably, he built the port of Ostia at Portus, which served as Rome's harbor

¹⁵⁶ The Rotunda's identification as a temple stems from Babbius' use of *aedes* in his dedicatory inscription (see #9) as well as the number of temples present on the Western terrace.

¹⁵⁷ Scranton (1951, 70-1; cf. #9) has discovered statues comparable in range to Pausanias' catalogue.

¹⁵⁸ Scranton 1951, 70-2.

¹⁵⁹ M. Torelli, cited by Gros (1996a, 160 and cf. 1976a, 131-3), attributes the Rotunda to the Augustan colony at Corinth. He claims that it was built on the model of the Temple of Roma and Augustus (#4 and above) to honor Agrippa as Augustus' *consors imperii*. Torelli's theory seems unlikely based on Scranton, but cannot be debated without access to his text.

¹⁶⁰ Paus. 3.12.9-11.

¹⁶¹ The precinct of Zeus, to which should be linked Pausanias' three statues of Zeus (Paus. 2.2.6-8 and 3.6), lies to the north of the Temple of Hermes.

¹⁶² At Rome, the two gods were celebrated together, as Venus and Jupiter, in the twice-yearly *Vinalia*. Sabbatucci 1988, 132-8.

¹⁶³ Scranton (1951, 71) tentatively suggests that statues in the "Pergamene style," which he uncovered during excavations, were sited on the edge of Babbius' platform.

through much of the Imperial period.¹⁶⁴ Among the few temples constructed during his reign are round Temples at Rome (#37) and Ostia (#24).

The Temple of Fortuna, Rome (#37)

The foundations of the Temple of Fortuna (#37), located in the Horti Lucullani or Aciliorum as they came to be known in the second century AD,¹⁶⁵ were uncovered by the garden's excavators, H. Broise and V. Jolivet, during their 1998 campaign. The Temple crowns an elaborate complex of buildings, which were in use from the late Republic until the sixth century AD.¹⁶⁶ In the course of their excavations, Broise and Jolivet have revealed much of the garden's extent on the Pincio¹⁶⁷ and have been able to impose a sequence of ownership onto the chronology suggested by the archaeological remains. Briefly, the gardens passed through the hands of L. Licinius Lucullus, who began construction in 66-63 BC,¹⁶⁸ through various owners to the *gens Pincia*, who gave their name to the hill, to the emperor Honorius, and eventually to the papacy.¹⁶⁹ While very few remains pertain to Lucullus' garden,¹⁷⁰ considered splendid by ancient authors,¹⁷¹ most of what is preserved dates to the period of

¹⁶⁴ Meiggs 1973, 62-3.

¹⁶⁵ The Acilii Glabrones owned the property in the 2nd and 3rd centuries AD, having acquired it from the Imperial family. *CIL* VI 623; Plin. *paneg.* 50; cf. Broise and Jolivet 1987a, 751 and 1996a, 68.

¹⁶⁶ Cassiod. *var.* 3.10 (Horti's buildings dismantled in 507-510 AD).

¹⁶⁷ Frontinus (*aq.* 22.2) indicates that the *aqua Virgo* began *sub hortis Lucullanis*, providing the only ancient topographical reference to these gardens. For their extent based on physical remains, see Broise and Jolivet 1996a, 67-8.

¹⁶⁸ *RE* XIII Licinius 104. Broise and Jolivet 1987a, 749 and 1996a, 67.

¹⁶⁹ For the sequence of ownership, see Broise and Jolivet 1987a, 749-53 and 1996a, 67-8.

¹⁷⁰ These include parts of a water drainage system and a niched wall. Broise and Jolivet 1987a, 758 and 1996a, 67-8.

¹⁷¹ Plin. *Luc.* 39 and 41 (luxurious dining rooms); cf. Isid. *orig.* 6.5.1, Plut. *Luc.* 18.3 and 42.2, Cic. *fin.* 3.7 fol., Varro *rust.* 1.13.7, Plin. *nat.* 18.6, and Colum. 1.4.6 (his similarly extravagant villa at Tusculum). Broise and Jolivet (1987a, 748-49 and 1996a, 67) urge caution in interpreting Pliny's remarks (*epist.* 39.2 and 41), which post-date Asiaticus' building program.

Valerius Asiaticus, consul in 46 AD,¹⁷² who undertook a grand building program in the Horti.¹⁷³

P. Ligorio sketched a plan (1552-1564) of Asiaticus' complex, which bears a strong resemblance to the late Republican Sanctuary of Fortuna Primigenia at Praeneste.¹⁷⁴ It shows a central stairway leading to a rectangular terrace, flanked by rooms and crowned by a large hemicycle. Behind and perpendicular to this hemicycle is a small round building identified as a "tempio."¹⁷⁵ This building consists of a cella, whose wall, indented by seven rectangular niches, is faced with five pilasters and fronted by a hexastyle pronaos. Ligorio's drawing has been linked with a plan of L. Bufalini (1551),¹⁷⁶ which shows a similar, semicircular portico ending in antae and a round building described as the "Templum Solis." Although excavations have proven that neither plan is accurate, the temple, curved exedra, terraces and rooms they feature are principal components of the garden.¹⁷⁷

Remains of Asiaticus' building program include walls that frame the Horti's perimeter¹⁷⁸ and a huge complex set on axis with the Mausoleum of Augustus.¹⁷⁹ This complex comprises a semicircular portico with fountain niches, acting as both an *ambulatio* and a sustaining wall for the terrace that opened before it and was bounded

¹⁷² *PIR* V 25. Asiaticus' gardens were planned on such an impressive scale that they may have convinced the emperor Claudius of political treachery. Broise and Jolivet 1987a, 750, and 1996a, 67-8. Possibly as a result or by falling prey to Messalina's (*PIR* V 161) greed and cunning (see Tac. *ann.* 11.37, Cass. Dio 60[61].31.5, Platner and Ashby 1929, 268, and Richardson, jr. 1992, 200), Asiaticus committed suicide in 47 (Tac. *ann.* 11.1).

¹⁷³ Tac. *ann.* 11.1; Cass. Dio 60[61].31.5.

¹⁷⁴ See #37. Coarelli (1983b, 202-6; cf. Moneti 1993b and 1994) explores possible links between the Licinii Luculii and the Sanctuary at Praeneste to account for the similarities of plan. Although he speaks in favor of the gardens as a strict imitation of the Sanctuary, it is more likely, especially as the principal buildings date to the time of Asiaticus, that Ligorio creatively conflated the remains on the Pincio and the Sanctuary in his plan. Broise and Jolivet 1987a, 758, 1990, 474, 1997b and 1999, 267.

¹⁷⁵ In his city plan of 1552 (see #37), Ligorio refers to the round building as the "Templum Fortunae."

¹⁷⁶ X. Paciotti (1557), M. Cantaro (1576), S. Du Pérac (1577), and A. Tempesta (1593) also produced plans of this site, see #37.

¹⁷⁷ Broise and Jolivet 1999, 265-6.

¹⁷⁸ The E and N walls were incorporated by Aurelian into his network of fortifications. Broise and Jolivet 1985, 529, and 1990, 474.

¹⁷⁹ Broise and Jolivet 1998, 493-4.

to the west by dining rooms.¹⁸⁰ Dated to the reign of Claudius by a brick stamp,¹⁸¹ Asiaticus' complex has been identified with the *nymphaeum Iovis* located in Regio VII from a contemporary capital decorated with eagles and thunderbolts, attributes of Jupiter.¹⁸² The round temple located above the portico,¹⁸³ at the end point of its axis with the Mausoleum, is considered a Temple to Fortuna. This attribution is based on an inscription that ties a mid-Republican sanctuary of Fortuna to this site.¹⁸⁴

In addition to this inscription, portions of perimeter walls, columns, and capitals have been linked to the first Temple of Fortuna.¹⁸⁵ Of Asiaticus' Temple, two boundary walls exist,¹⁸⁶ while what remains of the Temple building dates to the fourth century AD, contemporary with Regionary Catalogues that refer to it as *novum* or built "anew."¹⁸⁷ While Asiaticus may have been influenced by the pre-existing sanctuary in constructing his Temple and nymphaeum, the orientation of his complex suggests that he intended to link it both visually and ideologically to the Mausoleum of Augustus. Through this connection, he may have sought to strengthen his political ties with the deified emperor and, by extension, with Imperial command.¹⁸⁸ His Temple of Fortuna, the goddess who shaped human destiny, and his nymphaeum to the all-powerful Jupiter were the most effective means in his power to achieve these aims and, by doing so, demonstrate his desire for an illustrious fate.

¹⁸⁰ The portico extends between the Villa Medici and Trinità dei Monti, while the dining rooms are preserved beneath the convent. Broise and Jolivet 1996a, 69.

¹⁸¹ While a brick stamp could point to construction undertaken during his successors' reigns (see #56 above), based on the extent of Asiaticus' building program, it seems likely that the complex dated to his ownership.

¹⁸² Broise and Jolivet 1990, 473-4, and 1996a, 69; De Spirito 1996b, 353. For later modifications to this complex, see Richardson, jr. 1992, 200, and Broise and Jolivet 1996a, 70.

¹⁸³ The Temple was probably accessed via a set of ramps or stairs from the exedra. Broise and Jolivet 1996b, 455.

¹⁸⁴ *CIL* VI 184; cf. Broise and Jolivet 1990, 474.

¹⁸⁵ See #37. The Temple of Fortuna lies underneath a Renaissance pavilion known as the Parnassus.

¹⁸⁶ See #37.

¹⁸⁷ Broise and Jolivet 1996a, 70, and 1998, 493; cf. Aronen 1995b, 267.

¹⁸⁸ Broise and Jolivet 1987b, 499, 1990, 474, and 1996a, 69.

The Shrine of the Lares Augusti, Ostia (#23)

A small circular building (#23) at the center of Ostia's Forum has been identified as a Shrine to the Lares Augusti, protectors of the Imperial household, based on seven inscribed plates found in its vicinity.¹⁸⁹ These plates, discussed by H. Bloch, indicate the Shrine's founders as well as the dates of its dedication and a key ceremony connected with the cult. While four of these plates signal donations made at the Shrine, the curvature of three corresponds to that of its remains,¹⁹⁰ a brick ring encircled by a cornice and embedded with six rectilinear niches. The three curved plates formed part of the revetment and architrave of the Shrine, otherwise enigmatic due to its absence of columns, commonly employed in aediculae,¹⁹¹ and more significantly, of an entrance.

Although it is difficult to tell how the Shrine functioned from its remains,¹⁹² the first two inscriptions studied by Bloch identify it as a *Laribus Augustis sacrum*, set up during the reign of Claudius by *magistri primi de sua pecunia*.¹⁹³ These *magistri primi* are named in the third and fifth inscriptions as L. Seius Hermeros, L. Seius Primus, and L. Seius Diomedes,¹⁹⁴ while the dates of the Shrine's dedication, 1 January 51 AD, and *lustratio*, 26 June, appear in the fourth inscription.¹⁹⁵ The *magistri primi*, also alluded to in the sixth and seventh inscriptions,¹⁹⁶ were the first

¹⁸⁹ See #24 and below. For their findspots, see Bloch 1962, 212.

¹⁹⁰ Bloch 1962, 212-3 and 218.

¹⁹¹ At Rome, the Lares were worshipped in *aediculae*, like the Shrine of the Lares Praestites (see Coarelli 1999b, 175-6) next to the Temple of Vesta (#57), and at *compita* or altars (see Bakker 1994, 129).

¹⁹² Even though this building was referred to by its dedicators as an *aedicula*, Bloch (1962, 219) compares it to a tower, a word used by the scholiast on Persius (4.28) to describe *compita*.

¹⁹³ Bloch 1962, 214-5 figs. 4-5.

¹⁹⁴ Based on the similarity of the names and the word *libertus* used to describe two of the three *magistri*, Bloch (1962, 216-8 fig. 6; cf. Meiggs 1973, 354) has envisaged the Shrine's donors as freedmen of L. Seius Strabo, *praefectus praetorio* in 14 AD, or L. Seius Tubero, *consul suffectus* in 18 AD.

¹⁹⁵ Bloch 1962, 216-7, 221 and fig. 7.

¹⁹⁶ Bloch 1962, 218.

stewards of the cult at Ostia. Though the cult of the Lares Augusti was established in Rome as early as 7 BC,¹⁹⁷ it took Claudius, who embraced the religious policies of Augustus,¹⁹⁸ to promote its introduction to Ostia in 51.¹⁹⁹ The *magistri primi*, whom he assigned to oversee the cult, began their first term on the Shrine's dedication day²⁰⁰ and took part in the *lustratio*, a cleansing ceremony connected with its inauguration.²⁰¹

While the cult of the Lares Augusti was not among the most prominent in the Empire,²⁰² the Shrine's location is significant as it demonstrates the importance of the Imperial cult, underlined by the nearby Temple of Augustus and Roma, at Ostia.²⁰³ This relationship is stressed further by a reorganization and amplification of the cult in the late first century AD and by the construction of a seat or hall of its magistrates on the Decumanus Maximus in the mid-second century.²⁰⁴

Nero: (54-68 AD)

While his contributions to the development of Roman architecture had a significant impact on later round temples, Nero was only directly responsible for rebuilding the Temple of Vesta (#57) at Rome.²⁰⁵

The Temple of Vesta, Rome (#57)

¹⁹⁷ For the organization of the cult at Rome and a discussion of its shrines and altars, see Bloch 1962, 219-20 n. 16, and Bakker 1994, 129-32 and 201.

¹⁹⁸ Tac. *ann.* 12.11; Suet. *Claud.* 11.2; *CIL* XIII 1668.2.1-4; cf. Bloch 1962, 221 and Bakker 1994, 123.

¹⁹⁹ See Bloch 1962, 222-3, for evidence of the Lares at Ostia prior to the Claudian period.

²⁰⁰ Bloch 1962, 221.

²⁰¹ Bakker 1994, 122-3. For a Roman shrine of the Lares Augusti, which refers to this ceremony on its architrave (*CIL* VI 451), see Bloch 1962, 222.

²⁰² Alföldi 1973, 42.

²⁰³ Bloch 1962, 223; Meiggs 1973, 132.

²⁰⁴ Pavolini 1989, 213-4; Pensabene 1996b, 214-5.

Based on Tacitus, who lists a *delubrum Vestae* among the sanctuaries destroyed in 64 AD and restored by Nero,²⁰⁶ R. Scott has suggested that both the Temple of Vesta (#57) and its Area Sacra were repaired at the end of Nero's reign.²⁰⁷ His hypothesis is supported by Julio-Claudian brick stamps used to restore a collapsed drain and to restructure the east side of the precinct,²⁰⁸ as well as by representations of the Temple on Neronian coins. These aurei and denarii, minted after 64, depict the Temple as a monopteros set on a stepped podium with Ionic columns and a domed roof. The Temple is identified by a seated figure of Vesta,²⁰⁹ holding a scepter and a patera, who appears beneath a smoke hole.²¹⁰ Nero's coins, which closely resemble those minted to celebrate Caesar's reconstruction, suggest that, though he repaired the Temple, he did not significantly alter its design.

Round temples dated to the Julio-Claudian period:

As part of Augustus' commitment to reviving traditional beliefs, new temples to established gods were built throughout the Julio-Claudian period.²¹¹

The Perirrhanterion, Rome (#51)

Excavations near the Theater of Marcellus in Rome have uncovered the foundations of a circular building (#51) illustrated on the Severan Marble Plan. The

²⁰⁵ However, some work on the Shrine of Venus (#55) may date to his reign as Vacca (et al. 1704, 58) notes that Neronian pipes were found in its vicinity. Due to their exceptionally large diameter, Lanciani (1888, 6) considers it unlikely that they signal the Shrine's conversion into a nymphaeum.

²⁰⁶ Tac. *ann.* 15.41 and *hist.* 143.

²⁰⁷ Scott (1993a, 17) believes that *delubrum* refers to the Area Sacra of Vesta, not only to the Temple, while Nero's rebuilding work also included additions to the Atrium Vestae.

²⁰⁸ *CIL* XV Suppl. 309-10; cf. Gatti 1899c, 50, and Scott 1993a, 17 and 1999b, 126.

²⁰⁹ She appears for identification purposes only. Fuchs 1969, 51-7; Hill 1989, 24.

²¹⁰ See #57. The presence of the smoke hole proves that the Temple lacked a cult image (Ov. *fast.* 6.925-8; vs. Scott 1999b, 127, who implausibly proposes that a cult statue of Vesta was introduced in the 1st c. AD).

foundations, sited at the level of the Julio-Claudian pavement,²¹² appear on Fragment 31n of the plan²¹³ as one of two circles in an area delimited by the theater, the Porticus of Octavia, and the Temple of Apollo Medicus.²¹⁴ Supporting a monopteros, whose remains date to the reign of Vespasian,²¹⁵ they may mark a site connected with the worship of Apollo from the Archaic period. Literary sources refer to a sanctuary of Apollo in *prata Flaminia*; known as *Apollinar*, this sanctuary centered around a natural spring used for purification rituals.²¹⁶ Based on its proximity to the Temple of Apollo, erected in the sanctuary in 433 BC,²¹⁷ and possible parallels, E. La Rocca has proposed that the monopteros provided a shelter for the spring from the first century AD.²¹⁸

In addition to Frontinus, who refers to the spring as a source of Apollo,²¹⁹ Plutarch may mention it in his narration of the murder of M. Marius Gratidianus.²²⁰ He describes how Catilina, after decapitating Marius, washed his hands of blood in the *perirrhanterion*. This term, which lacks a Latin equivalent, seems to refer both to a lustral source and to the implements employed in ritual cleansing.²²¹ By using this term as well as language common to descriptions of human sacrifice,²²² Plutarch may imply that Catilina followed traditional purificatory rites in his attempt to cleanse himself.²²³

²¹¹ In addition, the Hellenistic Rotunda at Ilion (#14) may have been restored, while the Shrine of Apollo Delphinios at Miletos (#19) was rebuilt during the early Julio-Claudian period.

²¹² La Rocca 1993, 23-4, vs. 1999a, where he suggests that the foundations could be Flavian.

²¹³ Rodríguez Almeida (1993a, 42) remarks on the limited accuracy of this fragment.

²¹⁴ La Rocca (1993, 23-4 and 1999a) has identified the other circle as the Columna Bellica.

²¹⁵ See Chap. VI #51.

²¹⁶ Liv. 3.63.7, 4.25.3 and 40.51.6; cf. Aronen 1995a, 257. La Rocca (1993, 23) considers this one of three such sites in Rome.

²¹⁷ For a discussion of the temple and its connection to lustral rites, see Viscogliosi 1993, *passim*.

²¹⁸ La Rocca 1993, *passim*, and 1999a.

²¹⁹ Frontin. *aq.* 1.4.

²²⁰ Plut. *Sull.* 32; Cic. *frag.* 9.19; Ascon. *tog. cand.* 80; Oros. *hist.* 5.19.

²²¹ La Rocca 1993, 22 and 1999a.

²²² See Oros. *hist.* 5.19, Gagé 1955, 435-6, and Coarelli 1965-1967, 66.

²²³ La Rocca (1999a) speculates that the rituals undertaken at the source of Apollo may have been intended for victorious generals returning to triumph in the city.

If the monopteros served as a shelter for the *perirrhanterion*, then, La Rocca suggests, it may find parallels in the Rotunda at Ilion (#14), the Monopteros at Pompeii (#28), and the Shrine of Fortuna Primigenia at Praeneste (#30).²²⁴ However, although they rested on wells, there is no evidence to show that any of these monuments either originated as natural springs or were employed in ritual purification. Moreover, their prime locations suggest that they functioned as the Mundi of their cities.²²⁵ A closer match is the Shrine of Venus Cloacina, a circular platform surmounted by a balustrade, whose involvement with ritual cleansing is attested in the sources.²²⁶ Like the Perirrhanterion, which may have been fed by a pipe alongside the Temple of Apollo Medicus,²²⁷ the shrine of Venus found a constant water supply in the Cloaca Maxima.²²⁸ For its use of a monopteros however, the Perirrhanterion may have more in common with Hellenistic tholoi at Argos and Miletos (#19), which served as monuments to the healing and cleansing powers of Apollo.²²⁹

The Shrine of Hercules, Rome (#41)

Although not attested in written sources, significant archaeological remains point to the existence of a round Shrine (#41) beside the Tiber. The Shrine stood in an area adjacent to the later Pons Aelius, which may have served as a port in the late Republican and early Imperial periods. Local finds of marble fragments as well as an

²²⁴ La Rocca 1993, 20.

²²⁵ The same reasoning applies to the Mundus in the Roman Forum (#49), which La Rocca (1993, 21) also cites as a possible parallel.

²²⁶ See Plin. *nat.* 15.119, Serv. *Aen.* 1.720, and Coarelli 1993e, 290-91. Similarly, the worship of Artemis at Stymphalos (#61) is linked to a natural spring. Seiler 1986, 127-8.

²²⁷ La Rocca 1993, 23. This pipe may have been installed after the natural source ran dry.

²²⁸ The shrine is only a valid parallel if, like the Perirrhanterion, its source was once natural.

²²⁹ For the Tholos in the Sanctuary of Pythian Apollo at Argos, see Robert 1939, 6 and 421.

inscription naming a *portus vinarius*²³⁰ have led scholars to propose that the port serviced the marble or wine-producing industries.²³¹ Through its location, the Shrine may have had some involvement in the trading activity of the port.

The Shrine rested on an earlier pier projecting at an angle into the river, which its excavator D. Marchetti identified as part of a bridge. This pier, formed of tufa *opus quadratum*, extended beneath the Shrine and a hemicycle.²³² Consisting of fifteen columns and two projecting antae, the hemicycle was aligned with the back of the Shrine, most likely a monopteros, which in turn was preceded by a rectangular altar.²³³ The altar, which features a bucranium above the crossing of two plane branches,²³⁴ is stylistically comparable to work of the Julio-Claudian period.²³⁵

In addition to the altar, three capitals have been found which pertain to the Shrine or the hemicycle. Highly unusual, they appear wrapped by a lion skin,²³⁶ while, like the altar, their rich detail and naturalistic carving date them to the Julio-Claudian period.²³⁷ Though the lion skins suggest that the Shrine honored Hercules, Marchetti prefers Liber based on a fragmentary inscription discovered nearby.²³⁸ This

²³⁰ *CIL* VI 9189-90, cf. 9181a-c and 9182, *CIL* VI 8826, and Flambard 1987, 201-10.

²³¹ Marble: Marchetti 1891, 53-60 and Flambard 1987, 204; wine: Rodríguez Almeida 1993c, 154-5.

²³² Marchetti (1891, 46-7; cf. Rodríguez Almeida 1993c, 154) dates the pier to the Augustan period, but attributes the Shrine to the third century AD (see Chap. VI #41). As he notes, the relative positions of both structures go against assigning them the same date, though it is more likely that the pier was Republican and coincided with the opening of the port. See Flambard (1987, 203-4 n. 52) for the dating limits imposed by the pier's use of both Grotta oscura and Anian tufa.

²³³ Marchetti 1891, 45.

²³⁴ Strong 1961, 92; Paris 1979, 264-5. Though Marchetti (1891, 46) identified them as vines, their slender branches and broad leaves with five three-toothed lobes are typical of plane or sycamore trees. Uncommon in the Roman decorative repertory, plane branches also appear on brick stamps of the *figlinae Platinianae*. Coarelli 1996n, 94.

²³⁵ See 'Statuary' below.

²³⁶ The cult image of the Temple of Hercules in *foro Boario* (#43) incorporates this motif (see Chap. IV 'Statuary'). However, hoping to support his attribution of the Shrine to Liber (see below), Marchetti (1891, 46; cf. Azzurri 1892, 175-7 and Dayan 1979, 334) interprets the animal skin as a panther's.

²³⁷ von Mercklin 1962, 278; La Rocca 1984, 63. However, Dayan (1979, 334) dates the capitals to the 2nd c. and Marchetti (1891, 46) to the 3rd, while Rodríguez Almeida (1993c, 154) believes that the base was reused and does not speculate on the date of the capitals.

²³⁸ Marchetti 1891, 46.

inscription, now lost, read LIB[ER] and may have adorned either the Shrine's architrave or a round base.²³⁹

Like the Shrine's remains, its location is of limited help in determining the god to whom it was dedicated. If sited in a port, it recalls the Temple of Hercules Victor *ad portam Trigeminam* (#44), which may have honored Hercules for his military might, symbolized by his labors, or for his role as the patron of merchants.²⁴⁰ While both aspects of Hercules could be represented, it is equally possible that, if the port was employed in the wine trade, the Shrine honored Liber-Bacchus, the god of wine. To account for both possibilities, E. Rodríguez Almeida suggests that the cults of Hercules and Liber were fused in this area of the port.²⁴¹ However, lacking verification of Marchetti's inscription, Hercules seems the better choice based on the capitals, which employ one of his most potent attributes.

III ANALYSIS

TEMPLE FOUNDATION AND LOCATION

Many of the principles that guided the foundation and location of temples in the late Republic remained valid in the Julio-Claudian period.²⁴² In the tradition of "victory temples," the Senate decreed a Temple to Mars Ultor on the Capitoline (#46), while to express his allegiance to Vesta, whom he served as Pontifex Maximus, Augustus set up a sanctuary in his house on the Palatine (#56). Once private, his house became public with the incorporation of her sanctuary and the Temple of Apollo. Agrippa's Pantheon (#50) also began as a private foundation as did Valerius

²³⁹ Architrave: Marchetti 1891, 46, Platner and Ashby 1929, 251, and Dayan 1979, 334; altar: Gusman 1901-1914, pl. 30.

²⁴⁰ See Chap. IV #44.

²⁴¹ Rodríguez Almeida 1993c, 154.

Asiaticus' Temple of Fortuna on the Pincio (#37).²⁴³ Among the public temple foundations, the Rotunda at Corinth (#9) was vowed by a local magistrate, while the Athenian people founded the Temple of Roma and Augustus (#4) and religious orders set up the Shrine of the Lares Augusti at Ostia (#23).

As in the late Republic, the Campus Martius proved an appealing choice for temple foundations. Central to this area were Agrippa's horti, which served as the focal point of his building program. The Pantheon, its main feature, may have opened towards the south to face the Basilica Neptuni or the north in the direction of the Mausoleum of Augustus.²⁴⁴ Even if, by facing south, the Pantheon was tied to Agrippa's military prowess,²⁴⁵ its location near the site of Romulus' apotheosis lends it a dynastic quality. This quality would be enhanced by its orientation of 355°, if the Pantheon faced north, which marks the region of the sky in which Julius Caesar's famous comet of 44 BC appeared.²⁴⁶ Moreover, a northern orientation would establish sight lines not only with the Mausoleum, but also with Augustus' Horologium and Ara Pacis.²⁴⁷ Coarelli has suggested that the Pantheon, linked to other significant projects of his reign, formed the centerpiece of buildings which, albeit indirectly, promoted the Imperial cult in Rome.²⁴⁸

By orienting his Temple of Fortuna towards the Mausoleum, Valerius Asiaticus may have drawn on the same ideology in attempting to link his fate with

²⁴² See Chap. IV 'Temple foundation and location.'

²⁴³ As private dedications, they may be comparable to the late Republican Shrine of Venus (see Chap. IV #55).

²⁴⁴ Until further excavations reveal which reconstruction is correct (see #50 above), the implications of both should be considered.

²⁴⁵ If Ziolkowski is right (see #50 above), the Campus Martius would be fitting for Agrippa's victory monument.

²⁴⁶ This comet marked the beginning of the *ludi Victoriae Caesaris* (Plin. *nat.* 2.93). Nissen 1873, 549; Hauteceur 1954, 166; Gros 1976a, 149.

²⁴⁷ La Rocca 1999b, 282.

²⁴⁸ Coarelli (1988, 74-5) suggests that Augustus was inspired by Hellenistic cities like Alexandria, where buildings as diverse as gymnasia, temples, and mausolea were brought into the service of the ruler cult.

Augustus’.²⁴⁹ Even more than the Campus Martius, hill sites like Asiaticus’ horti allowed sight lines to be created with ease, while providing space for new constructions.

As for the Pantheon and the Temple of Fortuna, the locations of the Perirrhanterion (#51) and the Shrine of Hercules (#41) were determined in relation to important landmarks. The Perirrhanterion may have been built to shelter a natural spring of Apollo next to the Theater of Marcellus. This role would explain its awkward proximity to the Theater, as well as its orientation towards the Temple of Apollo *in Circo*. Similarly, the Shrine of Hercules’ location near a port, facing the Campus Martius, may reflect the god’s role as both a protector of merchants and a patron of military victors.

Outside of Rome, prominent locations were held in high esteem.²⁵⁰ The Shrine of the Lares Augusti occupied a central position in the Forum of Ostia, while the Rotunda rose above the Lower Agora at Corinth and the Temple at Athens, crowning the Acropolis, stood among the most sacred buildings of the city. Sited on axis with the Parthenon,²⁵¹ the Temple was near the Erechtheion, from which it drew its proportions and ornament.²⁵²

The Julio-Claudian period reveals a duality in the relationship between round temples and their environment. The Temple at Athens, the Rotunda at Corinth, the Shrine at Ostia,²⁵³ and more subtly, the Pantheon’s round court, stand in sharp

²⁴⁹ The impact of Fortuna as the goddess of fate is enhanced by the complex’s similarities to the Sanctuary of Fortuna Primigenia at Praeneste, see #37 above.

²⁵⁰ This is also characteristic of late Republican temple foundations, see Chap. IV ‘Temple foundation and location.’

²⁵¹ Baldassarri 1998, 48.

²⁵² See ‘Decorative details’ below. In both the Greek and Roman periods, temples to the ruler cult were sited in significant locations, cf. Ephesus and Caesarea (Ios. *antiq.* 15.339). Zanker 1988, 298.

²⁵³ Like the Shrine at Ostia, that of Apollo Delphinios at Miletos (#19) was framed by a rectilinear court, but was balanced or harmonized (see below) by two semicircular exedras.

contrast to the rectilinear buildings or porticoes that frame them.²⁵⁴ The Temple of Fortuna, the Perirrhanterion and the Shrine of Hercules rather strive to harmonize with neighboring features, echoing the curves of the semicircular portico on the Pincio, the Theater of Marcellus and the hemicycle.²⁵⁵ Inspired by the Temple at Praeneste (#31), which mirrors the form of the portico that precedes and almost conceals it,²⁵⁶ these temples are successful in creating continuity by reflecting and engaging with their surroundings. Both of these trends will have an impact on the location of future round temples.

BUILDING MATERIALS AND TECHNIQUES

Masonry techniques

Two of the masonry techniques employed in the construction of late Republican round temples found favor in the Julio-Claudian period. *Opus quadratum*, the Greek method used to best advantage in the Temple of Hercules Victor *ad portam Trigeminam* (#44), appears in the foundations of Agrippa's Pantheon (#50) and is simulated in the marble revetment of the platform at Corinth (#9) and of the Shrine of the Lares Augusti at Ostia (#23).²⁵⁷ Similarly, *opus reticulatum*, known from the Temple of Fortuna Huiusce Diei (#38), is used in the platform's core as well as in the perimeter walls of the Temple of Fortuna on the Pincio (#37).

Both of these techniques, employed in the foundations of the Perirrhanterion (#51), are frequent features of early Imperial architecture. While *opus quadratum* is

²⁵⁴ As in the Hadrianic Pantheon (see Chap. VI #50), the contrast between round and rectilinear forms in these buildings, hemmed in by their surroundings, may have been more apparent from their interiors.

²⁵⁵ The hemicycle in turn reflects the banks of the Tiber.

²⁵⁶ See Chap. IV #31.

usually confined to large-scale building projects, *opus reticulatum* is more widespread. Its ease of production and suitability for a range of building types ensures its use through the early second century AD,²⁵⁸ when it is eclipsed by *opus testaceum* or brickwork. *Opus testaceum*, formed from courses of kiln-fired bricks, was first used in selected monuments of the early Julio-Claudian period²⁵⁹ and more widely to rebuild Rome following the fire of 64 AD. This method, quicker and more economical than *opus reticulatum*, was employed in the wall of the Shrine at Ostia.²⁶⁰

Roofing techniques

Like the majority of late Republican round temples, most dating to the Julio-Claudian period employed timber roofs. The Rotunda at Corinth (#9) preserves sloping marble plates, carved as tiles, and a finial indicative of a timber roof.²⁶¹ Though no longer extant, timber roofs can be reconstructed for the Temple of Roma and Augustus (#4) and probably for the Perirrhanterion (#51) and the Shrine of Hercules (#41).²⁶²

Although the time-tested pattern afforded by Greek roofs was appealing to most round temple builders, some may have begun to experiment with the possibilities of Roman domes and vaults. While the Temple at Praeneste (#31) may have been roofed by an early dome, coins depict a dome on Nero's Temple of Vesta (#57). Moreover, according to La Rocca's reconstruction, an annular vault may have

²⁵⁷ The foundations and screen wall of the Temple of Roma and Augustus at Athens (#4) may have employed this technique.

²⁵⁸ Adam 1994a, 133 and 141.

²⁵⁹ The first large-scale building project to employ brick was Tiberius' Castra Praetoria, 21-23 AD. Adam 1994a, 145. The other masonry technique developed at this time, namely *opus vittatum*, was not used in Julio-Claudian round temples. Adam 1994a, 135 and 139, and see Chap. VII 'Masonry techniques.'

²⁶⁰ Almost all buildings constructed in Ostia from the 2nd c. AD were brick. Adam 1994a, 145-6.

²⁶¹ For comparable Greek roofs, see Chap. IV 'Roofing Techniques.'

ringed the round court of Agrippa's Pantheon (#50). This vault, formed from concrete poured on a wooden scaffolding, would have resembled those known from Praeneste's Terrace of the Hemicycles. Though a key feature of later round temples, Roman domes and vaults were not in wide enough use until the second century AD²⁶³ to support the existence of a dome on the Temple of Vesta or a vault in the Pantheon.

BUILDING COMPONENTS

As in the late Republic, the foundations and podia of Julio-Claudian round temples, where known, follow both Greek and Italic trends. Like the Temple of Hercules Victor *ad portam Trigemina* (#44) and the Shrine of Hermes and Maia on Delos (#10), the Perirrhanterion (#51) rests on rings of stone blocks, albeit arranged around a concrete core.²⁶⁴ Roman concrete is also employed in the ring foundations that enclose the circular court of the Pantheon (#50) and in the platform beneath the Rotunda at Corinth (#9).²⁶⁵

Both the Pantheon and the Rotunda moreover include Roman podia. According to either reconstruction, the Pantheon is reached by a stepped porch. While, if La Rocca is correct, this porch might resemble a Hellenistic propylon,²⁶⁶ the height and access stairs of its podium would recall almost any Republican or contemporary Roman temple.²⁶⁷ Similarly, the Rotunda at Corinth rests on a high platform that serves as its podium. Accessed by side stairs, it is less conventional, but

²⁶² A concrete dome, too heavy for any of them to support, would have been especially out of place in the Temple of Roma and Augustus.

²⁶³ In the 1st centuries BC and AD, domes were confined to bath buildings like the "Temple of Mercury" at Baia. Sear 1982, 79-80; Adam 1994a, 186-7. For Nero's contributions to the history of the dome, see 'Introduction' above.

²⁶⁴ The Temple of Roma and Augustus and the rectangular cella or porch of the Pantheon rest on stone blocks, while the Rotunda at Corinth may have incorporated a poros layer between its core and revetment.

²⁶⁵ The Temple of Vesta's (#57) concrete foundations remained unchanged from the late Republic (see Chap. IV 'Building components').

does have parallels in the Temples of Apollo *in Circo*, Venus Genetrix and Divus Iulius.²⁶⁸ While the Shrine of the Lares Augusti at Ostia (#23) lacked a podium, like the Perirrhanterion (#51), the Temple of Roma and Augustus at Athens (#4) employed a Greek krepis to support its colonnade.²⁶⁹

Comparable to the moldings favored in the late Republic, those extant from the Rotunda at Corinth and the Shrine at Ostia employ forms common to the Greek repertory. Likewise, the preserved Attic column bases from the Temple of Roma and Augustus are near copies of those used in the Erechtheion, as are the shafts with lotus and palmette collars, Ionic capitals and entablature. The Attic bases of the Rotunda at Corinth, its Corinthian capitals and Ionic entablature also have Greek origins, albeit less clearly defined, as do the Corinthian capitals of the Pantheon. Perhaps the best expression of Greek influence on Augustan round temples is the Pantheon's caryatids which, not previously attested in Roman architecture, are attributed to a famous Greek craftsman.²⁷⁰ To balance this influence, the figurative capitals of the Shrine of Hercules (#41), unusual for any period,²⁷¹ use a Roman Corinthian capital as their base.

In their overall form, most of the round temples datable to the Julio-Claudian period are reminiscent of their late Republican and Greek precedents.²⁷² Among the few exceptions are the Pantheon, whose round court would have few parallels, the Shrine at Ostia, a drum without an entrance, and the Shrine of Hercules, whose hemicycle lacks clear comparanda. These exceptions, inspired by the experimental

²⁶⁶ Loerke 1982, 52.

²⁶⁷ Temple of Divus Iulius serves as a good contemporary example.

²⁶⁸ Favro 1984, 220 n. 93 and 222.

²⁶⁹ The Rotunda at Corinth rests on a single step.

²⁷⁰ Diogenes of Athens is credited with the bronze capitals and caryatids of the Pantheon (see #50 above). For the caryatids used in the forum of Augustus, see Gros 2001, 477.

²⁷¹ See 'The column capital' below.

²⁷² For comparable monopteroi, see Chap. IV 'Building components.' The screen walls of the Temple of Roma and Augustus may find parallels in the Temple of Aphrodite at Knidos (#16).

spirit of the first Augustan architects, like the more conventional round temples, fit within the framework of Augustan and Julio-Claudian architecture as it develops in Rome and the provinces. Taken as a microcosm of Roman architecture at this date, they show Augustus' emphasis on traditional Greek and Italic forms and use of exuberant ornament, combined with developments in the Corinthian order that will comprise his legacy.

DECORATIVE DETAILS

The podium molding

As in the late Republic, the molding preserved from Julio-Claudian round temples relies heavily on the Greek cyma recta and reversa.²⁷³ The simple, angular crown of the platform at Corinth (#9) incorporates a cyma recta between two sets of fascias and fillets, while its base molding consists of a torus, fascia, and cyma reversa, surmounted by two fillets. Between a torus and fillets, the base molding of the Shrine of the Lares Augusti at Ostia (#23) employs a deeply sloping cyma reversa.

While the Shrine's projecting molding recalls the base of the Temple of Hercules at Ostia, ca. 75-70 BC, both it and the Rotunda at Corinth, whose verticality is shared by the Temple of Juno Sospita in the Forum Holitorium, follow many Julio-Claudian temples in eschewing the extravagant profiles of the late Republic.²⁷⁴

²⁷³ See Chap. IV 'The podium molding.'

²⁷⁴ Adam 1994b, fig. 37 nos. 7 and 12. Comparable Augustan moldings may be found in Temple A of the Area Sacra di Largo Argentina and in the temples of the Forum Holitorium (Adam 1994b, 50-1 fig. 37; Gros 1996a, 134-5), while the moldings of the Temples of Fortuna Huiusce Diei (#38) and of Portunus are among the most exuberant of the late Republic, see Chap. IV 'The podium molding.'

Instead, their use of moldings recalls that of Classical Greek temples, whose elegant and refined finish was much admired by Augustan architects.²⁷⁵

The column base

Developed during the late Republic,²⁷⁶ the Roman version of the Attic base is used in almost all Julio-Claudian monuments, both in Italy and in the provinces.²⁷⁷ Of the round temples, the Temple of Roma and Augustus at Athens (#4)²⁷⁸ and the Rotunda at Corinth (#9) had bases of this type. Resting on the krepis of the Athenian Temple and the stylobate of the Rotunda, their bases consisted of two tori separated by a scotia and two fillets. Like most Julio-Claudian bases, they are carved independently of the column shafts,²⁷⁹ but do not rise from plinths, a common feature of the late Augustan period.²⁸⁰

The column shaft

Like the Pantheon's (#50) caryatids, the form and ornament of the Temple of Roma and Augustus' (#4) column shafts derived from the Erechtheion at Athens. Not only are their spacing and entasis comparable, but their collars decorated with alternating palmettes and lotus flowers are direct quotations of the column collars

²⁷⁵ The strip that surmounts the crown molding of the Rotunda adds to its finished effect. First used in the Temple of Fortuna Huiusce Diei, in the Augustan period, it appears in Temples of Juno Sospita and of Janus in the Forum Holitorium. Gros 1996a, 134.

²⁷⁶ See Chap. IV 'The column base.'

²⁷⁷ Augustus' Temple of Mars Ultor preserves several good examples (see Kockel 1995). Strong and Ward-Perkins 1962, 7-8.

²⁷⁸ The massing of the base is similar to that of the more complex Ionic bases along the east side of the Erechtheion. Binder 1969, 77.

²⁷⁹ This marks a departure from late Republican practice, see Chap. IV 'The column base.'

²⁸⁰ Though common in the Classical and Hellenistic periods, this practice was not favored in the late Republic. Strong and Ward-Perkins 1962, 5 and 11-2; Gros 2001, 495.

used along the Erechtheion's east façade.²⁸¹ This decorative band, framed by bead-and-reel and egg-and-dart molding courses, native to fifth century Greece,²⁸² is reflected in ornament of the Basilica Paulli and the Milliarium Aureum at Rome.²⁸³

The column capital

As in the late Republic, Julio-Claudian architects preferred to use the Corinthian order for most new temple foundations.²⁸⁴ Appealing for their ornamental quality, Corinthian capitals were especially valued in Rome for their adaptability and associations with Greek culture.²⁸⁵ In Greece however, all three orders were employed through the Augustan period,²⁸⁶ when Ionic capitals featured in the Temple of Roma and Augustus (#4). These capitals, topped by a band of egg-and-dart molding,²⁸⁷ are closely related to the capitals of the Erechtheion's east face, though their abacus is larger and their volutes are wider and more pronounced.²⁸⁸

While their basic form and components were established by the late Republic,²⁸⁹ the style and proportions of Corinthian capitals were not yet formalized. The first Augustan examples, in contrast to the rich and organic decoration of late Republican capitals, appear both flat and stylized. Their leaves, with deep nerves, lobes symmetrically opposed, and uniform hollows, are set beneath caulicoli whose

²⁸¹ Binder 1969, 78-84. See 'The entablature' below, for the comparable frieze course of the Rotunda at Corinth (#9).

²⁸² Locri provides a more organic 5th c. BC example. Binder 1969, 85 pl. 9.

²⁸³ By comparison to the collars of the Temple of Roma and Augustus, their ornament appears more rigid and geometric. Binder 1969, 87 and pl. 10b.

²⁸⁴ See Chap. IV 'The Corinthian capitals of the round temples.' Nero's repair of the Temple of Vesta (#57) retained the Ionic order employed in the late Republic.

²⁸⁵ Favro 1984, 210; Zanker 1988, 106. It is the adaptability of Corinthian capitals that allowed them to serve as a base for the figurative capitals of the Shrine of Hercules (#41), see below.

²⁸⁶ Gros 1996a, 160.

²⁸⁷ See Strong and Ward-Perkins (1962, 17) for examples of this motif used on the abacus of Corinthian capitals.

²⁸⁸ Binder 1969, 81; Baldassarri 1998, 47; cf. Wilson Jones 2000, 111 (possible political motivations behind the choice of order).

²⁸⁹ Gros 1996a, 145; cf. Chap. IV 'The Corinthian capital in the late Republic.'

vertical ridges and broad rims open up to a controlled flourish of volutes and helices.²⁹⁰

By the later Augustan period however, a trend towards natural and autonomous forms begins to emerge, wherein leaves are shown elongated and spread more freely across the surface of the capital.²⁹¹ Most notable in capitals from the Temple of Mars Ultor,²⁹² this increased naturalism soon surpasses that of late Republican capitals, whose two-block construction restricted both the height and spread of their ornament.²⁹³ Like the late Augustan capitals, those of his successors couple an interest in naturalism with high quality carving.²⁹⁴

Although few in number, the Corinthian capitals preserved from Julio-Claudian round temples adhere to the trends set by Augustan architects in Rome. The capitals of the Rotunda at Corinth (#9) employ two tiers of acanthus leaves, whose rigid nerves are combined with lightly folded lobes and irregular hollows.²⁹⁵ As these tiers begin to invade the zone of the volutes and helices, a third extends from the calices to frame the volutes. This unusual feature, which also appears in the Tiberian Temple of Castor, is complemented by a second, a rosette rising on a thin stem to rest on the capitals' abacus.²⁹⁶

Onto the form of the Corinthian capital, the capitals of the Shrine of Hercules (#41) graft a lion skin, widening at the top where the paws supplant the volutes.

²⁹⁰ This is especially true of the capitals of the Temples of Divus Iulius, Saturnus, and Apollo Palatinus. Strong and Ward-Perkins 1962, 13-5; Gros 1976a, 209-10, 1996a, 145, and 2001, 476.

²⁹¹ Gros (1996a, 145; cf. Heilmeyer 1970, 50-1) links this development to influences from Asia Minor, where asymmetrical arrangements of forms, particularly the leaves of capitals, were common.

²⁹² Heilmeyer 1970, pl. 2.1 and 3.3; Gros 2001, 476-8. Slightly earlier, and less naturalistic, examples may be found in the Temple of Apollo in *Circo*. Leon 1971, 149-50, 157-8, 160, 162, 164-5, and pl. 60.1, 62.1 and 63.1-2; Gros 1996a, 145; Viscogliosi 1996a, 88-9 and 108-9.

²⁹³ Chap. IV 'The Corinthian capital in the late Republic.' By the mid-1st c. AD, all capitals, regardless of size, were carved from a single block. Strong and Ward-Perkins 1962, 12; Gros 2001, 477.

²⁹⁴ Heilmeyer 1970, 127; Gros 2001, 484.

²⁹⁵ Heilmeyer 1970, 61 and 67 (comparable capitals at Roman Corinth). Their use of the Corinthian order, in contrast to the Athenian Temple's Ionic, may be a conscious reference to Rome.

Symmetrically modeled, the lion's head is finely carved with deep hollows used to define its eyes, mouth, and mane. These hollows, effecting a contrast between light and shade, lend an organic quality to the capitals' surface.²⁹⁷ Like their refined execution and use of naturalistic forms, comparable subject matter on a capital of late Republican or Augustan date may help to assign them to the Julio-Claudian period.²⁹⁸ This capital, depicting a lion's scalp with its mane wrapped around clubs, though less finely modeled, uses deep carving, light and shade to define the lion's features.²⁹⁹ Less typical of Julio-Claudian capitals than those of the Rotunda at Corinth, the lion skin capitals, nonetheless, partake of the experimental spirit shared by many Julio-Claudian craftsmen.³⁰⁰

The entablature

Introduced into the Roman repertory in the late Republic,³⁰¹ the modillion cornice, the defining element of the Corinthian entablature, becomes a regular feature of Augustan architecture in Rome.³⁰² Outside of Italy however, standard Ionic entablatures continue to be used throughout the Julio-Claudian period.³⁰³ The Temple of Roma and Augustus at Athens (#4) preserves a modest example with a three-fascia architrave, a blank frieze course, and egg-and-dart molding in place of dentils.³⁰⁴

²⁹⁶ Examples may be found in the Temples of Apollo Palatinus and Divus Iulius. Strong and Ward-Perkins 1962, 14.

²⁹⁷ Dayan 1979, 334-5.

²⁹⁸ For debates surrounding their date, see #41 above.

²⁹⁹ von Mercklin 1962, 277-8 no. 660.

³⁰⁰ Though less apparent in the architecture of Augustus' successors (prior to Nero), architects and craftsmen did not entirely abandon their interest in experimentation when Augustan Classicism was formalized, see Gros 2001, 484 and below.

³⁰¹ See Chap. IV 'The entablature.'

³⁰² Though omitted from Vitruvius' treatise on Roman architecture (see Gros 1976a, 197-201), modillion cornices may be found in the Temples of Divus Iulius, Apollo Palatinus and *in Circo*, and Mars Ultor. Gros 1976a, 207-7, 210-1 (Divus Iulius), 221-7 (Apollo *in Circo*), and 231-4 (Mars Ultor).

³⁰³ Wegner 1992, 45.

³⁰⁴ For a discussion of the Julio-Claudian egg-and-dart, see Strong and Ward-Perkins 1962, 21-2.

Like the entablature on the east face of the Erechtheion,³⁰⁵ that of the Temple incorporates bead-and-reel astragals³⁰⁶ and a cyma reversa as frames for its frieze course.³⁰⁷

These motifs, common from the Augustan period,³⁰⁸ also appear as crown moldings in the Ionic entablature of the Rotunda at Corinth (#9).³⁰⁹ This entablature includes a three-fascia architrave, an anthemion frieze course, and dentils.³¹⁰ With comparable examples in the Temples of Mars Ultor and Castor and the Forum of Augustus, its frieze comprises palmettes alternating with S-shaped volutes.³¹¹ While the Rotunda's frieze is more stylized than the Roman examples, anthemion friezes as such are common to Rome and her provinces from the Augustan period.³¹²

Pavements

Like temples of the late Republic, Julio-Claudian round temples incorporated mosaic flooring into their decorative programs.³¹³ These lively, often multi-colored surfaces leave few traces, but may be reconstructed for the Rotunda at Corinth (#9) and perhaps the round court of the Pantheon (#50). R. Scranton, who excavated the Rotunda, has suggested that its rough stylobate provided a base for light mosaic

³⁰⁵ Both entablatures are remarkably similar in form, even though the Erechtheion incorporates a figured frieze. Baldassarri 1998, 47.

³⁰⁶ For Julio-Claudian astragals, see Strong and Ward-Perkins 1962, 24.

³⁰⁷ Based on Classical models, this cyma reversa closely resembles examples from the Basilica Paulli and the Forum of Augustus, see Ganzert 1988, 116-7 nos. 3-4.

³⁰⁸ Strong and Ward-Perkins 1962, 18.

³⁰⁹ The Rotunda's cyma reversa finds parallels in Julio-Claudian buildings like the Basilica Paulli (see Leon 1971, 173 pl. 67.2; Ganzert 1988, 120 no. 12), the Forum of Augustus (see Leon 1971, 106 fol., 169, 174, and pls. 67.3 and 68.1-2), and the Temple of Castor (see Strong and Ward-Perkins 1962, 22-3).

³¹⁰ Like all Augustan dentils, these are both tall in proportion to their width and closely set. Strong and Ward-Perkins 1962, 24.

³¹¹ Strong and Ward-Perkins 1962, 18 and 21; Gros 1996a, 146-7. This motif, with Hellenistic origins, is used in the frieze of the Temple of Apollo at Didyma. Gros 1976a, 230; cf. Wegner 1992, 43-4.

³¹² Strong and Ward-Perkins 1962, 18; Wegner 1992, 43.

³¹³ See Chap. IV 'Stucco and mosaic work.' No traces of wall paintings or ornamental stucco work have been preserved.

work.³¹⁴ Similarly, if La Rocca's Agrippan date for the layer beneath Hadrian's floor is correct, its bedding and marble plates suggests that it carried an *opus sectile* pavement like that of the Hadrianic Pantheon.³¹⁵

Statuary

Ancient sources, both written and iconographic, attest to the presence of statues in the majority of the Julio-Claudian round temples. As in the late Republic, the choice of statuary was closely tied to the intentions of the temples' founders and the requirements of the cults.³¹⁶ The Imperial cult was celebrated indirectly in the Pantheon (#50) and openly in the Shrine of the Lares Augusti (#23) and the Temple of Roma and Augustus (#4). Aware that Augustus was unwilling to be numbered among the gods in Rome, Agrippa placed his image on the Pantheon's porch and in its interior, divine statues that may have signaled his future apotheosis. In the Shrine at Ostia, inscribed plaques allude to statues or altars that commemorated the *genius* of Claudius, while outside of Italy, statues celebrating Augustus and Roma in the Temple at Athens equated the Imperial cult with Hellenistic ruler cults and the Greek gods.³¹⁷

Tied to his personal and political propaganda is the statue erected in the Sanctuary of Vesta on the Palatine,³¹⁸ which emphasized her allegiance to Augustus. Moreover, if Torelli is correct, a statue of Victoria displayed in the Rotunda at Corinth (#9) may signal his gratitude to Agrippa. Alternatively, according to Scranton, the

³¹⁴ Scranton 1951, 24.

³¹⁵ Ziolkowski (1999, 55; cf. La Rocca 1999b, 280) also compares this pavement to the geometric flooring of Hadrian's Basilica Neptuni.

³¹⁶ See Chap. IV 'Statuary.'

³¹⁷ Similarly, the base built to honor Attalos I at Pergamon (see #4 above) set a statue of a Roman emperor in a sanctuary of Athena, the city's protecting divinity.

³¹⁸ See *InscrIt* XIII² 66 = *CIL* I² 213 and #56 above.

Rotunda and its podium may have served as a display gallery for Aphrodite and other Greek statues.³¹⁹

The only sculpture preserved from the Julio-Claudian round temples is an altar linked to the Shrine of Hercules (#41). This altar, which depicts a bucranium above the crossing of two plane branches, is stylistically appropriate to the early Julio-Claudian period. Framed by molding, including rows of cyma reversa,³²⁰ the altar's central motif recalls the Ara Pacis in its realistic modeling and delicate execution of forms.³²¹

PROPORTIONAL ANALYSIS (Charts V.1-6)

Since Vitruvius was a contemporary of Augustus, his recommendations regarding temple and column design may be more applicable to early Imperial round temples than to their predecessors.³²² Unlike those of Greek tholoi and late Republican round temples,³²³ the proportional relationships employed by the Rotunda at Corinth (#9) show a high correlation to Vitruvius' monopteros.³²⁴ The Rotunda, like his model, has a 10:1 ratio between its column height and lower column diameter, in turn related to its architrave height by 2:1. Moreover, its column height is almost equal to its stylobate diameter. Vitruvius' relationship between column height and

³¹⁹ For arguments regarding its attribution, see #9 above.

³²⁰ The crown molding is similar to examples found in the Basilica Paulli (Ganzert 1988, 117-18 no. 3) and the Temple of Roma and Augustus (see 'The entablature' above), while the base molding recalls cyma reversas employed in the Temple of Apollo *in Circo*, the Ara Pacis, and the Forum of Augustus (Ganzert 1988, 117-20 nos. 8-10 and 13). The altar's cyma reversa, with a pendant lotus flower, is more elaborate than that of the Rotunda at Corinth (see 'The entablature' above).

³²¹ Characteristic of the Ara Pacis as a whole (see Torelli 1999), elegant modeling is a feature of the bucrania and garland frieze that spans the interior of its altar enclosure. Paris 1979, 264-5; Zanker 1988, 118 fig. 96.

³²² But see 'The entablature' above (Vitruvius' omission of modillions).

³²³ See Chap. IV 'Proportional analysis.'

³²⁴ For references to Vitruvius, see Chap. II 'Vitruvius on round temple design.'

lower column diameter is also followed by the Temple of Roma and Augustus at Athens (#4).³²⁵

In their proportions, the columns of the Rotunda at Corinth approximate Vitruvius' pycnostyle arrangement, while those of the Temple at Athens come close to his prescriptions for diastyle. Within the Corinthian and Ionic orders however, neither building follows Vitruvius' guidelines. Moreover, neither shows the 1:2 relationship between their base diameters and intercolumnation widths, which M. Wilson Jones suggests was popular from the Augustan period.³²⁶ Instead, the Rotunda's base diameter to interaxial width is 1:2, while both it and the Temple enjoy comparable ratios among their base diameters, base heights, and lower column diameters.³²⁷

The 6:5 rule for Corinthian column heights to shaft heights proposed by Wilson Jones is reflected in the Rotunda, while the Ionic Temple of Roma and Augustus fits his ratio of 10:9.³²⁸ For the relationship between column height and entablature height, Wilson Jones also ascribes a pattern to Corinthian temples, namely of 1:4, which is not picked up by the Rotunda.³²⁹ Interestingly, of the Roman temples he examines,³³⁰ the late Republican round Temples of Hercules Victor *ad portam Trigemina* (#44) and at Tibur (#64) are farthest from his ideal.³³¹

³²⁵ None of the peripteroi or drums are sufficiently well-preserved to be compared to Vitruvius' ratios. For the relationships applied to drums, see Chap. IV.

³²⁶ Wilson Jones (2000, 73) cites examples of this relationship, which he traces back to Hermogenes' Temple of Dionysios at Teos and Pytheos' Temple of Athena at Priene, in the Temple of Mars Ultor and the Maison Carrée.

³²⁷ Not surprisingly, their capitals, intercolumnations, and interaxial measurements differ significantly.

³²⁸ See Chap. IV and Wilson Jones 1989a, 57, 1989b, 136 (6:5 ratio employed in columns of the Temple of Mars Ultor), and 2000, 150.

³²⁹ However, like the Temple at Athens, the Rotunda shows an almost 1:1 correspondence between its architrave and frieze.

³³⁰ Wilson Jones (1989a) draws conclusions about the proportions of the Corinthian order from nine well-preserved temples in Rome and Latium.

³³¹ Comparable to the Rotunda at 1:5¼, The Temple of Hercules and the Round Temple at Tibur have an approximately 1:5½ correspondence. Wilson Jones 1989a, 48.

Returning to his concept of the critical dimension,³³² the Perirrhanterion (#51) corresponds closely to the Rotunda in the relationship between its interaxial and external diameters.³³³ Beyond these correlations however, the Julio-Claudian round temples have little in common with each other, with Vitruvius or with Wilson Jones, even though as a group, they are more consistent in size than Greek tholoi and late Republican round temples.³³⁴

IV CONCLUSION

With a rich architectural inheritance from the late Republic, Augustan architects had the freedom to experiment with forms and styles drawn from Italic and Greek sources. At the beginning of his reign, they enhanced buildings little different from their predecessors with lavish materials and decoration.³³⁵ While the Greek sources that inspired these early monuments were varied, by the late Augustan period, architects looked to Athens to provide material for their ornament. Among their models was the Erechtheion, after which the Temple of Roma and Augustus (#4) was styled.

The Erechtheion also inspired the caryatids of Agrippa's Pantheon (#50).³³⁶ More than for its decoration, the Pantheon is significant as the first building in Rome to honor a living emperor. This type of dedication, attested at Athens in the Temple of Roma and Augustus and at Ostia in the Shrine of the Lares Augusti (#23), becomes widespread in Italy and abroad. Similarly, the styles and types of ornament employed

³³² See Chap. IV 'Proportional analysis.' Unlike the Shrine of the Lares Augusti and the Perirrhanterion (#51), both the Rotunda and the Temple fit his criteria of simple ratios between parts (albeit loosely).

³³³ The total diameter serves as the critical dimension of both buildings.

³³⁴ The Rotunda, the Shrine at Ostia and the Perirrhanterion have critical dimensions of close to 5 meters, while the floor space of the Shrine of Hercules (#41), independent of its hemicycle, is comparable to that of the Rotunda.

³³⁵ Gros 1976a, 215 and 1996a, 144.

under the Julio-Claudians, including fully developed Corinthian capitals and modillion cornices, have an appreciable influence on the architectural decoration of the Flavian and Antonine periods.³³⁷

³³⁶ Moreover, the Temple of Mars Ultor employed cyma reversas and egg-and-darts that find parallels in the Erechtheion's ornament. Strong 1953, 129.

³³⁷ See Chap. VI 'Decorative details.'

CHAPTER VI: THE FLAVIANS THROUGH THE ANTONINES

I INTRODUCTION

After the reign of Nero, the Flavian dynasty returned to the ideals of Augustan Classicism through the conservative building program pursued by Vespasian and his son Titus. Vespasian's second son Domitian, a more avid builder, completed many of their projects, while, in his own work, he emphasized interiors and light effects previously explored by Nero in his Domus Aurea.¹

Domitian's monumental legacy is matched by that of Trajan, who inherited the empire from Nerva, to construct buildings of astonishing richness and beauty in Rome. In a sense, J. B. Ward-Perkins suggests, his architecture marks both the "climax and completion" of Augustus' building program.² His successor Hadrian began a new era of experimentation, evident in his highly original Villa at Tibur and Pantheon (#50), both of which use rounded forms and the latest in building techniques to shape impressive, interior spaces.³

With the empire at its greatest expansion,⁴ Hadrian explored its limits for architectural inspiration more vigorously than any emperor had done before him. This is as evident from the buildings he constructed in Italy as from those that adorned the major provincial cities he visited throughout the Roman world.

II DISCUSSION

The Flavians: (69-96 AD)

¹ Ward-Perkins 1989, 100-4, and below.

² Ward-Perkins 1989, 84.

³ Ward-Perkins 1989, 105-11, and below.

⁴ Boatwright 2000.

Vespasian: (69-79 AD)

Unlike the excesses that characterized Nero's building program,⁵ Vespasian's was marked by both practicality and foresight. His first project, the rebuilding of the Temple of Jupiter Optimus Maximus, demonstrated his respect for traditional religion, while his second, the Temple of Divus Claudius, established his dynasty as the true successor of the Julio-Claudians.⁶ Allying himself with Claudius, he distanced his reign from Nero's, underscoring this when he began construction of the Flavian Amphitheater on the site of Nero's artificial lake.⁷ Finally, with the Templum Pacis,⁸ and possibly his rebuilding of the Perirrhanterion (#51), he established the Flavian period as an era of peace and prosperity.

The Perirrhanterion, Rome (#51)

Erected in the Julio-Claudian period, the Perirrhanterion (#51) was rebuilt under Vespasian.⁹ Remains from his reign include two Corinthian capitals and fragments of a curved entablature. The entablature, sculpted on both sides, consists of an inscribed, three-fascia architrave and a frieze course decorated with acanthus spirals and laurel branches.¹⁰ This course, surmounted by a modillion cornice, through its iconography and style, recalls the exterior frieze of the Temple of Apollo Medicus.¹¹

⁵ See Chap. V.

⁶ Ward-Perkins 1989, 63. Temple of Jupiter Optimus Maximus: De Angeli 1996, 148-53; Temple of Divus Claudius: Buzzetti 1995, 277-8.

⁷ Rea 1993, 30-5.

⁸ The Templum Pacis was vowed and the Arch of Titus built in response to the capture of Jerusalem in 71 AD, see Santangeli Valenzani 1999, 285-6 and below.

⁹ His rebuilding is commemorated on the shrine's architrave, see #51.

¹⁰ See below. The 2nd c. AD tholos in the macellum at Perge includes a similar double-sided entablature. De Ruyt 1983, 131-2.

¹¹ La Rocca 1999a, 79-80; cf. Viscogliosi 1996a, 48-52 and below.

Vespasian may have fulfilled a personal agenda in underlining the connection between these monuments, forged when the shrine was erected above the ancient spring of Apollo.¹² E. La Rocca suggests that, by rebuilding the Perirrhanterion, the emperor commemorated Apollo for facilitating his and Titus' victory over the Jews in 71 AD.¹³

Domitian: (81-96 AD)

In addition to the building projects he inherited from Vespasian and Titus,¹⁴ Domitian undertook significant restorations at Rome. While most of his restoration work was focused on the Campus Martius, including the Temple of Fortuna Huiusce Diei (#38) and the Pantheon (#50), he also may have restored the Tholus of Cybele on the Sacra via (#34). Of his new constructions, many of which may have been designed by Rabirius,¹⁵ his most famous are the palace on the Palatine, the Forum Transitorium, and the stadium and Odeon in the Campus Martius,¹⁶ though he also built the 'Temple of Minerva Chalcidica' (#48) and a temple to his family, the *gens Flavia* (#40).

The Temple of Fortuna Huiusce Diei, Rome (#38)

Under Domitian, the Area sacra di Largo Argentina gained a travertine pavement, while its temples were restored.¹⁷ To the Temple of Fortuna Huiusce Diei (#38), layers of brickwork and stucco were added to fully incorporate its columns into

¹² See Chap. V #51.

¹³ La Rocca 1993, 21-2.

¹⁴ These included the Amphitheater, the Baths of Titus, and the Temple of Vespasian. Ward-Perkins 1989, 73.

¹⁵ Rabirius is attested as the architect of the Palatine palace. Ward-Perkins 1989, 73.

¹⁶ Flavian palace: Sasso d'Elia 1995, 43-4; Forum Transitorium: Bauer and Morselli 1995, 307-11; and Stadium of Domitian: De Spirito 1999b, 343-4.

¹⁷ Marchetti-Longhi 1970-1971, 9-13.

its first century BC cella wall.¹⁸ At a later date, the Temple received new travertine stairs and a brick base and altar revetted in marble.¹⁹

The Tholus of Cybele, Rome (#34)

Iconographic evidence has raised the possibility that Domitian's reign saw the rebuilding of a second round temple. The Tholus of Cybele (#34), dated to the late Republic, has been linked with a denarius more commonly associated with a shrine in the Circus Maximus.²⁰ This coin shows a four-column temple, raised on a three-step krepis, which carries an entablature, lion antefixes and a finial. Inside the temple is a statue of Cybele holding a spear.²¹ Though difficult to determine its shape from the coin, the temple has been interpreted as round, based on its similarities to coin depictions associated with the 'Temple of Minerva Chalcidica' (#48).²²

More substantial than the coins are brick foundations found near the later Basilica of Constantine²³ and two terracotta reliefs discovered between the Temple of Antoninus and Faustina and the 'Temple of Romulus' (#52).²⁴ These reliefs²⁵ show a goddess carrying a patera and a long spear, while sitting on a high-backed throne flanked by recumbent lions. The group appears on an oared boat.

Present on the Domitianic coin, the spear and lions are common attributes of Cybele celebrated on later coinage, including a contorniate minted in honor of Diva

¹⁸ Marchetti-Longhi 1956-1958, 61, and 1970-1971, 21-2. Fragments of a white mosaic pavement (see #38 and below) found inside the Temple may also date to the Domitianic period. Coarelli 1981a, 21.

¹⁹ These additions are not securely dated. Gros 1996a, 270.

²⁰ Küthmann and Overbeck 1973a, 41-2 no. 77.

²¹ Unlike the elaborate cult image of the Temple of Magna Mater on the Palatine (Prud. *perist.* 10.156-60, and Arnob. *nat.* 7.49; see 'Statuary and reliefs' below), it would have been conceivable to reorient this statue (cf. Cass. Dio 46.33.3, and Chap. IV #34).

²² However, Küthmann and Overbeck's arguments (1973a, 66 no. 127) are flawed as the coins linked to Minerva Chalcidica may show a rectangular temple, see below.

²³ See Chap. IV #34 and below.

²⁴ Vermaseren 1977, 37 nos. 202-3.

²⁵ These may be dated to the Flavian period based on comparable reliefs from Rome and Ostia. Simon 1963b, 613, and 1963c, 744-5; cf. Simon 1966, 24-5 (altar).

Faustina.²⁶ This coin, which depicts Cybele seated inside a rectangular temple fronted by steps, though occasionally linked with her Tholus,²⁷ is better associated with the Temple of Magna Mater on the Palatine.²⁸ Similarly, the Palatine temple may be represented on the Haterii relief²⁹ in the guise of a statue of Cybele.³⁰ Like Faustina's coin, this relief, together with an Antonine medallion that shows the Shrine of Hercules (#41),³¹ has been identified incorrectly with her Tholus on the Sacra via.³²

The Pantheon, Rome (#50)

The fire of 80 AD damaged or destroyed several significant buildings in the central Campus Martius.³³ Among them were the Pantheon (#50) and the Saepta Iulia, constructed by Agrippa as part of his large-scale building program.³⁴ Domitian's restoration of both buildings is attested by the sources,³⁵ and in the case of the Pantheon, by physical remains. These remains include an upper bedding layer found beneath the rotunda of Hadrian's Pantheon.³⁶ Its similarity to the Agrippan layer suggests that Domitian's rebuilding, obliterated by lightning under Trajan,³⁷ adopted the Pantheon's original plan.

²⁶ K  thmann and Overbeck 1973a, 27-8 no. 44; Vermaseren 1977, 37.

²⁷ Nash 1961-1962, Vol. 2: 34.

²⁸ The building's shape and steps are prominent features of the Palatine temple. See H  lsen 1895b, 28, for the role the stairs may have played in the Ludi Megalenses (Lucr. 2.618 fol., Cic. *har. resp.* 24, and Liv. 36.36.4-5).

²⁹ For an analysis of the buildings represented on the Haterii Relief, see Richter 1885, 418-23, and Castagnoli 1941, 59-69.

³⁰ It is unreasonable to suppose, like Castagnoli (1941, 67), that Cybele was a "filler" used in response to *horror vacui*.

³¹ See #41 below.

³² Haterii relief: Vaglieri 1903, 28, Jordan and H  lsen 1907, 103-4, Esdaile 1908, 369, Graillot 1912, 334, Platner and Ashby 1929, 325, and Lugli 1946, 219 and 1947, 177-8. Medallion: see #41 below.

³³ Cass. Dio 66.24.2.

³⁴ See Chap. V #50.

³⁵ Pantheon: *Chronogr. a.* 354, and Hier. *chron. a. Abr.* 2105; Saepta Iulia: Stat. *silv.* 4.5.2, and Mart. 2.14.5, 57.2, 9.59.1, 10.80.4, and cf. Gatti 1999, 228.

³⁶ It is possible that the stairs (#50 and Chap. V; cf. Wilson Jones 2000, 182) and the fragments of marble revetment (#50 and Gruben and Gruben 1997, 55) found beneath Hadrian's pronaos are of Domitianic date.

³⁷ Oros. *hist.* 7.12.5 and Hier. *chron. a. Abr.* 2126.

‘The Temple of Minerva Chalcidica,’ Rome (#48)

Domitian’s so-called Temple of Minerva Chalcidica (#48) is known from a variety of sources, both written and iconographic. It is only within recent years however that these pieces of evidence have been taken together to locate and describe the building. The Regionary Catalogues place it in the Campus Martius,³⁸ while a later source defines its position between the Temple of Isis and Serapis and the Pantheon (#50).³⁹ An early Medieval church which preserves its name, S. Maria sopra Minerva,⁴⁰ may also suggest its location, though it is only with new work on the Severan Marble Plan that the building has been sited accurately. In addition to placing it within its topographical context, the Plan indicates the building’s shape and scale, while a coin minted under Domitian⁴¹ and a drawing by the Renaissance artist, Onofrio Panvinio,⁴² may show its elevation.

Plate 31 of the Marble Plan has been restored to illustrate the Campus Martius from the Porticus Divorum⁴³ to the Saepta Iulia. C. Hülsen identified a round building, located between the Divorum and the Serapeum, as a fountain. He based his hypothesis on a fragmentary inscription,]VACHR[--]A, above the building, which he restored as *lavacrum* or ‘circular fountain.’⁴⁴ E. Sjöquist refined Hülsen’s theory, emending the inscription to [LA]VACHR[VM] A[GRIPPAE] in reference to Ammianus Marcellinus’ appellation of the Baths of Agrippa.⁴⁵

³⁸ *Curios. urb.* p. 125 VZ I.

³⁹ *Mir.* 22, 50 VZ III (see #48).

⁴⁰ *Itin. Eins.* 195 VZ II; cf. Hülsen 1927, 346, and Walser 1987, 175-7 and 189-90.

⁴¹ See #48.

⁴² *Cod. Vat. Lat.* 3439 f. 25r.

⁴³ The Divorum was at least begun, if not completed by Domitian. Coarelli 1995a, 19-20.

⁴⁴ Hülsen (1903, 39-46; cf. Petersen 1903, 320) erroneously attributed to it the *pinea* or gilded pine cone on display in the gardens of the Vatican.

⁴⁵ *Amm.* 29.6.17; see Ghini (1996b, 40-2) for more common ways of referring to the *Thermae Agrippae*. This inscription was first interpreted by G. Belleri (1673, 23; cf. Sjöquist 1946, 99-105) as [LA]VACHR[VM] A[GRIPPINAE].

Through the discovery of an additional fragment, which reads MI, both Hülsen's and Sjöquist's readings have been proven incorrect. More likely is MI[NE]RVA CHA[LCIDIC]A, wherein her epithet may suggest links to a cult of Athena in Chalkis⁴⁶ or the Chalcidicum, equivalent to the Atrium Minervae near the Curia.⁴⁷ Based on the inscription, L. Cozza concluded that the building represented on the Plan was a temple to Minerva Chalcidica.⁴⁸ A fourth century source⁴⁹ links Domitian with a temple dedicated to this goddess in the Campus Martius, while Pliny records the existence, though not the location, of a temple of Minerva constructed by Pompey in 62 BC.⁵⁰ Domitian's temple may have been a restoration of Pompey's or more likely, a new foundation.⁵¹

The building illustrated on the Severan Marble Plan is highly unusual. Set within a circular precinct, it is approached by four sets of steps, linked by niches, while it includes a rectangular object that may represent a statue base. This depiction has been related to Panvinio's drawing, based on a work of Pirro Ligorio,⁵² which shows half of a round temple with an external peristasis of twenty-four columns, a cella wall with four entrances, and an internal colonnade of sixteen columns. The subject of the drawing is identified in its margins as the Temple of Isis and Serapis or of Sol.⁵³

In addition to its label, elements of the building's plan speak against associating the drawing with Domitian's dedication to Minerva Chalcidica. While the

⁴⁶ de Caprariis 1996, 255; vs. Lundström 1929, 369, and Schürmann 1985, 14. A round building was also used to honor Athena at Magnesia on the Meander (#18), see 'The Antonines' below.

⁴⁷ Cass. Dio 51.22. Castagnoli 1993, 507-8; Zevi 1993, 135-6; Viriouvét 1995, 76-8.

⁴⁸ Carettoni et al. 1960, 99.

⁴⁹ *Chronogr. a.* 354 p. 146 M.

⁵⁰ Plin. *nat.* 7.97.

⁵¹ Restoration: Viriouvét 1995, 79-80; new foundation: Nash 1961-1962, Vol. 2: 66, Richardson, jr. 1992, 256, Castagnoli 1993, 252, and de Caprariis 1996, 255; undecided: Jordan and Hülsen 1907, 573, and Platner and Ashby 1929, 344.

⁵² *Cod. Paris.* f. 309.

⁵³ Castagnoli 1952, 100-1.

Marble Plan shows four stairs, possibly suggesting four entrances, it does not include columns, which are normally depicted for peripteral temples.⁵⁴ Moreover, the drawing omits the stairs and the rectangular base, for which L. Richardson's suggestion, namely that they were removed as part of Septimius Severus' restoration of the building, is purely hypothetical.⁵⁵ The one element that can support a connection between the Plan and the drawing is their comparable size, which may be coincidental.⁵⁶

Like the drawing, a coin issued under Domitian, ca. 94 AD,⁵⁷ has been associated with this building. It depicts a round temple on a three-step podium with Corinthian or Composite columns supporting a three-fascia architrave, a flat roof, and florette- and globe-shaped acroterial sculpture.⁵⁸ A statue of Minerva, shown with a helmet, spear and round shield, appears inside the temple. This statue type is depicted on other Domitianic coins⁵⁹ and recalls a statue of Minerva found in the vicinity of S. Maria sopra Minerva.⁶⁰ While the statue may be associated with Domitian's building, the coin is problematic in that it depicts columns and a flat roof, which makes the temple appear more rectangular than round.⁶¹

Both the drawing and the coin would support a reconstruction of this building, namely with a stepped podium, cella,⁶² colonnade, and roof, which is almost

⁵⁴ On the same plate, the Divorum and Serapeum are both depicted with colonnades.

⁵⁵ Richardson, jr. 1992, 256.

⁵⁶ The drawing includes foot measurements, see Castagnoli 1952, 100-1.

⁵⁷ This forms part of a series of five coins minted by Domitian to celebrate temples constructed during his reign. Also included are depictions of the Temples of Jupiter Capitolinus, Cybele, Jupiter Victor, and Serapis. Hill 1989, 29.

⁵⁸ Cf. Schürmann 1985, 14 pl. 16c (comparable gem).

⁵⁹ Minerva is frequently shown on Domitianic coinage in her capacity as warrior goddess, both alone and with Domitian, see *BMCEmp* II 363 nos. 296-7, 370 no. 332, 381 no. 376, 386 no. 395, and 389 no. 408.

⁶⁰ Schürmann 1985, 77-88. Castagnoli (1993, 506; cf. Carettoni et al. 1960, 101, and Schürmann 1985, 77-88) discounts the statue as the cult image of a temple to Minerva Chalcidica.

⁶¹ On coins, round buildings are usually shown with conical roofs, see #57 for examples illustrating the Temple of Vesta in the Roman Forum.

⁶² In order to reveal the cult statue, cella walls may be absent from the coin depiction.

incompatible with the depiction on the Marble Plan.⁶³ Closer parallels to the Plan are provided by fountains, which share its round form, sets of steps, niches, and central ‘base’ or fountainhead. In Flavian examples found near the Lacus Iuturnae,⁶⁴ basins, recalling the outer circle on the Marble Plan,⁶⁵ support stepped structures down which water once cascaded. Moreover, the building known as ‘Minerva Chalcidica’ may follow *lacus*, as well as temples, by including a statue of the god to whom it was dedicated.⁶⁶

Though comparable in form, it should be noted that preserved fountains are much smaller than the building on the Marble Plan. Funerary monuments, known for reflecting other architectural types,⁶⁷ may preserve both the form and scale of the round building. Among them are a tomb shown on an incised marble plan discovered on the via Labicana⁶⁸ and a funerary monument known as S. Maria Capua Vetere.⁶⁹ In plan, these examples combine a square base with a round core encircled by four niches, while in the elevation of S. Maria Capua Vetere, this plan translates to three levels: a base, an intermediary level with statue-filled niches, and a round monopteros. This elevation is corroborated by the commemorative monuments of the Julii at Glanum, ca. first century BC,⁷⁰ and of C. Memmius, which forms part of the Domitianic forum at Ephesos.⁷¹

⁶³ Lugli’s reconstruction (1938, 110-2), though closer to the Marble Plan, is pure speculation based on Sangallo’s drawing of the ‘Temple of Portunus’ at Portus. Sjöquist 1946, 112-3 figs. 36-7.

⁶⁴ Tammisto 1989, 242-9 and figs.; cf. Jordan 1867, 399-401.

⁶⁵ This is usually interpreted as a circular precinct wall, see above.

⁶⁶ The lacus Ganymedis and lacus Orphei serve as good examples. Aronen 1996a, 168; Coarelli 1996j, 171.

⁶⁷ Tombs of this type may copy small fountains or their larger prototypes, if such buildings existed (cf. Tammisto 1989, 245).

⁶⁸ Hülsen 1890, 52-60; Wilson Jones 2000, 72 figs. 4.4-4.5.

⁶⁹ Toynbee 1971, 109; von Hesberg 1992, 131.

⁷⁰ Rolland 1969; von Hesberg 1992, 121 and 139.

⁷¹ As C. Memmius was Sulla’s uncle, this building should be dated to the 2nd c. BC. Wiplinger and Wlach 1995, 79; vs. Weber 1990, 118-9 and cat. M24-6 (Augustan period).

Based on these parallels, it is probable that Hülse and Sjöquist were correct after all in describing the round building on the Marble Plan as a fountain. This would suggest that the coin commonly linked to it represents an unknown temple of Minerva. Even without the coin evidence in support of its Domitianic date, the emperor's well publicized devotion to the goddess⁷² makes it likely that the fountain, certainly earlier than the Severan Marble Plan, provided him another means of promoting his patroness and protector.⁷³

The Temple of the Gens Flavia, Rome (#40)

Domitian converted the *domus* of his family, the *gens Flavia*, into a Temple commemorating its divinized members (#40).⁷⁴ The Temple's dedication can be dated to the last years of his reign, between the death of Titus' daughter Julia in 89 AD,⁷⁵ whose ashes were interred in the Temple,⁷⁶ and Domitian's death in 96. In addition to Julia's, the ashes of Domitian⁷⁷ and most probably of Vespasian and Titus were contained in this monument,⁷⁸ praised by contemporary authors for its size and splendor.⁷⁹ Martial and Statius, in particular, commend the Temple as a reflection of the heavens.⁸⁰ Based on their testimony, modern scholars have concluded that it was both round and domed.⁸¹ The Pantheon (#50), often considered a monument to the

⁷² See Giard 1981a, 203-32, and 1981b, 233-45.

⁷³ Schürmann 1985, 14-5.

⁷⁴ Platner and Ashby 1929, 247; Rodríguez Almeida 1986, 57; Candilio 1995, 201; Coarelli 1995i, 368. Richardson, jr. (1992, 181) suggests that the *domus* may have been leveled to make room for the Temple. For the Sabine associations of the site, which may have influenced Domitian's choice, see Torelli 1987, 570-2, and Paris 1994g, 78.

⁷⁵ See #40. Torelli 1987, 563; Coarelli 1995i, 368.

⁷⁶ *PIR* F 426.

⁷⁷ See #40.

⁷⁸ See #40. Rodríguez Almeida 1986, 57-8; Richardson, jr. 1992, 181; Candilio 1995, 201; Coarelli 1995i, 368.

⁷⁹ Martial and Statius (#40 and see below) also evoke the temple as a symbol of Rome's *aeternitas*. Platner and Ashby 1929, 247; Richardson, jr. 1992, 181.

⁸⁰ Mart. *epigr.* 9.1.8-10, 3.12, and 34.1-2; Stat. *silv.* 4.3.19 and 5.1.240-1.

⁸¹ Altmann 1906, 88; Platner and Ashby 1929, 247; Richardson, jr. 1992, 181.

gens Iulia, has been taken as a precedent for this Temple in terms of its function, form, and celestial connotations.⁸²

Beyond describing the symbolic content of the Temple, the sources confirm its date, if simply by the coincidence that Martial's and Statius' poems which extol it can be dated to 95-96 AD,⁸³ and provide some indication of its location. Iconographic and architectural finds further define the Temple's location and allow for its reconstruction. Suetonius notes that Domitian's birthplace, namely his family *domus*, is sited in Regio VI *ad Malum Punicum*.⁸⁴ This is confirmed by the Regionary Catalogues, which locate the Temple of the Gens Flavia near that of Quirinus, the Horti Sallustiani and the Baths of Diocletian.⁸⁵ In addition, a *cippus*, found in the vigna Sadoleti,⁸⁶ and a water pipe, uncovered near the intersection of via XX Settembre and via Firenze,⁸⁷ both name T. Flavius Sabinus,⁸⁸ Vespasian's brother, in whose *domus* Domitian was probably born.⁸⁹

Also near this spot on via Firenze were found several highly significant reliefs, whose date, refined workmanship, material, and subject matter suggest that they formed part of the Temple's decorative scheme.⁹⁰ These Pentelic marble reliefs, excavated from an area to the north of the exedra of the Baths of Diocletian,⁹¹ show

⁸² Cass. Dio 53.27, but see Chap. V #50 as Agrippa's Pantheon was not domed and may not have been round.

⁸³ Martial's *epigrammata* IX and Statius' *silvae* IV and V were written in late 95-early 96 AD. Torelli 1987, 563. Since both they and the Temple were vital to conveying Domitian's dynastic message, Rodríguez Almeida (1986, 57-8) proposes that the Temple's *dies natalis*, commemorated by the poems, was Domitian's birthday, 24 October.

⁸⁴ Suet. *Dom.* 1.1.9, and see #40.

⁸⁵ See #40, and Paris 1994c, 16.

⁸⁶ *CIL* VI 29788: *Inter duos / parietes / ambitus privat(us) / Flavi Sabini*. The vigna was sited somewhere in the area defined by S. Andrea (whose construction led to the discovery of the water pipe), via XX Settembre, via Nazionale, and via delle Quattro Fontane. Rodríguez Almeida 1986, 56; Paris 1994c, 23.

⁸⁷ *CIL* XV 7451: *T. Flavi Sabini*. Rodríguez Almeida 1986, 56; Torelli 1987, 567; Paris 1994c, 23; Coarelli 1995i, 368.

⁸⁸ Tac. *hist.* 3.69; cf. *PIR* F 352.

⁸⁹ Coarelli 1995i, 368.

⁹⁰ For a full description of the fragments, see Paris and Gazda 1994.

⁹¹ Paris 1994b, 9, and 1994c, 23; Coarelli 1995i, 368.

both sacred and historical scenes that, as interpreted by R. Paris, have particular relevance for Domitian's dynastic monument.⁹² Clearly recognizable among the relief fragments is the head of a *flamen* against the backdrop of a temple, whose pediment shows figures pertaining to the founding legends of Rome.⁹³ Paris has identified the temple as that of Quirinus, or Romulus by his Sabine name, and sees the historical reliefs representing soldiers, Vespasian, and Victoria as an allusion to the Flavians' success in the Civil War of 68-69 AD.⁹⁴ She attributes the fragments to an altar-precinct laid out like the *Ara Pacis Augustae*,⁹⁵ while Torelli and Coarelli associate the reliefs with an arch marking the entrance to the Temple.⁹⁶

A rare Roman sestertius minted under Domitian in 95-96 AD shows a decastyle temple set within two precincts, the first of which is dominated by an entrance arch.⁹⁷ Another Domitianic coin, with a disproportionately large Jupiter seated inside a temple, may illustrate the elevation of this monument,⁹⁸ while a relief found in the Forum of Trajan, which shows a decastyle temple behind a procession of two *togati* and four *lictors*, may depict its inauguration.⁹⁹

Two separate sets of remains have been attributed to the Temple of the Gens Flavia.¹⁰⁰ The first, found beneath the Caserma dei Corazzieri, consists of a podium

⁹² Paris 1994g, 76-83; cf. Torelli 1987, 570-2.

⁹³ Torelli 1987, 569.

⁹⁴ Paris 1994f, 40-1.

⁹⁵ Paris 1994g, 76-9; Marconi 1994, 84-91; cf. Paris 1994c, 17 (analogous function).

⁹⁶ Torelli 1987, 569; Coarelli 1995i, 368.

⁹⁷ The coin shows three vertically-differentiated levels; the first two probably represent precinct walls marked by entrances, and the third, a decastyle temple whose triangular pediment is emblazoned by an enthroned Jupiter. Torelli 1987, 565-7; Paris 1994c, 26-8; Candilio 1995, 198-9; vs. Haberey (1960, 292), who interprets the coin image as a temple resting on a two-tiered substructure.

⁹⁸ See #40 and Coarelli 1995i, 369; vs. Paris 1994c, 26.

⁹⁹ For a full description, see Ambrogi 1985, 104-8; cf. Torelli 1987, 564, Candilio 1995, 198-9, and Coarelli 1995i, 368. Paris (1994c, 28-30) proposes that one *togatus*, identified by Thorwaldsen as Trajan, began as Domitian but was remodeled when he suffered *damnatio memoriae*.

¹⁰⁰ A third set described by Flaminio Vacca (et al. 1704, 32), which pertain to the Shrine of Venus in the horti Sallustiani (#55), has been incorrectly identified with this Temple, see Torelli 1987, 563, Richardson, jr. 1992, 181, and Coarelli 1995i, 368.

and the wall of a nymphaeum decorated with richly colored mosaics.¹⁰¹ Adjacent to the ‘Planetario’ of Diocletian’s Baths, the second forms part of a much larger rectangular precinct that stretches into the Piazza Termini, where traces of a substantial rectilinear podium have been uncovered.¹⁰² Both fall within the area defined by Suetonius and the find-spots of the *cippus*, water pipe, and reliefs. Moreover, as both are of Flavian date, either podium may realistically pertain to the Temple.

Based on the evidence of the iconographic sources and physical remains, it seems impossible that the Temple of the Gens Flavia was round. Instead, Martial’s and Statius’ remarks regarding its celestial symbolism should be interpreted as referring to the apotheosis of the deceased interred inside it rather than to its form.¹⁰³

Round temples rebuilt during the Flavian period:

The Temple of Vesta, Forum, Rome (#57)

Aurei of Vespasian and Domitian may point to a restoration of the Temple of Vesta in the Forum (#57) during the Flavian period.¹⁰⁴ Like the Neronian issues, which commemorated its rebuilding after the fire of 64 AD, they show a round temple on a stepped podium with Ionic columns and a domed roof. Vesta appears twice, on the apex of the roof as well as inside the temple, to aid in its identification.¹⁰⁵ In

¹⁰¹ Rodríguez Almeida 1986, 56; Torelli 1987, 568-9; Paris 1994c, 24-5; Coarelli 1995i, 369; de Vos 1996, 82. The Caserma is sited on via XX Settembre to the south-west of S. Susanna, a location which roughly corresponds to that of the *Statua Mamuri* mentioned in the Regionary Catalogues. See #40 and Paris 1994c, 18.

¹⁰² Candilio 1995, 194-200.

¹⁰³ See Torelli 1987, 563, and Chapter II ‘Cosmic implications of the round form?’

¹⁰⁴ See #57. These issues do not, as Scott (1999b, 127) tentatively suggests, represent the Shrine on the Palatine, see Chap. V #56.

¹⁰⁵ See Chap. V #57.

addition to their possible restoration of the Temple, Domitian restructured the Palatine ramp and began work on the Atrium Vestae.¹⁰⁶

Trajan: (98-117 AD)

Like Domitian's, Trajan's building program comprised both the restoration of significant monuments at Rome, including the Temple of Vesta in the Forum (#57), and new construction. Among his most important new buildings were his baths, forum and markets, designed by Apollodorus of Damascus.¹⁰⁷

The Temple of Vesta, Forum, Rome (#57)

In addition to completing Domitian's restoration of the Atrium Vestae,¹⁰⁸ Trajan undertook an ambitious rebuilding of her Temple (#57).¹⁰⁹ To commemorate his reconstruction, illustrated on the contemporary Uffizi and Lateran reliefs,¹¹⁰ he reissued Cassius' first century BC coinage.¹¹¹ Like the coins, these reliefs show the Temple with an Ionic peristasis, suggesting that its order remained constant from the Republican period. On the reliefs, the Ionic columns are supported on plinths attached to a high podium. Grillwork fills the temple's intercolumnations, while its interior is accessed by steps leading to a pair of doors. Its roof consists of a shallow

¹⁰⁶ Scott 1999b, 127. The ramp ceased to be a link between the Forum and the Palatine with Trajan's completion of the Atrium Vestae (see below). Steinby 1993, 149-59.

¹⁰⁷ Ward-Perkins 1989, 84-5.

¹⁰⁸ Trajan's work on the Atrium Vestae is suggested by contemporary brick stamps found throughout the eastern part of the building and denarii minted under Trajan and Plotina, which depict the head of Vesta. Bloch 1936, 217-22. For the plan and building phases of the Atrium, see Bloch 1936, 216-25, Lanciani 1967, 228-34, Scott 1993b, 174-5, and Coarelli 1995k, 100-5.

¹⁰⁹ Trajan, or the Senate acting on his behalf, may also have restored the nearby Regia. Scott 1999a, 189-92.

¹¹⁰ However, Cody (1973, 48) dates the Uffizi relief to the mid-first century BC, while the Lateran relief has been linked by its excavator, Santa Maria Scrinari (1968, 189) with the base of the equestrian statue of Marcus Aurelius, ca. 179 AD. Beyond their style, both reliefs show Ionic columns (see below), which date them to the Trajanic period or earlier, see Chap. VII #57 (Corinthian columns of the Severan period).

¹¹¹ See Chap. IV #57.

cupola with a knob finial.¹¹² The temple is framed by a tree and an Ionic portico on both reliefs and by four Vestals on the Lateran relief.

The reliefs probably inspired Renaissance drawings by an anonymous artist (Anonymous Destailleur), G. A. Dosio, and G. da Sangallo.¹¹³ In each of these, a round temple with Ionic columns, grillwork, and a cupola or conical roof is shown raised on a podium. In most cases, a tree and an Ionic portico appear behind the temple. R. Scott has associated the tree on the reliefs and drawings with the *lucus Vestae* located at the base of the Palatine¹¹⁴ and the portico with a series of rooms built by Trajan.¹¹⁵

Hadrian: (117-138 AD)

To Hadrian's reign can be attributed some of the greatest advances in round temple building since the late Republic. While the Pantheon (#50) ranks among his finest accomplishments,¹¹⁶ he also built round shrines or temples in his villa at Tibur (#63 and 65), Asia Minor (#27 and 59) and England (#8).¹¹⁷ Clearly fond of the round form, Hadrian even employed it for his mausoleum, an elaborate version of the Mausoleum of Augustus.¹¹⁸

The Pantheon, Rome (#50)

¹¹² Richardson, jr. (1992, 413) speculates that the knob may represent a statue base.

¹¹³ A 19th c. drawing by Canina is similar, see #57.

¹¹⁴ Cic. *div.* 145. Scott (1993a, 15-6, and 1999c, 129-30) reaches this conclusion based on analogies with scenes shown on medallions of Hadrian and Antoninus Pius and on remains of a pit discovered by Boni (1900, 172-83). He suggests that the reliefs commemorated the flowering or planting of a tree.

¹¹⁵ Scott 1999b, 127. Stucchi (1959, 14, 25, and 90-1) identifies the Ionic portico shown behind a temple to Vesta on the first century AD Sorrento Base with the Temple of Divus Iulius, see Chap. V #56.

¹¹⁶ His other major projects include the completion of the Temple of Divus Traianus in Trajan's forum and the Temple of Venus and Roma on the Velia. Ward-Perkins 1989, 121 and below.

¹¹⁷ Medallions of Hadrian, which illustrate the Shrine of the Penates at Lavinium (#17; cf. Scott 1999c, 129), may suggest that it was restored or rebuilt during his reign. For the full extent of his building projects, see Boatwright 2000.

¹¹⁸ Wilson Jones 2000, 80.

Hadrian's rebuilding of the Pantheon (#50), ca. 118-128 AD,¹¹⁹ was one of the most significant architectural projects of his reign. With much of the original building destroyed in 110 AD,¹²⁰ his architects¹²¹ were free to construct a new Pantheon on its foundations. Unlike Agrippa's building,¹²² his consisted of three parts: a pronaos, an intermediate block, and a rotunda. The pronaos was preceded by an entrance court, framed by porticoes, which aligned the Pantheon with neighboring buildings.¹²³ A further set of buildings behind the rotunda, including the Saepta Iulia and the Basilica Neptuni,¹²⁴ masked its curved exterior. By externally de-emphasizing its round form, they, like the Pantheon's court, porch and intermediate block, helped to maximize its internal impact.¹²⁵

The pronaos of Hadrian's Pantheon follows classical precedents in its design.¹²⁶ Resting on a podium accessed by front and side steps,¹²⁷ it displays eight Corinthian columns beneath an entablature and a triangular pediment.¹²⁸ Four rows of columns fill its depth to create three aisles, two of which terminate in semi-circular niches and the third, in the rotunda's entrance.¹²⁹ Agrippa's dedicatory inscription

¹¹⁹ See #50 (brick stamps).

¹²⁰ Oros. *hist.* 7.12.5, Hier. *chron. a. Abr.* 2126, and above.

¹²¹ Strong stylistic similarities between late Trajanic and early Hadrianic buildings suggest that Apollodorus was involved in some of Hadrian's projects. While these may have included the Pantheon, he did not take part in Hadrian's designs for the Temple of Venus and Roma (cf. Cass. Dio 60.4.3) nor his villa at Tibur. Heilmeyer 1975, 316-47; MacDonald 1982, 129-37; Rasch 1985, 119; Wilson Jones 2000, 192 and 212.

¹²² See Chap. V #50. Both Beltrami's and La Rocca's reconstructions suggest that Agrippa's Pantheon had two parts: either a rectangular cella and porch or a rectilinear porch and circular court.

¹²³ MacDonald 1976, 27. The so-called 'Arcus Pietatis', found inside the court, is likely to have been a monumental statue base, vs. de Fine Licht 1966, 25-9, and Kleiner 1992, 253-5 (reliefs).

¹²⁴ Hadrian rebuilt both buildings. Saepta Iulia: *Hist. Aug. Hadr.* 19.10, and Gatti 1999, 228; Basilica Neptuni: de Fine Licht 1966, 147-53, and Boatwright 1987, 48-9. The Basilica is connected to the rotunda by vaulted chambers, which may have served as buttresses for its dome.

¹²⁵ MacDonald 1976, 62, and 1982, 111-8.

¹²⁶ Gros (1996a, 176; cf. Cic. *orat.* 3.180) suggests that the traditional porch allows the domed drum, a form more common in bath buildings, to be understood as a sacred space.

¹²⁷ Its front steps overlay an earlier set attributed to Agrippa or Domitian, see #50, above, and Chap. V.

¹²⁸ For a plan of this pediment discovered on the grounds of the Mausoleum of Augustus, see Chap. V #50.

¹²⁹ The porch's bronze drop-vault ceilings were stripped by pope Urban VIII. MacDonald 1982, 98.

restored by Hadrian appears on the frieze course,¹³⁰ while the positions of clamp holes suggest that an eagle and a *corona civica* figured on the pediment.¹³¹ F. Coarelli has proposed that the eagle symbolized the apotheosis of Augustus,¹³² with whom Hadrian may have sought to associate himself by rebuilding the Pantheon.¹³³

The entablature, which runs beneath the pronaos' pediment and roof,¹³⁴ links it with the intermediate block. Its pavement serves as another visual link, though with the rotunda, as its geometric pattern continues into the rotunda's interior.¹³⁵ However, the intermediate block is the principal means of transition between the pronaos and the rotunda. Nearly as wide as the former and as high as the latter, it serves as the back wall of the pronaos and adapts to the curved form of the rotunda.¹³⁶ The porch's statue niches are embedded in the intermediate block,¹³⁷ while pilasters flanking the niches visually continue the lines of the porch columns to the sides of the intermediate block as well as to the walls flanking the rotunda's entrance.¹³⁸ Between the pilasters are reliefs depicting sacrificial implements, garlands and candelabra¹³⁹ which, together with the statues of Augustus and Agrippa that may have stood in the niches,¹⁴⁰ fill out the intermediate block's decorative scheme.¹⁴¹

¹³⁰ Other than the Temple of Trajan, Hadrian did not ascribe his name to buildings he built or restored (*Hist. Aug. Hadr.* 19).

¹³¹ The *corona civica* may reflect an honor granted Augustus by the Senate (*R.Gest.div.Aug.* 34.2; Cass. Dio 53.16.4; Plin. *nat.* 16.3-4). de Fine Licht 1966, 44-6; Boatwright 1987, 46.

¹³² Suet. *Aug.* 97. Coarelli 1983a, 42-4, and Chap. V.

¹³³ de Fine Licht 1966, 201-2; MacDonald 1976, 84.

¹³⁴ de Fine Licht 1966, 78. A fragment of the entablature, drawn by B. Peruzzi (*Uffizi Arch.* 541 verso; cf. Bartoli 1914-1922, vol. 2: pl. 137 fig. 225), may be preserved, cf. Lanciani 1881, 269.

¹³⁵ de Fine Licht 1966, 38. For a description of the floor, see below and de Fine Licht 1966, 100-1.

¹³⁶ de Fine Licht 1966, 59; Ziolkowski 1999, 58.

¹³⁷ Additionally, the intermediate block contained two stairways, which provided access to the upper rooms and the rotunda's roof. MacDonald 1976, 28, and 1982, 99.

¹³⁸ For an analysis of the pilasters flanking the entrance, see Wilson Jones 2000, 205-6.

¹³⁹ For the sacrificial implements, see Honroth 1971, 85 no. 86a-b.

¹⁴⁰ Cass. Dio 53.27.

¹⁴¹ Herdejürgen 1990, 123-31; Ziolkowski 1999, 58.

Although the foundations of the pronaos and the intermediate block are continuous with those of the rotunda,¹⁴² some features of the Pantheon have caused scholars to doubt the cohesiveness of its plan and construction.¹⁴³ Most notably, the brick fabric of the intermediate block and the rotunda is only bonded to a quarter of their total height.¹⁴⁴ Further, the intermediate block displays a false pediment at a level visually more appropriate for the pronaos' pediment,¹⁴⁵ as well as two cornices which line up with the rotunda, but not with the pronaos.¹⁴⁶

P. Davies, D. Hemsoll and M. Wilson Jones have proposed an appealing solution.¹⁴⁷ They suggest that the fifty foot shafts intended for the pronaos¹⁴⁸ were either lost in shipment¹⁴⁹ or became impossible to acquire after construction of the Pantheon had begun. When the news was relayed, its architects adjusted the pronaos and intermediate block to suit more readily available forty foot shafts,¹⁵⁰ while continued work on the rotunda resulted in the incomplete bond. Were the original design carried out, the pronaos and the intermediate block would have shared a roof and the cornice of the pronaos would have formed the second cornice of the rotunda.¹⁵¹

¹⁴² de Fine Licht 1966, 59-62.

¹⁴³ For a summary of previous scholars' views, see de Fine Licht 1966, 186-9.

¹⁴⁴ de Fine Licht 1966, 85-7; Ziolkowski 1999, 58.

¹⁴⁵ Wilson Jones (2000, 206) suggests that this compromise (see below) may have been inspired by the Propylaea to the Athenian Acropolis.

¹⁴⁶ For additional incongruities, see Davies et al. 1987, 134-40, and Wilson Jones 2000, 203-6.

¹⁴⁷ Davies et al. 1987, 134-40. For a summary of previous solutions, see de Fine Licht 1966, 186-9.

¹⁴⁸ Fifty foot monoliths were used for the Column of Antoninus Pius, Trajan's Baths, and the Temple of Divus Traianus. As Trajan's adopted son, it seems reasonable that Hadrian, faced with a limited supply, used the larger and more impressive columns for the Temple of Trajan in preference to the Pantheon. Wilson Jones 1999, and 2000, 208-10.

¹⁴⁹ Several shipwrecks, including that at Mahdia, include fifty foot columns among their cargo. Wilson Jones 2000, 209.

¹⁵⁰ Forty foot monoliths appear in the Temples of Vespasian, Antoninus Pius and Faustina, and Saturn, and the Column of Phocas. By opting for shorter columns, Hadrian was able to employ granite from the prestigious Mons Claudianus and monoliths, which were considered more impressive than columns made of drums. Wilson Jones 1999, and 2000, 211-2.

¹⁵¹ Davies et al. 1987, 134-40; Wilson Jones 1989a, 53, 1989b, 136, 1999, and 2000, 204-6; Ziolkowski 1999, 58.

The rotunda with its vast cupola serves as the culmination of Hadrian's Pantheon. Its foundations consist of a concrete ring from which a cylindrical wall rises in three tiers. Each tier is differentiated by exterior cornices and interior openings linked by vaults and arches. A cupola springs from the top of the wall, though its base is concealed on the exterior by the drum, taller externally than internally, and by a series of step rings.

The first level or tier of the rotunda's interior is marked by an undulating surface of exedrae opening inwards alternating with aediculae, which in turn mask chambers opening outwards.¹⁵² Sited along the Pantheon's north-south axis, are the two main exedrae: the rotunda's entrance and a large apse, which may have housed a tribunal of Hadrian.¹⁵³ Pairs of Corinthian columns flank the main exedrae and front the remaining six exedrae and eight aediculae.¹⁵⁴ The exedrae and aediculae displayed statues¹⁵⁵ against a marble veneer that corresponded to the rotunda's paving.¹⁵⁶

The second tier of the drum, framed by entablatures,¹⁵⁷ includes a plinth as the base for a series of pilasters and vertical bands embedded with circles and squares.¹⁵⁸ In-between sets of four pilasters are windows that let light from the rotunda into floorless rooms above the exedrae and aediculae.¹⁵⁹ Besides the windows, the decoration of this tier corresponds with the columns of the lower tier and the coffers

¹⁵² The chambers, which are accessed from outside the Pantheon, may have served as storage areas, though their primary functions were to lighten the load-bearing wall and speed the curing of the concrete during construction. MacDonald 1982, 100-3; Wilson Jones 2000, 187.

¹⁵³ Cass. Dio 69.7.1; cf. Godfrey and Hemsoll 1986, 202.

¹⁵⁴ This arrangement is reminiscent of the late 1st c. AD courtyard of the Temple of Jupiter at Baalbek. Sear 1982, 247-8

¹⁵⁵ See 'Statuary and reliefs' below.

¹⁵⁶ de Fine Licht 1966, 71 and 84.

¹⁵⁷ The entablatures comprised three fascias, a blank frieze course, and a heavy modillion cornice, cf. Ziolkowski 1999, 60, and Wilson Jones 2000, 196.

¹⁵⁸ Though stripped of its decoration in 1747-1752, a segment of this tier was reconstructed by A. Terenzio based on descriptions and Renaissance drawings (*Cod. Chigi P.* vii.9; for existing fragments, see Micheli 1984, 55-64).

¹⁵⁹ MacDonald 1982, 105-9.

of the cupola on the cardinal axes. Similarly, the rotunda's floor is aligned with the drum and cupola on the north-south axis.¹⁶⁰ Their use of the same, brightly colored stones helps to establish a rhythm between the floor and the two tiers, which enhances the climax achieved by the Pantheon's dome.¹⁶¹

Rising from the second tier, the dome, a hemisphere atop a cylinder,¹⁶² culminates in an oculus. The oculus worked together with the bronze sheathing¹⁶³ that once plated the dome's coffers¹⁶⁴ to illuminate the rotunda.¹⁶⁵ While its round form may have inspired Cassius Dio's comparison of the Pantheon to the heavens,¹⁶⁶ the dome is more likely to have reflected Roman interest in symmetry and perfect numbers¹⁶⁷ than the celestial vault.¹⁶⁸ Even in the absence of cosmic imagery,¹⁶⁹ the Pantheon, with its richly ornamented space shaped by unprecedented feats of engineering, successfully conveys Hadrian's Imperial message.

The Temple of Zeus Asklepios Soter, Pergamon (#27)

¹⁶⁰ Wilson Jones 1999, and 2000, 189 and 194. Wilson Jones (2000, 192) cites the Porta dei Leoni and the Porta dei Borsari at Verona, the nymphaeum at Miletus, and the Library of Celsus at Ephesos as example of monuments whose lower and upper tiers are partially aligned.

¹⁶¹ Ward-Perkins 1989, 114.

¹⁶² The same relationship between drum and dome appears in the Domitianic bath building at Albano and the Tor de' Schiavi. Wilson Jones 2000, 184; cf. Vitruvius 5.10.5 (bath buildings) and Gros 1996a 176.

¹⁶³ Constantius II removed the bronze plates, leaving the bronze ring of the oculus, in 663 AD (*LPD* 1.149 and 343 and *VZ* 2.251 and 264). The lead plates which replace bronze on the exterior of the dome date to the papacy of Gregory III (731-741 AD; *LPD* 1.149 and 2.544; *VZ* 2.264).

¹⁶⁴ The coffers, arranged in groups of five over twenty-eight rows, are asymmetrical, allowing their central field to be seen from anywhere in the rotunda. Wilson Jones 2000, 194.

¹⁶⁵ They form a marked contrast to the exedrae, which, in shade for most of the day, break up the solidity of the drum. Ward-Perkins 1989, 116.

¹⁶⁶ Cass. Dio 53.27.

¹⁶⁷ The number twenty-eight, perfect as it equals the sum of its factors, is picked up by the number of columns and pilasters in the pronaos. Gruben and Gruben 1997, 68.

¹⁶⁸ Ziolkowski 1999, 61, cf. Chap. II; vs. Hautecoeur 1954, 166, de Fine Licht 1966, 198-200, Passuello and Dissegna 1976, 65-6, MacDonald 1982, 119-21, and Gros 1996a, 178. Wilson Jones (2000, 182-3) suggests that the 28 coffers be understood as the phases of the moon, the oculus as the sun (whose course may have been tied to specific astronomical events), and the 5 rows of coffers as the remaining planets. He links the ground plan, divided into sixteen parts, to the Etruscan *templum* (see Chap. III 'Augural divination in Archaic Italy: defining the Roman *templum*').

¹⁶⁹ Stierlin (1984, 106-11) suggests that, by employing such imagery, the Pantheon's dome would have proclaimed Hadrian the cosmocrator.

The Temple of Zeus Asklepios Soter (#27)¹⁷⁰ shows marked similarities, both structural and decorative, to the Pantheon (#50).¹⁷¹ Located in the Asklepieion at Pergamon, the Temple formed the focal point of the sanctuary, founded in the early fourth century BC.¹⁷² In the Hellenistic and Julio-Claudian periods, the sanctuary received some attention,¹⁷³ though only during the reign of Hadrian, who took a personal interest in Pergamon,¹⁷⁴ was it substantially rebuilt. In addition to the Temple, constructed by L. Cuspius Rufinus, consul in 142 AD,¹⁷⁵ a massive propylon and three colonnaded halls were built to give definition to the sanctuary court. Other Hadrianic buildings at Pergamon include the Traianeum, the Sanctuary of the Egyptian gods, and part of the Gymnasium, which W. Koenigs and W. Radt have shown, probably employed the same workshop as the Temple of Asklepios.¹⁷⁶

Begun in the Hadrianic period, the new sanctuary court, accessed via a colonnaded street from Pergamon's city center,¹⁷⁷ was bordered by the propylon,¹⁷⁸ the Temple and, along its north, south and west sides, by covered porticoes or halls.¹⁷⁹ Under Antoninus Pius, a library, including a statue of the deified Hadrian, was added

¹⁷⁰ For the Temple's attribution, see Ael. Arist. 42.4, quoted by Habicht 1969, 13.

¹⁷¹ In addition to this Temple, Godfrey and Hemsoll (1986, 204-5) note that the Pantheon influenced the design of buildings connected with kingship, including the 'Pantheon' at Ostia (#24) and the Mausolea of Diocletian at Split and of Maxentius (see Chap. VII 'The Temple of Romulus (#52)'). To this list can be added the Romano-Celtic Temple of Vesunna at Périgueux, cf. Gros 1996a, 184.

¹⁷² The early sanctuary, after its foundation by Archias, the first prytaneis of Pergamon, consisted of three small cult buildings and an Ionic temple of Asklepios. Radt 1988, 250-2.

¹⁷³ For a discussion of the sanctuary's late Hellenistic and early Roman building phases, which may have included a temple on the site of the rotunda (Ziegenaus 1981, 30 and 39), see Radt 1988, 254-9.

¹⁷⁴ Hadrian visited Pergamon in 123 AD, during the first of two trips to Asia Minor. Koenigs and Radt 1979, 340; Gros 1996a, 181.

¹⁷⁵ Based on the date of Rufinus' consulship, Wiegand (1932, 7; vs. Habicht 1969, 9-11) proposed that the temple was built in the Antonine period.

¹⁷⁶ Koenigs and Radt 1979, 340-2; cf. Radt 1988, 49, for additional Hadrianic buildings at Pergamon.

¹⁷⁷ The sacred way, which was elaborated with pillars, shops, and a series of funerary monuments in the early Imperial period, follows the primary Hellenistic approach. Radt 1988, 257-9.

¹⁷⁸ The propylon, built by Claudius Charax, consul in 147, oriented visitors to the court's east-west axis from the north-east axis pursued by the street. Radt 1988, 261-2.

¹⁷⁹ Directly outside the sanctuary are a Hellenistic hall and a Hadrianic theater. Radt 1988, 264-5.

to the north of the propylon,¹⁸⁰ while in 200 AD, a round building employed as an Abaton (#26) was built beside the Temple.

Like the Hadrianic Pantheon, the Temple of Zeus Asklepios Soter consists of a columnar porch, an intermediate block, and a domed rotunda.¹⁸¹ Though only half the diameter of the Pantheon,¹⁸² the rotunda is very similar in construction and plan. Its concrete foundations, conforming to the natural slope of the terrain, are faced with ashlar masonry to the level of the podium. From the podium, the partially-preserved drum rose with courses of ashlar blocks to the springing point of the dome. The drum's interior is punctuated by seven niches, arranged symmetrically,¹⁸³ of which the largest, a round niche opposite the entrance, contained the Temple's cult statue.¹⁸⁴ Behind the Temple to the east, diametrically opposed to its entrance porch, is a free-standing tower linked by an arch. This tower included stairs to access the Temple's roof,¹⁸⁵ a dome with an oculus not unlike that of the Pantheon.¹⁸⁶

Similarly, elements of the Temple's decorative and sculptural program recall the Hadrianic Pantheon. Its porch, accessed via steps, had four Corinthian columns supporting coffered and a sculpted pediment.¹⁸⁷ To either side of the porch are pilasters set beneath an architrave and a pediment that framed the entrance to the rotunda, while directly below the dome, positioned for emphasis, is a cornice surmounted by an entablature and coffered.¹⁸⁸ Inside the rotunda, the floor and the

¹⁸⁰ The library was constructed by Flavia Melitine in honor of Hadrian. Radt 1988, 263.

¹⁸¹ For rooms formed by the junction between the intermediate block and the rotunda, see Ziegenaus 1981, 38-9.

¹⁸² Deubner 1938, 54; Radt 1988, 260.

¹⁸³ Wiegand 1932, 11.

¹⁸⁴ This statue may be depicted on coinage of Marcus Aurelius and Commodus. Deubner 1938, 54.

¹⁸⁵ Wiegand 1932, 11-2.

¹⁸⁶ A cistern beneath the rotunda's floor formed part of the water catchment system associated with the oculus. Ziegenaus 1981, 41-4.

¹⁸⁷ Radt 1988, 261.

¹⁸⁸ Wiegand 1932, 12-4; Ziegenaus 1981, 47-59.

walls were revetted with marble to the level of a Corinthian entablature. Both the niches, flanked by Corinthian pilasters, and the cupola displayed mosaics.¹⁸⁹

The sanctuary at Pergamon is consistent with what is known about the cult of Asklepios and his worship in the city. While the Temple was the pilgrims' first and last point of contact with the god, the round Abaton, which supplemented Hellenistic incubation rooms,¹⁹⁰ served as a location for effecting cures.¹⁹¹ The sanctuary's connection to Hadrian, assured by building work begun during his reign, is underscored by the fact that the emperor was frequently identified with Asklepios at Pergamon.¹⁹² As a site of particular interest to him, it is not unreasonable that Rufinus' architects chose to emulate Hadrian's prized Pantheon in the Temple's design. Moreover, as a dedication to Zeus Asklepios Soter, its round form is not without precedent. The fourth century BC Tholos in the Sanctuary of Asklepios at Epidauros (#13) was one of the finest round buildings in the Greek world.¹⁹³

The round temples of Hadrian's Villa, Tibur (#63 and 65)

Another major architectural project of Hadrian's reign, his Villa at Tibur, included two round Shrines. The smaller of the two, a domed drum that formed part of his South Theater (#65), is known from physical remains as well as drawings by Ligorio, Contini, Piranesi, Nibby, and Pannini.¹⁹⁴ Centered within a trapezoidal

¹⁸⁹ Wiegand 1932, 13-4; Ziegenaus 1981, 60-5. The dome is formed of brick-faced concrete, see Ziegenaus 1981, 46, and 'Roofing techniques' below.

¹⁹⁰ Ziegenaus 1981, 76 and 97.

¹⁹¹ Robert 1939, 406-10; Radt 1988, 254 and 259-60.

¹⁹² *Hist. Aug. Hadr.* 14.7, cf. Cass. Dio 69.16.2; Habicht 1969, 10; Godfrey and Hemsoll 1986, 209 n. 71. A previous builder, Attalos III of Pergamon, also associated himself with Asklepios. Radt 1988, 254.

¹⁹³ A small tholos may have covered the *bothros* in the Asklepieion at Athens. Robert 1939, 234-40, 325-6, and 406-7.

¹⁹⁴ See #66. For a discussion of the South Theater, see MacDonald and Pinto 1995, 124-31.

precinct near the top of the cavea,¹⁹⁵ the drum probably contained a statue base¹⁹⁶ and may have been preceded, according to Ligorio, by a four-column porch supporting three statues.¹⁹⁷ Fragments of a statue of Hercules found near the Shrine¹⁹⁸ would suggest that its precinct incorporated some type of display, though whether this formed part of its porch cannot be resolved without further excavation.

As a shrine sited above a theater, the drum at Tibur has parallels in Pompey's theater and temple to Venus Victrix in the Campus Martius, ca. 61-55 BC.¹⁹⁹ In plan, it also recalls the Temple at Praeneste (#31), which rises above cavea,²⁰⁰ and, for its location in a private villa, the theater shrine in the Villa of M. Agrippa Postumus on Planasia.²⁰¹

The larger temple, the so-called Shrine of Aphrodite (#63), formed the centerpiece of an elaborate nymphaeum situated above the Valle di Tempe, the Villa's eastern limit, and alongside one of its major entry routes.²⁰² Though in a poor state of preservation, the nymphaeum, known as the Ninfeo Fede, can be reconstructed with a semicircular portico embracing the Shrine²⁰³ and two side apses, shaped as hemicycles.²⁰⁴ Ancillary rooms and a corridor complement this structure, all of which

¹⁹⁵ MacDonald and Pinto (1995, 130) note that the shape and size of this platform is unusual for theater shrines.

¹⁹⁶ The base is illustrated on an elevation by Pannini, cf. MacDonald and Pinto 1995, 128 fig. 159.

¹⁹⁷ Ligorio's porch is also notable for its multi-colored pavement, see 'Mosaic and stucco work' below. Hanson 1959, 72-3.

¹⁹⁸ Winnefeld 1895, 125; Hanson 1959, 73.

¹⁹⁹ Gros 1999, 120-1. The temporary tholos erected in honor of Zeus Sosipolis at Magnesia on the Meander may have stood above the city's theater. Kern 1900, 98, 1.9, 44 (inscription); Fiechter 1937, 308; Robert 1939, 70-2; Roux 1992, 196.

²⁰⁰ See Chap. IV #31.

²⁰¹ Hanson 1959, 73.

²⁰² de Franceschini 1991, 450; Calandra 1996, 188-9.

²⁰³ The Shrine appears on plans of Piranesi and Rossini. Aurigemma 1996, 44.

²⁰⁴ de Franceschini 1991, 140-2; Aurigemma 1996, 44.

rests on an artificial terrace.²⁰⁵ The Shrine, which faced west, consisted of twenty Doric columns supporting an entablature, coffers, and possibly a conical roof.²⁰⁶

Because of a copy of Praxiteles' Aphrodite discovered in the nymphaeum,²⁰⁷ this monopteros is commonly associated with the sanctuary of Aphrodite Euploia at Knidos (#16). The sanctuary, which housed the original statue, may have been one of several famous sites that Hadrian recreated at his Villa.²⁰⁸ Although it is not mentioned among his copies,²⁰⁹ ancient sources and possible remains pertaining to the Knidian temple suggest that it was similar to Hadrian's Shrine. In describing his visit to the Temple at Knidos, Pseudo-Lucian makes note of its garden precinct and two doors.²¹⁰ Pliny also refers to the Temple, remarking that it "stands entirely open so as to allow the image of the goddess to be viewed from every side."²¹¹

Neither author assigns it a round form, but partly on the basis of the Shrine at Tibur, I. C. Love has identified a monopteros at Knidos as the Temple of Aphrodite Euploia.²¹² This fourth century BC Temple²¹³ rises from an artificial terrace.²¹⁴ Its eighteen columns rest on a stylobate fronted by steps, which are aligned with a rectangular altar. Inside the Temple is a marble statue base that may have supported

²⁰⁵ Lugli 1932, 112-4; de Franceschini 1991, 446 and 450.

²⁰⁶ de Franceschini 1991, 140. However, the columns may not have been strong enough to support a roof, see Coulton 1977, 84-5 and 154-9.

²⁰⁷ Schefold 1964, 56-9 fig. 2.

²⁰⁸ *Hist. Aug. Hadr.* 26.5. This incomplete listing includes places Hadrian visited as well as sites from the Underworld. Andreae and Ortega 1992, 69; Calandra 1996, 239 and 251. In this context, a shrine to Aphrodite Euploia, the patron goddess of sea travellers, seems particularly appropriate.

²⁰⁹ Andreae, Ortega (1992, 69) and Paribeni (1994, 16 n. 4) express concern that the Knidian Temple is absent from the list.

²¹⁰ Ps. Luc. 11-18. Examples of tholoi with diametrically opposed doors may be found at Eretria, Aezani, and Taman. Roux 1992, 203-6 and 213-6.

²¹¹ Plin. (*nat.* 26.4.21) refers to the Temple as an aedicula, which Roux (1992, 198) considers worrying in view of the monopteros' (and Hadrian's Shrine's) large size.

²¹² Pausanias (1.1.3) notes a number of temples to Aphrodite at Knidos.

²¹³ Love 1970, 154-5, and 1972, 70-4.

²¹⁴ Based on Hadrian's Shrine, Love (1972, 74, and 1973, 424; vs. Calandra 1996, 250-1) assumed that the columns of the Knidian Temple were Doric and attributed the Corinthian capitals found on site to a later rebuilding.

Praxiteles' Aphrodite,²¹⁵ while Love links an area to the east with the gardens described by Pseudo-Lucian.²¹⁶

Neither the monopteros at Knidos nor Hadrian's Shrine preserves doors. Though their absence has caused some scholars to identify a rectangular shrine to the west of the monopteros as the Temple,²¹⁷ it is likely, as K. Schefold suggests, that her statue stood behind folding doors.²¹⁸ Moreover, a round temple at Knidos would explain the long tradition of round shrines to Aphrodite.²¹⁹ One of the first Roman temples to partake of this tradition is the Shrine of Venus in the Horti Sallustiani (#55).²²⁰ As the Horti belonged to Hadrian,²²¹ this building may have influenced his decision to build the round Shrine at Tibur.

The use of a semicircular nymphaeum to enclose the Shrine may have a precedent in the Shrine of Hercules by the Pons Aelius (#41), a round monopteros set within a curved portico.²²² By incorporating the Shrine into a nymphaeum, instead of a sacred precinct like the sanctuary at Knidos, Hadrian may have implied that his dedication was meant as a tribute to the goddess rather than a temple to her cult.²²³

The Temple of Tyche, Side (#59)

²¹⁵ Love (1972, 75-6) may have discovered a fragment of the Aphrodite statue, together with an inscription that may name Praxiteles.

²¹⁶ Love 1972, 72; vs. MacDonald and Pinto 1995, 58.

²¹⁷ For the rectangular shrine, see Love 1972, 75. Linfert (1981, 615) and Ridgway (1984, 80 n. 66) suggest that Hadrian's Shrine conflated the statue of Aphrodite and the notable, but independent monopteros at Knidos.

²¹⁸ Schefold 1964, 56. Folding doors may have been employed to restrict access to the cult statue of the Temple of Nemesis at Rhamnous. Roux 1992, 199.

²¹⁹ MacDonald and Pinto 1995, 58-9. See Chap. IV #55 for an overview of this tradition, to which may be added a round shrine of Aphrodite at Roman Paestum. Sestieri 1953, 129-33.

²²⁰ See Chap. IV #55.

²²¹ His active interest in the property is attested by brick stamps. Calandra 1996, 256.

²²² See Chap. V #41 and below. Also comparable are coin depictions of the Macellum Magnum at Rome, which show a monopteros set against a portico, cf. Hill 1989, 40, and Pisani Sartorio 1996, 204-6.

²²³ Calandra 1996, 249-51.

The Hadrianic Temple of Tyche (#59), located in the Agora at Side, has been identified based on remains, both extant and described by early investigators,²²⁴ coins, and comparable temples.²²⁵ Remains of the Temple include its foundations, its podium fronted by steps, and part of its twelve-column peristasis. These Corinthian columns, echoed by twelve pilasters, support a three-fascia architrave and a frieze course. While the frieze above the colonnade displays acanthus, that above the pilasters is more elaborate with putti, garlands, and sculptured heads.²²⁶ On top of both entablatures are coffers and a conical roof.²²⁷

By far the most interesting part of the Temple is the drop ceiling of its cella. Along the base of the ceiling ran a ring of twelve images, each of which represented a sign of the zodiac. Although uncommon, comparable ceilings may be found in the adyton of the first century AD Temple of Bel at Palmyra, where the seven planetary gods appear encircled by the zodiac,²²⁸ and in the west apse of the Temple of Hercules at Sabratha. Here, Marcus Aurelius, riding an eagle, may be shown at the center of the zodiac.²²⁹

In sculpture, this theme is explored in a round Nabatean plaque from Khirbet Tannur, probably of the first century BC, where the zodiac is used as a frame for an image of Fortuna.²³⁰ Although she does not appear on the ceiling at Side, A. Mansel suggests that the Temple conveys the same idea, namely that Fortuna controls human

²²⁴ Fragments of the ceiling, now lost, were catalogued by F. Beaufort (1818, 98-9) and E. Petersen (Lanckoronski 1892, 135-7).

²²⁵ Mansel and Bean (1956, 37; vs. Koenigs and Radt 1979, 348 n. 42) date the Temple by reference to its closest stylistic parallel, the gate of Hadrian at Antalya.

²²⁶ These heads may represent Tyche, see 'The Entablature' below.

²²⁷ Mansel and Bean (1956, 36 n. 30) point to comparable roofs on Syrian tombs.

²²⁸ Gundel 1966, 1279-83; Joyce 1990, 364-5 and 372.

²²⁹ Caputo and Ghedini 1984, 69-70. Stierlin (1984, 103-5) claims that Hadrian is depicted with a phoenix and zodiac band on coins minted in 121.

²³⁰ The plaque is carried by a winged Nike figure. Matheson 1994b, 28-9.

destiny by overseeing the movement of the stars or the zodiac.²³¹ His attribution of the Temple to Fortuna finds support in Imperial coinage. Coins minted by Gallienus and Salonina,²³² connected with Side, show a seated figure of Tyche inside a round temple with a conical roof.²³³ Moreover, comparable coin depictions of the Temples of Tyche at Antioch and Sagalassos, probably Hellenistic in date, show that they too were round.²³⁴

Possibly the earliest and most famous round temple to Tyche is that at Alexandria. As described by Libanius,²³⁵ it was notable for its semicircular niches, containing statues of the twelve gods, and its cult image of Tyche crowning Alexander the Great.²³⁶ While the connection between Tyche and the ruler cult is reaffirmed in the Imperial period by the Temple of Fortuna on the Pincio (#37),²³⁷ the Hadrianic Temple at Side, like the Temple of Fortuna Huiusce Diei (#38),²³⁸ may commemorate the goddess' role in regulating everyday life.

The Shrine of Sulis-Minerva, Bath (#8)

Like the Temple of Zeus Asklepios Soter at Pergamon (#27), the round Shrine of Sulis-Minerva at Bath (#8) may have been constructed in connection with Hadrian's visit to the city in 122 AD.²³⁹ This substantial monopteros, whose diameter approximates the width of Bath's principle temple to Minerva,²⁴⁰ consists of twelve

²³¹ Mansel and Bean 1956, 33 and 36-7 n. 40; cf. Stierlin (1984, 145) for Greek and Roman conceptions of the zodiac.

²³² See #59.

²³³ Mansel and Bean (1956, 35) see a pomegranate on top of the roof.

²³⁴ Antioch: Imhoof-Blumer 1888, Vol. 2: 362 no. 25 pl. 12.20; Sagalassos: Hill 1989, 251 no. 55 pl. 38.15; cf. Mansel and Bean 1956, 36 n. 32, and Szilágyi 1966, 1940-1. For other temples to Tyche, see Paus. 2.2.7-8, 2.20.3, and 4.30.3-6.

²³⁵ Lib. *descr.* Foerster VIII, 529-31; cf. Theoph. Sim. *hist.* 8.13, and *BMC Alexandria* LV, XC, pl. xi.

²³⁶ Will 1951, 239; La Rocca 1999b, 283.

²³⁷ See Chap. V #37.

²³⁸ See Chap. IV #38.

²³⁹ Cunliffe 1995, 87.

²⁴⁰ Richmond and Toynbee 1957, 97-105; Cunliffe 1966, 199-204.

Corinthian columns supporting an elaborate entablature and a conical roof.²⁴¹ The entablature, carved on both sides, combines a tendril motif on its inner face with floral and animal designs on its exterior.²⁴²

The monopteros, set within a rectilinear precinct to the north of the city's baths, was aligned with the main temple of Sulis-Minerva.²⁴³ In addition to its shared axis and comparable size, the monopteros celebrated the same goddess, whose cult is unique to the thermal complex at Bath.²⁴⁴ However, the temples were dramatically different in style, as the monopteros recalls Hadrianic architecture in Italy and the Greek world rather than Romano-Celtic buildings.²⁴⁵

The Antonines: (138-192 AD)

Antoninus Pius: (138-161 AD)

Unlike Hadrian's, Antoninus Pius' building program, which focused on arches, columns, and temples to the Imperial cult,²⁴⁶ involved limited restoration and construction of round buildings in Rome.²⁴⁷ Outside of Italy, the only round monopteroi constructed during his reign formed part of the nymphaeum of Herodes Atticus at Olympia.²⁴⁸

²⁴¹ For difficulties that arise when roofing a monopteros of this size, see #63 above.

²⁴² Cunliffe 1995, 86.

²⁴³ Cunliffe 1995, 85-7; cf. Wilson Jones 2000, 153 fig. 7.29.

²⁴⁴ For this healing cult, see Croon 1953, 79-83.

²⁴⁵ For Romano-Celtic round temples, which fall outside the scope of this thesis (Chap. I), see Horne and King 1980, 369-555 (Western Europe), Rodwell 1980b, 557-85 (Britain), and Grimal and Woloch 1983, 55-6.

²⁴⁶ The most significant temples include those of Divus Augustus (Torelli 1993, 145-6), Hadrian (Cipollone 1996, 7-8), and Faustina (Cassatella 1993, 46-7). Ward-Perkins 1989, 124-6.

²⁴⁷ Like Hadrian (see above), Antoninus Pius may have commemorated a restoration of the Shrine of the Penates at Lavinium (#17) on medallions.

²⁴⁸ Schleif and Weber 1944, 53-82; Binder 1969, 107. Based on Herodes' wife Regilla's status as a priestess of Demeter, Robert (1939, 399-402) mistakenly attributes the monopteroi to Zeus.

The Pantheon, the Shrine of Bacchus, and the Shrine of Hercules, Rome (#50, 32, and 41)

Among the temples Antoninus Pius is credited with restoring are the Pantheon (#50) and the Shrine of Bacchus (#32) in Rome. Though recorded by literary sources, the lack of any archaeological evidence for Antonine work on the Pantheon suggests that his repairs were minimal.²⁴⁹ An inscribed entablature however links Antoninus Pius with the late Republican Shrine.²⁵⁰ This block, which depicts a Maenad or follower of Bacchus,²⁵¹ is all that remains of the modest shrine *in summa sacra via*, whose existence along with a Tholus to Cybele (#34) is attested by Martial.²⁵²

A medallion minted under Antoninus Pius has been thought to refer to both the Shrine and the Tholus.²⁵³ This medallion shows a monopteros set within a two-storied colonnade. The colonnade is fronted by antae and topped by a plain, three fascia architrave and a series of objects, possibly Bacchic masks. Resting on a high podium, the shrine is depicted with four columns supporting a blank architrave and a domed roof. Garlands hang from the architrave and a globular finial tops the roof. The shrine contains a cult image commonly identified as Bacchus and is preceded by a tripod and a basket of grapes.²⁵⁴ While G. Lugli has proposed that the colonnade was sacred to Bacchus and the shrine to Cybele,²⁵⁵ other scholars see the colonnade

²⁴⁹ *Hist. Aug. Pius* 8 and see #50.

²⁵⁰ Though fragmentary, the inscription (#32) identifies the Shrine's rebuilding with Antoninus Pius and dates it to 143-161 AD. Gatti 1899a, 147-8, and 1899b, 223; Hülsen 1902a, 241, and 1902b, 95; Vaglieri 1903, 27-9; Lugli 1946, 219, and 1947, 147.

²⁵¹ Vaglieri 1903, 27; Brown 1941, 20; Nash 1961-1962, Vol. 1: 165.

²⁵² See Chap. IV #34 and above.

²⁵³ Hülsen 1902a, 241, and 1902b, 95-6; Jordan and Hülsen 1907, 104; Lugli 1946, 219, and 1947, 174; Coarelli 1982, 36.

²⁵⁴ Two figures approach the shrine, one leading an animal for sacrifice and the other carrying fruit. Brown 1941, 19-20.

²⁵⁵ Lugli 1947, 176.

and the monopteros as a shrine to Bacchus and imagine that the shrine to Cybele was not dissimilar.²⁵⁶

A closer parallel for the image illustrated on the medallion is the Shrine of Hercules (#41) located near the Pons Aelius.²⁵⁷ This Shrine, founded in the Julio-Claudian period, was enclosed within a semicircular portico. Although probably one-story, the portico, when combined with the Shrine, is reminiscent of the image on the medallion. Moreover, as the identification of the shrine on the medallion is not secured by a legend, its attribution to Liber-Bacchus is only based on attributes. As a result, this medallion may indicate that Antoninus Pius rebuilt the Shrine of Hercules or alternatively, that round shrines set within colonnaded courts were not uncommon in Rome.

The Shrine of the Genius Senatus, Rome (#39)

Coins minted under Antoninus Pius, ca. 158-159 AD,²⁵⁸ may point to the construction of a Shrine to the Genius Senatus or “spirit of the Senate” (#39).²⁵⁹ They show a small monopteros with two columns supporting a curved pediment or a dome, flanked by two additional columns.²⁶⁰ Inside is a togate cult image standing on a low base. The attributes of this figure are difficult to interpret, but may represent a scepter and a branch, both highly appropriate for the Genius Senatus.²⁶¹ This attribution must remain speculative however as the coins lack legends to identify the figure.

²⁵⁶ Hülsen (Jordan and Hülsen 1907, 104; cf. Brown 1941, 21) suggested that the two tholus-shaped Shrines of Bacchus and Cybele formed part of a symmetrical entrance to the Palatine.

²⁵⁷ See Chap. V #41.

²⁵⁸ See #39.

²⁵⁹ Hill (1989, 39) speculates that the Shrine was located inside the Curia.

²⁶⁰ The pediment or dome is topped by fleurettes along its ridge and statuettes at its corners. Hill 1989, 17.

²⁶¹ Birt 1845, 1613-25. Strack (160, quoted in *BMCEmp* IV lxxiv) has identified the figure as the emperor in the guise of a ‘*pacator orbis*.’

Moreover, if a segmental pediment rather than a dome, there is no evidence to suggest that they represented a round shrine.²⁶²

Commodus: (180-192 AD)

The reign of Commodus saw even less new building than that of Antoninus Pius,²⁶³ though it did include a round Shrine at Portus (#29), the port of Ostia.

The Shrine of Liber Pater Commodianus, Portus (#29)

To Commodus' reign can be attributed a small peripteral Shrine (#29) sited near the north-east corner of Trajan's harbor at Portus. Consisting of a high socle, Corinthian columns and a fragmentary entablature,²⁶⁴ its remains can be identified with the Shrine of Liber Pater²⁶⁵ mentioned in an inscription²⁶⁶ and depicted together with a statue of Bacchus on the Torlonia harbor relief.²⁶⁷ For its location, the Shrine may honor Liber Pater as a protector of merchants, an attribute derived from the Greek Dionysos.²⁶⁸ This would be appropriate in view of the Shrine's closest architectural parallels: the Monument of Lysicrates at Athens (#3) and the Rotunda at Termessos (#62).

Round temples dated to the Antonine period:

²⁶² In his short description of this monument, Hill (1989, 17 and 39) does not state that he believes the image on the coin to represent a round shrine, though, as he identifies the Shrine of Spes Vetus (see Chap. III #54) in the same series as round, it is possible to infer that he holds this view.

²⁶³ Ward-Perkins 1989, 124.

²⁶⁴ For its inscription (*CIL* XIV 666), see #29.

²⁶⁵ Although used for a variety of gods, Pater became the established epithet of Liber in the Imperial period. Bruhl 1953, 13-4.

²⁶⁶ This inscription (*CIL* XIV 30, #29, and 'Foundation and layout' below), which commemorates a dedication *ex voto* to Liber Pater Commodianus, was found near the shrine. Lanci 1864, 81; Meiggs 1973, 385. For Commodus' dedications to Liber, see Bruhl 1953, 190.

²⁶⁷ Meiggs 1973, 165.

²⁶⁸ This attribute of Liber was usually commemorated in port cities outside of Rome. Bruhl 1953, 210-1. For an earlier dedication to Liber at Ostia (*CIL* 14.28-9), see Bruhl 1953, 205.

Also Antonine in date are round monopteroi at Argos (#2), Athens (#5), and Isthmia (#15) and a tholus at Magnesia on the Meander (#18). Unlike the monopteroi, the tholus is too fragmentary to be reconstructed,²⁶⁹ though an inscription²⁷⁰ notes that it was dedicated by Apollonius to Athena Poliouchos.²⁷¹

The Temple of the Nymphs, Argos (#2)

The second century AD monopteros²⁷² in the Agora at Argos is identified as a Temple to the Nymphs (#2) by an inscription on its architrave.²⁷³ Encased within a rectangular socle, its foundations consist of three courses of radiating blocks laid out around a pit. The pit is accessed both by steps and by a corridor that extends to the northern limit of the socle.²⁷⁴ A circular stylobate resting on the socle provided support for eight columns with Attic bases, monolithic shafts, and Corinthian capitals.²⁷⁵ Above the columns was an entablature with a three-fascia architrave, an inscribed frieze course, a modillion cornice, and lion-head water spouts.²⁷⁶ A timber roof, topped by an acanthus finial, crowned the Temple.²⁷⁷

The pit, reminiscent of *bothroi* in the Tholos at Epidauros (#13) and the Temple of Hercules Victor *ad portam Trigeminam* (#44) as well as of the *favissa* of the Temple of Vesta in the Roman Forum (#57), was probably integral to the cult. As

²⁶⁹ A curved entablature, now lost, has been attributed to this building by Fiechter (1937, 309) and Robert (1939, 73 and 412).

²⁷⁰ Kern 1900, no. 216.

²⁷¹ Will (1951, 239) and Roux (1992, 178 and 196) speculate that the Shrine was founded on Athens' behalf.

²⁷² Roux 1957, 665, vs. 1954, 162 (peripteros).

²⁷³ See Roux 1954, 160, and #2.

²⁷⁴ Courbin 1953, 107; Roux 1954, 162, and 1957, 663.

²⁷⁵ Roux 1954, 160, and 1957, 664. As a monopteros on a high socle, it resembles the Rotunda at Corinth (see Chap. V #9).

²⁷⁶ Roux 1957, 664.

²⁷⁷ Courbin 1953, 107; Roux 1954, 160-2.

a Temple to the Nymphs or *Nymphaeum*,²⁷⁸ a term commonly used to describe fountain houses, its pit may have contained an hydraulic apparatus,²⁷⁹ allowing the monopteros to function as both a fountain and a temple.

The Rotunda, Athens (#5)

Not the first rotunda to occupy the Athenian Agora, the monopteros (#5) added in the mid-second century AD stood in marked contrast to the fifth century BC drum known as the Skias (#6). Functionally too, the two buildings differed, the earlier serving as the meeting place of the prytaneis into the Imperial period,²⁸⁰ and the later as a shrine or fountain house.²⁸¹ The foundations of the monopteros, though little of its elevation, are extant near the northern end of the Stoa of Attalos. They overlie the western portion of a square peristyle court, which was built in the fourth century BC and dismantled in the second century AD, a few years before the Rotunda was erected.²⁸² A substantial deposit of lead seals, naming Zeus, Athena, Poseidon, Asklepios, and other gods, was found in a Roman stratum in the area. Like the destruction date of the court, this deposit acts as an effective *terminus post quem* for the Rotunda,²⁸³ and would, moreover, endorse its identification as a religious building.

²⁷⁸ Frontin. *aq.* 3. Robert (1939, 6) may have found a Greek precedent for this Temple in a round shrine of the Nymphs on Delos.

²⁷⁹ Roux 1954, 162.

²⁸⁰ For a third round building in the Agora, which functioned as a fountain, see Shear, jr. 1971, pl. 46; vs. Robert (1939, 388-9) and Thompson and Wycherley (1972, 121-3), who incorrectly identify it as a shrine known as the Leokorion (cf. Strab. 9.1.16).

²⁸¹ The foundations of the building, strong enough to support a water basin, and a water channel found in its vicinity have been used as evidence to see the Rotunda as a fountain house. Dinsmoor, jr. 1974, 425-7.

²⁸² Townsend 1995, 76.

²⁸³ Shear 1936, 412.

The Rotunda consisted of deep foundations²⁸⁴ supporting a three-step krepis and eight Corinthian columns.²⁸⁵ Above the columns rose an architrave, an entablature, a sima with lion-head water spouts, and a brick dome.²⁸⁶ Positioned to correspond with the upper story of the Stoa of Attalos,²⁸⁷ this lofty monopteros, throughout its relatively short existence,²⁸⁸ made a notable contribution to the building and religious repertory of the Athenian Agora.

The Temple of Palaimon-Melikertes, Isthmia (#15)

In the Antonine period, a round temple was constructed in the precinct of Palaimon-Melikertes at Isthmia (#15). The precinct, a replacement of an earlier cult site,²⁸⁹ is located beside the starting gates of the Stadium²⁹⁰ and to the south-east of the peribolos of Poseidon. Stoa were added to the peribolos at the same time as the Temple was built by Publius Licinius Priscus Iuventianus. As high-priest of Poseidon, Iuventianus sought to demonstrate his status and religious fervor by enlarging and ornamenting two of Isthmia's main cult sites.²⁹¹

The Temple of Palaimon, centered along the east-west axis of the precinct, was preceded to the east by an altar and an open area used for cult rituals.²⁹² Of the Temple building, little remains beyond its high, square socle, which contained a pit

²⁸⁴ Deep foundations may have been necessary to support the Rotunda's heavy dome, see below.

²⁸⁵ Binder (1969, 107-10; cf. Thompson and Wycherley 1972, 203) prefers to see ten columns with Composite capitals.

²⁸⁶ Dinsmoor, jr. 1974, 420, and see 'Roofing techniques' below; vs. Binder 1969, 108-10 (concrete).

²⁸⁷ Shear 1936, 424-5.

²⁸⁸ The Rotunda was destroyed during the Herulian invasion of 267 AD. Shear 1936, 412 n. 5.

²⁸⁹ Will 1955, 170; cf. Broneer (1973, 99-106), for a detailed description of the precinct's development in the 1st and early 2nd centuries AD.

²⁹⁰ The stadium fell into disuse after the destruction of Corinth in 146 BC. Broneer 1973, 4.

²⁹¹ Iuventianus also reconstructed the nearby theater. Broneer 1973, 5.

²⁹² Lamps involved in nocturnal rites were found throughout the precinct. They may endorse the identification of the Temple as a heroon, possibly like the Tholos at Epidauros (#13). Hawthorne 1958, 95.

and a corridor linked to a reservoir.²⁹³ Although the corridor suggests that water played a part in cult practice,²⁹⁴ the pit functioned as more than a fountain base. According to Pausanias,²⁹⁵ it served as an *adyton* where oaths were taken, possibly by athletes and officials involved with the Isthmian games.²⁹⁶

Like its pit and corridor, the Temple's elevation recalls that of the Nymphs at Argos (#2).²⁹⁷ Coins minted under Hadrian, Marcus Aurelius, Caracalla, and Geta²⁹⁸ depict it as a round monopteros with a stepped podium, Corinthian columns, and a cupola ornamented with acroterial sculpture. Inside the temple is a statue of Palaimon reclining on the back of a dolphin, while sacred trees,²⁹⁹ the entrance to the *adyton*, and a priest leading a bull to sacrifice appear nearby.³⁰⁰

Based on the coins, O. Broneer has reconstructed the Temple with a square podium, accessed via four steps, and eleven Corinthian columns. The central intercolumnation is wider³⁰¹ to showcase the statue of Palaimon on a dolphin, while the Temple's cupola, topped by a finial, is ornamented with floral and dolphin-shaped acroterial sculpture.³⁰² Though unusual, the Temple's odd number of columns and wide central intercolumnation has a precedent in the Temple of Roma and Augustus

²⁹³ The corridor, also accessed via the Temple's cella, was coated with water-tight stucco. Broneer 1973, 107-10.

²⁹⁴ Broneer 1973, 27, 49-50, 92, 94-5, and 110.

²⁹⁵ Paus. 2.2.1.

²⁹⁶ Robert 1939, 156-9 and 177-9; Broneer 1973, 42-3 and 111-2.

²⁹⁷ For other round temples that contained pits, see #2 above.

²⁹⁸ The Hadrianic coins may commemorate its construction. Broneer 1973, 112.

²⁹⁹ The Uffizi and Lateran reliefs depict a sacred tree, representing the *lucus* of Vesta, beside her Temple in the Forum (see #57 and above; cf. Smith 1950, 27 n. 52).

³⁰⁰ Festivals in honor of Palaimon involved the sacrifice of a black bull (Philostr. *imag.* 420); cf. Robert 1939, 156-7 and 177-9 (chthonic significance).

³⁰¹ As this motif is common on coins, it may not signify that the Temple's intercolumnations varied in width.

³⁰² Broneer 1973, 110-11. Similar marine decoration appears on the tholos of the *macellum* at Puteoli (De Ruyt 1983, 150-8) and in the fountain to Poseidon, which Babbus Philinus built in conjunction with his Rotunda at Corinth (see Chap. V #9; cf. Scranton 1951, 16, 34 and 66).

on the Athenian Acropolis (#4).³⁰³ The central intercolumnation in both buildings may simply enhance their ability, as round monopteroi, to exhibit their statuary.³⁰⁴

In his description of the Temple, Pausanias mentions statues of Palaimon, Leucothea, and Poseidon, who oversaw the Isthmian games, in its precinct.³⁰⁵ The presence of these statues is appropriate in view of Palaimon's mythical origins. As Melikertes, the son of Ino-Leucothea, he was rescued from drowning by a dolphin which carried him to Isthmia. Following his later death and apotheosis, the city's leader Sisyphus³⁰⁶ honored him by founding the Isthmian games.³⁰⁷

Although Palaimon and Leucothea first appear in Homer,³⁰⁸ the majority of sources that deal with the myth date to the early Imperial period. As a result, J. Hawthorne assigns the cult's foundation to the re-establishment of Corinth as a Roman colony in 46 BC.³⁰⁹ The archaeological evidence, if only by its absence prior to the first century AD, supports Hawthorne's idea that the cult of Palaimon originated at Isthmia in the Roman period. As attested by the Temple, the cult reached its height in the second century AD.

III ANALYSIS

FOUNDATION AND LOCATION

³⁰³ See Chap. V #4.

³⁰⁴ This was probably a concern of Babbuius Philinus, when he chose the round form for his monument (see Chap. V #9).

³⁰⁵ Paus. 2.2.1. None of these statues have been found. Broneer 1973, 111.

³⁰⁶ A statue base of Sisyphus was discovered to the north-east of the Temple together with a base dedicated to Iuventianus. Broneer 1973, 112.

³⁰⁷ See #15. For interpretations of the myth, see Robert 1939, 156-9 and 177-9, Will 1955, 169-80 and 210-2 (who explores the conflated cults of Ino-Leucothea and Melikertes-Palaimon), and Käppel 2000, 1185.

³⁰⁸ Hom. *Od.* 5.333.

³⁰⁹ Hawthorne 1958, 92-8; vs. Will 1955, 169-80 and 210-12 (pre-hellenic).

Of the round temples rebuilt at Rome from the Flavian through the Antonine periods, most have been linked to individual emperors by coins, ancient sources, and building inscriptions.³¹⁰ Through their depiction on official currency, the Temple of Vesta (#57)³¹¹ and possibly the Tholus of Cybele (#34) and the Shrine of Hercules (#41) may reflect projects carried out by the Senate on behalf of Vespasian, Domitian, Trajan, and Antoninus Pius. Ancient sources point to other Imperial projects, namely the restoration of the Pantheon (#50) during the reigns of Domitian and Antoninus Pius and its complete rebuilding, confirmed by brick stamps, under Hadrian. Similarly, dedicatory inscriptions from the Perirrhanterion (#51) and the Shrine of Bacchus (#32) attribute their rebuildings to Vespasian and Antoninus Pius.

Through their efforts, emperors were able to express their esteem for the temples' cults and founders, most evident in the two restorations of the Temple of Vesta, a goddess linked to Rome's foundation,³¹² and Hadrian's rebuilding of the Pantheon as a tribute to Augustus and Agrippa.³¹³ Of the new temple foundations, Hadrian's round Shrines at Tibur (#63 and 65) fit within the program adopted at his villa by exploring his Greek sensibilities and interest in a variety of architectural forms.³¹⁴

Outside of Rome, the Shrine of Liber Pater Commodianus at Portus (#29), built *ex voto* by a resident, honored both Commodus and Liber, while round temples founded in the provinces, namely the Temples of Zeus Asklepios Soter at Pergamon (#27) and of Tyche at Side (#59) and the Shrine of Sulis-Minerva at Bath (#8), may

³¹⁰ An exception to this is the Temple of Fortuna Huiusce Diei (#38), which is indirectly linked to Domitian based on restoration work he undertook in the Area Sacra.

³¹¹ Scott (1999b, 127) suggests that Trajan was directly involved in the rebuilding of the Temple of Vesta.

³¹² The restoration of the Tholus of Cybele may be comparable, if it was meant to evoke the goddess' importation to Rome as illustrated on the terracotta reliefs.

³¹³ Similar is Vespasian's rebuilding of the Perirrhanterion, should it have provided a means of honoring the god who oversaw his Jewish victory, see #51 above.

³¹⁴ The incorporation of the Shrine into the theater marks an uncommon, though not unprecedented, use of the round form, see #65 above.

have celebrated visits of Hadrian together with commemorating their respective gods.³¹⁵ Of these, the founder of the Temple of Asklepios is known to have been a local magistrate, while another provincial foundation at Isthmia (#15) can be attributed to the high priest of Palaimon-Melikertes. Like the Temple at Isthmia, round temples at Argos (#2) and Athens (#5) mark local dedications, which probably had little to do with the Imperial cult or emperors' initiatives.

Although its location remained constant, the Temple of Vesta was elevated on a high podium by the Trajanic period to underscore its religious significance and make it commensurate to the increasingly high buildings that occupied the Roman Forum.³¹⁶ Similarly, in his rebuilding, Hadrian's architects preceded the Pantheon by a long rectangular forecourt to emphasize its north-south axis and by doing so, align it with neighboring buildings. This axis moreover underlined its symbolic connection to the Mausoleum of Augustus, which probably proved decisive in Hadrian's decision to undertake such a sizeable building project.³¹⁷

The Temple of Zeus Asklepios Soter, though nominally a replacement of an earlier temple, was built anew in the Hadrianic period in conjunction with a dramatic restructuring of Asklepios' sanctuary. Previously consisting of a few temples and sacred springs, the sanctuary was redefined through the addition of porticoes on three sides, and a propylon, a library and the Temple on the fourth. The appearance of symmetry fostered by these buildings, arranged around a central axis,³¹⁸ was enhanced by the columnar porches of the propylon and the Temple, which, like the Pantheon's pronaos, helped to mask the latter's round form.

³¹⁵ The plan of the Temple of Zeus Asklepios Soter is a direct reference to Hadrian's Pantheon.

³¹⁶ This privilege was reserved for the city's most sacred buildings, see Tac. *hist.* 4.53 and Scott 1999b, 127.

³¹⁷ Similarly, the Perirrhanterion's proximity to the Temple of Apollo Medicus may have induced Vespasian to rebuild it, see #51 above.

³¹⁸ Deubner 1938, 33.

Similarly, the Temple of Palaimon-Melikertes was a new foundation located at an earlier religious site. Its position next to the precinct of Poseidon underlined similarities in their cults, while its proximity to the Earlier Stadium reflected the origins of the Isthmian games. The round monopteros of Sulis-Minerva at Bath was also sited in a pre-existing sanctuary, dominated by thermal baths and the goddess' main temple, with which it shared its proportions and axis.³¹⁹

The remaining round temples founded in the Antonine period occupy secular spaces. Of these, the round Shrines from Tibur are the most dramatic; one is accessed by ascending the cavea of the South Theater,³²⁰ and the other, from a major entry route, though it is framed by a dramatic landscape spreading out below its artificial terrace.³²¹ The Shrine of Liber Pater is sited beside Trajan's harbor, while the Temples of Tyche and of the Nymphs and the Rotunda at Athens are located in their city's principal agoras. Earlier structures may have influenced the off-center siting of the Temple at Side as well as the Rotunda at Athens, which is aligned physically, and possibly symbolically, with the neighboring Stoa of Attalos.³²²

More so than in the Julio-Claudian period, buildings like the Pantheon and the Temple of Zeus Asklepios Soter focus on interior space, allowing porches, porticoes, and neighboring buildings to align them with their surroundings. By emphasizing their interiors, they stand in sharp contrast to the Temples of Tyche and Palaimon-Melikertes, the Shrine of Sulis-Minerva, and the Rotunda at Athens, wherein their round forms are deliberately accented against rectilinear porticoes or precincts.³²³ In-

³¹⁹ Like the Temple of Palaimon-Melikertes, the Shrine appears to have stood in a rectangular precinct.

³²⁰ On reaching its platform, the Shrine is accessed via steps (see Hanson 1959, 72, for possible reconstructions based on Pannini and Piranesi).

³²¹ Likewise, the late Republican Round Temple at Tibur (see Chap. IV #64) rests on an artificial extension of the city's acropolis.

³²² This may have provided a means of evoking Hellenistic Athens.

³²³ The Temples of the Nymphs at Argos and of Vesta, raised on an elevated podium, are comparable in so far as they stand out from neighboring rectilinear buildings.

between these extremes are the Shrines of Aphrodite and Liber Pater, which, by reflecting curved elements both built and natural, act in harmony with their environment.³²⁴

BUILDING MATERIALS AND TECHNIQUES

Masonry techniques

Like those of the late Republican and Julio-Claudian periods,³²⁵ Flavian and Antonine round temples either employed *opus quadratum* masonry or simulated it in their revetment. Although badly preserved, the walls of the Temples of Zeus Asklepios Soter at Pergamon (#27) and of Tyche at Side (#59), as well as of the Shrine of Liber Pater Commodianus at Portus (#29), appear to have consisted of ashlar blocks. The Temple of the Nymphs at Argos (#2) and the Rotunda at Athens (#5) incorporate poros blocks into their foundations and podia, but employ a marble veneer to visually unite them with their elevations.³²⁶ The Pantheon's (#50) pronaos, intermediate block, and the interior of its drum,³²⁷ as well as the podia of the Temples of Asklepios and of Palaimon-Melikertes at Isthmia (#15), also used marble revetment, while the stucco-facing of the Temple of Fortuna Huiusce Diei (#38) may have been painted to resemble ashlar courses.³²⁸

Beneath their revetment, several round temples employed *opus testaceum* or brickwork, a technique that was used in the Claudian Shrine of the Lares Augusti at

³²⁴ When seen from behind (i.e. above the curved cavea), the same may be said for the Theater Shrine at Tibur. See Chap V, for the comparable Perirrhanterion and Shrine of Hercules.

³²⁵ See Chaps. IV and V 'Masonry techniques.'

³²⁶ For veneer and stucco work, also see 'Pavements and wall revetment' below.

³²⁷ Bronze plates were used as veneer on both faces of the dome.

³²⁸ The exterior of the Pantheon's drum may have been similarly decorated to link it with the pronaos and intermediate block as well as with the lower step rings of its cupola, revetted with marble plates.

Ostia (#23).³²⁹ Brick filled out the walls of the Temple of Fortuna Huiusce Diei, may have formed the foundations of the Tholus of Cybele (#34), and comprised the walls of the Pantheon's porch, intermediate block, and drum.³³⁰ The drum's foundations and dome, like the foundations of the Temples of Asklepios³³¹ and of Palaimon and the cupola of the Theater Shrine at Tibur (#65), were fashioned from poured concrete.³³² Supported by wooden shuttering during construction, concrete bonded with layers of aggregate formed a monolithic mass that found favor, for its strength, versatility, and ease of construction, through the late Imperial period.³³³

Roofing techniques

Several Flavian and Antonine round temples, especially those built in the provinces, follow late Republican and Julio-Claudian precedent in employing timber roofs.³³⁴ The Temple of Tyche at Side (#59) and the Shrine of Sulis-Minerva at Bath (#8), as well as the Temple of the Nymphs at Argos (#2), had conical roofs, formed, in the case of the Argive temple, from bands of leaf-shaped tiles decreasing in size towards its summit.³³⁵ In Italy, the Shrines of Aphrodite at Tibur (#63) and possibly of Liber Pater at Portus (#29) may have used conical roofs to reflect their closest architectural comparanda, the Temple at Knidos (#16) and Greek shrines like the Rotunda at Termessos (#62).³³⁶

³²⁹ See Chap. V and #24.

³³⁰ See #50 above, for the Pantheon's use of relieving arches to lighten the load borne by its drum's foundations and walls.

³³¹ Stone blocks appear to have ringed the Temple's concrete foundations. Ziegenaus 1981, 30-2.

³³² Concrete construction was used in the drum of the Theater Shrine, the terrace beneath the brick nymphaeum and its Shrine of Aphrodite at Tibur (#63), and to some extent, in the foundations of the Rotunda at Athens (#5).

³³³ See 'Roofing techniques' below.

³³⁴ See Chaps. IV and V.

³³⁵ The monopteroi incorporated into the 160 AD nymphaeum of Herodes Atticus at Olympia use similar roof tiles. Schleif and Weber 1944, 73-4 and fig. 15.

³³⁶ See above.

Vaulted roofs or domes, possibly employed in the Temple of Fortuna Primigenia at Praeneste (#31), Agrippa's Pantheon (#50), and Nero's rebuilding of the Temple of Vesta (#57), find wider use in the Flavian and Antonine periods, wherein coins attest to domed roofs on the Temples of Vesta and Palaimon-Melikertes (#15), and the Shrine of Hercules (#41). Concrete domes, used to roof round bath buildings from the Late Republican period onwards,³³⁷ were incorporated into Imperial palaces under Nero and the Flavians.³³⁸ Hadrian used domes to great effect in his villa at Tibur³³⁹ and more significantly, in his rebuilding of the Pantheon. With an internal diameter double that of any previous dome,³⁴⁰ the cupola which crowns the Pantheon ranks it as one of the greatest technical feats of Roman architecture.

The Pantheon's drum was constructed using six bands of aggregate, decreasing in weight³⁴¹ towards the oculus of its dome.³⁴² Exedrae and chambers embedded in its walls, together with relieving arches, also helped to reduce the mass of the drum, while the oculus, acting as a compression ring, and external step rings aligned with its base ensured the dome's long-term stability.³⁴³ During construction, the dome was supported on a complex wooden scaffolding,³⁴⁴ which included molds

³³⁷ Domes were employed in baths at Baia, Pozzuoli, Misene, and Cuma in the late Republican and Augustan periods, and again at Baia, Albano and Rome into the Antonine period. Sanpaulesi 1971, 14-6; Stierlin 1984, 60-3; Adam 1994a, 186-91. The late Republican or early Augustan Mausoleum of Caecilia Metella also included a dome, though set beneath a conical roof. De Angelis d'Ossat 1940, 250; Sanpaulesi 1971, 15.

³³⁸ For the domes of the Domus Aurea and the Domus Augustana, see Adam 1994a, 187-9.

³³⁹ Rasch 1985, 119-21.

³⁴⁰ Adam 1994a, 186 (chart).

³⁴¹ The lightest aggregate, a volcanic lava stone from Vesuvius, was also used in the dome of the 3rd c. Mausoleum of Constantina. De Angelis d'Ossat 1940, 244-5.

³⁴² Like the Pantheon, Domitian's round bath building at Albano, incorrectly identified as a temple by Altmann (1906, 46 and 71), employed layers of aggregate and a brick and bronze ring around its oculus (cf. Vitruvius 5.10.27-8). De Angelis d'Ossat 1940, 233 and 238. Adam (1994a, 181) suggests that the domes of the Central Baths at Pompeii were among the first to use this technique.

³⁴³ A series of rooms between the Pantheon and the Basilica Neptuni may have functioned as buttresses. Wilson Jones 2000, 191. All of these features worked together in stabilizing the dome despite stress fractures that appeared during construction.

³⁴⁴ Coarelli 1995k, 329.

for its coffers.³⁴⁵ Once plated in bronze, the coffers diffused light from the oculus,³⁴⁶ adding to the dramatic effects experienced by visitors entering the Pantheon's drum.

The Temple of Zeus Asklepios Soter (#27), modeled after the Pantheon, included a rubble and mortar version of its dome, while the Rotunda at Athens (#5) was crowned by a brick cupola and the Theater Shrine at Tibur (#65) by a concrete dome. In Roman provinces outside of Italy, the materials and techniques used to construct domes were inherited from the capital as early as the Augustan period, though, as the Temple of Asklepios and the Rotunda at Athens demonstrate, were used to best effect from Hadrian's reign.³⁴⁷

BUILDING COMPONENTS

The foundations of Flavian and Antonine round temples follow late Republican and Julio-Claudian precedents.³⁴⁸ Like the Temple of Hercules Victor *ad Portam Trigeminam* (#44), that of the Nymphs at Argos (#2) comprised bands of radiating blocks laid out around a pit. The Temple of Palaimon-Melikertes (#15) similarly includes a pit, though set in concrete.³⁴⁹ Concrete is also employed in Hadrian's Pantheon (#50), where he does not reuse Agrippa's foundations, in the Temple of Zeus Asklepios Soter (#27), and in the terraces which support the Theater Shrine (#65) and the Shrine of Aphrodite (#63) at Tibur. With a ring of poros blocks set around a concrete core, the Rotunda at Athens (#5) combines both techniques,³⁵⁰ while the Tholus of Cybele (#34), if correctly identified with the ring found near the

³⁴⁵ de Fine Licht 1966, 133-42; MacDonald 1976, 38-43.

³⁴⁶ Rasch 1985, 138.

³⁴⁷ The Hunting Baths at Leptis Magna, ca. 200 AD, provide impressive evidence of the continued use of domes in the provinces after the Antonine period. Rasch 1985, 124-5.

³⁴⁸ See Chap. V.

³⁴⁹ The 3rd c. BC *opus incertum* foundations and *favissa* of the Temple of Vesta in the Roman Forum (#57) are similar.

³⁵⁰ The foundations of the Perirrhanterion (#51) are comparable.

Basilica of Constantine, introduces brickwork into the material repertory of Imperial foundations.

Above their foundations,³⁵¹ the Shrine of Aphrodite, the Shrine of Sulis-Minerva at Bath (#8), and the Rotunda at Athens (#5) are likely to have employed a Greek-style krepis.³⁵² A high Greek socle, comparable to that of the Monument of Lysicrates in Athens (#3), was used to support the Shrine of Liber Pater at Portus (#29), while reliefs show that the Temple of Vesta in the Roman Forum (#57) rose from a high podium by this date.³⁵³ The Temple of Tyche at Side (#59) stood on a comparable podium, fronted by steps,³⁵⁴ which was as typically Roman as the columnar porches and podia of the Pantheon and the Temple of Asklepios. In Greece, the Antonine Temples at Argos and Isthmia followed the Tiberian Rotunda at Corinth (#9) in their use of a square socle.

The few Antonine round temples to preserve moldings, column bases, and entablatures³⁵⁵ employ forms common to the late Republican and Julio-Claudian periods.³⁵⁶ Their column capitals are also drawn from this repertory, though they use all three principal orders. In addition to Corinthian, common to the majority of round temples,³⁵⁷ Doric, previously employed in the Monopteros at Pompeii (#28), appears in the Shrine of Aphrodite at Tibur (#63), and Ionic, known from the Temples of Roma and Augustus (#4) and possibly of Vesta in the Roman Forum, forms part of

³⁵¹ The Theater Shrine at Tibur rests directly on the terrace that defines its precinct.

³⁵² Prominent examples of round temples that employed a krepis include those of Hercules Victor *ad portam Trigeminam* and of Roma and Augustus on the Acropolis (#4).

³⁵³ Scott 1999b, 127; cf. Tac. *hist.* 4.53 and above.

³⁵⁴ This is comparable to the late Republican podium of the Temple of Fortuna Huiusce Diei, which was not altered as part of its Flavian rebuilding.

³⁵⁵ See the relevant sections below.

³⁵⁶ See Chap. V.

³⁵⁷ See 'The column capital' below.

the Temple of Vesta's Trajanic rebuilding and perhaps of the porch of the Theater Shrine at Tibur.³⁵⁸

The majority of Flavian and Antonine round temples, as monopteroi and peripteroi, fit within the framework of earlier architecture.³⁵⁹ The few drums datable to these periods are not entirely without precedent. While the late Republican drum of the Temple of Fortuna Huiusce Diei (#38) was not dramatically altered by Domitian, that of the Pantheon, which inspired the Temple of Asklepios, may have recalled the plan of Agrippa's building. Moreover, the Theater Shrine at Tibur resembles the Temple of Fortuna Primigenia at Praeneste (#31).³⁶⁰ Therefore, with the exception of the Pantheon, whose elevation marked a clear break with Julio-Claudian round temples, those built from the Flavian through the Antonine periods indicate a continuum from their predecessors.

DECORATIVE DETAILS

The wall base molding

Moldings preserved from the Hadrianic Pantheon (#50) and Temple of Zeus Asklepios Soter (#27)³⁶¹ are stylistically related to those used in Julio-Claudian round temples.³⁶² Along the base of the Pantheon's intermediate block runs a molding, which echoes the form of its column and pilaster bases. Like them, it consists of a torus topped by a cyma recta, fillets, a cyma reversa, another fillet, and a torus. Inside

³⁵⁸ The capitals of the Temple of the Nymphs at Argos may have been Composite.

³⁵⁹ The form of the Shrine of Aphrodite at Tibur may copy that of the 4th c. BC Temple at Knidos (#16), see #63 above.

³⁶⁰ It is also possible that it recalled the problematic Shrine of the Lares Augusti at Ostia (see Chap. V #23).

³⁶¹ Of the round temples which might have incorporated molding, none is extant from the Theater Shrine at Tibur (#65) nor the Temples of Tyche at Side (#59), of the Nymphs at Argos (#2), of Palaimon-Melikertes at Isthmia (#15), and of Liber Pater at Portus (#29).

³⁶² See Chap. V.

the Pantheon's drum, a second, simpler molding is preserved with a high fascia, a torus, a cyma recta, and an astragal. The torus figures prominently in the exterior molding of the Temple of Asklepios.³⁶³ Here a massive torus surmounted by a cyma reversa defines the base of the Temple's drum.³⁶⁴ Of these, the Pantheon's moldings produce a more elegant finish consistent with the rest of its design, while, through their use of both types of cymas, they recall Classical Greek and Augustan ornament.³⁶⁵

The column base

Established as the canonical form in the Julio-Claudian period,³⁶⁶ the Attic base is used extensively in Flavian and Antonine round temples. Such bases are extant from the Temples of Zeus Asklepios Soter at Pergamon (#27), Tyche at Side (#59), Sulis-Minerva at Bath (#8), Liber Pater at Portus (#29), and the Nymphs at Argos (#2).³⁶⁷ Plainer than the Pantheon's (#50) bases,³⁶⁸ they consist of two tori flanking fillets and a scotia.³⁶⁹ This sequence of design elements, present in the bases of the Temple of Roma and Augustus (#4) and the Rotunda at Corinth (#9), is used widely in Rome and the provinces.³⁷⁰

The column shaft

³⁶³ Ziegenaus 1981, 32-3. No external molding is preserved from the drum of the Pantheon.

³⁶⁴ Wiegand 1932, 11.

³⁶⁵ See Chaps. IV and V.

³⁶⁶ See Chap. V.

³⁶⁷ The monopteroi in Herodes Atticus' nymphaeum at Olympia also employ Attic bases. Schleif and Weber 1944, 72.

³⁶⁸ See 'The Base Molding' above.

³⁶⁹ This sequence is apparent from the best preserved bases at Side and Bath.

³⁷⁰ Two prominent examples are Hadrian's Villa (MacDonald and Pinto 1995, 53 fig. 41) and his library at Athens (Wilson Jones 2000, 30 fig. 1.17).

Though less elaborate than some of the Julio-Claudian column shafts,³⁷¹ those of Hadrian's Pantheon (#50), the Temple of Zeus Asklepios Soter at Pergamon (#27), and the Rotunda at Athens (#5) were nonetheless striking. Unlike most round temples,³⁷² they employed colored granite or marble monoliths between white marble bases and capitals.³⁷³ In addition to enlivening their columns, colored stones, which were difficult and costly to obtain, underlined the wealth and power of their founders.³⁷⁴

The column capital

As in the Julio-Claudian period,³⁷⁵ the majority of Flavian and Antonine round temples favored the Corinthian order. Doric and Ionic were used sparingly,³⁷⁶ confined to a few select buildings at Tibur and Rome. The Shrine of Aphrodite (#63) that forms the centerpiece of Hadrian's nymphaeum at Tibur employs the Doric order.³⁷⁷ Combining a broad abacus and compact echinus, the Shrine's capitals may recall those of the Temple of Aphrodite at Knidos (#16).³⁷⁸ Similarly, the Theater Shrine at Tibur (#65) may have used the Ionic order to underline Hadrian's interest in Greek architectural forms.³⁷⁹

³⁷¹ See Chap. V #4.

³⁷² Of those which preserved column shafts, the remaining Flavian and Antonine round temples employed fluting and materials comparable to their bases and capitals.

³⁷³ The Arch of Constantine provides a later example of colored monoliths used to add contrast and visual interest to a monument. Wilson Jones 2000, 124.

³⁷⁴ This is especially true in the case of the Pantheon. Wilson Jones 1999, 2000, 194-5, and below.

³⁷⁵ See Chap. V.

³⁷⁶ Tuscan, a variation of Doric, is used most widely in Imperial amphitheaters. Wilson Jones 2000, 110 (list of examples).

³⁷⁷ Other Doric buildings in Hadrian's villa include the tholus that topped the West Belvedere or viewing tower and the Ceremonial Precinct. MacDonald and Pinto 1995, 51-2 and 60.

³⁷⁸ See above for the debate surrounding the original order of the Temple at Knidos.

³⁷⁹ See #66 and above (Ligorio's porch). The Teatro Marittimo of Hadrian's villa also had an Ionic colonnade. MacDonald and Pinto 1995, 82-3.

More significantly at Rome, the Temple of Vesta in the Forum (#57), reconstructed as Ionic from the late Republican period,³⁸⁰ is depicted with the Ionic order on both Flavian coins and Trajanic reliefs. Its continued use of Ionic, rare in the Roman Forum, reflects tradition rather than contemporary taste.

Of the Flavian round temples, only the Perirrhanterion (#51) preserves Corinthian capitals. With a closely overlapping pattern of leaves,³⁸¹ noted for combining rigid nerves and folded lobes, they recall Augustan capitals from the adjacent Temple of Apollo Medicus.³⁸² As Flavian capitals, they are less organic,³⁸³ but do overlap the scrolling helices in a manner suggestive of natural growth.³⁸⁴

The Corinthian capitals of the Hadrianic Pantheon (#50) also betray some Augustan influence, though through the medium of Trajan's Forum.³⁸⁵ Like the Trajanic capitals,³⁸⁶ they employ ornament that is more structured than the lush, thickly layered growth of capitals from the Forum of Augustus.³⁸⁷ On the Pantheon's column and pilaster capitals, the leaf forms appear fragile, spread in thin, vertical layers across a background distinct from the naturalistic ornament.³⁸⁸

³⁸⁰ For 1st c. BC coins, which show the Temple, see #57 and Chap. IV.

³⁸¹ Overlapping leaves form part of the Italic tradition known from the Corinthian capitals of the Temple of Hercules Victor *ad Portam Trigeminam* (#44) and of the Sanctuary of Fortuna Primigenia at Praeneste. Leon 1971, 149.

³⁸² See Viscogliosi 1996a, 45-7, 88-9, 108-9. Leon (1971, 149, 159-60, and 164; cf. Gros 1996a, 145) dates the capital fragment to a partial restoration of the Temple of Apollo after the fire of 14 BC. Consequently, he suggests that it may have been influenced by capitals in the Forum of Augustus.

³⁸³ Gros 2001, 484. Heilmeyer (1970, 44-7; cf. Viscogliosi 1996a, 46-7) points to parallels from Asia Minor, namely Corinthian capitals from the Temples of Apollo at Didyma and Augustus at Antioch, for the capitals of Sosianus' temple (these are less closely reflected in the 14 BC capitals, see above).

³⁸⁴ As Heilmeyer (1970, 134-6) notes, these fit many of the characteristics of Flavian ornament, exemplified by capitals from the Domus Flavia (Leon 1971, 89 and pls. 29.2-3 and 30.1-3).

³⁸⁵ For the influences of the Forum of Augustus on Trajan's Forum, see Gros 2001, 486 and above.

³⁸⁶ Heilmeyer (1970, 155 and 158-60; vs. Gros 1996a, 188-9 and above) suggests that the same workshop carved the capitals of the Forum of Trajan, the Pantheon, and the Temple of Antoninus and Faustina. Freyberger (1990, 55-6 nos. 95 and 100-1) adds capitals from the Hadrianic rebuilding of the Basilica Neptuni to this list.

³⁸⁷ Leon 1971, 142 and 165 pls. 61.1-2; Gros 1996a, 178, and cf. 2001, 487.

³⁸⁸ Heilmeyer 1970, 151-3, 158-9, and pls. 54-5.

The play of light and shade achieved by the Pantheon's capitals³⁸⁹ is an important feature of the Corinthian capitals from the Temple of Zeus Asklepios Soter (#27). Here, the leaf forms are thin and vertical, effecting a contrast between their projecting lobes and deeply carved ridges and hollows. As Pergamene capitals, they introduce non-canonical forms into their design, like egg-and-dart molding,³⁹⁰ which reveal indigenous traditions of architectural ornament.³⁹¹

More canonical capitals from the Traianeum at Pergamon³⁹² are reflected in contemporary examples from the Temple of Tyche at Side (#59). These show a vertical pattern of leaves with rigid nerves, pointed lobes, and hollows designed to accentuate light and shade across the surface of the capital.³⁹³ With striking similarities to capitals from Hadrian's Temple of Venus and Roma,³⁹⁴ it is not difficult to believe that they were carved by the same or a similar workshop.³⁹⁵

The remaining capitals preserved from Antonine round temples, namely of Sulis-Minerva (#8), Liber Pater (#29), and the Nymphs (#2), are not in sufficiently good condition for study.³⁹⁶ However, it is likely that they show many of the same traits adopted by Hadrianic capitals: vertical, somewhat schematic growth and a strong interest in light and shade.³⁹⁷

³⁸⁹ Heilmeyer 1970, 147 and 168; Gros 1996a, 178.

³⁹⁰ This motif is also incorporated into the Ionic order of the Temple of Roma and Augustus (#4), see Chap. V.

³⁹¹ Heilmeyer 1970, 164; Wilson Jones 2000, 153. Comparable examples may be found in the Harbor Baths and the Library of Celsus at Ephesos (Heilmeyer 1970, pls. 27.3 and 28.1-2).

³⁹² Heilmeyer 1970, 167 pl. 27.1; cf. Gros 1996a, 182.

³⁹³ Gros (2001, 486 and 489) notes that the play on light and shade, absent from Flavian capitals, was reintroduced to provincial architecture under Trajan, possibly as a result of local workshops returning from Rome.

³⁹⁴ Freyberger 1990, 57 no. 107.

³⁹⁵ Koenigs and Radt (1979, 337-40) have proposed that the same workshop executed the capitals of the Traianeum and the Temple of Venus and Roma, and Strong (1953, 133) has noted the influence of Pergamene workshops on the architectural decoration of Side.

³⁹⁶ Although its capitals are no longer extant, the leaf acroteria of the Temple of Palaimon-Melikertes at Isthmia (#15) are consistent with those of Antonine capitals in their use of deep ridges, regular hollows and well-defined lobes.

³⁹⁷ In their poor state of preservation, it is difficult to say how far their design was influenced by Augustan or Pergamene models, cf. Gros 2001, 489-90.

The entablature

The Doric Shrine of Aphrodite at Tibur (#63) and the Ionic Temple of Vesta in the Roman Forum (#57) employed corresponding entablatures,³⁹⁸ while the majority of Flavian and Antonine round temples used Corinthian entablatures. The Corinthian entablature, distinguished from the Ionic by the presence of fully developed modillions, first appears in the Julio-Claudian period.³⁹⁹ While prototypes existed in the late Republic,⁴⁰⁰ the Tiberian Temple of Castor, with its S-shaped volutes elaborated by acanthus leaves, set the standard for the modillion cornice.⁴⁰¹

The Perirrhanterion (#51) takes its inspiration from an earlier source, namely the exterior frieze of the Temple of Apollo Medicus.⁴⁰² Its double-sided frieze course displays laurel and acanthus,⁴⁰³ whose naturalistic forms recall the rich ornament of Apollo's temple.⁴⁰⁴ This course, framed by Lesbian cymatia, surmounts a three-fasciae architrave⁴⁰⁵ and is in turn topped by a diminutive dentil course, a modillion cornice, and a row of bead-and-reel ornament.⁴⁰⁶

³⁹⁸ Although the Uffizi relief may show a Corinthian entablature surmounting the Temple of Vesta's Ionic peristasis, this combination seems unlikely, cf. Wilson Jones 2000, 111-3 (on mixed orders).

³⁹⁹ Augustan examples may be found in the Temples of Divus Iulius, Saturnus, Apollo on the Palatine and in *Circo*, and Mars Ultor. Strong and Ward-Perkins 1962, 24-5; Gros 1976a, 200-1 and 234, and 1996a, 148-9.

⁴⁰⁰ For their origins and possible use in the Temple of Hercules Victor *ad Portam Trigemina* (#44), see Chap. IV.

⁴⁰¹ Strong and Ward-Perkins 1962, 25; Sear 1982, 67; Gros 1996a, 148; Wilson Jones 2000, 142, and below. Gros (2001, 494) suggests that this form was inspired by Classical precedents like the consoles used to crown the door of the Erechtheion at Athens.

⁴⁰² Gros 1976a, 215-29; Viscogliosi 1996a, 48-52.

⁴⁰³ The Temple of Fortuna Huiusce Diei (#38) may also incorporate acanthus spirals into its frieze, see Chap. IV.

⁴⁰⁴ Zanker 1988, 68; Viscogliosi 1996a, 48-9 figs. 45-6 and 48.

⁴⁰⁵ The three-fascia architrave is standard for Corinthian entablatures from the late Augustan period onwards. Strong and Ward-Perkins 1962, 18.

⁴⁰⁶ While the cymatia and bead-and-reel recall ornament from the Temple of Mars Ultor (Sear 1982, 63 fig. 34.27; Ganzert 1988, 121 Cat. 11), the modillions, which frame soffit panels (see below), are reminiscent of the Temple of Apollo Medicus (Leon 1971, 197 pl. 79.1 and 80.1; Viscogliosi 1996a, 51 fig. 49).

Both the exterior and interior entablatures of the Pantheon (#50) set a modillion cornice that is comparable to the Temple of Castor's⁴⁰⁷ above a three-fascia architrave and a blank frieze course. Lesbian cymatia,⁴⁰⁸ bead-and-reel, and egg-and-tongue ornament, typical of early Hadrianic work,⁴⁰⁹ appear below the modillions and rosette soffits. Whereas the Perirrhanterion employed an elaborate anthemion, known from Flavian and early Augustan entablatures,⁴¹⁰ the Pantheon's blank frieze and more restrained decoration looks back to the Forum of Augustus.⁴¹¹

By contrast, entablatures from the Temple of Zeus Asklepios Soter at Pergamon (#27) and the Temple of Tyche at Side (#59) are more ornate. At Pergamon, modillions with elaborate leaf motifs frame rosettes, while the cornice is decorated with dentils, egg-and-tongue as a frame for a wave pattern, and a band of lotus and palmette ornament.⁴¹² A better preserved entablature from the Hadrianic upper gymnasium employs richer decoration with egg-and-tongue used to frame its modillions and soffits.⁴¹³

Like the Pergamene palmettes which recall ornament from the Temple of Venus and Roma,⁴¹⁴ many of the features used in the exterior entablature of the Temple at Side reflect styles prevalent in late Hadrianic Rome. Above a three-fascia architrave defined by bands of bead-and-reel, egg-and-tongue and elaborate Lesbian cymatia act as a frame for an anthemion frieze course. The entablature, which

⁴⁰⁷ Leon 1971, 191 pl. 80.3.

⁴⁰⁸ These may have been inspired by cymatia from the Forum of Augustus (Ganzert 1988, 117 Cat. 4; cf. Leon 1971, 171 pl. 70.1, for comparable ornament from the Temple of Roma and Augustus at Ostia).

⁴⁰⁹ Strong 1953, 120-1; Strong and Ward-Perkins 1962, 22 (egg-and-tongue).

⁴¹⁰ Leon 1971, 108 pls. 36.3 (Domus Flavia) and 37.2 (entablature found in the Via di Teatro Marcello).

⁴¹¹ See Leon 1971, 169 pl. 68.1 and 183 pl. 75.1-2, and Gros 2001, 494-5.

⁴¹² These fragments come from above the drum's entrance. Ziegenaus 1981, 62-3. What remains of the entablature from the Temple's pronaos and interior employs more typical molding, including egg-and-dart and Lesbian cymatia, together with a blank frieze course and an S-shaped modillion cornice. Wiegand 1932, 12 and 14; Ziegenaus 1981, 47-9 and 60-2.

⁴¹³ Koenigs and Radt 1979, pl. 117.3-4.

⁴¹⁴ Gros 1996a, 181. Strong (1953, 136) suggests that the palmette was a common Asiatic ornament employed by Pergamene architects in Rome.

surmounts the pilasters, includes a more detailed frieze with heads of Tyche shown above garlands and putti.⁴¹⁵ While the garlands, bead-and-reel, egg-and-tongue, and cymatia are features of the entablature of Hadrian's Mausoleum,⁴¹⁶ comparable heads appear in frieze courses from the Traianeum at Pergamon and the small peristyle temple at Side.⁴¹⁷

Though its carving is less skillful, the frieze course from the Shrine of Sulis-Minerva at Bath (#8) is similar in its subject matter, combining leaf ornament with depictions of animals. Of the remaining Antonine round temples to preserve entablatures, the Shrine of Bacchus (#32), like the Mausoleum and the round Temple at Side, employs bead-and-reel and Lesbian cymatia as part of its three-fascia architrave and figured decoration in its frieze course.⁴¹⁸ The preserved fragment of the entablature from the Temple of the Nymphs at Argos (#2) lacks ornament,⁴¹⁹ while the sima of the Rotunda at Athens (#5) consists of a dentil course surmounted by bands of floral calyxes and acanthus leaves,⁴²⁰ alternating with lion-head water spouts.⁴²¹ This elaborate sima, reminiscent of examples from the Traianeum at Pergamon as well as late Hadrianic architecture in Rome,⁴²² sets the Rotunda apart from early Antonine buildings, whose plain simas were drawn from the Augustan repertory.⁴²³

⁴¹⁵ Kleiner (1980, 37 and 42-3) proposes that this type of relief originated in Pergamon.

⁴¹⁶ Strong 1953, 144 fig. 6.

⁴¹⁷ Strong 1953, 132-3 figs. 4-5 and 137; Wegner 1992, 46; Gros 1996a, 190; cf. Kleiner 1980, 41 (a comparable late Republican relief from Sutri).

⁴¹⁸ For the probable identity of this figure, see above.

⁴¹⁹ The modillion cornice and lion-head water spouts mentioned by Roux (1957, 664 and above) have not been preserved for comparison.

⁴²⁰ The simas of the Rotunda at Corinth (#9) and the monopteroi at Olympia display similar ornament. Dinsmoor, jr. 1974, 417-9 n. 9.

⁴²¹ Unusually, not all the water spouts are pierced and none connect to channels or gutters for the removal of rain water. Dinsmoor, jr. 1974, 419-20 and 424-5.

⁴²² Good examples may be found in the Temple of Venus and Roma and the Mausoleum of Hadrian. Strong 1953, 128 fig. 3 and 144 fig. 6.

⁴²³ Strong 1953, 120 and 148.

Cornice soffits and ceiling coffers

The more elaborate Corinthian entablatures preserved from Flavian and Antonine round temples include soffit panels in-between the modillions of their cornices. These soffit panels contain rosettes, consisting of a single six-to-eight petaled flower in the cornices of the Perirrhanterion (#51), the Temple of Zeus Asklepios Soter (#27),⁴²⁴ and the Temple of the Nymphs at Argos (#2), and two overlapping flowers in those of the Pantheon's (#50) pronaos and drum.

Rosettes also feature in the ceiling coffers of the Temple of Tyche at Side (#59). Consisting of a single, eight-petaled flower framed within a recessed panel, they are less elaborate than the ceiling coffers of the Temple of Hercules Victor *ad portam Trigeminam* (#44) and the Round Temple at Tibur (#64), which employ both flowers and acanthus plants.⁴²⁵

Such ornament is absent from the coffers of the Pantheon's dome and of the Shrine of Aphrodite at Tibur (#63). However, as the dome was originally revetted, rosettes, together with any elaboration of the coffers' frames,⁴²⁶ may have been fashioned out of bronze.⁴²⁷ Considering the high level of detail possible in bronze work, coffers probably played a significant role in the Pantheon's decorative program.⁴²⁸

Pavements and wall revetment

⁴²⁴ Ziegenaus 1981, 58-62. A round commemorative monument and the sanctuary of the Egyptian gods at Pergamon, both Hadrianic, provide close stylistic parallels. Koenigs and Radt 1979, 341.

⁴²⁵ See Chap. IV. No coffers are extant from Julio-Claudian round temples.

⁴²⁶ The coffers of the Temple of Hercules Victor and of many prominent Julio-Claudian buildings, like the Temple of Concord (Wilson Jones 2000, 142 fig. 7.16), were elaborated with egg-and-dart molding.

⁴²⁷ By contrast, stucco may have comprised the Shrine's ornament, cf. Ward-Perkins 1989, 119.

⁴²⁸ For their role in reflecting light, see above. Wilson Jones (2000, 142) notes the role soffits and coffers played in enlivening cornices or ceilings when seen from below.

Like their predecessors,⁴²⁹ Flavian and Antonine round temples employed *opus sectile* pavements as part of their decoration. Hadrian's Pantheon (#50) provides the most conspicuous example, wherein a grid pattern containing circles and squares adorns the floor of its pronaos and rotunda.⁴³⁰ This pattern, aligned with the cardinal axes, is enlivened by colored stones, which appear in a similar arrangement in the drum's wall revetment.⁴³¹ These stones, drawn from throughout the Roman empire, not only underline Hadrian's power and wealth, but also, in the context of the drum, place a greater emphasis on its dramatic effects than its structure.

White marble fragments and clamp holes suggest that a similar geometric revetment was used for the floor and walls of the Temple of Zeus Asklepios Soter (#27),⁴³² while Ligorio notes the presence of a multi-colored pavement of interlocking rhomboids in the Theater Shrine (#65) at Hadrian's Villa. Although nothing is extant of the Shrine's pavement, a geometric pattern of gray marble has been reconstructed for its precinct.⁴³³ Similarly, pieces of white and colored marble found at the nymphaeum at Tibur formed part of its geometric pavement,⁴³⁴ which may have influenced the paving pattern used in the Shrine of Aphrodite (#63).⁴³⁵

Following late Republican practice,⁴³⁶ stucco may have elaborated the exterior of the Pantheon's drum and its brick cornices.⁴³⁷ Though stucco is a common

⁴²⁹ See Chaps. IV and V.

⁴³⁰ The bedding layer and marble fragments found beneath the drum's floor suggest that Domitian's Pantheon had a similar geometric pavement. Ziolkowski (1999, 55; cf. La Rocca 1999b, 280) proposes that it may also have been comparable to the geometric flooring of Hadrian's Basilica Neptuni.

⁴³¹ See #50. The use of complex geometric patterns in conjunction with round spaces was first explored in the pavement and revetment of Nero's Domus Aurea. Ward-Perkins 1989, 118.

⁴³² Ziegenaus (1981, 45 and 65) has not been able to confirm the existence of the colored marble fragments mentioned by Wiegand (1932, 14).

⁴³³ MacDonald and Pinto 1995, 130.

⁴³⁴ For a description of this pavement, which skillfully conforms to the curvilinear shape of the Ninfeo Fede, see de Franceschini 1991, 140 and 449-50.

⁴³⁵ Although its pavement is no longer preserved, based on the nymphaeum's, it seems probable that the Shrine employed *opus sectile* or mosaic work.

⁴³⁶ See Chap. IV. The Domitianic rebuilding of the Temple of Fortuna Huiusce Diei (#38) also used stucco on its walls, while Coarelli (1981a, 21) tentatively suggests that some of its *opus sectile* pavement may be preserved.

external facing for cupolas, bronze was employed for its dome. Like the Pantheon's bronze revetment, the multi-colored marble and glass mosaics inside the cupola of the Temple of Asklepios belie its solidity and enhance the light effects achieved by its oculus.

Statuary and reliefs

As in the late Republican and Julio-Claudian periods, the sculpture and reliefs employed in Flavian and Antonine round temples reflected both their cults and the agendas of their founders. Hadrian's Pantheon (#50) may have showcased images of Augustus and Agrippa⁴³⁸ in the niches of its intermediate block as well as statues of other deified emperors in the aediculae of its drum.⁴³⁹ Appropriate for a monument to the Imperial cult,⁴⁴⁰ these statues were complemented by an eagle and a *corona civica* on the pronaos' pediment, which recalled Agrippa's intention to elevate Augustus to the level of the gods.⁴⁴¹ Similarly, the pronaos of the Theater Shrine at Tibur (#65) may have displayed a statue of Hercules,⁴⁴² whom emperors favored for his role in supporting the Roman state.⁴⁴³

Whereas nothing is known of the other statues exhibited in the Shrine's pronaos and cella, the cult images of the Shrine of Aphrodite (#63) and of the Temples of Zeus Asklepios Soter at Pergamon (#27) and of Palaimon-Melikertes at Isthmia (#15) are attested by physical remains and iconographic sources. The copy of

⁴³⁷ de Fine Licht 1966, 102-8.

⁴³⁸ These statues are important features of Agrippa's Pantheon, see Cass. Dio 53.27 (quoted in #50) and Chap. V 'The Pantheon.'

⁴³⁹ Wilson Jones 1989a, 44-5, and 2000, 180; Ziolkowski 1999, 60. Parallels may be found in The tholos of the Sanctuary of Athena Pronaia at Delphi (#12), which Fiechter (1937, 313) believes was refitted with statues of Roman emperors, and in the nymphaeum at Olympia (see Schleif and Weber 1944, 54-61).

⁴⁴⁰ See Chap. V #50.

⁴⁴¹ See Cass. Dio 53.27, and Chap. V.

⁴⁴² See Coarelli 1987, 85-112 (important late Republican sanctuary of Hercules at Tibur)

⁴⁴³ Trajan revived Hercules' cult as a model for kingship, while Hadrian and Antoninus Pius celebrated him on coinage. Jaczynowska 1981, 636-7.

Praxiteles' Aphrodite discovered in the nymphaeum at Tibur, by linking the Shrine to the famous Temple at Knidos (#16), underlined Hadrian's Greek tastes. His interest in the Greek world is also attested by the cult statue of Asklepios,⁴⁴⁴ with whom Hadrian was identified,⁴⁴⁵ in the Temple at Pergamon.

Coins show that Palaemon on a dolphin formed the centerpiece of his Temple at Isthmia (#15),⁴⁴⁶ while Pausanias mentions statues of Palaemon, Leucothea and Poseidon in its precinct.⁴⁴⁷ Like the dolphin, which signals a pivotal point in the history of Palaemon's cult, the boat illustrated on two reliefs from the Tholos of Cybele (#34) recalls the importation of the black stone of Magna Mater to Rome.⁴⁴⁸ The stone may have been incorporated into her cult image on the Palatine,⁴⁴⁹ wherein, as on the reliefs, she appeared seated on a throne flanked by lions.⁴⁵⁰ Similarly, like the heads of Tyche shown on one of its exterior friezes, the zodiac images displayed on the ceiling of the Temple at Side (#59) may be closely connected to the cult.⁴⁵¹

In addition to its statues and pedimental sculpture, the Pantheon incorporated reliefs depicting sacrificial implements, garlands, and candelabra into its decorative program. Displayed on the intermediate block, these reliefs recall decoration on the enclosure of the Ara Pacis, where garlands topped by paterae hang from bucrania.⁴⁵² Not only are the motifs and symbolic content similar, but the richly detailed ornament

⁴⁴⁴ While this statue appears in the main exedra, the smaller niches may have contained bases or altars to other gods. Ziegenaus 1981, 45. Moreover, it seems probable that the pedimental sculpture included Athena and a giant, see above.

⁴⁴⁵ See above.

⁴⁴⁶ This theme, celebrating the dolphin which saved Palaemon from drowning (see above), is picked up by the acroterial sculpture.

⁴⁴⁷ Paus. 2.2.1.

⁴⁴⁸ *Ov. fast.* 4.273 fol. and 343 fol.; cf. Simon 1963c, 744-5, and 1966, 24-5. Though her cult appeared in Etruria, South Italy and Sicily in the early 3rd c. BC, it was introduced to Rome either directly from Phrygia or through Pergamon in 204 BC. Roller 1999, 263-71, 275-8, and 281.

⁴⁴⁹ *Prud. perist.* 10.156-60; *Arnob. nat.* 7.49.

⁴⁵⁰ This statue, shown carrying a patera and a scepter, was discovered during excavations of the Temple of Magna Mater on the Palatine. Hülsen 1895b, 25-7; Esdaile 1908, 371-2.

⁴⁵¹ See above.

⁴⁵² Kleiner 1992, 90.

of the Pantheon's reliefs looks back to Augustan models and by extension, the building's origins.

PROPORTIONAL ANALYSIS (Charts VI.1-8)

Although Vitruvius can hardly be considered an authority on buildings constructed after his lifetime, many of the ideas which he expressed, particularly of the importance of symmetry and proportion in temple design, remained current in Roman society. Monopteroi built from the Flavian through the Antonine periods, like their predecessors, employed the 1:10 relationship between their lower column diameters and column heights recommended by Vitruvius.⁴⁵³ This ratio is echoed by most drums, while both the monopteral Rotunda at Athens (#5) and the peripteral Temple of Tyche at Side (#59) show a 1:1 correspondence between their column heights and total exterior measurements.

In terms of columnar proportion, the Theater Shrine at Tibur (#65) fulfills the first of two requirements for pycnostyle and the Shrine of Sulis-Minerva at Bath (#8), as reconstructed by B. Cunliffe, fits the second for systyle. The Pantheon's (#50) porch columns, like those of the Shrine at Tibur, are close to pycnostyle with a $1 \frac{5}{8}:1$ relationship between their intercolumniations and lower column diameters and, like the Shrine at Bath, resemble systyle with a total height $9 \frac{5}{9}$ times their lower column diameter.⁴⁵⁴

Vitruvius' insistence on the lower column diameter as the determining factor for column design has more relevance in these periods. Not only does the Doric

⁴⁵³ This ratio is not applicable to the Doric Shrine of Aphrodite at Tibur (#63).

⁴⁵⁴ Wilson Jones (1989a, 49) suggests that systyle was intended in the Pantheon.

Shrine of Aphrodite at Tibur (#63) closely approximate his ideal relationships,⁴⁵⁵ but, when other elements of the columnar orders are compared to the lower column diameter, clear correlations emerge. With few exceptions, the base diameters are about 1 1/3 times the lower column diameters,⁴⁵⁶ while the base heights are one-half.⁴⁵⁷ Moreover, as in the Julio-Claudian period,⁴⁵⁸ the shaft height to lower column diameter ratio is close to 8:1.⁴⁵⁹

There is more variation among capital diameters⁴⁶⁰ and especially among capital heights, which range from 5/8 to 1 2/5 times the lower column diameter. Even more divergent are the temples' intercolumnations, interaxial widths and diameters. Moreover, Wilson Jones' 'rule' of a 6:5 relationship between the column and shaft heights is only supported by the columns of the Pantheon's exedras⁴⁶¹ and of the intermediate block of the Temple of Zeus Asklepios Soter (#27).⁴⁶² Though more popular in the Julio-Claudian period, this proportional relationship appears to have less relevance for round temple design than Vitruvius' module.⁴⁶³

Across the Flavian and Antonine periods, there is little correspondence between round temples' structural elements and critical dimensions, although individual temples show some significant proportional relationships. Most famous is

⁴⁵⁵ Vitruvius' guidelines are not valid for the Corinthian order, where, with the exception of the aediculae columns of Hadrian's Pantheon, all are in excess of a 1:1 correspondence between their capital heights and lower column diameters.

⁴⁵⁶ Most range between 1 1/4 and 1 1/2.

⁴⁵⁷ This ratio applies to the Pantheon's porch and aediculae columns (cf. 'Type B' in Wilson Jones 1989a, 43), and the columns of the Temples of Palaimon-Melikertes at Isthmia and of the Nymphs at Argos (#2).

⁴⁵⁸ See Chap. V 'Proportional analysis.'

⁴⁵⁹ See Wilson Jones 1989a, 43 ('Type C'). Exceptions include the reconstructed columns of the Temple of the Nymphs at Argos, the aediculae columns of the Pantheon, and the Doric columns of the Shrine of Aphrodite.

⁴⁶⁰ The only correspondence may be found in the porch and exedra capitals of the Pantheon, which are 1 1/3 times their lower column diameters.

⁴⁶¹ The Pantheon's porch columns, as reconstructed by Davies, Hemsoll and Wilson Jones (see #50 above), would fit this relationship.

⁴⁶² Though close, the columnar proportions of the Temple of Palaimon-Melikertes at Isthmia (#15), the Shrine of Sulis-Minerva, and the Rotunda at Athens are less reliable since they include reconstructed measurements.

⁴⁶³ Wilson Jones (1989a, 56-9) acknowledges some limitations of the 6:5 'rule.'

the Pantheon's 1:1 correspondence between its cella interior, measured at the interaxial diameter, and its height. This correlation has inspired scholars to inquire into the principles that informed the Pantheon's design. Among the more popular interpretations are those of K. de Fine Licht, H. Geertman, and M. Wilson Jones. While de Fine Licht sees the radius of the rotunda, divided into sixteen sections, as the factor which determines most elements of the Pantheon's plan,⁴⁶⁴ Geertman favors a more complicated approach. First he inscribes a square into a circle corresponding to the cella wall. Then he adds a square of the same dimensions to include the Pantheon's intermediate block and porch. Finally, he uses complex relationships based on the 1:1 ratio between the sides of the squares and their diagonals at the square root of two to account for Agrippa's plan and the plan and elevation of Hadrian's Pantheon.⁴⁶⁵

Wilson Jones adopts a similar approach, but employs the interaxial diameter of the cella at 150 Roman feet as the circle into which he inscribes the first square. This allows him to align the second square with the centers of the porch columns instead of with the porch exterior. He then follows de Fine Licht in determining the location of the Pantheon's exedrae and aediculae from the circle divided into sixteen radial measurements and their corresponding angles.⁴⁶⁶ In all three approaches, geometry provides a means of setting out the basic form of the Pantheon, while, as Wilson Jones notes, arithmetic, namely fractions of its 150 foot critical dimension, determines many of its parts.⁴⁶⁷

⁴⁶⁴ Moreover, de Fine Licht (1966, 195-8) notes that the circumference of Hadrian's Pantheon is approximately ten times the length of Agrippa's, according to Beltrami's reconstruction.

⁴⁶⁵ Geertman 1980, 206-17. Wilson Jones (2000, 93) remarks that the use of the square root of two in the Pantheon's plan is logical in so far as its drum is intersected by a square intermediate block and porch.

⁴⁶⁶ Wilson Jones 1989b, 129-31; cf. Jacobson and Wilson Jones 1999, 58. Wilson Jones (2000, 60) suggests that the same system is applied less successfully in the Temple of Zeus Asklepios Soter (#27), where the cardinal and diagonal axes are not aligned.

⁴⁶⁷ Wilson Jones 1989b, 131.

Taken as a group, the round temples built during the Flavian and Antonine periods are most closely related in terms of their columnar orders. Regarding their size, most were small, though they show a considerable range from the Tholus of Cybele (#34) with a floor space of nearly five square meters⁴⁶⁸ to the Shrine of Aphrodite, which exceeds two hundred.

IV CONCLUSION

Though firmly established by the end of the Augustan period,⁴⁶⁹ the movement that paid homage to Classical Athens began to evolve under the later Julio-Claudians.⁴⁷⁰ Augustan Classicism developed into an elaborate baroque style by the reign of Vespasian, who employed ornate ornament in many of his building projects.⁴⁷¹ He and Domitian chose a more conservative style however for their rebuildings of Julio-Claudian round temples, most notably the Perirrhanterion (#51), whose links to the Augustan Temple of Apollo Medicus⁴⁷² are underscored by its decoration.

In reaction to the florid ornament of the Flavians, Apollodorus returned to models like the Forum of Augustus in his design for Trajan's Forum.⁴⁷³ This more severe style was also used in Hadrian's early buildings like the Pantheon (#50), while many of his later works looked towards Asia Minor for their inspiration.⁴⁷⁴ A major

⁴⁶⁸ This dimension corresponds to the Domitianic foundations, which may be identified with this shrine (see #34 above).

⁴⁶⁹ See Chap. V 'Decorative details.'

⁴⁷⁰ Strong (1953, 121) notes precursors to the rich Flavian style in the ornament of the Temples of Castor and of Concordia.

⁴⁷¹ Gros 1996a, 185.

⁴⁷² See Chap. V and above.

⁴⁷³ Strong 1953, 120; Leon 1971, 127-41 and 159.

⁴⁷⁴ Strong 1953, 120-1 and 130; Gros 1996a, 185.

workshop from Pergamon,⁴⁷⁵ which seems to have constructed the Temple of Zeus Asklepios Soter (#27), may have accompanied Hadrian to Rome to build his Temple of Venus and Roma.⁴⁷⁶ Despite his penchant for Asiatic ornament, some of the last monuments begun by Hadrian imitated the rich variety of forms found in early Augustan architecture.⁴⁷⁷ These forms also inspired Antoninus Pius, who revived traditional styles in many of his projects,⁴⁷⁸ including his rebuilding of the Shrine of Bacchus (#32).

Like their eclectic ornament, the round temples of the Flavian and Antonine periods are notable for their range of locations. Moreover, many employ brickwork and concrete as well as domes, which may feature in select late Republican and Julio-Claudian temples. The dome appears to best advantage in Hadrian's Pantheon, whose design, based on simple geometric and arithmetic relationships, had a far-reaching influence on round temple design.

⁴⁷⁵ Strong 1953, 137; Heilmeyer 1970, 165, cf. 168-9 (other workshops from Asia Minor active in Rome). However, Gros (2001, 487-8) urges that caution be employed when identifying workshops based on stylistic similarities.

⁴⁷⁶ Strong (1953, 121; cf. 138) includes the Mausoleum of Hadrian and the Hadrianeum among the monuments influenced by Asiatic architecture.

⁴⁷⁷ The interior of the Hadrianeum built after his death imitates ornament from the Basilica Ulpia. Strong 1953, 130 and 137.

⁴⁷⁸ The Temple of Antoninus and Faustina, begun by Antoninus Pius (Cassatella 1993, 46-7), includes classical ornament evocative of the Augustan period. Strong 1953, 121.

PART III: THE LATER ROMAN EMPIRE
CHAPTER VII: THE THIRD AND EARLY FOURTH CENTURY
EMPERORS

I INTRODUCTION

After the collapse of the Antonine dynasty, Septimius Severus seized control over the empire. From an architectural standpoint, his reign and the reigns of his sons, Caracalla and Geta, coupled extensive repair work with new building. While the repairs focused on fire damage in the Forum, the new foundations took the form of huge imperial baths and temples celebrating the dynasty's origins.¹ Stylistically, most Severan work resembled Flavian architecture, its ornate decoration possibly inspired by Septimius Severus' restoration of the Domus Augustana.²

Though the Eastern excesses of Caracalla's successor Elagabalus brought the dynasty into disrepute, Alexander Severus restored some semblance of order, while completing several Severan repair and building projects. Following his death however, the empire rapidly fragmented, with legionaries in the provinces elevating their commanders to the status of emperors. Prominent among them was Aurelian, who, unlike most of his immediate predecessors, focused his building activity on Rome. His vast circuit of walls attests to the uncertainty of his times. This is underscored by the next significant set of emperors, who partitioned the Roman world along strict boundary lines.

As a by-product of dividing their rule, the joint Augusti Diocletian and Maximian, aided by the Caesares Constantius and Maximianus, built widely in the

¹ Ward-Perkins 1989, 132, and below.

² Sear 1982, 257-8; Ward-Perkins 1989, 134.

provinces.³ Their successor Maxentius, Maximian's son, however returned his focus to Rome, where he undertook a number of significant projects. Constantius' son Constantine, on defeating Maxentius, resumed or re-dedicated much of this building work, prior to moving the empire's capital to Constantinople in 330 AD.⁴

While late third and early fourth century buildings show limited development in their ornament,⁵ they do incorporate technical advances. Chief among them are new methods of constructing domes, which enable Constantine's architects to explore the lighting opportunities opened up by windows.⁶

II DISCUSSION

The Severans: (193-235 AD)

Septimius Severus: (193-211 AD)

Septimius Severus' vast building program comprised the restoration of monuments damaged in the Forum fire of 191 AD,⁷ additions to the Flavian palace on the Palatine,⁸ and significant new construction like his Temple of Hercules and Bacchus on the Quirinal. In conjunction with his projects at Rome, he commissioned a marble plan for the library of the Templum Pacis, which he restored,⁹ while, outside of Italy, he built widely in Lepcis Magna and saw the completion of the Sanctuary of Asklepios at Pergamon.

³ Though Diocletian rebuilt the Curia and constructed baths on the Viminal, his primary project was a palace at Split. Similarly, Constantius and Maximianus emphasized new construction in their capitals at Trier and Thessaloniki. Sear 1982, 263-8.

⁴ Ward-Perkins 1989, 415.

⁵ Some like the 'Temple of Romulus' (#52 and below) even reuse ornament from Flavian and Severan buildings.

⁶ See 'Roofing techniques' below.

⁷ Herodian. 1.14.4 and Cass. Dio 72.24. Most of this work was concentrated in the years 203-208 AD. Claridge 1998, 20.

⁸ Together with rebuilding the palace, he added the Septizodium, whose elaborate three-tiered design is characteristic of Severan architecture. Ward-Perkins 1989, 132 and below.

⁹ Ward-Perkins 1989, 128; Coarelli 1996m, 67-70.

The Mundus and the Temple of Vesta, Forum, Rome (#49 and 57)

To Septimius Severus' reign may be attributed the reconstruction of two major Archaic foundations in the Roman Forum: the Mundus (#49) and the Temple of Vesta (#57). Fragments of the Mundus include brick foundations¹⁰ and marble blocks used to repair its Republican entablature. Contemporary with its rebuilding, steps were added to its precinct to allow the Mundus access from the south.¹¹

More extensive was the Severan reconstruction of the Temple of Vesta. Based on coins,¹² Julia Domna, the wife of Septimius Severus, is thought to have taken charge of the project, which included rebuilding significant elements of the Trajanic Temple.¹³ As on the Uffizi and Lateran reliefs,¹⁴ the Severan Temple includes a podium with engaged plinths and columns. Instead of the Ionic order, Julia Domna employed Corinthian as illustrated on her coins, which also show the grillwork and domed roof known from the reliefs.¹⁵

The Severan Temple, like the Regia and the Atrium Vestae until its 64 AD rebuilding,¹⁶ retains the eastern orientation of its predecessors. Resting on Republican foundations, its marble-revetted podium and plinths supported twenty Luna marble columns. These were mirrored by semi-columns attached to the interior and exterior of the cella wall. Above the colonnade were ceiling coffers and a Corinthian entablature, whose frieze displays sacrificial implements.¹⁷ While the Corinthian order is unique to the Severan Temple, these motifs may replicate earlier ornament as

¹⁰ The foundations may date to the late Severan period. Coarelli 1995k, 95.

¹¹ Prior to the Severan period, the pavement level to the south was raised considerably. Coarelli 1983b, 217.

¹² See #57.

¹³ Alternatively, some elements may have survived the fire of 191 AD. Scott 1999b, 127.

¹⁴ See Chap. VI.

¹⁵ On the coins, an image of Vesta is shown inside the Temple and Vestals appear sacrificing on a round altar in front. Mattingly 1950, 168-9; Cody 1973, 43; cf. Cecamore 1994-1995, 26 figs. 19 and 20.

¹⁶ Scott 1993c, 138-42, and 1999a, 189-92.

¹⁷ Lugli 1946, 206.

they find close parallels on a Roman denarius minted by P. Sulpicius Galba in 69 BC.¹⁸

The Abaton, Pergamon (#26)

The Abaton (#26) built at Pergamon in ca. 200 AD recalls the Hadrianic Temple of Zeus Asklepios Soter (#27) in its plan and ornamentation. Located next to the Temple at the south-east corner of Asklepios' precinct, its two-storied round form was obscured by a cistern and a covered portico spanning the south side of the court. Like the Temple and the Hadrianic Pantheon (#50), the Abaton's greatest impact was achieved on entering its domed drum.¹⁹ The drum and its six horseshoe-shaped apses form the building's upper level.²⁰ Its lower level, which is without parallel, comprises three full and one half rings of walls and pillars roofed with barrel vaults. The first or innermost ring consists of a central core, supporting the floor of the upper level, while a series of seventeen pillars forms the second ring, and windows and archways comprise the third.²¹ The fourth, half-ring, is open to the sky and channels traffic around the north-west side of the building.²²

In addition to the portico, a cryptoporticus opens into the Abaton's lower level.²³ This level in turn gives access to the upper level by a complicated set of stairways.²⁴ Like the Temple, the upper rotunda was decorated with marble revetment

¹⁸ This coin, minted in honor of Vesta, shows a knife, a simpulum and an ornamental ax. Cody 1973, 47 pl. 5.8.

¹⁹ For the drum, see Ziegenaus 1981, 98-9, and 'Roofing techniques' below.

²⁰ Ziegenaus 1981, 94-100.

²¹ Instead of windows on the south and east sides, the third ring is solid as it abuts the natural slope.

²² Wiegand 1932, 16-8; Ziegenaus 1981, 78-94.

²³ Ziegenaus 1981, 86.

²⁴ The stairways, which follow the Adyton's NE face, are complemented by a ramp. Wiegand 1932, 19-20; Ziegenaus 1981, 82-7.

and mosaics, and its apses were flanked by pilasters.²⁵ The layout of both levels coincides with what is known of Asklepios' worship at Pergamon. While it seems likely that cures were effected on the lower level, using spring water piped through the cryptoporticus,²⁶ the apses of the upper level may have functioned as medical consultation rooms.²⁷ As an incubation site, the Abaton served as an ideal complement to the Temple of Zeus Asklepios Soter.

Geta: (211-212 AD)

Geta may have been responsible for a Temple in Greek Aigosthena (#1).

The Temple of Melampous, Aigosthena (#1)

Coins minted under Geta²⁸ may illustrate a round Temple of the hero-god Melampous located in his sanctuary at Aigosthena (#1). Next to the domed monopteros shown on the coins is a tree entwined with a serpent, which F. Robert suggests has both chthonic and agrarian connotations.²⁹ As a second set of coins may show Melampous suckled by a she-goat,³⁰ such symbolism is appropriate in view of his upbringing and moreover, was reflected in his festivals or *Melampodeia*.³¹

Caracalla: (211-217 AD)

²⁵ Though no longer extant, the capitals have been reconstructed as Corinthian. Wiegand 1932, 19; Ziegenaus 1981, 97 and 100.

²⁶ For the water distribution system, see Ziegenaus 1981, 88-92, 96 and 98.

²⁷ Wiegand 1932, 30; vs. Robert (1939, 407-8), who points out that no ancient source attests to the building's function, and suggests that the porticoes, which ringed the court, more closely resemble incubation areas at other sanctuaries.

²⁸ See #1.

²⁹ Robert 1939, 137; vs. Postolacca (1866, 336), who considers them symbolic of a tomb. However, as few parallels can be found for mausolea on Imperial coinage (see #52 below), Postolacca's hypothesis is untenable.

³⁰ Imhoof-Blümer and Gardner 1888, 9.

³¹ IG VII 219 and 223, cf. 207-8 (*Melampodeion* in which the festivals were held); Paus. 1.44.5, 2.7.8 and 8.18.7 (Melampous as a hero god).

Though mindful of his father's restoration efforts, Caracalla focused on new construction, including his Baths and a temple to Serapis.³²

The Temple of Vesta, Forum, Rome (#57)

Under Caracalla, a coin series was issued to commemorate his mother's rebuilding of the Temple of Vesta (#57).³³ In addition to the Temple, a Corinthian monopteros topped by a domed roof, he or Julia Domna appears as a participant in the sacrifice that accompanied its re-dedication.

Alexander Severus: (222-235 AD)

Principally interested in the repair of older buildings, like the Flavian Amphitheater and the Temple of Isis, Alexander Severus completed the Baths of Caracalla,³⁴ and oversaw the construction of lavish round temples at Rome (#35) and Ostia (#23).

The Temple of Dea Dia, Rome (#35)

A round Temple (#35) built under Alexander Severus crowned the sanctuary of Dea Dia, a large complex of buildings overseen by the priestly college, the *Fratres Arvales*.³⁵ The cult of Dea Dia,³⁶ one of the earliest in the city, was considered by Romans of the late sixth and fifth centuries BC to mark a limit of the *ager Romanus*

³² *Hist.Aug.Carac.* 9.10. Sear 1982, 256; Gros 1996a, 188.

³³ See #57.

³⁴ Sear 1982, 260; Claridge 1998, 21-2.

³⁵ This priesthood was drawn from the highest sector of society (Plin. *nat.* 18.6; Gell. 7[6].7). Pellegrini 1865, 10; Henzen 1868, iii-iv.

³⁶ Otherwise unknown, Dea Dia may be related to Ceres. Birt 1845, 964-75; Henzen 1868, iv; Lanciani 1868c, 107.

or territory of Rome.³⁷ This limit corresponded to the fifth milestone of the via Campana-Portuensis.³⁸ Using ancient sources, principally the Annals of the Fratres Arvales, modern scholars have identified building remains at La Magliana as part of this sanctuary.³⁹ A thorough study of these remains has enabled the site's excavators, J. Scheid and H. Broise, to reconstruct its layout as well as the placement and appearance of its principal buildings.⁴⁰

The Annals of the priesthood are among the most important religious documents of the Imperial period.⁴¹ They date from 14 BC, when Augustus first dictated that the acts or religious practices of the Arvals be written down,⁴² to the late third century AD. The greatest concentration pertains to the Flavian period.⁴³ These three periods, the Augustan, the Flavian and the Severan, also mark key moments in sanctuary's building history. Though the cult of Dea Dia dates from the sixth century BC,⁴⁴ the first signs of religious occupation are third century,⁴⁵ and the first structures pertain to a major reorganization of the cult and its buildings in the Augustan period.

In the context of yearly purification rituals,⁴⁶ the Annals point to the existence of four major buildings and a series of minor structures in or near the sanctuary. The

³⁷ For the other limits of the *ager Romanus* in this period, see Alföldi 1962, 187-213, and Scheid 1987, 583-5 and 592-4, and for the possible derivation of *ambarvalia*, purificatory rites involving circumambulation, from *arva*, meaning 'boundary,' see Varro *ling.* 1.1.5, 85, Pellegrini 1865, 3, Henzen 1868, iii, and Scheid 1987, 585-6, and 1990, 99-100.

³⁸ Patterson 1999, 135. For the sources which locate the *lucus* of Dea Dia, namely mid-Imperial *Fasti* and late Imperial martyrologies, and the topographical difficulties they present, see Scheid 1976, 639-47, and 1990, 96-101.

³⁹ Abeken (1841, 121-3) was the first to locate the Sanctuary of Dea Dia.

⁴⁰ Pending their publication of the Temple, Lanciani's (1868c, 105-6) remains the best reconstruction.

⁴¹ Henzen 1867a, 229-47; De Rossi 1868, 25-6. Almost 240 fragments are extant dating from 28 BC to 241 or even 308 AD. Broise and Scheid 1987, 2-4.

⁴² Henzen 1868, iii.

⁴³ De Rossi 1858, 69-71, and 1866, 55-6.

⁴⁴ The cult's links to Romulus, its function as a limit of the *ager Romanus*, and a prohibition on the use of tools made of other materials than bronze in the *lucus* (Macr. *Sat.* 5.19, Serv. *Aen.* 1.448, and *CIL* I 603; cf. Henzen 1868, v) would suggest this date. Moreover, excavations in the area have revealed traces of occupation from the 7th-6th c. BC. Scheid 1987, 589-90.

⁴⁵ Scheid 1987, 590, and 1990, 149.

⁴⁶ The sacred grove was one of three locations for cult festivals. Some rites were enacted at the president's house in Rome, while others took place at the Pantheon (*CIL* VI 2041 = *ILS* 229). Scheid 1990, 95.

major buildings include an *aedes Deae Diae*, a *Tetrastylum*, a *Caesareum*, and a circus, and the minor, a permanent altar, several *arae temporales*, *papiliones*, most likely living quarters,⁴⁷ and a *balneum*.⁴⁸ They also locate and describe some of these structures. The Temple of Dea Dia, situated within the *lucus*, is reached by ascending a *clivus* or slope from the *Tetrastylum*,⁴⁹ which, together with the *Caesareum*, is sited at the base of the slope and near the circus, located *ante lucum* or outside of the grove.⁵⁰

Moreover, the Annals note that the Temple had a *fastigium*, usually translated as a pediment,⁵¹ and three doors or more likely, a door with three sections. They also indicate that it was preceded by an altar, that it contained at least two statues, and that it was large enough to accommodate twelve marble seats.⁵² They even establish some kind of timeframe for the Temple, which they note existed in 53 AD and was restored in 183, as well as for the *Tetrastylum* and the *Caesareum*, which first appear in Annals of the Domitianic period.⁵³

Remains of the sanctuary have helped to clarify the topographical information gleaned from the Annals. Prior to excavation, only the foundations of the Temple and a rectangular room which formed part of the *balneum* were visible. To these could be added Renaissance sketches of the *Tetrastylum* and the Temple.⁵⁴ The sanctuary,

⁴⁷ Scheid 1990, 134-6.

⁴⁸ Scheid 1990, 103; cf. 131-40, for sources dealing with the minor structures in the sanctuary.

⁴⁹ On 19 or 29 May, the Arvales completed the second day of the purification rites by celebrating morning rituals at the *Tetrastylum*, ascending to the Temple for afternoon rituals, and returning for further rites at the *Tetrastylum* in the early evening. Scheid 1990, 104-5. For a fuller description, see Henzen 1868, iv-vi, and Broise and Scheid 1993, 148-57.

⁵⁰ Scheid 1990, 112 and 131-3.

⁵¹ Henzen 1868, xi; vs. Scheid 1990, 155.

⁵² See #35. The *subsellia marmorea* were used by the priesthood when they distributed bread to their *familia* and officials during the yearly festival. Scheid 1990, 105-9.

⁵³ Scheid 1990, 109. For a discussion of the sources pertaining to the *Tetrastylum* and the *Caesareum*, see Abeken 1841, 121-3 (*Tetrastylum*), and Scheid 1990, 109-31. The *Tetrastylum* may have functioned as a banquet hall and the *Caesareum* as a statue gallery for divinized emperors. Pellegrini 1865, 10.

⁵⁴ See #35 (Ligorio's plan of the Temple). For references to S. Peruzzi's drawing of the *Tetrastylum*, ca. 1570, see Scheid 1990, 159.

extending from the *balneum* and *papiliones* at its base to the Temple at its summit,⁵⁵ lies underneath a densely populated suburb of Rome and is bisected by two modern roads and the train line.⁵⁶ Despite the difficulties of the terrain, Scheid and Broise have fully excavated the *balneum*, an adjacent hemicycle of twelve rooms, identified as *papiliones*,⁵⁷ and the Temple.

The Temple rises from a terrace on axis with the bath-and-housing complex and, in its present form, like the *balneum* and *papiliones*, dates to the reign of Alexander Severus.⁵⁸ At least one wall, which forms the western border of the sanctuary, and the circus, which may be linked with masonry discovered below the *balneum*, are older.⁵⁹ The *Tetrastylum* and *Caesareum*, possibly one and the same building, are harder to locate, though the evidence provided by the Annals and a drawing of Peruzzi may situate them at the bottom of the slope, where a Flavian platform and series of bases and busts of emperors were discovered in the sixteenth century.⁶⁰

The foundations of the Temple rest on an artificial terrace delimited by two walls.⁶¹ The terrace followed the predominant north-south axis of the sanctuary⁶² with the Temple's entrance facing south towards the slope and the buildings at its base.⁶³ Its well-preserved foundations⁶⁴ comprise an annular gallery, with eleven

⁵⁵ The martyrium of S. Generosa forms the sanctuary's northern limit. Scheid 1990, 143.

⁵⁶ Broise and Scheid 1987, 2.

⁵⁷ For a fuller description of these buildings, see Scheid 1990, 144-7.

⁵⁸ Scheid 1990, 143-8 and 155-8.

⁵⁹ For the remains of the circus, see Pellegrini 1865, 7. Soundings near the Temple have uncovered finds from the 2nd c. BC to the late Empire, while finds near the train station date to the 3rd c. BC. Broise and Scheid 1985, 543-4, and 1986, 399; Scheid 1990, 148-9.

⁶⁰ De Rossi 1856, 59-60; Scheid 1990, 158-65.

⁶¹ In view of their *opus latericium* construction, the terrace walls probably date to the Augustan period, when this technique was still in use. Adam 1994a, 146-7.

⁶² The sanctuary's orientation according to the cardinal points is typical of Archaic sites, see Chap. III 'Augural divination in Archaic Italy: defining the Roman *templum*.'

⁶³ Scheid 1990, 143-4; Broise and Scheid 1993, 147-8.

⁶⁴ The foundations owe their state of preservation to late Imperial decrees, which denounced the vandalism of temples located outside the city limits (cf. *Cod. Theod.* XVI 10.3, quoted by Henzen

niches and an entrance, bisected by two straight galleries, set at right angles.⁶⁵ This configuration takes the form of a cross superimposed on a circle.⁶⁶

Very little is preserved of the Temple's superstructure, but based on a few fragments and Ligorio's drawing, R. Lanciani has reconstructed it as a drum faced with Corinthian pilasters supporting an entablature and a sloping roof.⁶⁷ He sets pilasters along the cella interior flanking fifteen niches, alternately rectilinear and semicircular.⁶⁸ Finally, Lanciani proposes that the Arval Annals discovered nearby be incorporated into the Temple's stylobate.⁶⁹ Though appealing, his hypothesis is untenable, as the preserved plaques are rectilinear and their number would presuppose a monument of a much greater width.⁷⁰ According to the Annals, the Temple was preceded by an altar. This may be identified with a round altar, which depicts a serpent and bucrania flanked by garlands.⁷¹

The Temple of Dea Dia served as the crowning element of a vast sanctuary complex with its roots in the Archaic period, but its greatest expansion under the Empire. Little is known of the Temple in the Republican period and under Augustus, when the sanctuary had an east-west as opposed to its Flavian and Severan north-south orientation,⁷² nor even in the Flavian period, when the *Tetrastylum-Caesareum* was constructed. In its final phase, the Sanctuary of Dea Dia was laid out with strict

1868, xii), and later to their incorporation into the casino of the Vigna Ceccarelli and the basement of a restaurant. De Rossi 1866, 59; Henzen 1868, xii; Lanciani 1868c, 105.

⁶⁵ Lanciani 1868c, 105.

⁶⁶ They are remarkably similar to the foundations of the 'Temple of Portunus,' a mausoleum at Portus drawn by Sangallo. Lanciani 1868c, 105; Sjöquist 1946, 115 figs. 35-6.

⁶⁷ Lanciani makes no mention of the pediment cited in the Annals, which could suggest that the Temple's drum was preceded by a porch as Henzen (1868, xi) proposes. However, this reconstruction is not supported by the remains.

⁶⁸ Lanciani 1868c, 105-6.

⁶⁹ Lanciani 1868c, 106; cf. De Rossi 1866, 56, and Henzen 1868, xii. Lanciani's reconstruction recalls the Archaic 'Rotunda of the Laws' at Gortyna (see Robert 1939, 385-7) and the Hellenistic Tychaion at Alexandria, a round temple containing niches and steles inscribed with city laws (see Liban. 25, *Cod. Theod.* 14.27, and Will 1951, 239).

⁷⁰ It is more likely that the Annals were displayed in the *lucus*. Scheid 1990, 155-7.

⁷¹ The serpent may represent the *genius loci* of the grove. Henzen 1868, ix.

⁷² Broise and Scheid 1993, 147.

symmetry that reflected the importance of the Temple and set it apart from the lower buildings that played subsidiary roles in the cult.⁷³

The ‘Pantheon,’ Ostia (#24)

The second round temple constructed during the reign of Alexander Severus was the ‘Pantheon’ at Ostia (#24). Built near the Forum, the ‘Pantheon’ is sited next to the Basilica.⁷⁴ Its drum, masked by a portico, is preceded by a vast court that opens northward onto the Decumanus Maximus.⁷⁵ The court, contained within the walls of the original Castrum,⁷⁶ was first articulated in the late first century AD, when the Basilica was built.⁷⁷ Once part of the Basilica complex, the ‘Pantheon’s’ builders adopted the layout of its court and reused architectural elements from the peristyle court beside the “Byzantine” baths as aggregate in its boundary walls.⁷⁸

The court, accessed by steps, is spread out over two levels. At the lower level are six symmetrically placed drains, while at the higher, lining its long walls, are a series of statue niches topped by triangular and semicircular pediments.⁷⁹ A door in the middle of the east wall, opening into the Basilica, is mirrored by a semicircular niche in the west wall. The court, paved and revetted in marble, served as an elegant atrium for the ‘Pantheon.’⁸⁰

⁷³ Scheid 1990, 165-6 and 170-3; Broise and Scheid 1993, 147-8.

⁷⁴ For the layout of this area, see Bakker 1994, 172.

⁷⁵ Briggs 1930, 162.

⁷⁶ Briggs 1930, 162; Calza et al. 1953, 152.

⁷⁷ Pavolini 1989, 103.

⁷⁸ Among them were fragments of late 1st c. AD Tuscan capitals and marble pieces reused in its pavement. Pensabene 1973, 31 nos. 16-7 and n. 1, and 1996b, 202-4 and 209-10.

⁷⁹ Unlike the Roman Pantheon’s forecourt, the Ostian court lacked porticoes. Briggs 1930, 164 and 167.

⁸⁰ Calza et al. 1953, 152; Pavolini 1989, 110.

Raised on a high podium, the ‘Pantheon’ is fronted by steps and two horseshoe-shaped niches for fountains and statuary.⁸¹ Its pronaos, which recalls the porches of the Pantheon at Rome (#50) and the Temple of Zeus Asklepios Soter at Pergamon (#27), consists of ten columns, mirrored by pilasters along the wall of its intermediate block.⁸² Narrower than the intermediate blocks of the rotundas at Rome and Pergamon,⁸³ it accommodates two stairwells⁸⁴ giving access to its roof.⁸⁵

A pavement of multi-colored marbles extends from the porch into the drum, articulated by three large rectangular niches,⁸⁶ alternating with four smaller semicircular niches. The rectangular niches, which follow the cardinal axes, protrude beyond the curved wall of the rotunda.⁸⁷ In addition to enlivening its exterior, through their depth, they helped to showcase the ‘Pantheon’s statues. Columns supported on pedestals⁸⁸ beside the niches framed its statue display, which included an image of Alexander Severus.⁸⁹ This statue, together with the materials and techniques employed in its construction,⁹⁰ helps to date the ‘Pantheon’ to his reign. Moreover, like his portrait statue, the luxurious marbles used as revetment for its complex⁹¹ may indicate that the ‘Pantheon’ celebrated the Imperial cult.⁹²

⁸¹ These niches, whose brickwork is not bonded with the podium, are likely to have been later additions. Briggs 1930, 164.

⁸² Based on their marble bases, Briggs (1930, 164-5) suggests that the pilasters and the wall of the intermediate block were revetted in marble.

⁸³ MacDonald 1982, 98 and 100.

⁸⁴ Alternatively, one well may have served as a storage area. Briggs 1930, 165.

⁸⁵ As the walls are relatively thin for such a large building, it is more likely that the ‘Pantheon’ had a timber roof than a dome.

⁸⁶ A small room, reached via steps, lies below the rectangular niche that shares an axis with the ‘Pantheon’s entrance. Briggs 1930, 166.

⁸⁷ Comparable, though more dramatic, are the apses of the Abaton at Pergamon (#26), see above.

⁸⁸ Briggs (1930, 165) suggests that, as in Diocletian’s Palace at Split, these columns helped to support the ‘Pantheon’s dome.

⁸⁹ Pensabene 1996b, 201. Images of Gordian III and his wife were added to the ‘Pantheon’ at a later date, see #23 and Meiggs 1973, 81, and Pensabene 1996b, 201, for a comparable pair (S 4397-8) displayed in the Barracks of the Vigiles.

⁹⁰ Pavolini 1989, 110. For other Severan work at Ostia, see Calza et al. 1953, 151-4, and Meiggs 1973, 146.

⁹¹ The sumptuous materials, as well as some features of the architectural decoration (see ‘Decorative details’ below), point to Eastern influences. Pensabene 1996b, 201.

Round temples refurbished during the Severan period:

The Pantheon, Rome (#50)

Below Agrippa's dedicatory inscription is a second, which commemorates restoration work undertaken by Septimius Severus and Caracalla on the Pantheon in Rome (#50).⁹³ While the extent of their work is unclear, it may have included reinforcing the masonry of the drum⁹⁴ or restoring the marble revetment of its second tier.⁹⁵

The mid-to-late third century AD:

Philip 'the Arab': (244-249 AD)

The vast Sanctuary of Jupiter Heliopolitanus at Baalbek, begun in 16 BC,⁹⁶ was completed under Philip 'the Arab.' His additions include a monumental propylon leading to the temple's hexagonal and rectangular courts,⁹⁷ and to the south of the complex, the round Temple of Tyche (#7).

The Temple of Tyche, Baalbek (#7)

Although known as the Temple of Venus, the round Temple at Baalbek (#7) is more likely to have commemorated Tyche. Coins minted under Philip 'the Arab'

⁹² Meiggs (1973, 81; cf. Pensabene 1996b, 201) suggests that Alexander Severus made financial contributions to its construction.

⁹³ For the political motivations which may have fueled this inscription, see de Fine Licht 1966, 190.

⁹⁴ Cracks appeared in both the drum and the dome soon after Hadrian's Pantheon was built. de Fine Licht 1966, 190.

⁹⁵ Strong 1953, 119 n. 5.

⁹⁶ Though his cult is attested as early as the 6th c. BC, Jupiter's complex was begun after Baalbek became a Roman colony. Sear 1982, 245; Ward-Perkins 1989, 314.

⁹⁷ The hexagonal forecourt may be contemporary with the propylon. Ward-Perkins 1989, 314; Gros 1996a, 190.

show a Tychaion that bears a striking resemblance to this building. As on the coins,⁹⁸ the Temple is fronted by a porch, whose eight Corinthian columns, arranged in two rows,⁹⁹ support a triangular pediment. The pediment was curved above the wide central intercolumnation¹⁰⁰ that provides access to the cella from the porch's three-tiered steps.¹⁰¹

While the Temple's foundations and the podium beneath its porch are rectangular, the cella rests on a curved extension, whose scalloped edges correspond to plinths supporting the four columns of its peristasis.¹⁰² These columns, with five-sided Attic bases and Corinthian capitals, are mirrored by pilasters, which flank five aediculae embedded in the cella wall.¹⁰³ A garland and putti frieze runs above the aediculae, while inside the cella, a socle, fourteen half-columns and cornices define two tiers of decoration.¹⁰⁴ Of these tiers, the lower may have accommodated statue bases in-between the columns and the upper includes five niches topped by alternating triangular and semicircular pediments. A Corinthian entablature, which corresponds to the entablatures of the porch and the drum exterior,¹⁰⁵ runs along the base of the cupola.¹⁰⁶

The roofing system employed by the Temple is highly unusual. A sloping wooden roof probably extended above the columns and coffers of the porch as far as

⁹⁸ While the coins may suggest that the Temple contained a cult image (see 'Statuary and reliefs' below), it has not been found. Wiegand 1925, 96.

⁹⁹ The central columns of the back row are attached to the cella wall. Wiegand 1925, 92.

¹⁰⁰ Wiegand (1925, 99 and 105) places a relief depicting an eagle in flight, comparable to the antefix block of the Temple of Hercules Victor *ad portam Trigeminam* (#44), above the Temple's door.

¹⁰¹ For the Temple's complex stair arrangement, see Wiegand 1925, 93-5.

¹⁰² For the podium's base and crown moldings, see 'The base molding' below.

¹⁰³ The aediculae, whose semi-domes are ornamented with birds, are flanked by Composite pilasters. Wiegand 1925, 99.

¹⁰⁴ The Propylon of the Sanctuary of Jupiter at Baalbek also employs two tiers of decoration. Wiegand 1925, 109.

¹⁰⁵ The repetition of motifs in the interior and exterior entablatures helps to visually unite the building. Wiegand 1925, 93 and 104, and see 'The entablature' below.

¹⁰⁶ This junction of elements features in the round exedras of the altar court at Baalbek. Wiegand 1925, 109.

the entrance wall. Here stone blocks continued its course to the center of the cupola. Disguising its vaulted ceiling,¹⁰⁷ these blocks fanned out above the drum.¹⁰⁸

Besides its shape, the roof is notable for its use of ashlar blocks, which also feature in the Temple's podium and drum.¹⁰⁹ In terms of their decoration, its podium supports a multi-colored marble or mosaic pavement,¹¹⁰ while the blocks of its drum are carved with rich ornament, a distinctive feature of the Temple. Also noteworthy are the scalloped edges of the podium, whose undulating effect is enhanced by a repetition of columns, pilasters, and aediculae, and the cella's elaborate two-tiered interior. These design elements lend the Temple a baroque quality shared by the Antonine Temple of Bacchus and the Temple and forecourts of Jupiter at Baalbek.¹¹¹

As a dedication to Tyche, it recalls the Temple of Tyche at Side (#59) as well as Tychaia shown on coins minted throughout Asia Minor.¹¹² Though more elaborate, its plan, combining a rectangular porch and a drum, is similar to the Temple at Side as well as to the Temple of Fortuna Huiusce Diei at Rome (#38).¹¹³ However, as its porch is sizable enough to conceal its drum, it also takes inspiration from Hadrian's Pantheon (#50).

Trebonianus Gallus (251-253 AD):

The reign of Trebonianus Gallus saw little new building beyond a possible Temple of Juno at Rome (#45).

¹⁰⁷ More than disguising it, the entrance wall, set parallel to the steps, disrupts the circularity of the drum. Wiegand 1925, 98-9.

¹⁰⁸ For alternative reconstructions, see Wiegand 1925, 105-6.

¹⁰⁹ Wiegand 1925, 96-7. Similarly, the portico fronting the Temple of Jupiter employed stone vaults. Gros 1996a, 191.

¹¹⁰ Wiegand 1925, 96.

¹¹¹ Gros 1996a, 190.

¹¹² See Chap. VI #59.

¹¹³ See Chaps. IV #38 and VI #59. Godfrey and Hemsoll 1986, 209 n. 71.

The Temple of Juno Martialis, Rome (#45)

Coins minted under Trebonianus Gallus in 251 AD¹¹⁴ attest that a Temple of Juno Martialis (#45), otherwise unknown from literary and archaeological sources,¹¹⁵ existed in Rome. Her epithet *Martialis* may signify Juno in her capacity as the mother of Mars¹¹⁶ or more likely, may indicate that her Temple was sited in the Campus Martius, possibly near a temple to Mars.¹¹⁷ Alternatively, as P. Hill suggests, it may locate her Temple in the Campus Martialis at the base of the Caelian.¹¹⁸

The coins depict Juno Martialis inside a Corinthian monopteros. Her cult figure, shown enthroned with a globe and ears of corn in her hands and a peacock at her side, is accompanied by two figures interpreted as children or herms.¹¹⁹ The Temple itself consists of steps, columns and an arched entablature hung with garlands. A dome, encircled by antefixes, rises from the entablature and is topped by an acroterial ornament.

To explain its absence from the sources and the brevity of its depiction on coins, D. Brown has suggested that the Temple was a temporary construction.¹²⁰ However, it seems more probable that the Temple was planned, but never built, like the Capitoline Temple of Mars Ultor (#46).¹²¹

Aurelian: (270-275 AD)

¹¹⁴ The legend appears in both its nominative and dative forms. Alföldi 1955, 62.

¹¹⁵ Steinby 1996a, 123.

¹¹⁶ Küthmann and Overbeck 1973b, 72; Roscher 1890-1897, 586. Alföldi (1955, 63-5) speculates that *Martialis* either may signal Juno as the female counterpart of Mars or Apollo Salutaris, or may refer to some historical event.

¹¹⁷ Marchetti-Longhi 1949-1950, 199 fol.; cf. Hill 1989, 17. Alföldi (1955, 62-4; vs. Hill 1989, 18) links this with the Temple of Juno Regina *in Campo* (see Viscogliosi 1996d, 126-8).

¹¹⁸ Hill 1989, 17-8.

¹¹⁹ Alföldi 1955, 64.

¹²⁰ Brown 1941, 128. It would have a parallel in a wooden tholos was re-erected yearly to mark the festival of Zeus Sosipolis at Magnesia on the Meander. Kern 1900, no. 98 (inscription); Robert 1939, 70-2; Will 1951, 239.

¹²¹ See Chap. V #46. This idea may be supported by the garlands, which, Alföldi (1955, 63-4) suggests, commemorate special sacrifices connected with the Temple's (intended) inauguration.

Aurelian undertook two major building projects at Rome. By means of the first, a circuit of walls, he dramatically increased Rome's defensive capabilities, while with the second, he commemorated Sol (#53), the god who oversaw his military victories.¹²²

The Temple of Sol, Rome (#53)

Unlike Elagabalus' temples to Sol Invictus,¹²³ which celebrated a Syrian cult considered excessive by the Roman people,¹²⁴ Aurelian commemorated an indigenous sun cult in his Temple at Rome (#53).¹²⁵ Its foundation formed part of a three-step plan of religious reform¹²⁶ initiated after his victory at Palmyra in 272 AD.¹²⁷ These steps consisted of the official recognition of Sol as the supreme god of the Roman Empire, the construction of the Temple of Sol and the introduction of the *Agones Solis*,¹²⁸ and the creation of a college of *pontifices Dei Solis*.¹²⁹ The first of these

¹²² Moreover, Sol was widely worshipped in the provinces, whose support Aurelian sought to re-unify the empire. Hautescoeur 1954, 145-56 and 168-70.

¹²³ In addition to many provincial temples, he built a temple to Sol on the Palatine known as the *Elagabalium* (*Hist.Aug.Heliog.* 1.3.6; *Aur. Vict. Caes.* 23; *Herod.* 5.5.8; *Chronogr. a.* 354, p. 147 M; *Hier. chron. a. Abr.* 2291) and another *ad Spem Veterem* (*Hist.Aug.Heliog.* 13.4-5 and 14.2-3; *Herod.* 5.6.6). Halsberghe 1972, 74-6, and 1984, 2186-7.

¹²⁴ Born into a religious family at Emesa, Elagabalus, a high priest of Sol, hoped to establish Sol's primacy over Jupiter Optimus Maximus at Rome. In addition to lavish temples, he instituted purificatory rituals involving abstention from pork, circumcision, and most notably, human sacrifice. Halsberghe 1972, 84-9.

¹²⁵ Calzini Gysens and Coarelli 1999, 331-3. While its Eastern origins are undisputed, the cult of Sol, like those of Magna Mater and Isis, was integrated into the Roman pantheon at an early date. Halsberghe 1972, 26-37 and 45-56, and 1984, 2181-4. However, some sources (*Hist.Aug.Aurelian.* 25, and *Zos.* 1.61.1) still identify Aurelian's cult with Syrian Baal.

¹²⁶ *Hist.Aug.Aurelian.* 35.3. *Homo* 1904, 184; Halsberghe 1972, 138-48, and 1984, 2196-9.

¹²⁷ As he claimed that a vision of Sol had ensured his success, Aurelian began to show his devotion in Palmyra, where he restored the Temple of Sol damaged during his attack. Halsberghe 1972, 133, and 1984, 2195.

¹²⁸ *Chronogr. a.* 354, p. 148 M; *Hier. chron. a. Abr.* 2291; *Iulian. orat.* 4, 115 B, p. 201. The games' introduction coincided with the inauguration of Aurelian's Temple. Halsberghe (1972, 144, and 1984, 2198; cf. *Homo* 1904, 186) would link them with games celebrated on 19-22 October, to be distinguished from the games in November, mid-December, and those marking the *Dies Natalis Invicti* on 25 December (*Inscr. Ital.* XIII² 261; cf. above, *Caes. civ.* 10.113-34, and Calzini Gysens and Coarelli 1999, 331-3).

¹²⁹ *Hist.Aug.Aurelian.* 35.3; *CIL* VI 501, 846, 1397, 1418, 1673, 1739, 1740, 2151, and X 5061. For what little is known about the priesthood, see *Homo* 1904, 187-8, and Halsberghe 1972, 144-7.

reforms, celebrated on coin issues,¹³⁰ elevated the status of Sol and Aurelian as his earthly personification,¹³¹ the second ensured that Sol would be housed and celebrated accordingly, and the third determined that his cult would be durable.

Aurelian's Temple of Deus Sol Invictus, dedicated in 275 AD,¹³² can be located and described based on literary sources, Renaissance drawings and archaeological remains. The sources place the Temple in Regio VII and more specifically, in *Campo Agrippae*.¹³³ Moreover, the Regionary Catalogues locate it in the vicinity of the *Forum Suarium*, the site for pork distribution, and the *Cohortes Urbanae*, a supervisory body in charge of pork and wine.¹³⁴ This fits well with another reference to the Temple of Sol¹³⁵ and an inscription discovered near S. Silvestro in Capite,¹³⁶ which remark on cut-price wine stored in the Temple's porticoes.¹³⁷ Though not precisely located, this depot seems to have been sited near S. Silvestro.¹³⁸

In addition to noting the importance of its porticoes,¹³⁹ the sources remark on the Temple's splendor. Moreover, this *opus magnificentissimum*¹⁴⁰ may be linked with a series of Renaissance drawings that attest to its grandeur. R. Lanciani was the

¹³⁰ These coins (*RIC* V.1 301 no. 319-22) depict a bust of Sol with a radiating crown on the obverse and Aurelian with a scepter and patera sacrificing by an altar on the reverse. Homo 1904, 184-5; Sotgiu 1975, 1048.

¹³¹ Aurelian was the first emperor to take the title *Deus* during his lifetime, see Homo 1904, 191-2, Sotgiu 1975, 1043-4, and Halsberghe 1984, 2200 (for coins and undated inscriptions).

¹³² See #53.

¹³³ *Not. Reg. VII*, 111, 172 VZ 1; *Chronogr. a.* 354, p. 148 M.

¹³⁴ For these buildings, see Hülsen 1895a, 47-9, and Torelli 1992, 119-22. It was Aurelian's policy to distribute wine, oil, bread, and pork to the Roman people (*Hist. Aug. Aurelian.* 35.2 and 48.1). Richardson, jr. 1992, 363.

¹³⁵ *Hist. Aug. Aurelian.* 48.4.

¹³⁶ The inscription (*CIL* VI 1785 = 31931) notes that stocks of *vina fiscalia* were transported to the Temple from an area *ad Ciconias Nixas*. For this area, see Platner and Ashby 1929, 111, and Virlovvet 1995, 56-9; vs. Flambard (1987, 191-201; cf. Lega 1993, 268), who sees it as a combination of two distinct toponyms.

¹³⁷ Wine was also stored in the late Republican *porticus Minucia Frumentaria*. Virlovvet 1995, 55 and 146.

¹³⁸ Hülsen 1895a, 50; Coarelli 1982, 48.

¹³⁹ *Hist. Aug. Aurelian.* 35.

¹⁴⁰ *Hist. Aug. Aurelian.* 1.3, 25.6, and 39.2; Eutr. 9.15.1; Aur. Vict. *Caes.* 35.7; Zos. 1.61.

first to publish two drawings by A. Palladio, which have proven indispensable to the study of Aurelian's Temple. The plan shown on the first drawing¹⁴¹ illustrates two large courts joined by a small square court. The first large court is oblong with two semicircular apses and four openings at the juncture of the apses and the side walls. A single colonnade is attached to the interior of walls, while double columns mark the openings. The second large court is rectangular with three projecting niches on three sides of its perimeter wall. This wall encloses a round temple¹⁴² with a three-stepped krepis, sixteen columns, and two openings along the long axis of the complex.¹⁴³ The elevation illustrated on this drawing is two-storied with columns flanking niches on both stories together with a column of double height, which marks off an arched opening. The elevation on the second drawing¹⁴⁴ is strikingly similar, but adds alternating flat and triangular lintels above the upper order of columns. Palladio identified the first drawing with gardens near the via Flaminia and the second with a basilica of Domitian.

Accepting Palladio's interpretation of the remains, Lanciani proposed a link between the gardens and the *horti Largiani* or the *nymphaeum Iovis* located in Regio VII. He identified the ruins of a large building whose stairs followed the slope of the Quirinal with Aurelian's Temple.¹⁴⁵ C. Hülsen, by contrast, considered the structures on the Quirinal as part of Caracalla's Temple of Serapis, and connected Palladio's drawings with the Temple of Sol.¹⁴⁶ He interpreted Palladio's plan as two porticoes, the first apsidal and the second rectangular, leading to a large rectangular temple

¹⁴¹ *RIBA* X 17r.

¹⁴² As the round temple lacks measurements, scholars from Lanciani (1894) to Calzini Gysens and Coarelli (1999) have doubted the veracity of Palladio's reconstruction, see below.

¹⁴³ Diametrically opposed entrances also feature in the Skias at Athens (#6) and the macellum tholus at Aezani (see De Ruyt 1983, 23-4).

¹⁴⁴ *RIBA* XV 11v.

¹⁴⁵ Lanciani 1894, 300-5, and 1895, 94-101; vs. Calzini Gysens and Coarelli (1999, 331-3), who note that the building on the Quirinal is located in Regio VI.

¹⁴⁶ Hülsen 1894, 393-4, and 1895a, 39 and 51-4; cf. *CIL* VI 570.

absent from the plan.¹⁴⁷ This style of complex, he suggested, recalled the Temple of Jupiter at Baalbek.¹⁴⁸ Moreover, based on Palladio's topographical notes and the sources which help to site the Temple,¹⁴⁹ Hülsen located it near S. Silvestro in Capite. He assigned it a North-South orientation along the via Lata in the area bordered by the via del Gambero, the via dei Condotti, the via Borgognona, the via Bocca di Leone, and the Piazza S. Silvestro.¹⁵⁰

More recently, F. de Caprariis and M. Torelli have suggested an East-West orientation for the complex.¹⁵¹ Archaeological remains found near S. Silvestro seem to endorse this hypothesis. These include *opus quadratum* walls seen by Piranesi at the intersection of the via della Vite and the via del Moretto, which may constitute the North-East corner of the rectangular court, and peperino walls and columns discovered along the via della Vite,¹⁵² possibly its Northern perimeter.¹⁵³ In addition, most buildings in the area adopt an East-West orientation,¹⁵⁴ providing reason to support de Caprariis' and Torelli's conclusions.

Like Hülsen's ideas regarding the Temple's orientation, his views on the articulation of its complex have been called into question. F. Castagnoli employed drawings by P. Ligorio and Renaissance maps to determine the layout of the Temple

¹⁴⁷ Hülsen (1895a, 40; cf. Calzini Gysens and Coarelli 1999, 331-3) considered the round temple a figment of Palladio's imagination.

¹⁴⁸ Hülsen 1895a, 41-4. Richardson, jr. (1992, 364; cf. Lugli 1938, 281) speculatively identifies the Temple with a rectangular building found near the Campus Martius in 1794. As comparanda, the Temple of Sol alongside the Circus Maximus, described by Tacitus as *vetus* (Tac. *ann.* 15.74.1, cf. Ciancio Rossetto 1993, 276; vs. Tert. *spect.* 8, and Turcan 1958, 257-62), was probably rectangular as was Probus' depiction of a temple to Sol Invictus (*RIC* V.2 55 no. 354, 62 fol. nos. 414-7, and 74 nos. 536-8; Hill 1989, 18 fig. 16, but see below). Castagnoli (1978, 385-6) does not consider this image representative of Aurelian's Temple.

¹⁴⁹ See above, #53 and Ulrichs 1888, 98.

¹⁵⁰ Hülsen 1895a, 57 pl. 4.

¹⁵¹ de Caprariis 1991-1992, 179-80; Torelli 1992, 112-4.

¹⁵² Hülsen 1895a, 55-8; Torelli 1992, 117-8; Calzini Gysens and Coarelli 1999, 331-3. For the walls, see *CAR* II 162 no. 79.

¹⁵³ Torelli (1992, 116-8; cf. Hülsen 1895a, 40-1) locates the S limit between the via di S. Claudio and the via delle Convertite, near the end of the Piazza Colonna. If his reconstruction is correct, S. Silvestro in Capite lies over the remains of the small square court, which may have been gardens in the 14th c. (when the church was known as *inter duos hortos*, cf. Calzini Gysens and Coarelli 1999, 331-3).

¹⁵⁴ Torelli 1992, 112.

complex. These include a plan and an elevation of a complex identified by Ligorio as the “Septa Tributa” and three additional elevations. The first drawing¹⁵⁵ illustrates a rectangular court with a monumental entrance projecting from one wall and a series of three niches in each of its remaining walls. The niched walls are fronted by a portico. At the center of this court is a temple with a columnar porch, a square intermediate block, and a circular cella.¹⁵⁶

Castagnoli noted the columns excavated near the via della Vite as evidence for an internal portico, even if lacking on Palladio’s plan,¹⁵⁷ and the repetition of a round temple on both plans as proof that the Temple of Sol was round.¹⁵⁸ Although Ligorio’s drawing makes no allusions to Palladio’s square and apsidal courts, the striking visual correspondences between the rectangular court illustrated on Palladio’s drawing and the complex shown here, together with the similar dimensions ascribed to both structures,¹⁵⁹ makes Castagnoli’s connection compelling.

Three elevations with strong similarities to Palladio’s may be connected with this complex. The first¹⁶⁰ is two-storied with half-columns flanking niches and topped by triangular pediments on the lower level, together with an entrance arch marked off by columns.¹⁶¹ The second¹⁶² shows a niche or apse framed by two monumental entrances, which is decorated with an ornamental colonnade surmounted by alternating triangular and segmented lintels. While Ligorio cautiously refers to

¹⁵⁵ *Cod. Turin. a.* II 3 J. 16.

¹⁵⁶ In addition to the Hadrianic Pantheon (#50), the plan closely recalls the Temple of Artemis at Stymphalos (#61).

¹⁵⁷ See *Hist. Aug. Aurelian.* 35.3 and 48, and above (wine stored in the Temple’s porticoes).

¹⁵⁸ Castagnoli 1978, 375-6.

¹⁵⁹ Castagnoli 1978, 373, and see #53.

¹⁶⁰ *Coll. Albani-Dal Pozzo* 10805 at Windsor.

¹⁶¹ The sketchy upper level seems to have included windows.

¹⁶² *Coll. Albani-Dal Pozzo* 10805 at Windsor.

these elevations as illustrating a “basilica” or “temple,”¹⁶³ he assigns the third,¹⁶⁴ wherein columns flank niches with comparable lintels, to the Temple of Sol.¹⁶⁵

Also relevant to the identification of the “Septa Tributa” and Aurelian’s Temple of Sol, as well as to a greater understanding of its layout, are a series of Renaissance maps, which show the area around S. Silvestro. These include two maps of Ligorio, one of which, ca. 1553, illustrates two unidentified Saepta, while the other, ca. 1561, depicts the “Septa Tributa,” the “Septa Curiata,”¹⁶⁶ and the “Septa Centuriata.”¹⁶⁷ They are echoed by maps of Panvinio, Du Pérac, and Cartaro, wherein all three Saeptas have an East-West orientation. While the “Septa Tributa” occasionally includes a rectangular temple,¹⁶⁸ on Cartaro’s plan, a round temple appears inside the “Septa Curiata.” Moreover, most maps locate the “Basilica Domitiana”¹⁶⁹ and an “Arcus Novus” or “Claudij” along the façade of the Saepta Curiata.¹⁷⁰ Torelli connects the “Arcus” with the Arco di Portogallo, which, he suggests, may have functioned as a monumental entrance for the Temple complex.¹⁷¹

Like the Hadrianic arch,¹⁷² the rectangular court may represent a rebuilding of an earlier structure,¹⁷³ possibly the Porticus Vipsania, erected by Agrippa and his sister Vipsania Polla.¹⁷⁴ To Aurelian’s reign may be attributed fragments of

¹⁶³ Platner (cited in Castagnoli 1978, 377-8) identified these with the hemicycles of Trajan’s Markets.

¹⁶⁴ *BNP Cod. Ital.* 1129, c. 315.

¹⁶⁵ Moneti 1993a, 160 fig. 9 and 62.

¹⁶⁶ See Castagnoli 1978, 376 fig. 5 (Ligorio, *Cod. Turin*).

¹⁶⁷ Calzini Gysens and Coarelli (1999, 331-3, and see above) link the “Septa Curiata” and the “Septa Centuriata” with the Temple of Sol and the “Saepta Tributa” with the *Forum Suarium*.

¹⁶⁸ This features on the maps of Ligorio (ca. 1561), Panvinio (ca. 1565), and Du Pérac (ca. 1574).

¹⁶⁹ See Castagnoli 1978, 380-2, and Calzini Gysens and Coarelli 1999, 331-3, for the misidentification of the “Basilica Domitiana.”

¹⁷⁰ The main exception is Panvinio’s map (ca. 1565).

¹⁷¹ Torelli 1992, 118-9. However, as the arch was free-standing, this suggestion is difficult to support.

¹⁷² Coarelli 1995k, 294.

¹⁷³ As depicted on a 17th century drawing by A. Giovannoli, this structure consists of stone and brick work, whose Diocletianic brick stamps suggest that it was rebuilt under his or Constantine’s reign.

Moneti 1990, 14-6 figs. 9-10; de Caprariis 1991-1992, 179-80.

¹⁷⁴ de Caprariis 1991-1992, 184-91; vs. Calzini Gysens and Coarelli 1999, 331-3. Moreover, Coarelli (1982, 48, and 1999c, 152) locates the porticus to the N of the Temple.

architectural sculpture discovered near S. Silvestro.¹⁷⁵ They include part of the Temple's or portico's architrave, frieze and cornice, whose ornament is evocative of the Roman East.¹⁷⁶ Similarly, the two tiers of statue niches illustrated on Palladio's and Ligorio's elevations recall prominent provincial buildings like the Severan Basilica at Leptis Magna and the Propylon and the Temple of Tyche (#7) at Baalbek.¹⁷⁷

In addition to these fragments, literary sources give some idea of the Temple's decoration. They record that eight of its porphyry columns were re-used in S. Sofia at Constantinople.¹⁷⁸ Moreover, they claim that the Temple contained vast quantities of gold and silver jewelry, precious gems, jewel-encrusted clothes, paintings, and statues.¹⁷⁹ Although the decoration of his Temple of Sol may have recalled the excesses of the Syrian cult, the plan of Aurelian's complex, by combining a round temple with a colonnaded portico,¹⁸⁰ has strong Roman precedents. As early as the late Republic, both peripteroi and drums appeared in rectangular porticoes, prominent examples being the Temples of Fortuna Huiusce Diei (#38) and of Hercules and the Muses (#42).

Of these two forms, Ligorio's drum preceded by an intermediate block and pronaos seems a more likely choice for Aurelian's Temple.¹⁸¹ Its use of multi-colored stones, notably porphyry columns, recalls Hadrian's Pantheon (#50), which exerted

¹⁷⁵ For the findspots, see *CAR* II 160-2 nos. 69-79, 169-71 nos. 87-94, and 175-7 nos. 114-29.

¹⁷⁶ Lanciani 1894, 306-7, and 1895, 95-6; Gullini 1960, 34-6 pls. 19-21; and see 'Decorative details' below.

¹⁷⁷ Gullini 1960, 54; Richardson, jr. 1992, 364; and see #7 above.

¹⁷⁸ *Ant. Constant.* 4.1.66. Materials from the Temple were also employed in S. Giovanni in Laterano. Calzini Gysens and Coarelli 1999, 331-3.

¹⁷⁹ See #53. In addition to statues of Jupiter and Aurelian, the Temple contained images of Bel and Helios (Zos. 1.61) in order to appeal to initiates of other sun cults. Homo 1904, 190; and Halsberghe 1972, 143 and 151.

¹⁸⁰ Similarly, the round Shrine of Apollo Delphinios at Miletos (#19) is set within a porticoed court. Kawerau and Rehm 1914, 147-8.

¹⁸¹ Moneti's (1992, 12-3 and fig. 1; cf. *Cod. Magl.* 2.1.429) unlikely conflation of the two plans results in a rotunda with an awkwardly large drum and long stairwell.

considerable influence on the design of second and third century buildings like the Temple of Zeus Asklepios Soter at Pergamon (#27) and the ‘Pantheon’ at Ostia (#23).¹⁸² Moreover, as a round temple to Sol, it has parallels in the Temple of Helios-Sebazios at Thrace,¹⁸³ the Skias at Athens (#6), which was linked with the Phosphoroi, Helios and Selene,¹⁸⁴ and the Marneion or temple to the sky god Marnas at Gaza.¹⁸⁵

Round temples rebuilt during the third century AD:

The Temple of Fortuna, Rome (#37)

Though founded in the Claudian period,¹⁸⁶ the remains of the Temple of Fortuna on the Pincio (#37) date to the mid-third century AD.¹⁸⁷ These consist of a segment of the cella wall, the inner face of which is marked by rectangular niches and a revetment of black marble veined with white. The flooring, similarly, consisted of white marble plates. Like the Hadrianic Pantheon (#50),¹⁸⁸ the Temple may have been topped by a dome with an oculus and preceded by a rectangular pronaos,¹⁸⁹ though the pronaos, if it existed, has not yet been excavated.

The fourth century AD:

Maxentius and Constantine: (306-337 AD)

¹⁸² In this case, Probus’ coins (see above) may illustrate the Temple’s porch.

¹⁸³ Macr. *Sat.* 1.18.7 and 11. Robert 1939, 127-8.

¹⁸⁴ Wachsmuth 1890, 319 n. 3; Robert 1939, 127-30.

¹⁸⁵ This Temple, built in ca. 130 AD, was described by the 4th c. AD author Mark the Deacon as “round, being supported by two colonnades, one within the other... in the center was a dome puffed up and rising on high,” see Smith 1950, 14.

¹⁸⁶ See Chap. V #37.

¹⁸⁷ The Temple’s rebuilding may explain its description as *novum* in the Regionary Catalogues, see #37.

¹⁸⁸ Broise and Jolivet 1998, 493. This connection may reflect its founder’s intention to link the Temple with prominent Augustan monuments, and by extension, the Imperial family, see Chap. V #37.

¹⁸⁹ This is based on Renaissance plans and maps which depict the Temple, see #37.

Like Aurelian, Maxentius focused his building activity on Rome, where the devastating fire of 283 AD had destroyed much of the Velia.¹⁹⁰ He began by rebuilding Hadrian's Temple of Venus and Roma and added his own Basilica Nova and the round 'Temple of Romulus' (#52).¹⁹¹ His work also included baths on the Quirinal and a complex on the via Appia with a villa, a circus and a mausoleum.¹⁹²

To Constantine's reign can be attributed an arch commemorating his victory over Maxentius and several round buildings at Rome.¹⁹³ Like Maxentius' mausoleum and the contemporary Tor de' Schiavi, which reflect the Pantheon (#50),¹⁹⁴ Constantine employed a drum in the Tor Pignattara, the tomb of his mother Helena.¹⁹⁵ While this mausoleum lacked a colonnaded porch, his second, built for his daughter Constantina, encircled its drum with an barrel-vaulted ambulatory. An even more abstract version of the Pantheon's drum may be found in the 'Temple of Minerva Medica,'¹⁹⁶ a decagonal garden pavilion, whose brick-ribbed cupola raised on piers has little in common with the Hadrianic dome.¹⁹⁷

The 'Temple of Romulus,' Rome (#52)

In 309-310 AD, Maxentius issued the first of two coin series to depict a round building surmounted by a cupola. These series, minted at Rome and Ostia, honored divinized members of his family, the *gens Valeria*.¹⁹⁸ It is likely that Maxentius intended these series, by which he associated himself with successful members of his

¹⁹⁰ *Chron. a.* 354, p. 148 M; Frazer 1964, 66-7.

¹⁹¹ These buildings were completed or re-dedicated by Constantine. Ward-Perkins 1989, 426-9; Claridge 1998, 24.

¹⁹² Sear 1982, 270-1; Ward-Perkins 1989, 421; and see below.

¹⁹³ Sear 1982, 272.

¹⁹⁴ Instead of an oculus, the Tor de' Schiavi incorporates round windows into the base of its dome. MacDonald 1976, 101, and below.

¹⁹⁵ Ward-Perkins 1989, 429.

¹⁹⁶ Ward-Perkins 1989, 104; Carlucci 1996, 255-6.

¹⁹⁷ Rasch 1985, 137-8 and fig. 28, and see 'Roofing techniques' below.

¹⁹⁸ Frazer 1966, 389-90; Arnaldi 1977, 271-2 and 274; Talamo 1981b, 23-6; Hill 1989, 13-5.

gens, to legitimize and strengthen his rule.¹⁹⁹ The first series, commemorating his son M. Valerius Romulus, who died in 309 AD,²⁰⁰ shows the youth on the obverse and the rotunda on the reverse, accompanied by the legend AETERNAE MEMORIAE.²⁰¹

The rotunda consists of a two-step krepis supporting a cylinder of *opus quadratum* masonry. The cylinder is elaborated with a double door, standing ajar, and an entablature decorated with vegetal imagery. A hemispherical dome crowns the monument and is in turn topped by an eagle.

In addition to Romulus, the second series coins, minted from 311 AD, honored Maxentius' uncle and Constantine's father, Constantius (d. 306 AD),²⁰² Maxentius' father, Maximian (d. 310), and his father-in-law, Maximianus (d. 311).²⁰³ As in the first series, their portraits appear on the obverse, while a round building is depicted with considerable variation on the reverse. The second series coins show a rotunda consisting of a krepis, a cylinder, a partly-open door, an architrave, and a dome surmounted by an eagle, but, unlike the first series, columns, grillwork and statuary obscure the building's masonry, while disks or dentils ornament its entablature.

E. Talamo divided the second series emissions into three basic types:²⁰⁴ the first depicts a tetrastyle rotunda with a wide central intercolumnation to accommodate the door, topped by a triangular pediment, and side intercolumnations filled with grating; the second shows four columns, similarly spaced, incorporated into arches

¹⁹⁹ King 1959, 73; Frazer 1966, 390; Arnaldi 1977, 279-80; Talamo 1981b, 26. For Maxentius' ill-fated reign, see Frazer 1966, 385, and Fiore 1981, 64-6.

²⁰⁰ *PLRE* I Romulus 6.

²⁰¹ See #52, King 1959, 63-4 and 71-3 (mint marks), and Arnaldi 1977, 271-80 (*aeternitas Augusti* on coins).

²⁰² Maxentius may have included Constantius as an attempt to placate Constantine. Frazer 1966, 390; vs. King 1959, 73.

²⁰³ Constantius: *PLRE* I Constantius 12; Maximian: *PLRE* I Maximianus 8; Maximianus: *PLRE* I Maximianus 9. See King 1959, 63-4 and 71-3 (mint marks). The first emissions of the second series may have reproduced the obverse and reverse of the first series. On the later emissions, Maxentius used the obverse legends to establish his connection to each of the *divi*. Talamo 1981b, 23.

²⁰⁴ Talamo 1981b, 23-6 figs. 13-34.

beneath the drum's architrave; and the third illustrates a hexastyle rotunda with two groups of three columns flanking the door.²⁰⁵

Some coins of Talamo's second and third categories include an important variation, namely two statues in the side intercolumnations. These statues, which appear on pedestals, are of young, naked males leaning on scepters or pilasters.²⁰⁶ In view of the potent funerary symbolism of the partly-open door and the eagle,²⁰⁷ which imply the apotheosis of the *divus* depicted on the obverse,²⁰⁸ scholars have interpreted the statues as symbols of death and divinization.²⁰⁹

If not purely symbolic,²¹⁰ the rotunda shown on these coins may illustrate a memorial or funerary monument constructed during Maxentius' reign. Two rotundas, the mausoleum in his complex on the via Appia and the 'Temple of Romulus' (#52) facing the via Sacra, are the most likely candidates. The mausoleum, consisting of an ashlar-faced cylinder and a columnar porch, stands inside a large rectangular precinct.²¹¹ The precinct forms part of a villa that is dated to the Maxentian period by contemporary inscriptions and sources.²¹²

One of the inscriptions suggests that Romulus was the first to be buried in the mausoleum.²¹³ As his resting place and part of a dynastic complex in honor of Maxentius and his *gens*, it would be logical, as D. Brown, A. Frazer and F. Castagnoli suggest, that the mausoleum on the via Appia be depicted on Maxentius' coins.²¹⁴

²⁰⁵ See #52.

²⁰⁶ See #52. Frazer (1966, 390-1, and see below) incorrectly identifies one figure as male and the other as female.

²⁰⁷ Luschi 1984, 49-50.

²⁰⁸ Frazer 1966, 389; Talamo 1981b, 25; Rasch 1984, 77-8.

²⁰⁹ Luschi 1984, and above.

²¹⁰ Frazer 1966, 389 and 391; Küthmann and Overbeck 1973a, 26; Rasch 1984, 76-8.

²¹¹ Frazer 1966, 385 and 387. For a complete analysis of the mausoleum, see Rasch 1984.

²¹² See 'Maxentius and Constantine' above. Inscriptions and the *Chronographus* of 354 AD link the mausoleum and circus to Maxentius. The villa is earlier, but was renovated when the rest of the complex was built. Frazer 1966, 385.

²¹³ Frazer 1966, 388-9.

²¹⁴ Brown 1941, 304; Frazer 1966, 391, vs. 1964, 52-3 and 77; Castagnoli 1983b, 275-86.

Talamo, P. Hill, G. Pisani Sartorio, and R. Calza agree with this attribution for the first series coins, but prefer to identify the columnar building of the second series with the 'Temple of Romulus' on the via Sacra.²¹⁵

However, difficulties arise in assigning even the first series to the mausoleum. Neither series shows the building's projecting porch, while, more fundamentally, there is no sure parallel for a private mausoleum depicted on a coin.²¹⁶ Architecture shown on coins has a public character and, as Maxentius is not known to have illustrated monuments outside of Rome, a rotunda to which his coins may be attributed must be sought within the city limits.

The 'Temple of Romulus,' sited between the Temple of Antoninus Pius and Faustina and the Basilica of Maxentius-Constantine, with its round form and prominent public location, is an ideal candidate for depiction on both series.²¹⁷ The building consists of a domed rotunda whose thick walls are punctuated by an alternating pattern of four doors and four windows.²¹⁸ The doors provide access to the via Sacra and a series of three halls: two modest side halls that flank the rotunda and like it, open onto the via Sacra, and a much larger hall that stretches behind the rotunda and links it to the Templum Pacis.

The via Sacra façade of the rotunda and side halls is both lavish and monumental. Each of the side halls, which extend beyond the rotunda, is fronted by two cippolino columns raised on plinths. Concave walls, decorated with two tiers of statue niches, visually link the side halls to the rotunda.²¹⁹ The main entrance,

²¹⁵ Pisani Sartorio and Calza 1976, 152 n. 127; Talamo 1981b, 23 and 25; Hill 1989, 13-5.

²¹⁶ Should it represent Constantius' mausoleum at Trier, a coin noted by Küthmann and Overbeck (1973a, 27 n. 43) would be comparable.

²¹⁷ Discrepancies in both series may indicate phases in construction or planned and completed forms of a single building. Lugli 1947, 189; Coarelli 1986, 14. It is also possible that the model for Maxentius' coins no longer exists. Lugli 1947, 186; Richardson, jr. 1992, 333.

²¹⁸ Fiore 1981, 67-8 and 72.

²¹⁹ Fiore 1981, 81. Based on Renaissance drawings of the monument, Frazer (1964, 107-9) only reconstructs the lower tier.

consisting of a marble portal and two-paneled bronze doors,²²⁰ is accentuated by two porphyry columns set against the concave walls and beneath an ornamental architrave.²²¹ The dome of the rotunda rises above this façade,²²² while the vaulted roofing of the side halls may have been obscured by the high concave walls.²²³ These walls also effectively mask the joins between the rotunda and side halls and, by abutting both, create two triangular spaces that act as light wells.²²⁴

In the sixteenth century, an inscribed epistyle block was found in the vicinity of the building, which recorded the name of Constantine.²²⁵ Though the inscription is fragmentary, it is possible to deduce that Constantine either re-dedicated the building or had it dedicated in his honor by the Senate.²²⁶ Constantinian brick stamps support this date, while evidence for a rectilinear wall predating the concave wall of the entrance façade confirms that the monument had two consecutive phases.²²⁷ In view of Maxentius' building activity in the area, it is possible that he initiated the construction of the 'Temple of Romulus.'²²⁸ Constantine may have completed it or restructured its façade to tailor his rival's building to his own ideological purposes.²²⁹

The rectangular hall to which the rotunda is connected is much earlier. This Flavian building formed part of Vespasian's *Templum Pacis* and may have acted as

²²⁰ For the bronze doors, see Cima 1981 and Righetti 1981, 121-8.

²²¹ On the coins, the architrave is shown resting directly on the column capitals. Fiore 1981, 81. See Frazer (1964, 122-4) for possible reconstructions.

²²² For the drainage system necessitated by the oculus, see Frazer 1964, 85-6.

²²³ Frazer 1964, 89-90; Fiore 1981, 67 and 74. Some coins of the second series (Talamo's second category), which show arcuation, may support this reconstruction.

²²⁴ Fiore 1981, 67 and 80.

²²⁵ The inscription (*CIL VI 1147*), shown on a drawing by Ligorio (*Cod. Vat. Lat.* 3439 f. 14), is confirmed by Panvinio (*Cod. Vat. Lat.* 6780 f. 45). Frazer 1964, 74 and 76-7.

²²⁶ Jordan and Hülsen 1907, 10; Dörries 1954, 225; Flaccommio 1981b, 9-10; Grünwald 1990, 219 no. 249; Papi 1999a, 210; vs. Frazer 1964, 76-7 and 110-2.

²²⁷ Frazer 1964, 97-8; Fiore 1981, 67 and 80-1.

²²⁸ Alternatively, like the Temple of Venus and Roma (see 'Maxentius and Constantine' above), the 'Temple of Romulus' may mark the reconstruction of a building destroyed in 283. See Whitehead (1927, 14), for remains of a mid-1st c. AD pavement below the rotunda's floor.

²²⁹ Lugli 1947, 189, and below.

an archive or library.²³⁰ Contemporary with the rotunda, an apsidal wall with a comparable diameter was added to the interior of the hall. This apse opening towards the rotunda, like the connecting door,²³¹ suggests that the building of the rotunda and side halls and the restructuring of the Flavian hall was intended to result in a single, unified structure. The architectural evidence implies that the new building was designed as a monumental entrance for a pre-existing building, possibly put to a new use, which required both a shift in its orientation²³² and an extension to reach the via Sacra. The relationship between the two parts was retained when the rectangular hall was converted into the nave of Ss. Cosma e Damiano with the ‘Temple of Romulus’ serving as its vestibule.²³³

Architectural parallels can be found in a variety of buildings both at Rome and in the provinces.²³⁴ Thermae, like the Baths of Caracalla, incorporate round vestibules and caldaria into rectilinear complexes,²³⁵ while some Imperial residences, like the Palace at Lausus, and funerary monuments, like the mausoleum of Helena, combine rotundas with off-axis halls.²³⁶ For the tri-partite facade of the ‘Temple of Romulus’, comparanda can be found in triumphal arches, which employ columns on pedestals to create a monumental impression,²³⁷ and more specifically in two mausolea on the via Appia. Each mausoleum, illustrated in Renaissance drawings, consists of a rotunda with two projecting, rectilinear side halls visually linked by an

²³⁰ Flavian in origin, this building was rebuilt by the Severans (who affixed the Marble Plan to the N wall) and again by Diocletian after the fire of 283 AD. De Ruggiero 1913, 212-3; Lugli 1946, 226. Frazer (1964, 73, 79 and 116-9) uses its presence to support his identification of the ‘Temple’ as the office of the *praefectus urbi*.

²³¹ Fiore 1981, 72.

²³² Fiore 1981, 67. Maxentius’ use of a rotunda, rather than a rectangular building, makes this shift less apparent.

²³³ *Lib. pontif. LVI vita Felic. IV* (526-530 AD).

²³⁴ Independent of the side and rectangular halls, the model for the domed rotunda was undoubtedly the Hadrianic Pantheon (#50). MacDonald 1976, 100; Flaccomio 1981b, 11-2; Coarelli 1986, 14-5.

²³⁵ Nielsen 1990, Vol. 2: C.1-4, C.8, C.11-3, figs. 49, 51-3, 56-60, and 62.

²³⁶ Fiore 1981, 84 figs. 114 and 116.

²³⁷ Frazer 1964, 129; Fiore 1981, 81.

arcuated façade. As in the ‘Temple of Romulus,’ the façades mask each building’s drum, while accentuating their domes.²³⁸

Due to the building’s striking architectural form and prominent location, many scholars have tried to determine its function. Though its architecture suggests that the ‘Temple of Romulus’ served as a fourth century vestibule for the Templum Pacis,²³⁹ Maxentius’ coins raise doubts about the accuracy of this attribution. The question of its identity is further complicated by the fact that Maxentius probably intended the building to fulfill one function, while Constantine re-dedicated it to serve another. The name commonly ascribed to the building, the ‘Temple of Romulus,’ only appears in literary sources from the ninth century AD.²⁴⁰ Despite this gap, many scholars feel that Maxentius’ first and second series coins dedicated to Romulus provide sufficient proof that the rotunda they illustrate is the ‘Temple of Romulus’ built to honor Maxentius’ divinized son.²⁴¹

The two male figures represented on some second series coins have been a springing point for additional theories. Both L. Luschi and F. Coarelli have examined these figures with different results.²⁴² Luschi sees the two youths, distinguished by their heroic nudity and languid pose, as funerary symbols akin to *erotes* on Roman sarcophagi.²⁴³ Underlining this motif, together with the partly-open door and eagle, Luschi suggests that the rotunda acted as a dynastic temple to the *divi* of Maxentius’ family.²⁴⁴ Prominent since the Republic, when Valerius Publicola served as Rome’s

²³⁸ See #52, and Lugli 1953, 1220 fig. 3 and 1221 fig. 4. Frazer (1964, 126-8) also compares the rotunda to nymphaea and suggests moreover, that the ‘Temple’ replaced a nymphaeum on the via Sacra.

²³⁹ See #52.

²⁴⁰ See #52.

²⁴¹ See #52. It is not clear how the other *divi* of the second series were honored, if not simply by association with Romulus’ temple.

²⁴² Frazer (1966, 390-1) interprets the figures as Hercules and Victoria.

²⁴³ Luschi 1984, 45-9; cf. Castagnoli 1988, 104.

²⁴⁴ While Frazer (1964, 77) counters this argument by pointing out the lack of internal niches, the external niches may have been sufficient to display statues of the *gens*.

first consul, the *gens Valeria* gained special privileges, including the license to bury within the city walls. Maxentius, who used family connections to legitimize his power, may have revived this tradition with a dynastic monument near the site of his ancestor's historic *domus* and tomb.²⁴⁵ Since a monument to the glory of Maxentius' family would have been an insult to Constantine, such an attribution might explain why Constantine added a new façade, inscription and function to the building.²⁴⁶

Instead of searching for parallel depictions, Coarelli looks for pairs of gods which might reasonably be represented on Maxentius' coins. Discarding the Lares and Dioscuri as less likely candidates, he interprets the figures as statues of the Penates.²⁴⁷ While ancient sources site a Temple of the Penates on the Velia,²⁴⁸ Coarelli suggests that Maxentius, after demolishing much of the area to make way for his Basilica, re-erected the temple and other significant buildings nearby. In this context, he proposes that the side halls of the 'Temple of Romulus' functioned as the new Temple of the Penates.²⁴⁹

Regio IV includes a sequence of buildings on the south side of the via Sacra.²⁵⁰ While most are firmly located, the Temple of Jupiter Stator, sited between the Basilica of Maxentius-Constantine and the Temple of Antoninus Pius and

²⁴⁵ Cic. *leg.* 58; Plut. *quaest. Rom.* 79; Vir. *ill.* 15.6. Lugli 1947, 191; Luschi 1984, 51; Coarelli 1986, 19-21. For its location near the Temple of the Penates, see below and Palombi 1997, 436-7 n. 5-6.

²⁴⁶ Luschi 1984, 51.

²⁴⁷ Coarelli 1974, 94, and 1986, 16 and 19; vs. Luschi 1984, 44. For other coins which show the Penates, see Palombi 1997, 448 n. 51, while for the cult of the Penates, see Chap. III #17.

²⁴⁸ Varro *frag. Non.* p. 531; Sol. 1.22; Don. *Ter.* 256; Dion. Hal. 1.68.1; Liv. 45.16.5. Palombi 1997, 435-7. Whitehead (1913, 143-65) and Lugli (1946, 225-6) identified the Flavian hall as the original Temple of the Penates, while Palombi (1997, 438-9) links it to a temple illustrated on fragments 594 a-b and 673 of the Severan Marble Plan (cf. *Cod. Vat. Lat.* 3439).

²⁴⁹ Coarelli 1983b, 26-33, 1986, 18, and 1995k, 106-7. While Hill (1989, 13) points out that the coins show side intercolumnations, not side halls, in support of Coarelli's theory, the sources site both buildings to the N of the *summa Sacra via*, cf. Ps. Cic. *exil.* 24. Castagnoli 1988, 104.

²⁵⁰ See #52. Coarelli (1983b, 26-31 and 33, 1986, 4-10, and 1995k, 106) convincingly limits this region to include the 'Temple of Romulus.'

Faustina, has escaped attribution. Of the buildings alongside the via Sacra, Coarelli interprets the rotunda as the only possible candidate for a temple to Jupiter.²⁵¹

According to tradition, the Temple of Jupiter Stator was erected by Romulus,²⁵² while a few sources attest to its existence through the Republican period²⁵³ and again in the fourth century AD. Whether the temple remained active through the early and high Imperial periods is uncertain, though, if it fell into disrepair, it is not impossible that its site and connections to the origins of the city remained significant.

By naming his son after Rome's founder and by associating himself with divine family members, Maxentius demonstrated his awareness of the importance of history. Erecting a monument in honor of his family on the site of Jupiter's temple may have been a means of ensuring his place within the *aeternitas* of Rome.²⁵⁴ Constantine may have successfully negated Maxentius' claim to rule by re-dedicating the site and the 'Temple of Romulus' to the ancient cults of Jupiter Stator and the Penates.²⁵⁵

Based on the evidence available, it is likely that the rotunda depicted on Maxentius' coins is equivalent to the building on the via Sacra. Moreover, the coins' symbolism suggests that the 'Temple of Romulus' served a commemorative function. Luschi's hypothesis of a temple to the *gens Valeria* is the most direct means Maxentius could have chosen to honor his deceased relatives. Whether set in relation to his ancestor's *domus* and mausoleum or built on the remains of Romulus' temple to Jupiter, such a monument accords best with Maxentius' desire to tie his rule to divine

²⁵¹ Coarelli 1983b, 29-31.

²⁵² Ov. *fast.* 6.794. Coarelli 1983b, 26.

²⁵³ Cic. *Catil.* 1.9; Cic. *Phil.* 2.64; *CIL* VI 435. Coarelli 1983b, 31-3.

²⁵⁴ King 1959, 73; Arnaldi 1977, 276-9; Talamo 1981b, 26; Luschi 1984, 51; Coarelli 1986, 21-2, and 1995k, 106-7.

²⁵⁵ Coarelli 1986, 18. However, this may be incompatible with Constantine's Christian agenda, see Frazer 1964, 115.

members of his *gens*.²⁵⁶ As a commemorative monument, it is not surprising that the building was not recognized by its proper name in fourth century catalogues.

Constantine would have been quick to transform the structure, possibly into the Temple of Jupiter Stator²⁵⁷ or into some other monument that might celebrate his own ideology. For its scale and complexity, the ‘Temple of Romulus’ makes a significant contribution to the via Sacra at a point where Maxentius’ influence, even with the interventions of Constantine, is most felt: in the shadow of the Temple of Venus and Roma and the Basilica of Maxentius-Constantine.

III ANALYSIS

FOUNDATION AND LOCATION

Septimius Severus undertook a program of rebuilding in the Forum, which included additions to the Mundus (#49) and the reconstruction of the Temple of Vesta (#57). Coins attest to the involvement of his wife, Julia Domna, with the Temple of Vesta, while a dedicatory inscription shows that Septimius Severus and Caracalla repaired Hadrian’s Pantheon (#50). The important position held by each of these monuments reveals why the Severans took pains to restore them, while, as part of the Imperial domain,²⁵⁸ the reconstruction of the Temple of Fortuna on the Pincio (#37) may mark another high ranking project.

Though ostensibly a rebuilding, the Abaton at Pergamon (#26) completes the Sanctuary of Asklepios as redesigned under Hadrian. A prominent local figure, like

²⁵⁶ It is unclear why the ‘Temple of Romulus’ was built to complement the Flavian hall, if not to serve as a vestibule for the Templum Pacis. Possibly, its function necessitated more space than the rotunda and side halls, built on constricted piece of land, could afford.

²⁵⁷ It is also possible that Maxentius chose to honor the *divi* depicted on his coins by rebuilding Romulus’ Temple of Jupiter Stator. If so, Constantine may simply have rededicated it.

²⁵⁸ Following Valerius Asiaticus’ death in 47 BC (Tac. *ann.* 11.1), the Horti Lucullani became Imperial property. Broise and Jolivet 1987a, 750.

the consul who built the Temple of Zeus Asklepios Soter (#27), may have promoted its construction, while the Fratres Arvales, as her priesthood, probably re-erected the Temple of Dea Dia (#35).²⁵⁹ Coins attribute the Temple of Melampous at Aigosthena (#1) to Geta and the Temple of Tyche at Baalbek (#7) to Philip the Arab, and sources assign Aurelian the Temple of Sol (#53). As the god who oversaw his victory at Palmyra, it is not surprising that a temple to Sol was Aurelian's most lavish building project.

Inspired by the Pantheon at Rome,²⁶⁰ Alexander Severus may have founded a temple to the Imperial cult at Ostia (#23). Similarly, prior to its re-dedication under Constantine, Maxentius' 'Temple of Romulus' (#52) probably commemorated the *gens Valeria*.

While the settings of the Temple of Vesta, the Pantheon, and the Temple of Fortuna on the Pincio remained constant, the Mundus' precinct, further defined by a rise in the surrounding pavement level, was enhanced by steps. Like these round temples, new temple foundations occupied prominent positions along major routes and in sanctuaries. Comparable to the Hadrianic Pantheon, the 'Pantheon' at Ostia was preceded by a rectangular forecourt that aligned it with neighboring buildings and the Decumanus Maximus. Similarly, the Temple of Tyche may have faced the Decumanus of Baalbek, while the 'Temple of Romulus' opened onto the via Sacra. The 'Temple's road frontage was a primary consideration for its architect, who employed the rotunda to re-orient, extend and embellish the Flavian hall.

Aurelian's Temple of Sol may also have been accessed by a monumental entrance that formed part of its precinct.²⁶¹ It is likely that the Temple occupied the

²⁵⁹ Similarly, a high priest founded the Temple of Palaimon-Melikertes at Isthmia (#15).

²⁶⁰ See Chap. VI 'Foundation and location.'

²⁶¹ If not the Arco di Portogallo (see above), it is likely that some type of monumental entrance fronted the Temple's court.

center of the court, which, if pre-existing, was completely rebuilt to accommodate the cult.²⁶² While the Temple of Melampous may have formed the centerpiece of his Sanctuary at Aigosthena,²⁶³ the Abaton at Pergamon stood at the periphery of the Sanctuary of Zeus Asklepios Soter. Fully visible from outside the precinct, the Abaton was obscured from the court by a cistern and portico. Like its atypical entrances, namely a side door from the South Hall and the cryptoporticus, the Abaton's peripheral location must have enhanced its internal impact.

More prominent was the Temple of Dea Dia, situated on a terrace at the sanctuary's summit. In addition to its location, the Temple's round form set it apart from other buildings, which played subsidiary roles in her cult.²⁶⁴ Although elements of its decoration closely recall the nearby Sanctuary of Jupiter and Temple of Bacchus at Baalbek,²⁶⁵ the Temple of Tyche is also distinguished by its round form.²⁶⁶

The Temple of Sol forms a marked contrast to its rectangular precinct, though its court aligns it with surrounding buildings. The 'Temple of Romulus' makes concessions to the via Sacra and neighboring buildings by employing rectangular side halls and screen walls to obscure its round form.²⁶⁷ The 'Temple,' appreciated from inside its rotunda, has a parallel in the 'Pantheon' at Ostia. Their interior focus, known from Hadrian's Pantheon, is picked up by the Abaton at Pergamon, whose drum functions as a shell for two distinct levels.²⁶⁸

²⁶² Le Glay (1987, 554) attributes the Temple's siting in the Campus Martius to Aurelian's desire to link himself with Augustus, the *placator orbis*.

²⁶³ The Melampodeion, or festival hall, is the only other building known from the sanctuary.

²⁶⁴ The sanctuary's north-south axis helps to tie its disparate buildings together.

²⁶⁵ Not only are the other temples rectangular, but they include an *adyton* or 'covered niche,' a distinctly local feature absent from the Temple of Tyche. Gros 1996a, 192.

²⁶⁶ Even if the Temple of Tyche were contained within an enclosure, as Ward-Perkins (1989, 230) suggests, it is unclear how well this precinct would relate it to its neighbors.

²⁶⁷ Whereas most buildings on the via Sacra were rectangular, the Temple of Vesta (#57), the Tholus of Cybele (#34) and the Shrine of Bacchus (#32) may have been visible from the 'Temple.'

²⁶⁸ Its domed drum is interrupted by protruding apses, which, hidden from inside the sanctuary, add to the dramatic effects achieved by the upper level.

Of the third and early fourth century round temples, the ‘Temple of Romulus’ employs the round form to the greatest effect since the Hadrianic Pantheon. Whereas the Pantheon fronted a drum with a rectangular intermediate block and porch, the ‘Temple’ employs a rotunda to mediate between a pre-existing rectangular hall, rectilinear side halls, and the via Sacra. For the first time in Roman religious architecture, the ‘Temple’ takes inspiration from bath buildings through its use of a rotunda to bind elements in an otherwise rectilinear plan.

BUILDING MATERIALS AND TECHNIQUES

Masonry techniques

Third and early fourth century round temples employed many of the same materials and techniques used in earlier periods,²⁶⁹ while adding some important variations. Ashlar masonry, popular since the late Republic, appears in the walls of the Temples of Vesta (#57), Dea Dia (#35), Sol (#53), and Tyche at Baalbek (#7). While the Temple at Baalbek is unusual for its stone dome,²⁷⁰ the Abaton in the Sanctuary of Zeus Asklepios Soter at Pergamon (#26) follows clear precedents in facing the concrete cores of its walls and pillars with ashlar blocks.²⁷¹

Brick is used as a facing for concrete in the foundations of the Mundus (#49) and of the ‘Temple of Romulus’ (#52),²⁷² as well as in the marble-revetted walls of the ‘Pantheon’ at Ostia (#23).²⁷³ The ‘Pantheon’ incorporates *opus vittatum mixtum* into its foundations, a technique combining brick courses and rubble facing that first

²⁶⁹ See Chaps. IV-VI ‘Masonry techniques.’

²⁷⁰ See ‘Roofing techniques’ below.

²⁷¹ These blocks are thicker than average revetment. Ziegenaus 1981, 100.

²⁷² Brick foundations, though relatively rare, may have featured in the Domitianic Tholus of Cybele (#34).

²⁷³ If correctly identified with the Porticus Vipsania (see #53 above), parts of the Temple of Sol were rebuilt in brick-faced concrete under Diocletian.

appears in Augustan fortifications.²⁷⁴ In third century Ostia, it also features in tombs, the Schola of Trajan, and the House of Amor and Psyche,²⁷⁵ while at Rome, it forms the walls of the Temple of Fortuna on the Pincio (#37). *Opus reticulatum* and *opus latericium* are combined in repairs to the Pincian temple,²⁷⁶ in the foundations of the Temple of Dea Dia and significantly, in the dome of the ‘Temple of Romulus.’²⁷⁷

More so than poured concrete,²⁷⁸ popular under the Flavians and Antonines, brick-faced *opus concretum* is the main medium for new construction under the late third and early fourth century emperors. Not only did it allow large building projects to be completed quickly, like Aurelian’s walls,²⁷⁹ but, combined with other materials, it opened up new possibilities in roofing design.

Roofing techniques

While the Temple of Dea Dia (#35) employed a conical roof, laden with marble tiles and antefixes,²⁸⁰ most round temples of the third and early fourth centuries were topped by domes.²⁸¹ Coins attest that the Temples of Vesta (#57) and of Melampous at Aigosthena (#1) were roofed with cupolas, while Renaissance drawings reconstruct domes for the Temples of Sol (#53) and of Fortuna on the Pincio (#37).

²⁷⁴ It appears in the Herculaneum gate at Pompeii, Hadrian’s Villa, and more widely, in Romano-Celtic buildings throughout Gaul. Adam 1994a, 135 and 141-2.

²⁷⁵ Adam 1994a, 142.

²⁷⁶ These techniques are too widespread to serve as an accurate dating device, though their use in rebuilding work is typical of the third and fourth centuries (e.g. Maxentius’ repairs to the Aurelian walls). Adam 1994a, 141 and 151.

²⁷⁷ See ‘Roofing techniques’ below.

²⁷⁸ Poured concrete features in the steps of the ‘Pantheon’ at Ostia, as well as in the lower vaulting of the Abaton.

²⁷⁹ Ward-Perkins 1989, 436.

²⁸⁰ This Greek-style roof was more popular in earlier periods, see Chaps. IV-VI ‘Roofing techniques.’

²⁸¹ Although modeled after the Hadrianic Pantheon (#50), the ‘Pantheon’ at Ostia (#24) probably supported a timber roof (see above).

Fragments of poured concrete vaulting are preserved from the lower level of the Abaton at Pergamon (#26), as are parts of the semi-domes from the exedrae of its upper level.²⁸² It is probable that a concrete dome, comparable to that of the Temple of Zeus Asklepios Soter (#27), crowned the Abaton.²⁸³ With its proliferation of domes, vaults, and exedrae, the Abaton recalls bath buildings, notably the contemporary Hunting Baths at Leptis Magna.²⁸⁴ Unlike the Hadrianic Pantheon (#50) and the Temple of Asklepios, little attempt is made by the Hunting Baths or the Abaton to disguise the round forms that define their design.

By contrast, the cupola of the Temple of Tyche at Baalbek (#7) is masked by an extension of its sloping porch roof. While the triangular pediment and wooden roof of its porch has many parallels, including the pronaos of the Hadrianic Pantheon, the stone cupola and pitched roof above its cella is both complicated²⁸⁵ and uncommon. In addition to using cut stone work, which also features in the late second century Arthur's Oon, a round military trophy in southern Scotland,²⁸⁶ its cupola is unusual for its curvature, representing one-third of a circle,²⁸⁷ and its method of support. Unlike most cupolas, it rests on the cella's Corinthian cornice, acting as a mensole, rather than directly on its walls.²⁸⁸

The 'Temple of Romulus' (#52) is also exceptional for its materials and form. Comparable to the cupola of the Temple of Tyche, its dome is flatter than average,

²⁸² Ziegenaus 1981, 80.

²⁸³ Ziegenaus 1981, 99.

²⁸⁴ Rasch 1985, 124.

²⁸⁵ See #7 above.

²⁸⁶ Wilson 1973, 32; MacDonald 1976, 10; for additional bibliography, see Godfrey and Hemsoll 1986, 72. Also comparable are the tufa domes of the bath buildings at Baia and the cupolas which form part of the Arch of Marcus Aurelius at Oea and the quadrifrons arch at Laodicea. De Angelis d'Ossat 1940, 243; Rasch 1985, 122.

²⁸⁷ De Angelis d'Ossat 1940, 226.

²⁸⁸ This facilitated construction by diminishing its span and as a by-product, resulted in its one-third curvature. De Angelis d'Ossat 1940, 242.

adopting a double curvature like the Mausoleum of Maximianus at Thessaloniki.²⁸⁹ This late Antique convention is coupled by a second, the use of brick ribs and stone to shape its dome. Compartmentalized between the ribs, travertine, peperino, and tufa blocks are laid in horizontal layers, diminishing in weight toward the oculus.²⁹⁰ While this use of variously weighted materials has a strong precedent in Hadrian's Pantheon,²⁹¹ its construction techniques are closer to contemporary rotundas like the 'Temple of Minerva Medica.'²⁹² These early fourth century domes are lighter than the Pantheon's, allowing them to incorporate windows and, in the 'Temple of Minerva Medica', less substantial support structures.²⁹³

While the 'Temple of Romulus' explored the potential of this technique by including four windows, which opened up new lighting possibilities in its drum, it adhered to conventional methods of roofing in the concrete barrel vaults of its side halls. Used concurrently, the 'Temple' demonstrates how the roofing techniques popular in earlier periods remained in use through the early fourth century, even as clerestory lighting looks forward to early Christian architecture.²⁹⁴

BUILDING COMPONENTS

With two prominent exceptions, the foundations and podia of third and early fourth century round temples follow Flavian and Antonine precedents. The Mundus (#49) and the 'Temple of Romulus' (#52) employ a brick ring comparable to the

²⁸⁹ The Baptisterium at Nocera has a comparable dome. Fiore 1981, 68-9; Rasch 1985, 129.

²⁹⁰ Fiore 1981, 68-71. The 'Temple' is one of the last rotundas to incorporate an oculus. De Angelis d'Ossat 1940, 233.

²⁹¹ For the Pantheon's aggregate, see Chap. VI #50, and 'Roofing techniques.' Amphorae were commonly used to lighten the domes of late Antique rotundas like the Tor Pignattura and the Mausoleum of Constantina. Sear 1982, 274; Ward-Perkins 1989, 424, 431, and 436.

²⁹² Brick ribs, also used in the Flavian Amphitheater, the Villa of the Gordians, the Baths of Diocletian, and the Basilica of Maxentius-Constantine, provided support, while facilitating the construction of vaults and domes (like relieving arches). Ward-Perkins 1989, 433-5.

²⁹³ Sear 1982, 272-4. For the pillars which support its dome, see 'Maxentius and Constantine' above.

²⁹⁴ Sear 1982, 274.

Tholus of Cybele (#34),²⁹⁵ while in the Greek world, the Temple of Tyche (#59) rests on foundations and a podium of ashlar blocks, which figure prominently in the Temple of the Nymphs at Argos (#2) and the Rotunda at Athens (#5).²⁹⁶ The ‘Pantheon’ at Ostia (#24) and the Temple of Fortuna on the Pincio (#37) combine both materials in their foundations.

Though stone and brick also feature in the Temple of Dea Dia (#35), its network of ring and perpendicular corridors surpasses the pits and passageways of the earlier Temples of the Nymphs and of Palaimon-Melikertes at Isthmia (#15). Even more complex is the lower level of the Abaton at Pergamon (#26). Using pillars and walls to define two annular corridors, lit via windows from the third, this level not only supports the cella, but accommodates cult practices to a greater extent than previous foundations.²⁹⁷

Like some earlier round temples,²⁹⁸ that of Melampous at Aigosthena (#1) may have employed a Greek-style krepis. Most third and early fourth century temples however stood on Roman podia.²⁹⁹ In addition to the Temple of Vesta, whose podium was rebuilt to reflect its Trajanic reconstruction, the Temple of Dea Dia is raised on a high podium fronted by steps. Steps provide access to the columnar porches of the ‘Pantheon’ at Ostia and of the Temples of Tyche at Baalbek, Sol (#53) and Fortuna on the Pincio. The podium of the Temple of Tyche is also notable for its scalloped edge, which incorporates the plinths of its peristasis.

Its podium moreover, acting in concert with the drum’s aediculae, adds to the undulating quality of the Temple of Tyche. This type of effect, achieved by Hadrian’s

²⁹⁵ The foundations of the Temple of Vesta (#57) remained virtually unchanged since the late Republic.

²⁹⁶ For an early example of ashlar masonry used in foundations, see Chap. V. ‘The Pantheon’ (#50).

²⁹⁷ While the Temple of Vesta’s ash pit is attested by Festus (p. 296 L), it is reasonable to assume that other complex foundations played a part in cult rituals.

²⁹⁸ See Chap. VI ‘Building components.’

²⁹⁹ The Abaton and the ‘Temple of Romulus’ lacked podia.

Pantheon (#50) through its alternating exedrae and aediculae, becomes more widespread in the third century. While the concave walls of the ‘Temple of Romulus’ include two tiers of aediculae,³⁰⁰ rectangular and semicircular niches are embedded in the walls of the Temples of Dea Dia, Sol and Fortuna on the Pincio. More dramatic are the exedrae that protrude from the portico of Sol,³⁰¹ the main niche of the ‘Pantheon’ at Ostia, which extends beyond its drum,³⁰² and the apses of the Abaton at Pergamon. Though opening onto the drum, the Abaton’s apses effectively begin where its cella wall ends.

Columns, often framing aediculae, form another important part of baroque ornament, not only of round temples, but also of other prominent Severan buildings like the Septizodium in Rome and the rectangular court of the Sanctuary of Jupiter at Baalbek.³⁰³ While plinths are an important addition to this repertory,³⁰⁴ the bases, shafts and capitals of third and early fourth century round temples, as well as their moldings and entablatures, follow Flavian and Antonine precedents. Important exceptions include the five-sided Attic bases and Corinthian capitals of the Temple of Tyche.

Similarly, as monopteroi,³⁰⁵ peripteroi and drums, they recall earlier round temples. While the ‘Temple of Romulus’ is unusual for including two side halls and a pre-existing rectangular hall, the drums of the Temple of Dea Dia and to some extent, the Abaton, have parallels in the Temple of Fortuna Primigenia at Praeneste (#31) and the Theater Shrine at Tibur (#66), while the ‘Pantheon’ at Ostia and the Temple of Sol

³⁰⁰ An apse, of comparable diameter to the drum, was also added to interior of the Flavian building.

³⁰¹ The drum’s niches and portico’s apses are best illustrated in Ligorio’s drawing (*Cod. Turin. a. II* 3 J. 16).

³⁰² The ‘Pantheon’s’ podium is also fronted by two statue niches, while its court is lined with aediculae.

³⁰³ Sear 1982, 258; Ward-Perkins 1989, 319-20 fig. 205.

³⁰⁴ Plinths, also employed in Elagabalus’ Temple of Sol (see Gros 1996a, 188), form part of the Temple of Vesta (preserved from its Trajanic phase) and the ‘Temple of Romulus.’

³⁰⁵ In addition to the Mundus, which took the form of a monopteros from the late Republic, the Temple of Melampous is depicted without cella walls.

imitate the Hadrianic Pantheon. With columnar porches fronting their rotundas, the Temples of Tyche and of Fortuna on the Pincio are distant reflections of the Pantheon, more akin to the Temples of Fortuna Huiusce Diei (#38) and of Hercules and the Muses (#42).

DECORATIVE DETAILS

The podium and plinth molding

The few podium and plinth moldings preserved from third and early fourth century round temples rely on ornament popular in the Flavian and Antonine periods. Along the base of the Severan Temple of Vesta (#57) runs a molding consisting of a fascia, a torus decorated with flowering buds, and a cyma recta, whose palmettes and floral motifs recall decoration from the Domus Augustana.³⁰⁶ Above this molding, both its podium and plinths employ frames of Lesbian cymatia³⁰⁷ and a simple bead pattern. Although the resulting panels are flat, they appear recessed and enhance the undulating effect achieved by the protruding plinths and podium.

Lacking floral decoration, the remaining moldings are plainer. Base moldings from the ‘Pantheon’ at Ostia (#23) and the Temple of Tyche at Baalbek (#7) consist of fascias, scotias flanked by tori, and cyma rectas. While the crown molding from Baalbek is more complex,³⁰⁸ the molding of the ‘Temple of Romulus’ (#52)³⁰⁹ is the most basic, relying on fascias, a torus, and a single cyma reversa to give its plinths definition. Unlike most of the ‘Temple’s ornament, it is probable that these plinths,

³⁰⁶ Leon 1971, 115 pls. 39-40. While the plinths and podium have no direct parallels, their use of lush floral ornament is common to Flavian architecture.

³⁰⁷ This ornament has close parallels in the external order of the Temple of Venus Genetrix as rebuilt by Domitian and completed by Trajan. Leon 1971, 104 and 113 pl. 35b.

³⁰⁸ This molding, which comprises an astragal, a torus, a cyma recta, and a cyma reversa in-between two fascias, is comparable to the crown moldings of the Temple of Bacchus and the propylon of the Sanctuary of Jupiter at Baalbek. Wiegand 1925, 94 and 108.

³⁰⁹ This molding pertains to the plinths that flank the side halls.

which have a close parallel in a fourth century statue base, were purpose-made.³¹⁰

With their simple, flaccid workmanship, both the base and the plinths give evidence of the decline in standards that characterizes fourth century carving.

The column base

While the Temple of Vesta (#57), like Hadrian's Pantheon (#50), employs Ionic bases for its columns and pilasters, the Temple of Tyche at Baalbek (#7) and the 'Temple of Romulus' (#52), like most Flavian and Antonine round temples,³¹¹ use Attic bases. Though the Attic form is also adopted by the 'Pantheon' at Ostia (#23), its bases are unusual for their rich Asiatic ornament.³¹²

The column shaft

More so than in previous periods,³¹³ third and early fourth century round temples employ pilasters. Used in the Abaton at Pergamon (#26) to flank the niches of its upper level and on the exterior of the Temple of Dea Dia (#35), marble-revetted pilasters mirror columns in the Temple of Vesta (#57), the 'Pantheon' at Ostia (#23), and the Temple of Tyche at Baalbek (#7).³¹⁴ The peripteral columns and pilasters of the Temple of Tyche are joined by porch columns, half-pilasters and half-columns. While its porch shafts are a dramatic red granite, its peripteral columns and the half-columns of its interior, like the peristasis of the Temple of Vesta, employ white marble bases, shafts, and capitals.

³¹⁰ See Frazer (1964, 93 n. 30) for the statue base of Fabius Titianus, a consul and *praefectus urbi* in 338 AD.

³¹¹ See Chap. VI 'The column base.'

³¹² While the Temple of Fortuna Huiusce Diei (#38) also had Attic-Asiatic bases, the 'Pantheon's' closest Roman comparanda are the Greek-inspired Ionic bases of the Temple of Apollo Medicus. Gros 1996a, 502 fig. 616; Viscogliosi 1996a, 45 fig. 42.

³¹³ Though not uncommon in Greek tholoi like the Philippeion at Olympia (#22) and the Arsinoeion at Samothrace (#58), pilasters are not attested in Roman round temples prior to the Hadrianic period.

³¹⁴ The Temple of Vesta also employs pilasters in its interior.

Colored stones, used to great effect in the shafts, paving and revetment of Hadrian's Pantheon, also feature in the 'Pantheon' at Ostia, the Temple of Sol (#53), and the 'Temple of Romulus' (#52). By using cippolino and porphyry shafts, they not only enliven their façades, but also underline their Imperial connections.³¹⁵

The column capital

Unlike earlier periods, the capitals preserved from third and early fourth century round temples employ the Corinthian order.³¹⁶ Ionic through the Trajanic period, Corinthian capitals formed part of Julia Domna's reconstruction of the Temple of Vesta (#57). These capitals followed Flavian styles³¹⁷ through their combination of rigid nerves, folded lobes and regular hollows. Like Flavian capitals,³¹⁸ they emphasize light and shade effects and the ornamental qualities of foliage. However, as K. Freyberger points out, their execution is less skilled and proportions less balanced than comparable capitals.³¹⁹ He blames the volume of rebuilding work undertaken by the Severans for their sloppy craftsmanship.³²⁰

More skillful are the capitals re-used in the 'Temple of Romulus' (#52), which also resemble Flavian precedents,³²¹ and the porch and peripteral capitals of the Temple of Tyche at Baalbek (#7).³²² Recalling capitals from the mid-second century court of the Temple of Jupiter, those from the round Temple of Tyche as well as

³¹⁵ This is especially true for the porphyry shafts of the Temples of Sol and of 'Romulus.' Fiore 1981, 81.

³¹⁶ While the coins do not reveal the order of the Temple of Melampous at Aigosthena (#1), volute fragments attest that the Temple of Dea Dia (#35) included Corinthian pilasters as did, most likely, the Abaton at Pergamon (#26) on the model of the Temple of Zeus Asklepios Soter (#27).

³¹⁷ Heilmeyer 1970, 164 pls. 59, 3-5; Leon 1971, 225; Freyberger 1990, 103 pl. 36a.

³¹⁸ See Chap. VI 'The column capital.'

³¹⁹ Freyberger 1990, 103 pl. 36d (Temple of Ceres, Ostia).

³²⁰ Freyberger 1990, 103.

³²¹ Cima (1981, 108-9) dates them to the Domitianic period based on their similarities to capitals from the portico of the Forum of Caesar (Leon 1971, 93 pl. 32.2) and from the Flavian palace on the Palatine (Heilmeyer 1970, 137-9 pl. 48.8).

³²² The Composite? (see #7) pilaster capitals are no longer extant.

contemporary capitals from the Propylon at Baalbek look back to Antonine work.³²³ Their three tiers of leaves, characterized by projecting lobes and deep nerves, ridges and hollows, invade the zone of the volutes and helices. As in capitals from the Temple of Zeus Asklepios Soter at Pergamon (#27)³²⁴ and the Temple of Bacchus at Baalbek,³²⁵ this zone is crowned by a richly decorated abacus.

While the abacus molding reflects local influences,³²⁶ the capitals of the ‘Pantheon’ at Ostia (#23) borrow Asiatic ornament. In addition to spiky leaves, known from the Traianeum at Pergamon and the Temple of Tyche at Side (#59),³²⁷ the Ostian capitals employ a systematic arrangement of foliage. Their leaves, set at regular intervals, barely overlap until the level of the volutes and helices. Almost lost behind the foliage, the helices provide support for the eagles and theatrical masks displayed on the abacus.³²⁸

Though the masks recall capitals from the Porticus of Octavia and the foliage finds parallels in Severan rebuildings of the Stadium of Domitian, the Domus Augustana, and the Flavian Amphitheater, the ‘Pantheon’s’ capitals are closest to examples from the Basilica at Leptis Magna and the Frigidarium of the Great Baths at Cyrene.³²⁹ For their comparable style and content, the Ostian capitals have been ascribed to an Asiatic workshop, possibly from Aphrodisias.³³⁰

Inspired by Flavian, Antonine and Asiatic styles, capitals from third and early fourth century round temples employ ornamental foliage³³¹ to overrun the register of

³²³ Wiegand 1925, 108-9 figs. 154 and 171.

³²⁴ See Chap. VI.

³²⁵ Wilson Jones 2000, fig. 7.34.

³²⁶ Heilmeyer 1970, 164; Wilson Jones 2000, 153.

³²⁷ See Chap. VI.

³²⁸ Pensabene 1973, 95 no. 336 and pl. 33.

³²⁹ Pensabene 1973, 95-6 and 202; Gros 2001, 491.

³³⁰ Pensabene 1973, 95; vs. Gros (2001, 491), who warns against assigning them to any particular workshop.

³³¹ They form a marked contrast to the organic ornament of Julio-Claudian and Augustan revival capitals.

the volutes and helices.³³² Moreover, like their precedents,³³³ they emphasize vertical growth, acanthus distinguished by deep ridges and pointed lobes, and in some examples, the play of light and shade achieved by richly carved ornament.

The entablature

While the Severan restoration of the Mundus (#49) included repairs to its Ionic entablature, Julia Domna's rebuilding of the Temple of Vesta (#57) complemented its Corinthian columns with a corresponding entablature.³³⁴ Between its three-fascia architrave and modillion cornice runs a frieze course, which displays sacrificial implements. Compared to the Temple of Vespasian's frieze³³⁵ and reliefs from the Pantheon's intermediate block (#50),³³⁶ the Temple of Vesta's frieze course includes many of the same motifs, though it lacks the rich detailing that characterizes their ornament.³³⁷

Of the entablature blocks re-used in the 'Temple of Romulus' (#52), the anthemion frieze shows the lush modeling typical of Flavian decoration, while the cornice fragments are stylistically closer to the Arch of Septimius Severus.³³⁸ Similarly lavish decoration is employed in the Corinthian entablatures of the Temple of Tyche at Baalbek (#7). Both its interior and exterior entablatures comprise a three-fascia architrave, a blank frieze course, a variety of moldings,³³⁹ and a cornice whose S-shaped modillions alternate with rosette soffit panels. This cornice is topped by a

³³² Gros 2001, 491.

³³³ See Chap. VI.

³³⁴ A Corinthian entablature was also a feature of the Trajanic temple, see Chap. VI.

³³⁵ Wegner 1992, 42 pl. 2a.

³³⁶ See Chap. VI 'Statuary and reliefs.'

³³⁷ The mechanical copying of Flavian motifs is typical of mid-to-late 2nd c. ornament. Gros 1996a, 195.

³³⁸ For example, they employ the same distinctive Ionic cymatia. Wegner 1957, 55 and 68 n. 86; Frazer 1964, 96-7.

³³⁹ Among these moldings, including bead-and-reel and Ionic cymatia (whose darts are replaced by floral ornaments), the Lesbian cymatia resemble examples from the Temple of Jupiter at Baalbek. Wiegand 1925, 97 figs. 143-4.

sima decorated with acanthus and palmettes, while the exterior sima also includes lion-head water spouts.³⁴⁰

With moldings and a cornice reminiscent of the Temple of Bacchus,³⁴¹ the entablature which encircles the Temple of Tyche's porch and drum includes a convex frieze, a common feature of Asiatic decoration that appears in Rome as early as the Hadrianic period.³⁴² The shell motifs displayed on the sima of the Temple of Dea Dia (#35) recall ornament from the Temple of Jupiter at Baalbek³⁴³ as well as from prominent Roman buildings like the Hadrianic Basilica Neptuni.³⁴⁴ Other elements of its entablature³⁴⁵ are distinctly Flavian like its Ionic cymatia and dentils, which find close parallels in the Domus Augustana.³⁴⁶ Its combination of motifs reveals that the Temple of Dea Dia draws inspiration from a variety of sources, both Flavian and farther afield.

Similarly, the entablature of the 'Pantheon' at Ostia (#23), whose bases and capitals show clear Asiatic influence, combines Ionic cymatia characteristic of the Flavian period and Lesbian cymatia reminiscent of Augustan revival ornament.³⁴⁷ Its two-fascia architrave moreover is a prominent feature of Hadrianic buildings like the Temple of Venus and Roma.³⁴⁸ Ornament from Aurelian's Temple of Sol (#53) includes an ornate Corinthian cornice, incorporating scrolling vines reminiscent of the

³⁴⁰ Similar water spouts may be found in the rectangular court of the Sanctuary of Jupiter at Baalbek and the Octogon at Ephesos. Wiegand 1925, 108; Wegner 1992, 41.

³⁴¹ Likewise, molding preserved from the door frame finds parallels in the Temple of Bacchus. Wiegand 1925, 97 and 108-9.

³⁴² While the Hadrianeum in Rome provides an early example, this feature becomes more widespread under Constantine, when it appears in his Arch and Mausoleum of Constantina. Strong 1953, 141; Gros 2001, 495.

³⁴³ Ward-Perkins 1989, 317. The palmette antefixes also have an Eastern flavor.

³⁴⁴ Lanciani 1868c, 107.

³⁴⁵ Although Lanciani (1868c, pl. 5) saw its entablature as Ionic, not enough is extant to confirm his reconstruction.

³⁴⁶ Wegner 1957, 55. Wilson Jones (2000, 20 fig. 1.5) notes that the ring tracery in-between the dentils is a common Flavian feature.

³⁴⁷ For its incorporation of elaborate leaf and flower ornament, the 'Pantheon's' Lesbian cymatia recall Julio-Claudian monuments like the Forum of Augustus and the Temple of Castor. Ganzert 1988, 120 cat. 13-4.

³⁴⁸ Strong 1953, 140; Gros 2001, 494.

Nymphaeum of Pollio at Ephesos,³⁴⁹ and two anthemion friezes. The more elaborate frieze depicts a head whose hair and beard are formed from acanthus leaves, as well as smaller human and animal figures. While fantastical elements first appear in anthemion friezes of the Flavian period,³⁵⁰ the Temple of Sol's frieze more closely recalls ornament from Leptis Magna and Baalbek.³⁵¹ Rather than imported products, G. Gullini suggests that the Asiatic ornament of the Temple of Sol, as well as comparable motifs from the Temple of Dea Dia and the 'Pantheon' at Ostia, be attributed to Eastern workshops active in Rome since the Hadrianic period.³⁵²

Soffits panels and ceiling coffers

As in the Flavian and Antonine periods,³⁵³ most third and early fourth century round temples feature rosette soffit panels in their modillion cornices.³⁵⁴ More elaborate soffit panels are preserved from the Temple of Sol (#53). Recessed within a frame of Ionic and Lesbian cymatia, these long, rectangular soffits bulge with a band of oak leaf decoration. Though layered, the leaves appear flat and ornamental with any naturalistic detail overshadowed by the soffits' massing and overlapping design.³⁵⁵ For their decoration, M. Wegner points to parallels from the Baths of Caracalla and the late third century rebuilding of the Macellum at Pozzuoli.³⁵⁶

While the Temple of Vesta's (#57) ceiling coffers, like its soffit panels, include simple rosettes, ceiling coffers from the porch of the Temple of Tyche at

³⁴⁹ Koenigs and Radt 1979, pls. 118b-c.

³⁵⁰ Wegner 1957, 43. The Domus Augustana and the Arch of the Argentari provide good examples. Gullini 1960, 35.

³⁵¹ Gullini 1960, 35-6.

³⁵² Gullini 1960, 36, and see Chap. VI.

³⁵³ See Chap. VI 'Soffit panels and ceiling coffers.'

³⁵⁴ Rosette soffit panels are extant from the Temple of Vesta (#57 and see below), the 'Pantheon' at Ostia (#23), and the Temple of Tyche at Baalbek (#7).

³⁵⁵ Wegner 1957, 27-8 and 56.

³⁵⁶ Wegner 1957, 97; cf. Leon 1971, 175 pl. 71 (possible precedents in the Temple of Mars Ultor). Soffit panels re-used in the Cathedral at Benevento have a comparable form, though they include flowers and acanthus swirls. Wegner 1957, pls. 28a-b.

Baalbek (#7) feature an intricate central medallion. Each corner of the square medallion is elaborated by an arc whose central flower is encased in vine tendrils. Comparable to ceiling coffers from the Temple of Bacchus,³⁵⁷ these point to local influences on the decoration of the Temple of Tyche.

Pavements and wall revetment

Though less dramatic than the floor and wall revetment of Hadrian's Pantheon (#50), the majority of third and early fourth century round temples employed *opus sectile* as part of their ornament. Closest to the Pantheon are the Abaton at Pergamon (#26) and the 'Pantheon' at Ostia (#23), which included multi-colored geometric pavements. While diagonals framing roundels visually linked the Abaton's apses and dome,³⁵⁸ the 'Pantheon's' pavement helped to unite its porch and drum in a single composition. The white marble floors of the Temples of Vesta (#57) and of Fortuna on the Pincio (#37), and probably of the Temples of Tyche at Baalbek (#7) and of 'Romulus' at Rome (#52), had more basic designs, but played a similar role in unifying each Temple's structural and decorative elements.

Black marble revetment added contrast to the walls of the Temple of Fortuna, while white marble facing related the walls of the 'Temple of Romulus' Flavian hall to its floors. Moreover, stucco work on the façades of its rotunda and side halls linked the 'Temple' with nearby monuments on the via Sacra.³⁵⁹

Like the neighboring Temple of Zeus Asklepios Soter (#27),³⁶⁰ the upper level of the Abaton included multi-colored limestone and glass mosaics to accent its cupola and semi-domes. Fragments of this mosaic show that it combined geometric motifs

³⁵⁷ Wiegand 1925, 104.

³⁵⁸ Ziegenaus 1981, 95.

³⁵⁹ Frazer 1964, 98 and 114.

³⁶⁰ See Chap. VI.

similar to the paving's with swirling vegetal ornament.³⁶¹ While the Abaton's marble pavement linked its floor and elevation, its mosaic work, like the mosaic decoration of the Temple of Asklepios,³⁶² emphasized the dramatic qualities of its soaring roof independently of the massive foundations and superstructure necessary for its support.

Statuary and reliefs

While coins may depict cult images³⁶³ in the cellas of the Temples of Melampous at Aigosthena (#1) and of Tyche at Baalbek (#7)³⁶⁴ and in the side halls of the 'Temple of Romulus' (#52), the Arval Annals suggest that the Temple of Dea Dia (#35) contained at least two statues, one of which may have represented the goddess. Like these statues, which celebrated the Temples' cults, the images of Alexander Severus, Gordian III and his wife, displayed in the cella or court of the 'Pantheon' at Ostia (#23) support its attribution to the Imperial cult.³⁶⁵

Somewhat different are Aurelian's dedications at the Temple of Sol (#53). Though he included statues of Sol in his Eastern guises Bel and Helios, a statue of Jupiter and an image of himself as Sol's earthly counterpart, most of his decoration comprised booty from Palmyra.³⁶⁶ By incorporating spoils like paintings, jewelry, gems, and clothing into the Temple's decorative scheme, Aurelian revived a practice

³⁶¹ Ziegenaus 1981, 100.

³⁶² See Chap. VI.

³⁶³ As has been suggested for the Temple of Vesta (see Chap. V #57), it is also possible that the gods provided a means of identifying the Temples illustrated on the coins. By this reasoning, the image of Juno Martialis (#45) is not inconsistent with a temporary temple or a temple that was vowed, but never built.

³⁶⁴ The Temple's aediculae indicate that it once incorporated a sizable statue display.

³⁶⁵ Hadrian's Pantheon (#50) may be comparable, see Chap. VI 'Statuary and reliefs.'

³⁶⁶ See #53.

common in the late Republic, whereby successful generals used booty to fund and ornament their victory temples.³⁶⁷

The altar of the Temple of Dea Dia and reliefs above the aediculae of the Temple of Tyche are more typical of Imperial practice. While the sides of the altar depict garlands alternating with bucrania, the reliefs include garlands borne by putti.³⁶⁸ On the reliefs, the garlands appear beneath rosettes and heads,³⁶⁹ which recall motifs from the Temples of Tyche at Side (#59) and of Bacchus at Baalbek.³⁷⁰ To garland, bucrania, and putti friezes known from the late Republic,³⁷¹ motifs like heads and animals were added by the Flavian period³⁷² to become a common feature of Asiatic ornament under the Severan and third century emperors.³⁷³

PROPORTIONAL ANALYSIS (Charts VII.1-8)

Whereas the guidelines laid out by Vitruvius had some relationship to the design of Flavian and Antonine round temples,³⁷⁴ third and early fourth century monopteroi and peripteroi do not correspond to his ideals and, of the drums, only the Temple of Dea Dia (#35) shows a 1:10 relationship between its lower column diameter and column height.³⁷⁵ Similarly, in the columnar orders, few beyond Ligorio's systyle Temple of Sol (#53)³⁷⁶ and the pycnostyle Temple of Vesta (#57)³⁷⁷ demonstrate a correlation to Vitruvius' guidelines for proportion. Moreover, only the

³⁶⁷ See Chap. IV 'Introduction.' A good example of this phenomenon is the Temple of Hercules and the Muses (#42).

³⁶⁸ Garlands supported by putti figure in the Temples of Bacchus at Baalbek and of Bel at Palmyra. Wegner 1992, 40.

³⁶⁹ Wiegand 1925, 100.

³⁷⁰ See Chap. VI 'The entablature' and Wegner 1992, 40.

³⁷¹ Kleiner 1980, 37-49.

³⁷² The entablature of the Shrine of Sulis-Minerva at Bath (#8) serves as a good example.

³⁷³ Wegner 1992, 43-7.

³⁷⁴ See Chap. VI 'Proportional analysis'

³⁷⁵ This ratio is employed by the peripteral Temples of Vesta (#57) and of Tyche at Baalbek (#7).

³⁷⁶ His reconstruction is systyle based on its intercolumnation to lower column diameter relationship.

³⁷⁷ The Temple is pycnostyle from its column height to lower column diameter, a relationship approximated by the Temple of Tyche at Baalbek (#7).

Temple of Dea Dia and the 'Pantheon' at Ostia (#24) echo the 1:1 relationship between the lower column diameter and the capital height which he recommends for the Corinthian order.

When the entire columnar order is compared to the lower column diameter, the resulting pattern is less coherent than for Flavian and Antonine round temples. Even so, relationships like the 1:10 ratio between column height and lower column diameter³⁷⁸ and the 1:8 ratio between shaft height and lower column diameter³⁷⁹ are employed. Moreover, a few temples approximate Wilson Jones' 6:5 rule for column to shaft height.³⁸⁰

More erratic are the results of a comparison of their structural elements to their critical dimensions. For example, the column heights range from about 1/5 to 3/5 of the critical dimensions, while the roof diameters, often close to critical dimensions based on stylobate or total exterior measurements, are as little as one-half.³⁸¹ Moreover, individual temples are more inconsistent in their use of proportional relationships than in earlier periods, with structural elements representing both simple and complex fractions of their critical dimensions.³⁸²

Finally, an analysis of their floor space and volume in relation to their critical dimensions shows a great deal of divergence. Notably, the Abaton at Pergamon (#26), with twice the critical dimension of the 'Pantheon' at Ostia, has a volume over seven times greater.

³⁷⁸ This ratio is employed by the Temples of Vesta, Dea Dia and Tyche at Baalbek.

³⁷⁹ This features in the Temples of 'Romulus' (#52), Dea Dia, and Tyche.

³⁸⁰ The 'Pantheon' at Ostia (#24), the Temple of Dea Dia and the Temple of Sol, as reconstructed by Ligorio, come close.

³⁸¹ The roofs of the Temples of Vesta and 'Romulus' represent approximately half of their critical dimensions.

³⁸² See #57, 52, and 24, for the range of fractions employed in the Temples of Vesta and 'Romulus,' and the 'Pantheon' at Ostia. Although Wilson Jones (1989b, 112-14) uses other critical dimensions for the 'Temple of Romulus' and the 'Pantheon' at Ostia, his fractional relationships are no more simple or satisfactory.

IV CONCLUSION

Although the rich ornament of the Flavians fell out of favor in the Antonine period, it experienced a renaissance under the Severan emperors, who chose Flavian-style decoration to elaborate many of their building projects.³⁸³ While they employed this style in the Temple of Vesta (#57),³⁸⁴ some of their works, like the Arch of Septimius Severus, show a closer allegiance to Augustan Classicism.³⁸⁵ Another distinct influence on third century ornament is Asiatic.³⁸⁶ As in Hadrian's Pergamene-inspired buildings,³⁸⁷ round temples like the 'Pantheon' at Ostia (#23) and the Temple of Dea Dia (#35) include Eastern elements in their decoration.³⁸⁸ The same may be said for the Temple of Tyche at Baalbek (#7) and to some extent, the Abaton at Pergamon (#26),³⁸⁹ whose ornament reflects local styles.

Like the Severan round temples, the decoration of Aurelian's Temple of Sol (#53) recalled earlier monuments, specifically the Baths of Caracalla.³⁹⁰ The early fourth century 'Temple of Romulus' (#52) goes farther by reusing ornament, a practice that finds favor in early Christian architecture.³⁹¹ Coupled with its ornate Flavian and Severan decoration, the 'Temple' employs colored marble columns and niches to enliven its façade. Known from Hadrian's Pantheon (#50), these features,

³⁸³ Strong 1953, 121-2, 140 and 147; Gros 1996a, 185.

³⁸⁴ Strong 1953, 151 n. 150.

³⁸⁵ Strong 1953, 140-1; Gros 1996a, 185; vs. Sear (1982, 257), who suggests that the Arch's ornament anticipates late Imperial decoration. The reintroduction of Augustan Classicism after the Julio-Claudian period was inspired by Trajan and Hadrian, see Chap. VI 'Building components.'

³⁸⁶ Economic prosperity in the provinces resulted in considerable building activity, whose influence was felt throughout the empire. Gros 1996a, 185.

³⁸⁷ See Chap. VI 'Conclusion.'

³⁸⁸ Another prominent example is Caracalla's Temple of Serapis. Ward-Perkins 1989, 134.

³⁸⁹ This is based on its location, since very little of its ornament is preserved.

³⁹⁰ Strong 1953, 141.

³⁹¹ Strong 1953, 141; Frazer 1964, 104.

together with stucco and mosaic work, become common in the fourth century as the quality of carved ornament declines.³⁹²

Decline is also an aspect of the proportional relationships employed by third and fourth century round temples. Whereas clear patterns of proportions defined the columnar orders of round temples as a whole, as well as the structural elements of some individual examples, in the Flavian and Antonine periods, later round temples are widely divergent in the ratios and fractions they feature.

This is not surprising as their materials, techniques and plans become more varied. While the 'Pantheon' at Ostia and possibly the Temple of Sol take their lead from Hadrian's Pantheon, buildings like the Abaton and the 'Temple of Romulus' are highly inventive. In-between is the Temple of Tyche at Baalbek which, in its combination of a porch and a peripteros, has precedents from the late Republic, but employs an abundance of rounded forms that lend it greater vitality than Republican temples like that of Fortuna Huiusce Diei (#38).

³⁹² Ward-Perkins 1989, 430.

CHAPTER VIII: CONCLUSION

With a rich and varied history, round temples made a significant contribution to the development of Roman architecture. Literary tradition includes them among the earliest buildings in Rome, while they continue to form part of her architectural repertory until the Christian period. Throughout their use, round temples appear as monopteroi, peripteroi and drums. Whereas monopteroi and peripteroi, ringed by columns, emphasize their exterior, drums focus on shaping interior space. This distinction forms one of the defining features of Roman round temples, whose structural and stylistic similarities to rectangular temples situate them within the context of Roman architecture.

This thesis has examined round temples as an architectural type from the first attested examples through those of the early fourth century AD. Some of the earliest round temples, like the Mundus (#49), the Temple of Vesta (#57), and the Shrine of the Penates at Lavinium (#17), were closely tied to Rome's origins. In the late Republic, they were joined by several new temple foundations, which celebrated the architectural legacy of Greece.

Greece provided models for form and ornament, whose influence may be felt throughout the Imperial period. Most relevant are Greek tholoi or round buildings, elements of which are reflected in the design of Roman round temples. As military campaigns opened up the Greek world to Roman rule, generals returned to Italy with booty and the desire to found temples, both round and rectangular. Round victory temples, like those of Hercules Victor *ad portam Trigeminam* (#44) and of Hercules and the Muses (#42), followed Greek trends in design and ornament as a way of drawing attention to their founders' achievements.

In the early Imperial period, round temples began to spread throughout the Roman world. The first to be built outside of Italy, like the Temple of Roma and Augustus on the Athenian Acropolis (#4), were located in Greek areas. This Temple is also significant as one of several Greek examples to honor the emperor together with the personification of the Roman state.¹ Though not strictly the Imperial cult, Augustus may also be celebrated in Agrippa's Pantheon (#50) at Rome.

Hadrian's rebuilding of the Pantheon is the highpoint of the next era in round temple building. Not only was his monument one of the finest achievements in Roman architecture, but his reign marks the greatest expansion of the empire coupled with the widest distribution of round temples. The Pantheon's design and use of rich materials and ornament influenced later round temples, notably that of Zeus Asklepios Soter at Pergamon (#27) and the 'Pantheon' at Ostia (#24).

The Ostian 'Pantheon' may be dated to the last phase of the type's development, namely the third and early fourth centuries AD. Many of the elements that characterize earlier round temples continue to feature in this period, while two notable examples, the Abaton at Pergamon (#26) and the 'Temple of Romulus' (#52), introduce new variations. With the Abaton, the round form becomes a shell for two distinct levels, while in the 'Temple of Romulus,' a drum is bounded by rectangular halls.

This analysis of the historical development of round temples has highlighted reasons why the type had such a lasting attraction. Ancient authors attest to the appeal of the round form, specifically of round temples, when they attribute celestial connotations to domes and vaults.² Some modern scholars have drawn on these sources to explain the form of Hadrian's Pantheon (#50). Although ancient and

¹ See Chap. V #4.

² See Chap. II 'Cosmic implications of the round form?'

modern visitors alike may be reminded of the heavens when entering his drum, it is unlikely that the original Pantheon, built by Agrippa, could have elicited the same response.³

Based on studies of Greek tholoi, scholars have proposed that round temples honored chthonic or earth-bound gods in addition to Vesta as the goddess of the hearth.⁴ This analysis of round temples has shown that, while Vesta and hero gods like Hercules, Asklepios, Palaimon-Melikertes, and Melampous received round temples,⁵ their dedications are outnumbered by those to other gods and goddesses. Fortuna and her Greek counterpart Tyche were honored with seven,⁶ the Imperial cult with up to five,⁷ and Venus-Aphrodite with four.⁸ Moreover, many of the gods who had round temples were also commemorated with rectangular temples, suggesting that the round form was not a requirement of their cults.⁹

Even so, round temples may have had a special appeal for chthonic cults that employed pits in their rituals. As in the Tholos in the Sanctuary of Asklepios at Epidauros (#13), pits were embedded in the foundations of the Temples of Vesta (#57) and of Hercules Victor *ad portam Trigeminam* (#44), while corridors were incorporated into the Temples of Dea Dia (#35), Palaimon-Melikertes at Isthmia (#15), the Nymphs at Argos (#2), and most prominently, the Abaton in Asklepios' sanctuary at Pergamon (#26). Like the pit of the Temple of Vesta, which may have

³ See Chap. V #50.

⁴ See Chap. I 'Introduction.'

⁵ Temples of Vesta: #57, Hercules: #41-4 and possibly #25, Asklepios: #13 and 26-7, Palaimon-Melikertes: #15, and Melampous: #1.

⁶ #7, 30-1, 36-8, and 59.

⁷ #22-4 and possibly #50 and 52.

⁸ #9, 16, 55, and 63.

⁹ See Chap. III #47 for a discussion of Servius' statement (*Aen.* 9.406) that round temples were dedicated to Vesta, Diana, and either Hercules or Mercury.

collected ashes from her sacred fire,¹⁰ the pits and corridors employed in the other round temples probably fulfilled important religious functions.¹¹

Comparable to pits are the wells beneath the Monopteros at Pompeii (#28) and the Shrine of Fortuna Primigenia at Praeneste (#30), which may identify them as the *mundi* of their cities.¹² The Shrines of Venus in the Horti Sallustiani (#55) and of Aphrodite at Tibur (#63) also responded to a religious imperative. They probably mirror the famous Temple at Knidos (#16), which, if correctly identified as round, would mark the beginning of a long-standing tradition of round shrines to Aphrodite.¹³

Social considerations also contributed to the use of the round form, in so far as patrons had a significant influence on the appearance of their temples. In addition to late Republican victory temples, whose founders employed the form as a reflection of Greek tholoi,¹⁴ the patron of the Temple of Zeus Asklepios Soter at Pergamon (#27) may have imitated the design of the Pantheon (#50) in deference to Hadrian. Moreover, these buildings, like rectangular temples, used lavish materials and sculptural displays to underline the wealth and status of their founders.¹⁵

Like the use of the round form, social factors influenced the location of some round temples. The placement of the Temple of Fortuna Huiusce Diei (#38) was determined by its patron's desire to link it to the foundation of his illustrious "ancestor,"¹⁶ while the Temple of Fortuna on the Pincio (#37) lies on axis with the Mausoleum of Augustus, a potent symbol of the Imperial cult.¹⁷

¹⁰ See #57.

¹¹ See Chap. VII #26.

¹² See Chap. IV #28 and 30.

¹³ See Chaps. IV #55 and VI #63.

¹⁴ See above and Chap. IV 'Introduction'

¹⁵ See Chap. VI #50.

¹⁶ See Chap. IV #38.

¹⁷ See Chap. V #37.

Where social considerations cannot account for their location, the intrinsic advantages of areas like the acropolis at Tibur¹⁸ may explain the siting of some round temples. However, more common locations for round temples are sanctuaries and urban settings. While, in the former, round temples usually formed the focal point of a vast complex, like the Temple of Dea Dia (#35) and to some extent, the Temple and Shrine of Fortuna Primigenia at Praeneste (#30-1), those built in urban locations were often required to fit within rectilinear grids.

In the context of an urban grid, round temples could adapt or form a deliberate contrast to their surroundings. From the late Republic, porticoes accommodated round temples within grid patterns. The Temple of Hercules and the Muses (#42), for example, employed a portico to align it with the neighboring Porticus Octaviae and the Circus Flaminius. Set between the Shrine of the Camenae (#33) and a semicircular schola, the Temple was framed by complementary forms.¹⁹ In the sanctuaries of Palaimon-Melikertes at Isthmia (#15) and of Sol at Rome (#53), rectangular porticoes reserved open space around the temples to highlight their circularity from every angle.²⁰

Some drums like Hadrian's Pantheon (#50), the Temple of Zeus Asklepios Soter at Pergamon (#27), and the 'Pantheon' at Ostia (#24) employ porches to lend their façades the appearance of rectangular temples. While both Pantheons also use forecourts to align them within urban grids, the Temples of Fors Fortuna (#36) and of 'Romulus' (#52) incorporate rectilinear elements like platforms and side halls into their design.²¹ In some cases, round shrines like the Perirrhanterion (#51) and the

¹⁸ See Chap. IV #64.

¹⁹ This also applies to the Shrine of Apollo Delphinios at Miletos (#19), which is flanked by semicircular exedrae.

²⁰ The Temple of Tyche at Side (#59) and the Shrines of Hermes and Maia on Delos (#10) and of Sulis-Minerva at Bath (#8) were also set within porticoes.

²¹ See Chap. VII 'Temple foundation and location.'

Shrine of Aphrodite at Tibur (#63) responded to curved forms in their built or natural environments.²²

Whereas the use of rectangular porticoes marks a typically Roman response to the siting of temples, many follow Greek tholoi by occupying areas that lack clear architectural definition.²³ Without porticoes, the Temples of Hercules in and around the forum Boarium (#43-4) rely on their round forms to distinguish them from neighboring buildings. This contrast is accentuated by the rectangular Temple of Portunus that stands next to the Temple of Hercules Victor *ad portam Trigeminam* (#44). Similarly, the rectangular temple that accompanies the Round Temple at Tibur (#64), together with its dramatic location, emphasizes its round form.

Like their locations, the ability of monopteroi to showcase statues from every angle was an important factor in some temples' use of the round form. Prominent examples include the Rotunda at Corinth (#9) and the Shrine of Aphrodite in Hadrian's Villa (#63), both of which exhibited statues of the goddess in a context reminiscent of her Temple at Knidos (#16). The display of cult statues was also an important consideration for the patrons of the Temple of Palaimon-Melikertes at Isthmia (#15) and probably of the Temple of Roma and Augustus on the Acropolis (#4).

Similarly, statue display was a factor in the design of the peripteral Temple of Fortuna Huiusce Diei (#38), which, like rectangular temples, exhibited its cult statue against the back of its cella wall.²⁴ In its second phase however, the Temple was

²² See Chaps. V and VI 'Temple foundation and location.'

²³ This is also true for the Temple of Roma and Augustus (#4) and the Rotunda (#5) at Athens, the Shrine of the Lares Augusti at Ostia (#23), the Monopteros at Pompeii (#28), and the Temple of Vesta (#57), the Shrine of Bacchus (#32), and the Tholus of Cybele (#34) at Rome.

²⁴ According to some Renaissance plans, the Theater Shrine at Tibur (#65) may have displayed its main statue in a similar way, see Chap. VI #65.

rebuilt as a drum to visually balance statue groups added to flank its stairs.²⁵

Moreover, some round temples incorporated niches or aediculae, like the Pantheon (#50), to impress their visitors with statues on all sides.²⁶

In addition to their form, this thesis has addressed influences on the design and ornament of Roman round temples. Following her expansion into Greece, elements like ashlar foundations, stepped krepes and timber roofs known from tholoi feature in the Roman repertory. They appear concurrently with Roman brick and concrete foundations, podia, and domes. Round temple builders drew on both traditions in their designs, favoring the Greek for some buildings like the Temple of Hercules Victor *ad portam Trigeminam* (#44), which was intended to convey its founder's Greek tastes, and the Roman for others like the Temple of Fortuna Huiusce Diei (#38). Required to fit within a complex of rectangular temples, this Temple used its Roman podium and steps to deny its roundness and lend it the same visual axis and orientation as its neighbors.

Beyond these design elements, Roman round temples employ the same basic forms as Greek tholoi. However, while their monopteroi and peripteroi are comparable, Greek drums, lacking cupolas, do not have the same volume or visual impact as their Roman counterparts. Similarly, the drum's emphasis on shaping interior space, used to great effect in the Pantheon (#50), is more a feature of Roman round temples.

In their ornament, Roman round and rectangular temples alike draw from the Greek architectural repertory. Augustus' architects, looking to Greece for inspiration, formulated the 'Classical style' followed by many of his successors. The perseverance of Greek motifs in Roman architecture is demonstrated by round

²⁵ See Chap. IV #38.

temples built in the Greek world. In their decoration, temples like the Rotunda at Corinth (#9) are equally appropriate to Greece and Rome. The most prominent example however is the Temple of Roma and Augustus at Athens (#4), which derived its form and proportions, together with its ornament, from the Classical Erechtheion. The Erechtheion in turn inspired the use of caryatids in Agrippa's Pantheon (#50) as well as in the Forum of Augustus at Rome. Although local influences are more apparent in the ornament of round temples built in Asia Minor,²⁷ the Temples of Tyche at Side and Baalbek (#59 and 7) employ Roman podia and the Temple of Zeus Asklepios Soter at Pergamon (#27) imitates the design of Hadrian's Pantheon.²⁸

In their proportions, Doric round temples follow both Greek tholoi and Vitruvius, while Ionic and Corinthian examples begin to show a pattern of their own by the early Imperial period. Their columnar orders attain a consensus of proportions under the Flavian and Antonine emperors, though, in other aspects of their design, round temples are remarkable for their variety. As a result, their analysis has raised doubts about the approach of Vitruvius and M. Wilson Jones, who propose strict rules for temple design.

Though the range in proportions and size is remarkable for buildings of a single architectural type, round temples have some features in common. Most early peripteroi favor a 3:5 relationship between their cella and stylobate diameters, as recommended by Vitruvius,²⁹ and many round temples place an emphasis on height. Unlike rectangular temples, whose main axis is horizontal, round temples focus on the vertical. This results in monopteroi like the Rotunda at Athens (#5), which appear

²⁶ The Shrine of Venus (#55) may have included niches along the exterior of its cella wall, while the Temple of Tyche at Baalbek (#7) has both internal and external aediculae.

²⁷ For example, see Chap. VII 'Soffit panels and ceiling coffers.'

²⁸ See Chap. VI #27 and 'Proportional analysis.'

²⁹ See Chap. IV 'Proportional analysis.'

disproportionately tall for their diameter, and drums like the Pantheon (#50), whose volumes far surpass their floor space.³⁰

When choosing between round and rectangular forms for their temples, patrons must have evaluated the religious, social, topographical and aesthetic impacts of their decision. Though most preferred the rectangular form, those who built round temples would have been attracted to their versatility. Their ability to draw attention in virtually any setting must have been appealing to patrons who wanted to broadcast their religious devotion and social status. This may have contributed to round temples' popularity in the late Republic, when Roman military conquests provided the primary impetus for their construction,³¹ and under the reign of Hadrian. His Pantheon (#50), described by its contemporaries as a reflection of the heavens,³² not only inspired the design of round temples into the early fourth century AD, but continues to act as a major landmark in Rome and a milestone in the history of her architecture.

³⁰ See Chart VI.8.

³¹ This is assured by an analysis of the augural techniques employed in defining *templum* spaces, which has demonstrated that the dearth of round temples prior to the late Republic cannot be explained as a reflection of legal or religious constraints. See Chap. III 'Augural divination in Archaic Italy: defining the Roman *templum*.'

³² See Cass. Dio 53.27 (quoted in #50) and Chap. VI #50.

NOTES ON ANCIENT SOURCE CITATIONS AND THE BIBLIOGRAPHY

ANCIENT SOURCE CITATIONS

Latin sources and inscriptions are cited according to the abbreviations found in the *Thesaurus Linguae Latinae. Index* (1990).

For Greek sources, a comparable method is employed. For the author's name, the first syllable or first and second syllables, if the first does not end in a consonant, is cited. This is followed by the work cited by its Latin name and abbreviated according to the guidelines of the *Thesaurus Linguae Latinae. Index* (1990).

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**ROUND TEMPLES IN ROMAN ARCHITECTURE
OF THE REPUBLIC THROUGH THE
LATE IMPERIAL PERIOD**

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VOLUME II

VOLUME II. TABLE OF CONTENTS

NOTES ON THE TABLES AND CHARTS

CATALOGUE ENTRIES

- #1 AIGOSTHENA: Melampous, Temple
- #2 ARGOS: Nymphs, Temple
Table, Chart, Plan, Plates
- #3 ATHENS: Lysicrates, Monument
Table, Chart, Plan, Plates
- #4 ATHENS: Roma and Augustus, Temple
Table, Chart, Plan, Plates
- #5 ATHENS: Rotunda
Table, Chart, Plan, Plates
- #6 ATHENS: Skias
Table, Chart, Plan, Plates
- #7 BAALBEK: Tyche, Temple
Table, Chart, Plan, Plates
- #8 BATH: Sulis-Minerva, Shrine
Table, Chart, Plan, Plates
- #9 CORINTH: Rotunda
Table, Chart, Plan, Plates
- #10 DELOS: Hermes and Maia, Shrine
Table, Chart, Plan, Plates
- #11 DELPHI: Tholos, 580 BC
Table, Chart, Plan, Plates
- #12 DELPHI: Tholos, late 5th c.-370 BC
Table, Chart, Plan, Plates
- #13 EPIDAUROS: Tholos
Table, Chart, Plan, Plates
- #14 ILION: Rotunda
Table, Chart, Plan, Plates
- #15 ISTHRIA: Palaimon-Melikertes, Temple
Table, Chart, Plan, Plates
- #16 KNIDOS: Aphrodite, Temple
Table, Chart, Plan, Plates
- #17 LAVINIUM: Penates, Shrine
- #18 MAGNESIA ON THE MEANDER: Athena Poliouchos, Shrine
Plan
- #19 MILETOS: Apollo Delphinios, Shrine
Table, Plan, Plates
- #20 NAPLES AREA: Eumelos, Vesta or Ceres, Shrine
- #21 NAZZANO: Feronia, Temple
Table, Plan
- #22 OLYMPIA: Philippeion
Table, Chart, Plan, Plates
- #23 OSTIA: Lares Augusti, Shrine
Table, Chart, Plan, Plates
- #24 OSTIA: 'Pantheon' (I.XI.1)
Table, Chart, Plan, Plates
- #25 PELLA: Round Court with tholoi annexes
Table, Chart, Plan, Plates
- #26 PERGAMON: Abaton

- Table, Chart, Plan, Plates
 #27 PERGAMON: Zeus Asklepios Soter, Temple
 Table, Chart, Plan, Plates
 #28 POMPEII: Monopteros
 Table, Chart, Plan, Plates
 #29 PORTUS: Liber Pater Commodianus, Shrine
 #30 PRAENESTE: Fortuna Primigenia, Shrine
 Table, Chart, Plan, Plates
 #31 PRAENESTE: Fortuna Primigenia, Temple
 Table, Chart, Plan, Plates

MAP OF ROME

- #32 ROME: Bacchus, Shrine
 Table, Plan, Plates
 #33 ROME: Camenae, Shrine
 Table, Plan, Plates
 #34 ROME: Cybele, Tholus
 Table, Plan, Plates
 #35 ROME: Dea Dia, Temple
 Table, Chart, Plan, Plates
 #36 ROME: Fors Fortuna, Temple
 Table, Plan, Plates
 #37 ROME: Fortuna, Temple
 Table, Plan, Plates
 #38 ROME: Fortuna Huiusce Diei, Temple
 Table, Charts (I and II), Plans (I and II), Plates (I and II)
 #39 ROME: Genius Senatus, Shrine
 Plates
 #40 ROME: Gens Flavia, Temple
 Plates
 #41 ROME: Hercules, Shrine
 Table, Chart, Plan, Plates
 #42 ROME: Hercules and the Muses, Temple
 Table, Chart, Plan, Plates
 #43 ROME: Hercules Victor *in foro Boario*, Temple
 Table, Chart, Plan, Plates
 #44 ROME: Hercules Victor *ad portam Trigeminam*, Temple
 Table, Chart, Plan, Plates
 #45 ROME: Juno Marialis, Temple
 Plates
 #46 ROME: Mars Ultor, Temple
 Plates
 #47 ROME: Mercury, Temple
 Plates
 #48 ROME: 'Minerva Chalcidica, Temple'
 Table, Plan, Plates
 #49 ROME: Mundus
 Table, Chart, Plan, Plates
 #50 ROME: Pantheon
 Table, Chart, Plan, Plates
 #51 ROME: Perirrhanterion
 Table, Chart, Plan, Plates
 #52 ROME: 'Romulus, Temple'
 Table, Chart, Plan, Plates

- #53 ROME: Sol, Temple
Table, Charts (Ligorio, Palladio), Plans (Ligorio, Palladio), Plates
- #54 ROME: Spes Vetus, Shrine
Plates
- #55 ROME: Venus, Shrine
Table, Plan, Plates
- #56 ROME: Vesta, Shrine
Plates
- #57 ROME: Vesta, Temple
Table, Chart, Plan, Plates

#1 AIGOSTHENA: Melampous, Temple

Context: unknown

Date: under Geta: coins (see 'Iconographic sources' below)

Description: round monopteros with a domed roof

Remains: none

Literary and epigraphical sources:

Sanctuary of Melampous: *IG* VII 219 and 223, and Paus. 1.44.5 (yearly festival in honor of Melampous at Aigosthena). *IG* VII 207, 208, 219, and 223 (*Melampodeion* where the festival was held).

Iconographic sources: coins minted under Geta (see Head and Poole 1888, lxii and Imhoof-Blümer and Gardner 1888, 9)

Bibliography: Postolacca 1866, esp. 336. Head and Poole 1888, lxii. Imhoof-Blümer and Gardner 1888, 9. Plassart 1915, esp. 71 n. 1. Robert 1939, 137.

Text: 218.

#2 ARGOS: Nymphs, Temple

Context: Agora, to the N of the Hellenistic portico; orientation unknown (see Roux 1954, 162)

Date: 2nd c. AD: the quality of the workmanship (see text) and the letter forms of the inscription (see Roux 1954, 162 and 'Literary and epigraphical sources: Inscriptions from Remains' below)

Description: round monopteros? (8 m. in dia., marble, see text) resting on a socle (16 by 16 m., incl. a pit accessed by stairs and a corridor) with 8 columns (Attic bases, monolithic shafts, Corinthian capitals), a Corinthian entablature (a 3-fascia architrave, an inscribed frieze course, a modillion cornice, and a sima with lion-head water spouts, see text), and a conical roof topped by an acanthus finial

Remains: part of the foundations (marble-revetted poros with the corridor revetted in limestone?, see Roux 1954, 162), the stylobate (marble, resting on 8 poros piers, preserves traces of the cella wall?, see Roux 1954, 162 and text), the columns, the entablature, leaf-shaped roof tiles, and the acanthus finial (marble)

Literary and epigraphical sources:

Inscriptions from 'Remains': *ΤΩΝ ΠΗΓΩΝ ΚΑΙ ΤΟ ΝΥΜΦΑΙΟΝ ΜΕΤΑ ΤΩΝ ΔΟΞΕ[ΙΩΝ]* (dedicatory inscription, entablature, see Roux 1954, 160).

Excavations: G. Roux in 1953-1955

Bibliography: Courbin 1953, 107 no. 1586 figs. 8-9. Roux 1954, esp. 160-2 figs. 5-8; and 1957, 663-5 figs. 56-7. Neuerberg 1960, 68. Dinsmoor, jr. 1974, 423 n. 15.

Text: 184-5.

ARGOS: Nymphs, temple

<i>actual measurements</i>	<i>ideal</i>				<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Monopteros ext. *	8	27			1	
Pit dep.	2	6.8			1/4	
Pit wid.	1	3.4			1/8	
Pit stair risers	0.35	1.2				
Corridor wid.	0.5	1.7			1/16	
Socle len.	16	54			2	
Socle wid.	16	54			2	
Total hei. (columns)	4.5	15.2			9/16	10
Lower column dia. **	0.45	1.52				1
Shaft hei.	4	13.5			1/2	
Base hei.	0.2	0.7	0.75	7.1%	1/36	1/2
Capital hei.	0.3	1				2/3
Interaxial dia.	7.2	24.3	24	-1.2%	8/9	16
Entablature hei.	1.3	4.4			4/25	
Architrave hei.	0.45	1.5			1/18	
Frieze hei.	0.45	1.5			1/18	
Floorspace (square measure)	50.3	572.6				
<i>reconstructed measurements</i>						
Total hei. (monopteros)	10.7	36.1	36	-0.4%	1 1/3	
Stylobate wid.	8.5	28.7			13/12	
Stylobate hei.	0.2	0.7			1/40	
Base dia. (columns)	0.8	2.7			1/10	1 7/9
Capital dia.	1.25	4.2			2/13	2 7/9
Dentil hei.	0.15	0.5			1/54	
Cornice wid.	0.45	1.5			1/18	
Cornice hei.	0.25	0.8			1/32	
Acroteria wid.	0.2	0.7			1/40	
Acroteria hei.	0.35	1.2			1/23	
Roof dia.	7	23.6			7/8	
Roof hei.	2.7	9.1	9	-1.3%	1/3	
Volume (cubic measure)	91.5	2162.1				

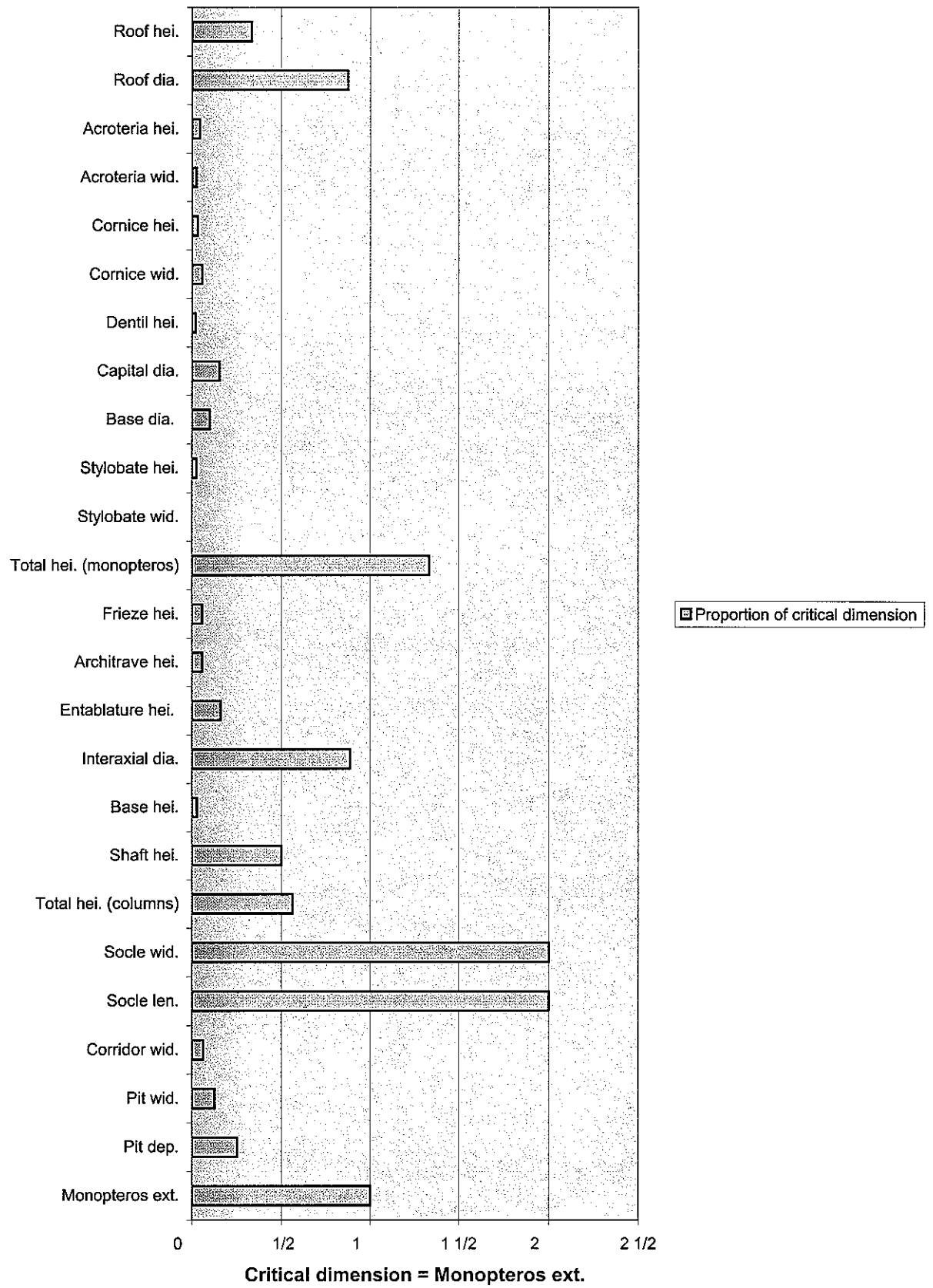
Note: * *critical dimension*

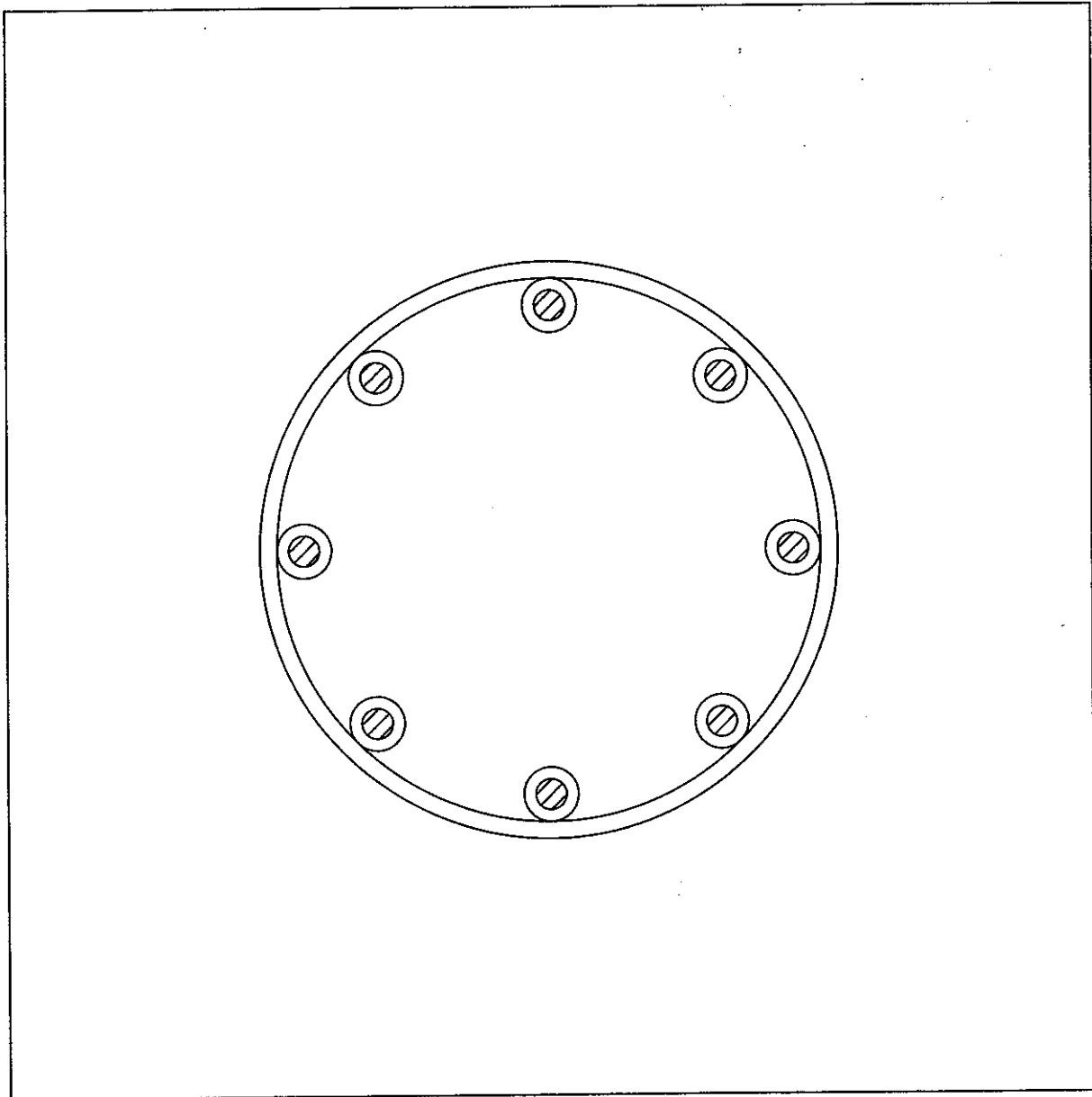
** *in relation to the lower column dia.*

Source: Courbin 1953, 107 no. 1586 figs. 8-9.

Roux 1954, 160-2 figs. 5-8; 1957, 663-5 figs. 56-7.

Chart #2. ARGOS: Nymphs, temple





#2 ARGOS:
Nymphs, temple
Scale 1:100

#3 ATHENS: Lysicrates, Monument

Context: W side of the Street of the Tripods, leading to the Sanctuary of Dionysos; oriented E

Date: 335-334 BC: dedicatory inscription (see 'Literary and epigraphical sources' below)

Patron: Lysicrates

Description: drum (2.2 m. in dia., marble) on a 3-step square socle (3.275 m. per side) with 6 interior and exterior pilasters (Attic bases, Corinthian capitals), an Ionic entablature, and a tent-shaped roof topped by a tripod finial

Remains: most of the foundations, socle (Pentelic marble), cella walls (Hymetic marble), pilasters, entablature and roof (Pentelic marble)

Literary and epigraphical sources: Bauer 1977, 218-9 (dedicatory inscription naming Lysicrates, architrave).

Decoration: roof with simulated scale-shaped tiles and a tripod finial; free-standing statue of Dionysos by Praxiteles in the interior (see Weber 1990, 106, and Roux 1992, 195 and 200)

Excavations: visible since antiquity

Previous attributions: Roux (1992, 195 and 200) identifies it as a treasury built to showcase statuary

Bibliography: Riemann 1956, 266 fol. Binder 1969, 92-4. Bauer 1977, 197-227 pls. 91-6. Seiler 1986, 138-47. Wilson Jones 1989b, 151. Weber 1990, 106, 220 cat. M4, and pl. 53.197-8. Roux 1992, esp. 200-3.

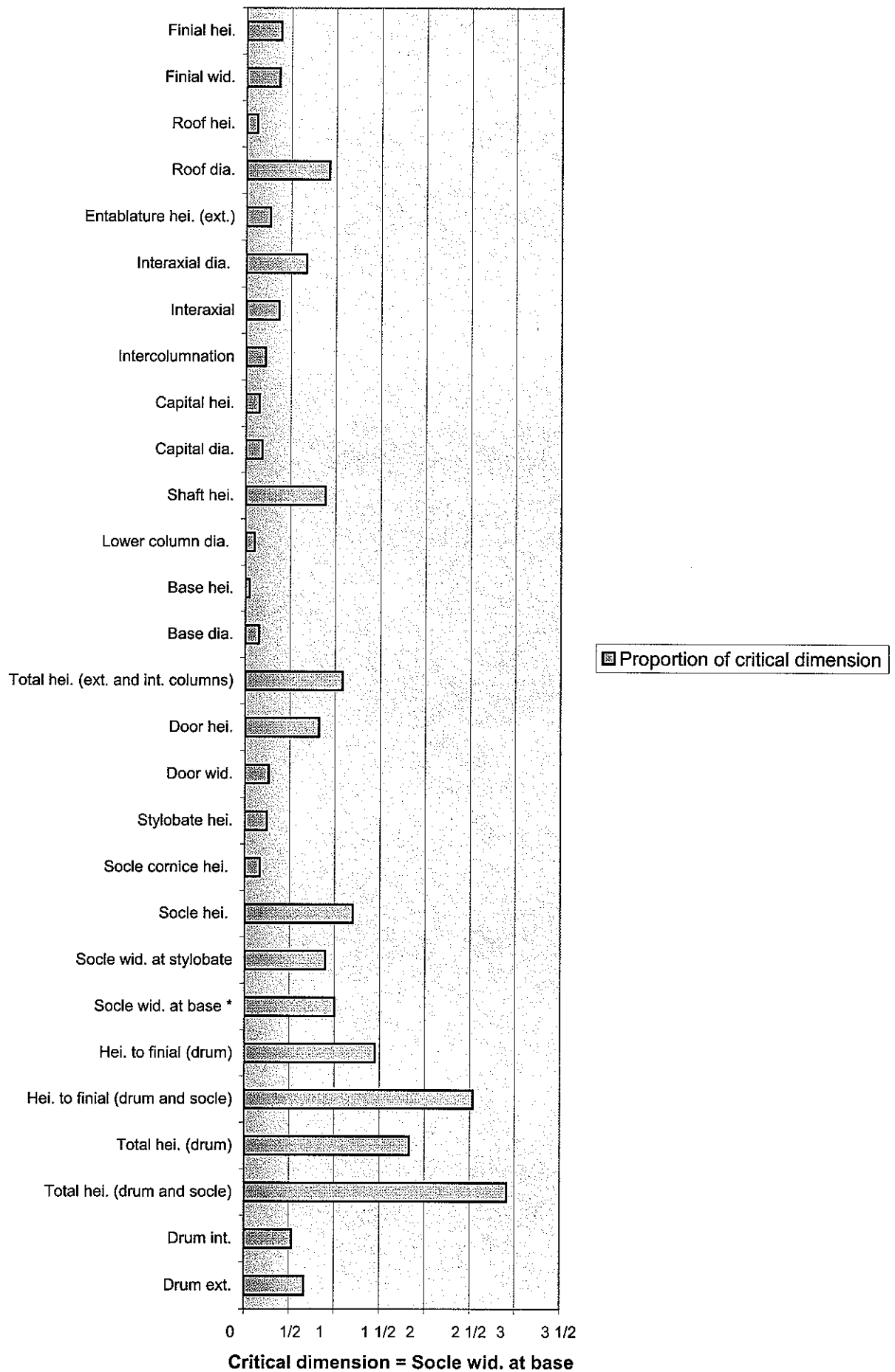
Text: 34-8.

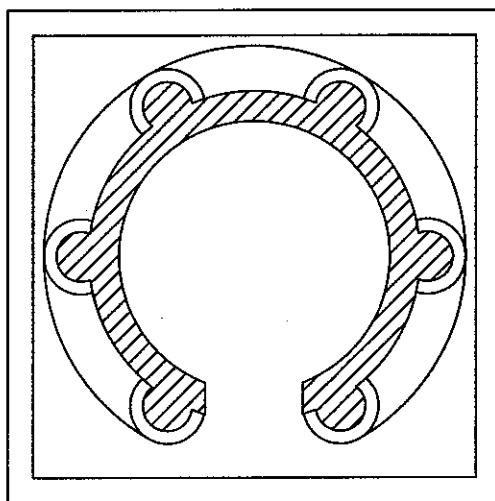
<i>ATHENS: Lysicrates, monument</i>		<i>ideal proportional relationships</i>	
<i>actual measurements</i>	<i>meters</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Drum ext.	2.2	2/3	
Drum int.	1.7	9/17	
Total hei. (drum and socle)	9.54	3	
Total hei. (drum)	6	1 5/6	
Hei. to finial (drum and socle)	8.29	2 1/2	
Hei. to finial (drum)	4.75	1 4/9	
Socle wid. at base *	3.275	1	
Socle wid. at stylobate	2.94	8/9	
Socle hei.	3.945	1 1/5	
Socle cornice wid. (lower)	0.1		
Socle cornice hei.	0.55	1/6	
Stylobate hei.	0.8	1/4	
Door wid.	0.85	5/19	
Door hei.	2.7	5/6	
Total hei. (ext. and int. columns)	3.54	1 1/12	10 5/7
Base dia.	0.5	2/13	1 1/2
Base hei.	0.15	1/22	4/9
Lower column dia. **	0.33	1/10	1
Shaft hei.	2.9	8/9	8 4/5
Capital dia.	0.6	2/11	1 4/5
Capital hei.	0.49	3/20	1 1/2
Intercolumnation	0.7	3/14	2 1/8
Interaxial	1.2	3/8	3 5/8
Interaxial dia.	2.2	2/3	6 2/3
Entablature hei. (ext.)	0.85	4/15	
Architrave hei.	0.25		
Frieze hei.	0.3		
Dentil hei.	0.15		1 7/95
Cornice wid.	0.2		
Cornice hei.	0.15		
Roof dia.	3.05	12/13	
Roof hei.	0.4	1/8	
Finial wid.	1.2	3/8	
Finial hei.	1.25	3/8	
Floorspace (square measure)	2.3		
Volume (cubic measure)	2.4		

Note: * *critical dimension*
 ** *in relation to the lower column dia.*

Source: Seiler 1986, 136-47 fig. 61.
 Wilson Jones 1989, 151.

Chart #3. ATHENS: Lysicrates, monument





#3 ATHENS:
Lysicrates, monument
Scale 1:50

#4 ATHENS: Roma and Augustus, Temple

Context: Acropolis, between the Parthenon (E, 5th c. BC) and the Erechtheion (W, 5th c. BC, rebuilt in the Augustan period); oriented toward the Parthenon (E)

Date: 27-20 BC: dedicatory inscription (see 'Literary and epigraphical sources: Inscriptions from Remains' below and text)

Architect: Diogenes of Athens? (see text)

Patron: the Athenian people in honor of Augustus

Description: round monopteros (8.6 m. in dia., Pentelic marble) with a 3-step krepis, a screen wall, 9 columns (Attic bases, fluted shafts, Ionic capitals), an Ionic entablature, and a conical roof topped by a pineapple finial? (see Weber 1990, 224 cat. M18)

Remains: the foundations (poros? or native rock?, see text), krepis, euthynteria, and parts of the columns and inscribed entablature (Pentelic marble); an inscribed altar? was found nearby (Pentelic marble?, see text)

Literary and epigraphical sources:

Inscriptions from 'Remains': *IG* II² 3173 = *CIG* 478 and *IG* III 1276 (dedicatory inscription, entablature). *IG* II² 1076 (altar).

Cult of Roma and Augustus: Suet. *Aug.* 52 (cult). *IG* II² 1054 and 1938 (*Romaia* festival at Athens). *IG* II² 2336 ('priest of Roma' at Athens, ca. 102-101 BC). *IG* II² 5047 and 5114 (priest's seat in the Theater of Dionysos, Athens).

Iconographic sources: 3rd c. coins minted in Athens (see Svoronos and Pick 1924, pl. 98 nos. 19-43)

Decoration: cult statues of Augustus and Roma? (see text and Weber 1990, 114)

Excavations: L. Ross in the 1830s, F. C. Penrose in 1851, and P. Kavvadias and G. Kawerau in 1885-1890, with additional fragments found in 1962-1968; dedicatory inscription copied by Cyriacus of Ancona in 1436.

Bibliography: Penrose 1851, 3 pl. 2 no. 6. Ross 1855, 106, 113 fol., and 272. Kavvadias and Kawerau 1906, 102. Snijder 1924, 223-6. Svoronos and Pick 1924, pl. 98 nos. 19-43. Judeich 1931, 256-7. Robert 1939, 369-75. Binder 1969, *passim*. Mellor 1981, 950-1030. Seiler 1986, 145. Weber 1990, 113-4 and 224 cat. M18. Baldassarri 1995, 69 fol. Walker 1997, 67-80. Baldassarri 1998, esp. 45-63.

Text: 115-6.

ATHENS: Roma and Augustus, temple

ATHENS: Roma and Augustus, temple

actual measurements	ideal				ideal proportional relationships	
	meters	roman feet	roman feet	% difference	to critical dimension *	within columnar order **
Cella ext. (screen wall)	3.2	10.8			2/5	
Cella int.	2.1	7.1	7	-1.4%	1/4	
Hei. to roof *	8.2	27.70			1	
Stair treads	0.33	1.11			1/25	
Stair risers	0.27	0.91				
Krepis dia. at base	8.6	29.1	30	3.1%	1 1/12	
Krepis dia. at euthynteria	7.35	24.83			8/9	
Krepis hei.	0.81	2.74	2.8	1.1%	1/10	
Euthynteria hei.	0.27	0.91				
Ambulatory	0.9	3			1/9	
Cella wall wid.	0.55	1.86			1/15	
Door dep.	0.6	2.15			1/13	
Door wid. (outside dim.)	1	3.4			1/8	
Door wid. (inside dim.)	0.7	2.36	2.3	-2.2%	1/12	
Door hei.	7.25	24.49			8/9	
Total hei. (columns)	6.2	20.9	21	0.5%	3/4	8 3/4
Base dia.	0.994	3.36			1/8	1 2/5
Base hei.	0.283	0.96				2/5
Lower column dia. **	0.704	2.4				1
Shaft hei.	5.3	17.9	18.5	3.4%	2/3	7 11/24
Capital dia.	1.15	3.9			1/7	1 5/8
Capital hei.	0.6	2				5/6
Intercolumnation	2.08	7			1/4	2 11/12
Interaxial	3.07	10.36	10.4	0.4%	3/8	4 1/3
Interaxial dia.	5.95	20.1	19.75	-1.7%	5/7	8 3/8
Architrave hei.(ext.)	0.6	2				
Frieze hei.	0.6	2				
Floorspace (square measure)	3.5	39.6				
Volume (cubic measure)	6.6	162.9				

reconstructed measurements						
Total hei.	9.6	32.4			1 1/6	
Entablature hei. (ext.)	1.5	5			2/11	
Dentil hei.	0.1	0.3				
Cornice wid.	0.33	1.11			1/25	
Cornice hei.	0.2	0.7	0.7	-1.1%	1/40	
Roof dia.	7.35	28.83	28.8	-0.1%	1 1/25	
Roof hei.	1.15	3.89			1/7	
Finial wid.	0.4	1.4	1.4	-1.1%	1/20	
Finial hei.	0.3	1				

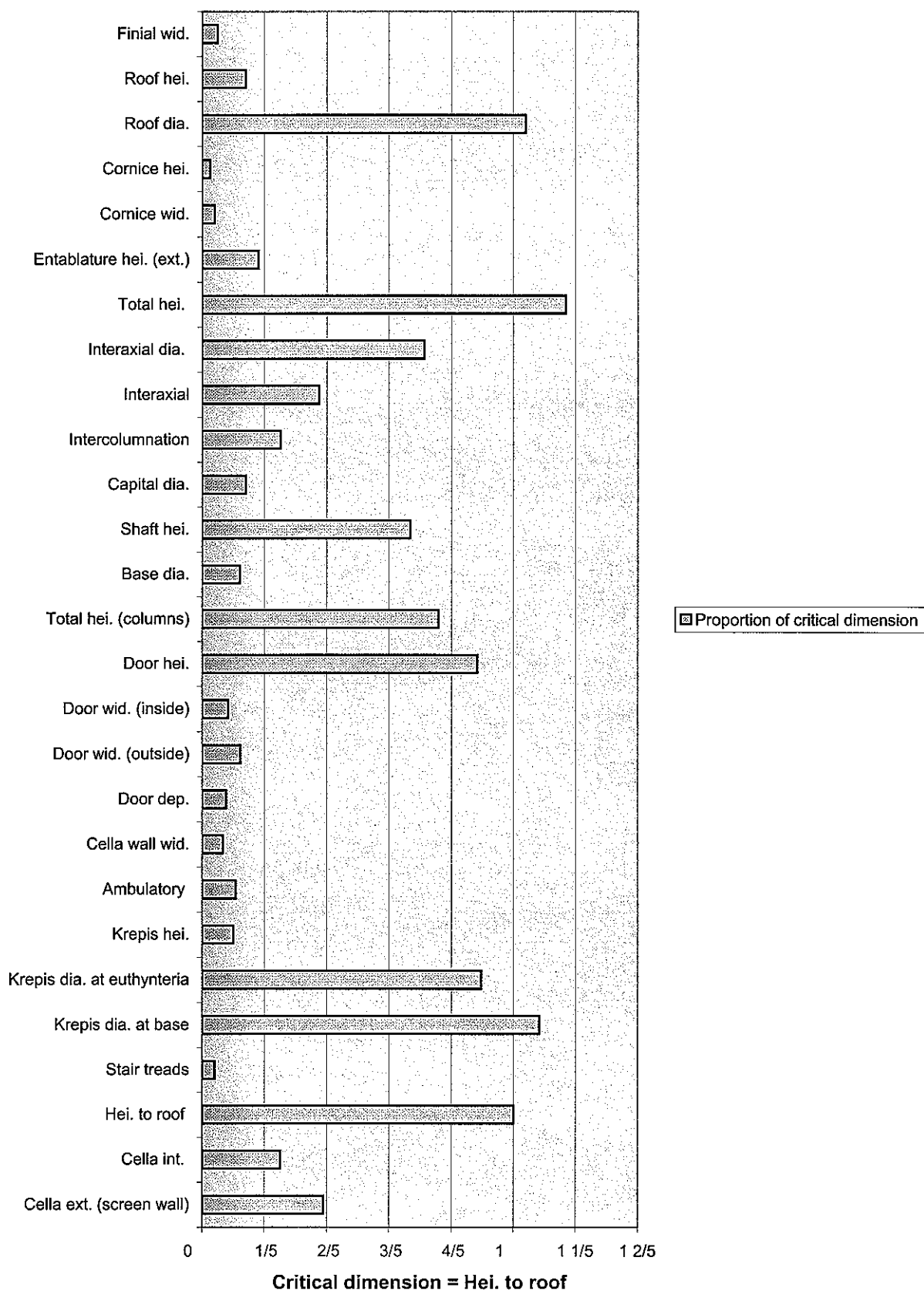
Note: * *critical dimension*

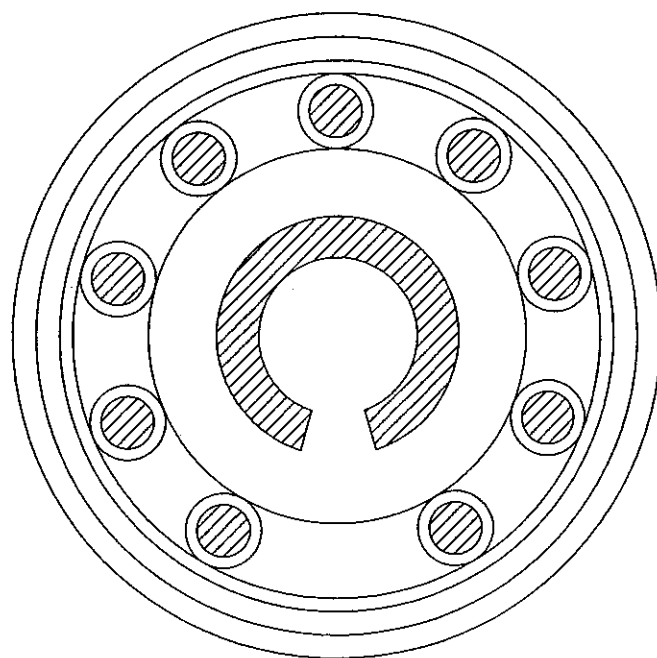
** *in relation to the lower column dia.*

Source: Binder 1967, 48-88 pl. 5.

Baldassarri 1998, 46 n. 3 fig. 3.

Chart #4. ATHENS: Roma and Augustus, temple





#4 ATHENS:
Roma and Augustus, temple
Scale 1:100

#5 ATHENS: Rotunda

Context: Agora, near the N end of the Stoa of Attalos; orientation unknown

Date: mid 2nd c. AD: destruction of the peristyle court (see text), stratigraphy (see Robinson 1959, 46-9, and 'Remains' below), and stylistic comparanda (see text)

Description: round monopteros (7.1 m. in dia., marble) on a 3-step krepis? (see Dinsmoor, jr. 1974, 422, and text) with 8 columns (Attic bases?, monolithic shafts, Corinthian or Composite? capitals, see text), an entablature (incl. a sima with lion-head water spouts), and a dome

Remains: part of the foundations (poros blocks with a concrete fill, see text), the columns (shafts of verde antico marble), the sima with lion-head water spouts (Pentelic marble), and the dome (brick-faced concrete); ceramic remains were found in the destruction fill (see 'Date' above), while nearby are a deposit of lead seals (see Shear 1936, 412, and text) and a water channel (see Dinsmoor, jr. 1974, 425-7)

Previous attributions: based on the large number of ancient burials in the area, Dinsmoor, jr. (1974, 413 and 427) tentatively identified the Rotunda as a heroon

Excavations: H. A. Thompson in 1936, with additional excavations in 1951-1954

Bibliography: Shear 1936, 403-14. Robert 1939, 388. Robinson 1959, 46-9. Binder 1969, 107-10. Shear, jr 1971, pl. 46. Thompson and Wycherley 1972, 203 and 229. Dinsmoor, jr. 1974, 412-27. Townsend 1995, 76-7 and 224-5.

Text: 185-6.

ATHENS: Rotunda

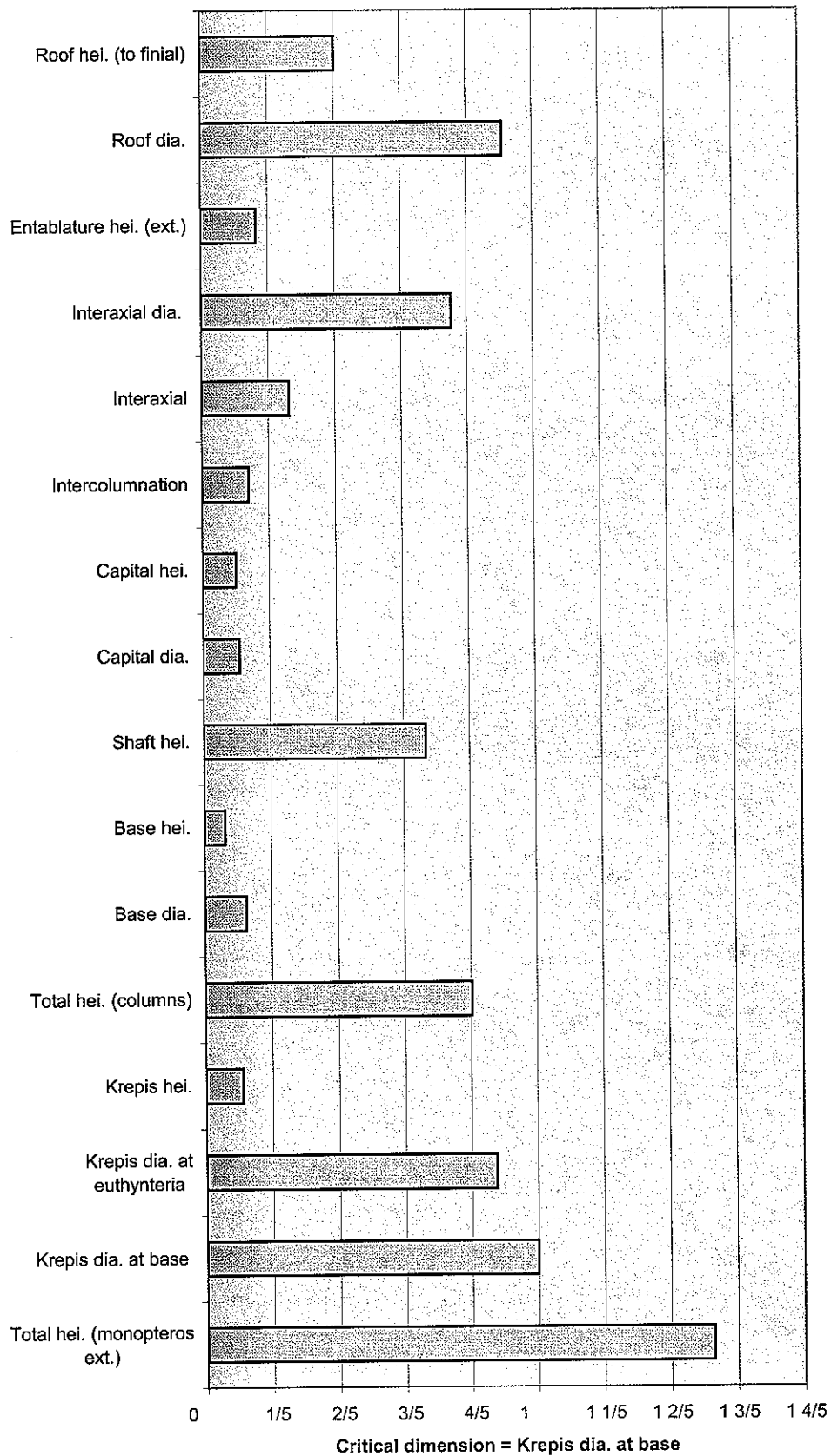
<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships to critical dimension *</i>	<i>within columnar order **</i>
Total hei. (monopteros ext.)	12.4	41.9			1 1/2	
Foundation dep.	1.2	4.0				
Foundation dia.	8.5	28.7				
Stair treads	0.3	1				
Stair risers	0.3	1				
Krepis dia. at base *	8.1	27.4			1	
Krepis dia. at euthynteria	7.17	24.2	24	-0.8%	7/8	
Krepis hei.	0.9	3.04			1/9	
Euthynteria hei.	0.25	0.84				
Total hei. (columns)	6.58	22.23	22	-1.0%	4/5	9 2/5
Base dia.	1	3.4			1/8	
Base hei.	0.5	1.7			1/16	8/11
Lower column dia. **	0.693	2.34				1
Shaft hei.	5.3	17.9	18.25	2.0%	2/3	7 4/5
Capital dia.	0.9	3			1/9	
Capital hei.	0.78	2.64	2.75	4.2%	1/10	
Intercolumnation	1.13	3.82			1/7	
Interaxial	2.13	7.2			5/19	
Interaxial dia.	6.09	20.6			3/4	
Entablature hei. (ext.)	1.34	4.53			1/6	
Architrave hei.	0.47	1.59			0	
Frieze hei.	0.41	1.39			0	
Dentil hei.	0.1	0.34			0	
Cornice wid.	0.2	0.7			0	
Cornice hei.	0.36	1.21			0	
Roof dia.	7.37	24.9			10/11	
Roof hei. (to finial)	3.2	10.8	11	1.9%	2/5	
Floorspace (square measure)	20.3	232.4				
Volume (cubic measure)	89.0	2870.7				

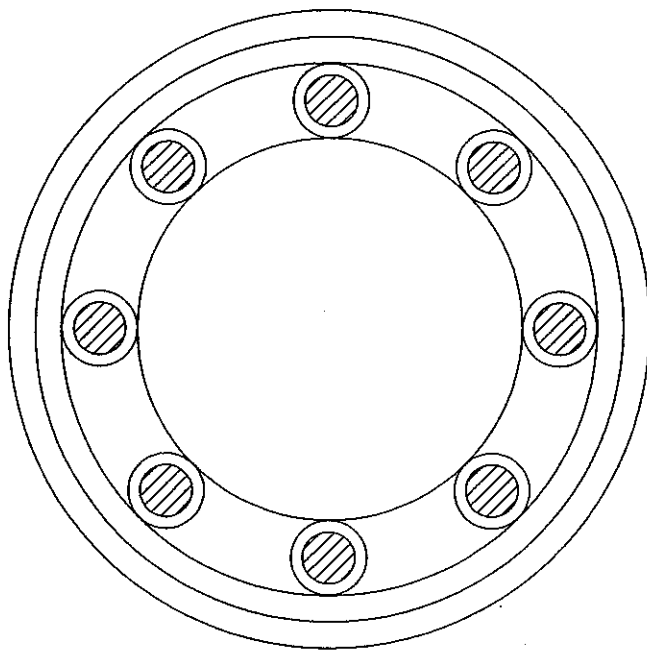
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: Dinsmoor, jr. 1974, 412-27 figs. 2-4.

Chart #5. ATHENS: Rotunda





#5 ATHENS:
Rotunda
Scale 1:100

#6 ATHENS: Skias

Context: Agora, adjacent to a kitchen (late Classical period), the Old Bouleuterion, the Metroon, and a major roadway

Date:

I. 470-460 BC: building materials and techniques, especially re. foundations and roofing

II. late 1st c. BC: porch, repairs to the door, marble paving

Patron:

I and II. Prytaneis?

Description:

I. drum (18.3 m. in dia., poros with mud brick walls) with 6 interior columns (in 2 arcs), 2 doors (facing E and N), and a tent-shaped roof (bronze and terracotta on an wooden substructure, see Thompson 1940, 89-91)

II as I. but with a 4-column porch (4.4 m. long by 6.6 m. wide) and 4 windows

Remains:

I. fragments of the socle, thresholds, columns (poros), sima, acroteria, and triangular roof tiles (terracotta); refuse pits embedded in the floor

II. part of the porch and window frames (poros)

Literary and epigraphical sources:

Function and attribution:

I and II. *IG III 764 (tholos)*. Dem. 19.190 (*Prytaneion*). Paus. 1.5.1 (*Prytaneion, Skias*).

Plat. *Tim.* 402 and *Apol.* 32 C, Hesych. *Suid.*, Poll. 8.155, Dem. 19.249, and Andoc.

Myst. 45 (roles of the Prytaneis). *IG II 476* 1.38, 56 and 64 (storehouse).

II. See Wachsmuth 1890, 319 n. 3 (dedication to the *Phosphoroi*).

Decorative scheme: Paus. 1.5.1 (silver statues).

Decoration: silver statues (see 'Literary and epigraphical sources: Decorative scheme' above); marble paving; sima and acroteria ornamented with alternating braid patterns and palmettes

Excavations: L. Shear in 1933-1938

Previous attributions: Robert (1939, 136-7) identifies it as a chthonic heroon, while Seiler (1986, 35; cf. Paus. 1.5.1) sees it as a temple to Apollo Prostaterios and Artemis Boulaia

Bibliography: Wachsmuth 1890, 315 fol. Charbonneaux 1925, 158-78. Vanderpool 1935, 470. Shear 1936, 343 fol. Robert 1939, 117-37. Thompson 1940. Seiler 1986, 29-35. Wilson Jones 2000, 182 fig. 9.6b.

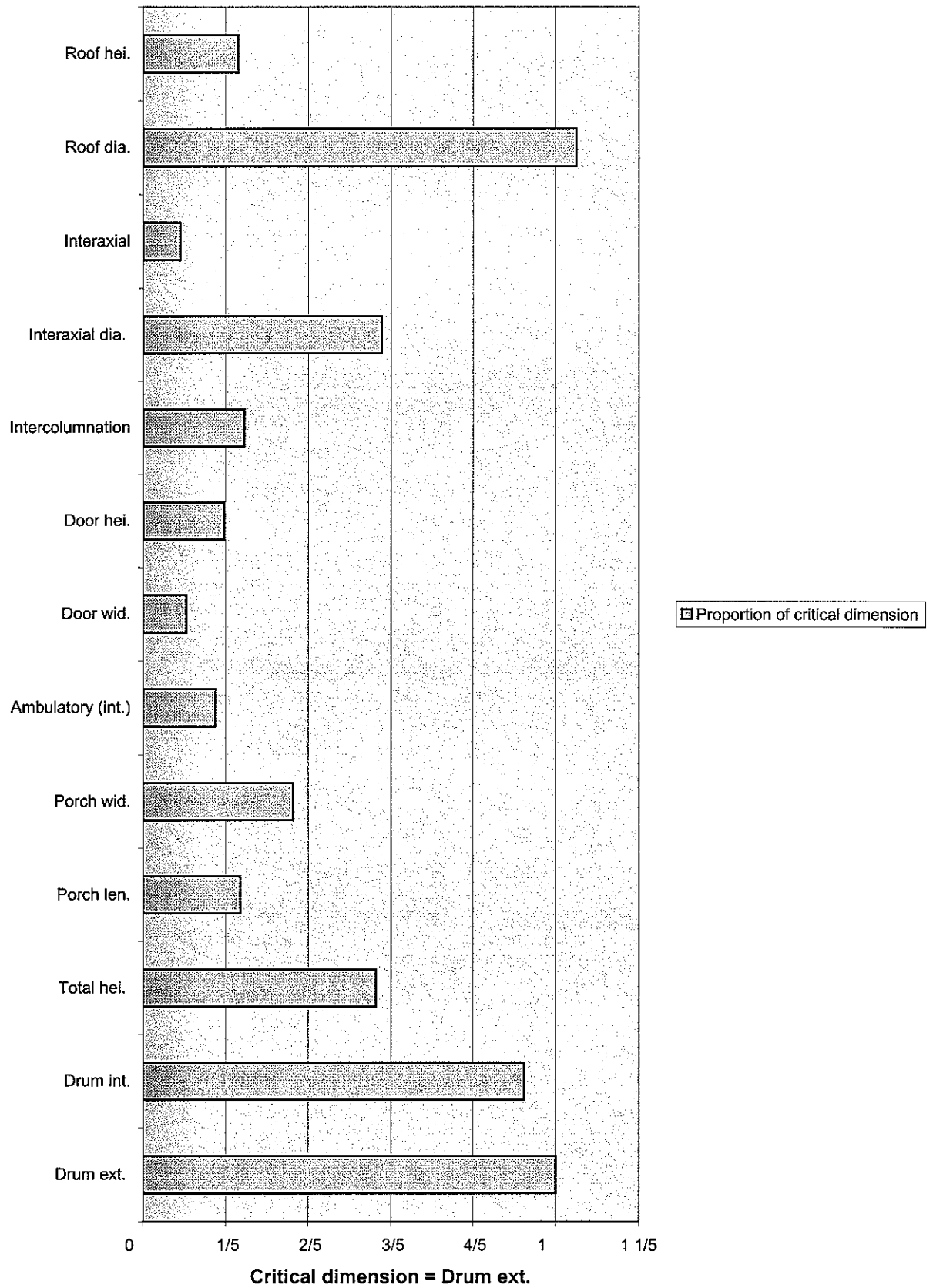
Text: 34-8.

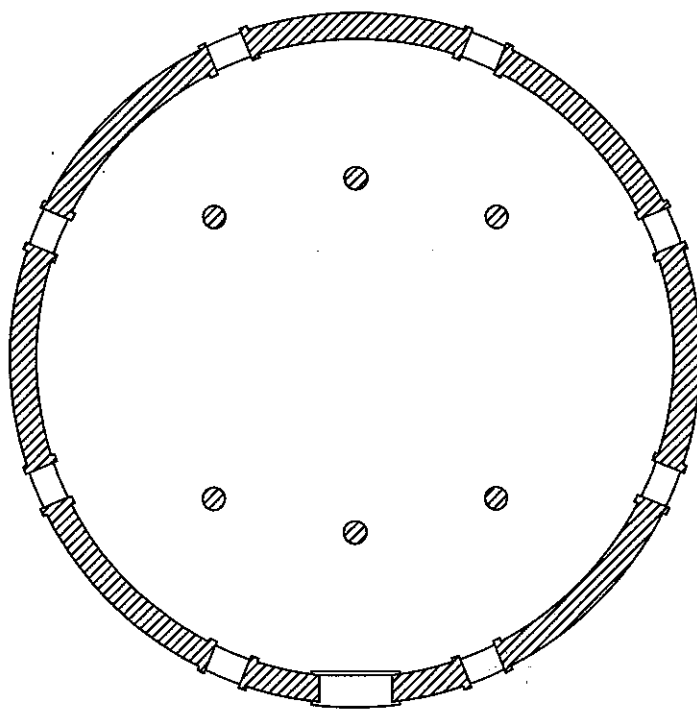
<i>ATHENS: Skias</i>		<i>ideal proportional relationships</i>	
<i>actual measurements</i>	<i>meters</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Drum ext. *	18.3	1	
Drum int.	16.9	12/13	
Total hei.	10.3	9/16	
Porch len.	4.4	4/17	
Porch wid.	6.6	4/11	
Cornice wid. (lower and upper)	0.1		
Cornice hei. (lower)	0.15		
Cornice hei. (upper)	0.35		
Ambulatory (int.)	3.17	3/17	
Cella wall wid.	0.7		
Door dep.	1.1		
Door wid.	1.9	2/19	
Door hei.	3.6	1/5	
Door jamb	0.2		
Door lintel	0.35		
Window wid.	0.9		
Window hei.	1.7		
Window jamb	0.2		
Window lintel	0.25		
Lower column dia. (int.) **	0.6		1
Intercolumnation	4.5	1/4	7 1/2
Interaxial dia.	10.56	4/7	17 3/5
Lower column dia. (porch) **	0.65		1
Intercolumnation	1		1 1/2
Interaxial	1.65	1/11	2 1/2
Cornice wid.	0.4		
Cornice hei.	0.15		
Acroteria wid.	0.05		
Acroteria hei.	0.2		
Roof dia.	19	1 1/20	
Roof hei.	4.2	3/13	
Floorspace (square measure)	224.3		
Volume (cubic measure)	379.5		

Note: * *critical dimension*
 ** *in relation to the lower column dia.*

Source: Seiler 1986, 29-35 figs. 15-6.
 Thompson 1940, *passim*.

Chart #6. ATHENS: Skias





#6 ATHENS:
Skias
Scale 1:200

#7 BAALBEK: Tyche, Temple

Context: sited 130 m. to the S of the Sanctuary of Jupiter (complex completed in the mid-2nd c. AD); may have faced the Decumanus (NW?, see text)

Date: under Philip the Arab: coins (see 'Iconographic sources' below), building materials and techniques (see text), and architectural comparanda (specifically the Temple of Bacchus, ca. Antonine period, and the Propylon at Baalbek, see Wiegand 1925, 109)

Description: round (11.5 m. in dia., *opus quadratum*) with an 8-column porch (Attic bases, monolithic shafts, and Corinthian capitals, supporting coffers; fronted by an elaborate set of steps, see Wiegand 1925, 94-5) and a drum whose scalloped podium supports 4 columns (5-cornered Attic bases and Corinthian capitals, monolithic shafts), mirrored by Corinthian pilasters, 5 semi-domed aediculae framed by pilasters (Attic bases, Composite capitals), a garland frieze, a Corinthian entablature (a 3-fasciae architrave, a rounded frieze course, a modillion cornice, and a sima with lion-head water spouts), and a cupola (see text and Wiegand 1925, 105-6); inside the drum are 2 tiers of decoration incl. a socle, 14 half-columns, 5 niches, a cornice, and a Corinthian entablature (as above)

Remains: much of the foundations and podium (packed stone faced with ashlar blocks); porch: the columns (red granite shafts), and part of the pediment (white marble?); drum: most of the cella walls incl. the door frame, the exterior aediculae and interior niches, the socle, cornices, frieze, entablatures, and part of the cupola (*opus quadratum*); a round altar, a head of Helios (limestone), and a relief depicting an eagle in flight were found nearby

Iconographic sources: coins minted under Philip I (see Winnefeld 1913, 153 fig. 6)

Decoration: marble flooring of the porch and cella (see text); the altar and the eagle relief (see 'Remains' above, and Wiegand 1925, 99, who links the relief with the Temple's door)

Excavations: German Baalbek-Expedition in 1898-1900 (see Wiegand 1925, 91-2)

Previous attributions: commonly considered a Temple of Venus (vs. Wiegand 1925, 90 and 99), Hülsen (1895b, 27) identified it as a Temple of Magna Mater,

Bibliography: Durm 1905, 302 fig. 275. Winnefeld 1913, 153 fig. 6. Wiegand 1925, 90-109 pls. 57-67. Smith 1950, 74-5. Sear 1982, 248. Godfrey and Hemsoll 1986, 209 n. 71. Wegner 1992, 40. Gros 1996a, 191.

Text: 226-8.

BAALBEK: Tyche, temple
ideal proportional relationships

actual measurements	ideal		% difference	ideal proportional relationships	
	meters	roman feet		to critical dimension *	within columnar order **
Cella ext.	11.5	38.9		2/3	
Cella int.	8.92	30.1		1/2	
Hei. to roof	14.5	49		6/7	
Porch len.	28.5	96.3		1 2/3	
Porch wid.	17	57.4		1	
Porch hei.	3.75	12.67		2/9	
Foundation len.	28.4	95.95			
Foundation wid.	17	57.4			
Stair treads (bottom and top)	0.38	1.28			
Stair treads (landing)	1.9	6.4		1/9	
Stairway wid. (bottom)	11.8	39.86		2/3	
Stairway wid. (top)	10.1	34.1		3/5	
Podium dia. at base (cella) *	17	57.4		1	
Podium dia. at base (porch len.)	28.5	96.3		1 2/3	
Podium dia. at base (porch wid.)	17	57.4		1	
Podium dia. at stylobate (cella)	16.8	56.76		1	
Podium hei.	2.91	9.83		1/6	
Podium cornice hei. (lower)	0.38	1.3			
Podium cornice hei. (upper)	0.5	1.7			
Ambulatory (ext.)	1.1	3.7	3.8	3.5%	1/15
Cella wall wid.	1.2	4.05			
Cornice wid. (lower)	0.3	0.9			
Cornice wid. (upper)	0.2	0.7			
Cornice hei. (lower)	0.6	1.95			
Cornice hei. (upper)	0.2	0.7			
Socle hei. (int.)	0.26	0.88			
Exedrae dep.	1.1	3.7	3.8	3.5%	1/15
Exedrae wid.	1.7	5.7		1/10	
Exedrae hei.	4.2	14.2		1/4	
Door dep.	0.95	3.2		1/18	
Door wid.	3.5	13.2			
Door hei.	7.09	24.0		5/12	
Total hei. (cella peristasis)	8.58	29		1/2	10 1/5
Base wid. (5 sided)	1.4	4.7			1 2/3
Base hei.	1	3.4			1 1/5
Lower column dia. **	0.84	2.84			1
Shaft hei.	6.53	22.1		2/5	7 7/9
Capital dia.	1.5	5.1	5.25	2.9%	1 6/7
Capital hei.	1.05	3.5		1/11	1 1/4
Intercolumnation	4	13.5			4 3/4
Interaxial	5.75	19.4		1/3	6 5/6
Interaxial dia.	14	47.3		5/6	16 2/3
Total hei. (porch columns)	8.58	29		1/2	10 1/5
Base dia.	1.4	4.7	4.75	1.1%	1 2/3
Base hei. (plinth)	0.9	3			
Lower column dia. **	0.84	2.84			1
Shaft hei.	6.63	22.4		2/5	7 8/9
Capital dia.	1.5	5.1	5.25	2.9%	1 6/7
Capital hei.	1.05	3.5		1/11	1 1/4
Intercolumnation (porch front)	6	20.3			7 1/7
Intercolumnation (porch side)	2	6.75			2 3/8
Interaxial (porch front)	7.4	25		3/7	8 4/5
Interaxial (porch side)	3.3	11.15		1/5	4

BAALBEK: Tyche, temple (cont.d)

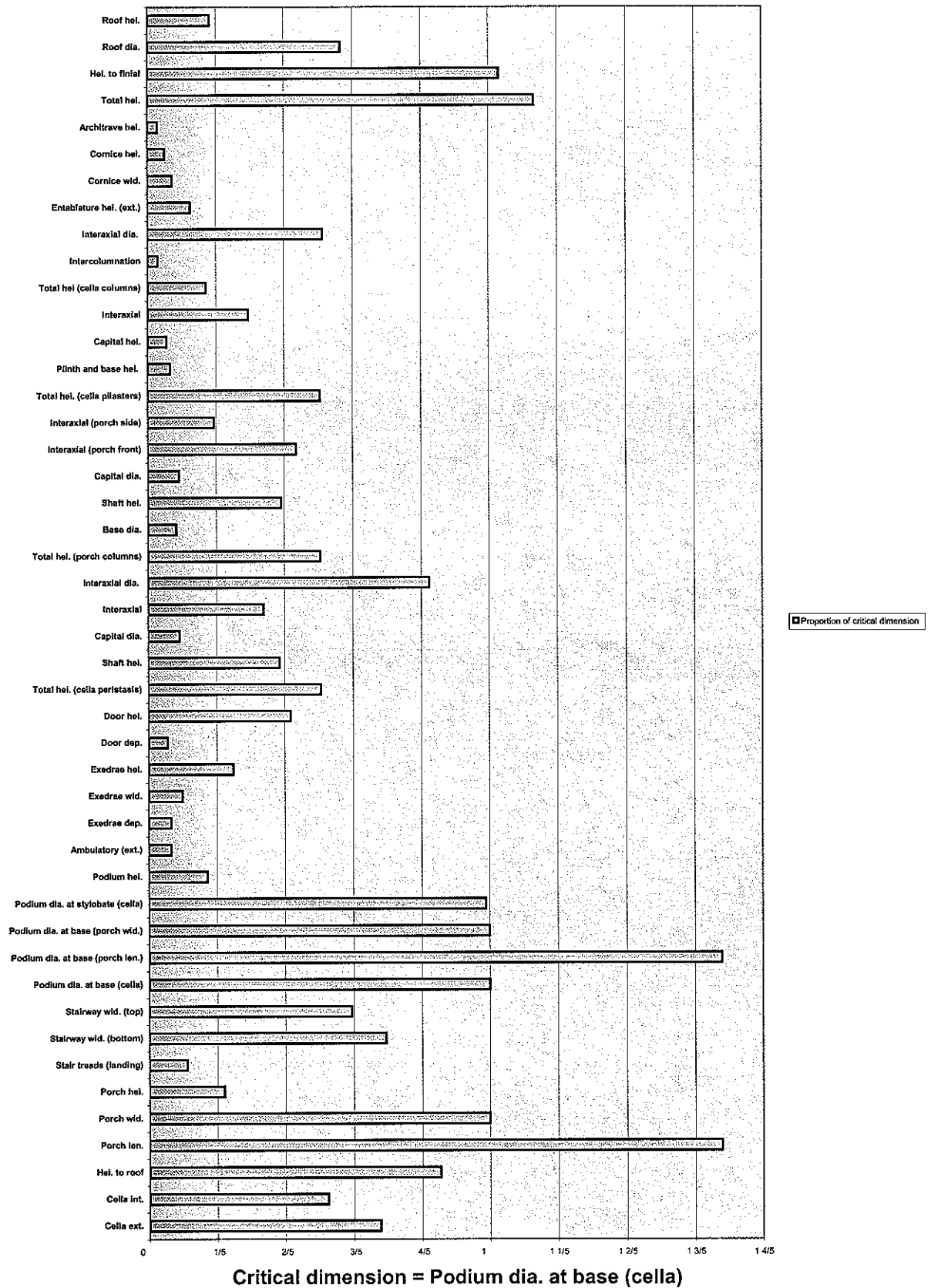
<i>actual measurements</i>	<i>ideal</i>				<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Total hei. (cella pilasters)	8.58	29			1/2	9 2/3
Plinth and base hei.	1.1	3.7	3.8	2.7%	1/15	1 1/4
Shaft dep. (lcd)	0.1	0.3				1/10
Shaft dep. (ucd)	0.03	0.1				1/30
Lower column wid. **	0.89	3				1
Upper column wid.	0.84	2.84				
Shaft hei.	6.53	22.1				7 3/8
Capital hei.	0.95	3.2			1/18	1 1/15
Intercolumnation	4	13.5				4 1/2
Interaxial	5	16.89			2/7	5 5/8
Total hei (cella columns)	2.92	9.9	9.75	-1.5%	1/6	9 3/4
Base dia.	0.53	1.8				1 4/5
Base hei.	0.2	0.68				2/3
Lower column dia. **	0.31	1				1
Shaft hei.	2.3	7.8				7 4/5
Capital dia.	0.42	1.42				1 3/7
Capital hei.	0.42	1.42				1 3/7
Intercolumnation	0.5	1.7			1/34	1 7/10
Interaxial	1.05	3.5				3 1/2
Interaxial dia.	8.7	29.4			1/2	29 2/5
Entablature hei. (ext.)	2.12	7.17			1/8	
Architrave hei.	0.76	2.57				
Frieze hei.	0.3	1				
Dentil hei.	0.2	0.7				
Cornice wid.	1.2	4.1			1/14	
Cornice hei.	0.86	2.9	2.9	-1.0%	1/20	
Entablature hei. (int.)	2	6.8				
Architrave hei.	0.5	1.7			1/34	
Frieze hei.	0.6	2.0				
Dentil hei.	0.1	0.3				
Cornice hei.	0.8	2.7				
<i>reconstructed measurements</i>						
Total hei.	19.25	65.0			1 1/8	
Hei. to finial	17.5	59.1			1	
Roof dia.	9.6	32.4			4/7	
Roof hei.	3.1	10.5			1/5	
Floorspace (square measure)	62.5	711.6				

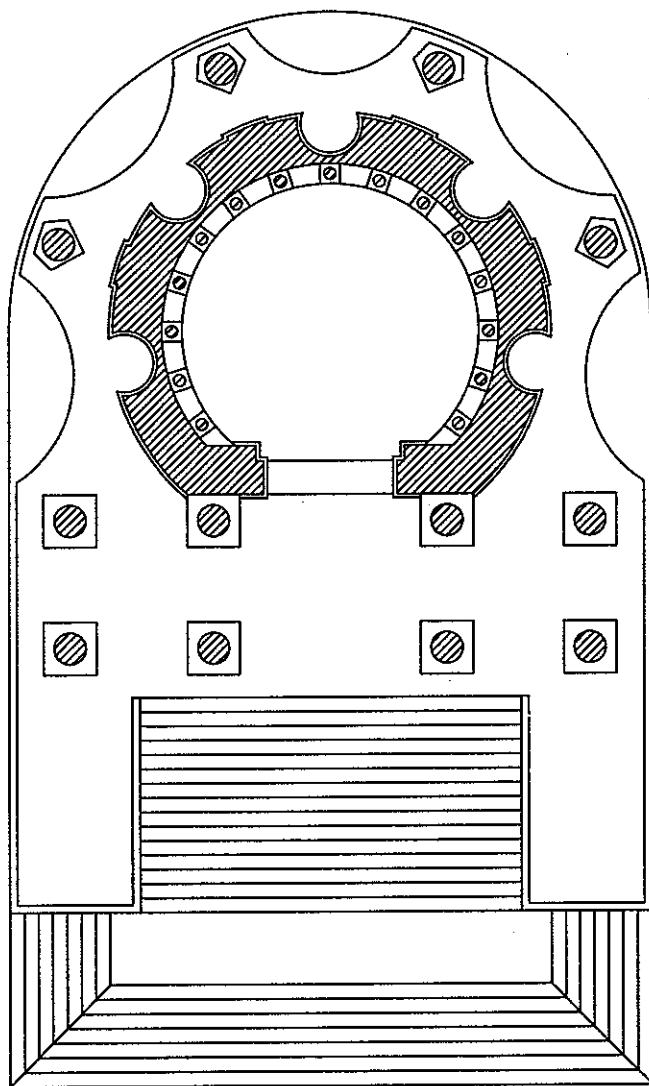
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: Wiegand 1925, 90-109 pls. 57-67.

Chart #7. BAALBEK: Tyche, temple





#7 BAALBEK:
Tyche, temple
Scale 1:200

#8 BATH: Sulis-Minerva, Shrine

Context: Sanctuary of Sulis-Minerva, set within a rectilinear precinct (31 by ? m., see Cunliffe 1995, 85 fig. 73); aligned with the Temple of Sulis-Minerva (W, mid-late 1st c. AD, see Cunliffe 1995, 87)

Date: Hadrianic period (122 AD?, see text): stylistic analysis of the entablature (see Cunliffe 1995, 85 and text)

Description: round monopteros (9.1 m. in dia., stone) with 12 columns (Attic bases, monolithic shafts, Corinthian capitals), an entablature (see text), and a conical roof

Remains: 4 blocks of the entablature and fragments of the columns (stone; for the columns, see Cunliffe 1995, 84)

Literary and epigraphical sources:

Cult of Sulis-Minerva: Ptolem. 2.3.13, *Itin. Ant.* 468.3, and Sol. 21 (cult at Bath).

Excavations: R. Mann in 1897 and B. Cunliffe in 1991; entablature found during the excavation of the baths in 1878-1882

Previous attributions: Cunliffe (1995, 85) suggests that the precinct walls formed part either of a forum and basilica complex or of a theater

Bibliography: Croon 1953, 79-83. Richmond and Toynbee 1957, 97-105. Cunliffe 1966, 199-204; 1995, 85-8 figs. 71-3.

Text: 179-80.

BATH: Sulis-Minerva, shrine

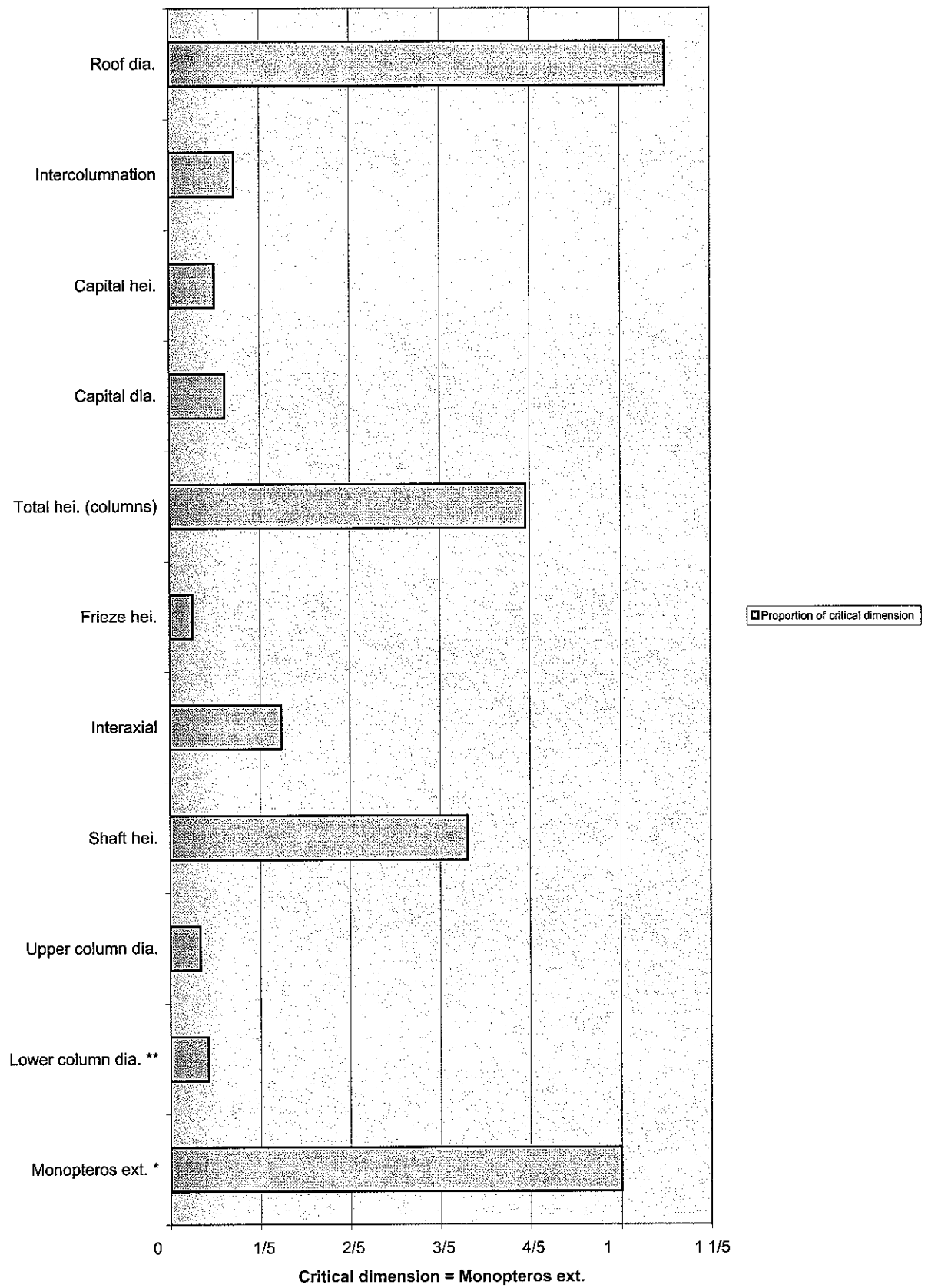
<i>actual measurements</i>					<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Monopteros ext. *	9.1	30.74			1	
Lower column dia. **	0.74	2.5	2.6	2.5%	1/12	1
Upper column dia.	0.6	2.03			1/15	4/5
Shaft hei.	6	20.3			2/3	8
Interaxial	2.25	7.6			1/4	
Frieze hei.	0.46	1.55	1.5	-0.8%	1/20	
Floorspace (square measure)	40.7	465.3				
<i>reconstructed measurements</i>						
Total hei. (columns)	7.2	24.32			4/5	9 1/2
Base dia.	0.95	3.2				1 1/4
Base hei.	0.3	1				2/5
Capital dia.	1.1	3.7	3.75	1.4%	1/8	1 1/2
Capital hei.	0.9	3	3.0		1/10	1 1/5
Intercolumnation	1.3	4.4			1/7	1 5/7
Roof dia.	10	33.8			1 1/10	

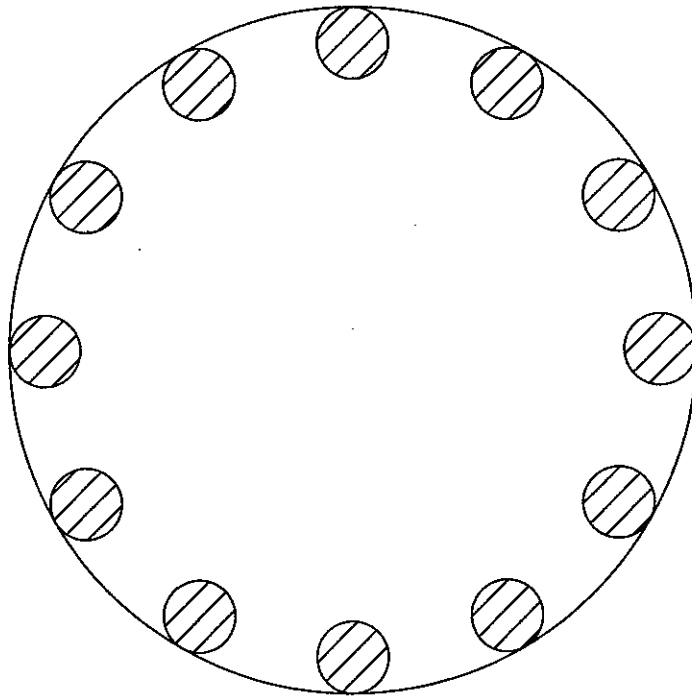
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: Cunliffe 1995, 85-8 figs. 71-3.

Chart #8. BATH: Sulis-Minerva, shrine





#8 BATH:
Sulis-Minerva, shrine
Scale 1:100

#9 CORINTH: Rotunda

Context: W terrace, Lower Agora; from the S, the W Terrace consists of the Temple of Tyche (Tiberian period), the Pantheon (early 1st c. AD-Claudian period), a ramp (Greek period) leading to the W shops and Temple E, the Temples of Herakles? (191 AD) and of Poseidon? (185 AD), and the Rotunda, behind which is Temple K (ca. 50-150 AD), while to the N are a statue, the Temple of Hermes? (early-late 1st c. AD), and a fountain (erected by Cn. Babbius Philinus?, see text and Scranton 1951, 64-7); oriented toward the Lower Agora (E)

Date: Tiberian period: dedicatory inscription (see 'Literary and epigraphical sources: Inscriptions from Remains' below)

Patron: Cn. Babbius Philinus

Description: round monopteros (10.8 m. in dia., marble) on a square socle (10.8 m. per side) accessed by side stairs with 8 columns (Attic bases, monolithic shafts, Corinthian capitals), a Corinthian entablature, and a cone-shaped roof topped by a pineapple? (see Weber 1990, 228 cat. M35)

Remains: the core and some revetment of the platform (concrete and stone fragments revetted in poros and blue marble), fragments of the stairs (poros), the stylobate (blue marble), the columns, the inscribed entablature, the roof, the finial (white marble), and statues associated with the W terrace incl. Athena, Artemis, Apollo, Antoninus Pius, a group of Apollo and the Muses, and several figures in the "Pergamene style" (see Scranton 1951, 70-1); also extant are the foundations and some revetment from both of Babbius' fountains

Literary and epigraphical sources:

Inscriptions from 'Remains': [CN. BABBIVS PHILINVS]S AED PONTIF / [D S P F C IDEMQVE] II VIR P (Rotunda's dedicatory inscription, architrave; for the restoration of Babbius' name in connection with the Rotunda, see Scranton 1951, 22). CN. BABBIVS PHILINVS NEPTVNI SACRO (dedicatory inscription of the Fountain of Poseidon, see Scranton 1951, 16, 34 and 66).

Location and decoration: Paus. 2.2.6-8 and 3.6 (layout of the W terrace, statues of Apollo Klarios and Aphrodite by Hermogenes of Kythera, 2 statues of Hermes, and 3 of Zeus).

Decoration: cult image of Aphrodite or Victoria? and statues in the "Pergamene style" (see text and 'Literary and epigraphical sources: Location and decoration' above); mosaic floor? (see Scranton 1951, 24); bronze sheathing for the finial? (see Scranton 1951, 30)

Excavations: J. de Waele in the 1920s and R. Scranton in the 1950s

Bibliography: de Waele 1930, 432-54; 1931, 50-1. Robert 1939, 6 and 89. Scranton 1951, esp. 17-34 plans B-D. Binder 1969, 106-7 fig. 115. Heilmeyer 1970, 77 n. 304. Gros 1976a, 131-3. De Ruyt 1983, 55-61. Engels 1990, esp. 68-9. Weber 1990, 121 and 228-9 cat. M35. Gros 1996a, 160.

Text: 123-4.

CORINTH: Rotunda

<i>actual measurements</i>	<i>ideal</i>				<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Monopteros ext. *	4.8	16.2			1	
Total hei. (monopteros)	8	27			1 2/3	
Total hei. (monopteros and socle)	10.6	35.8			2 1/5	
Socle wid.	10.8	36.5			2 1/4	
Socle hei.	2.7	9.1	9.0	-1.1%	5/9	
Socle cornice wid. (lower)	0.15	0.51			1/32	
Socle cornice wid. (upper)	0.15	0.51			1/32	
Socle cornice hei. (lower)	0.5	1.7				
Socle cornice hei. (upper)	0.25	0.84				
Stylobate dia.	4.93	16.65			1 1/36	
Stylobate hei.	0.3	1	1.0	1.0%	1/16	
Total hei. (columns)	5.22	17.64	17.8	1.0%	1 1/10	9 4/7
Base dia.	0.76	2.57				1 3/8
Base hei.	0.2	0.7				3/8
Lower column dia. **	0.55	1.86				1
Shaft hei.	4.3	14.5			8/9	7 4/5
Capital dia.	1	3.4				1 5/6
Capital hei.	0.68	2.3			1/7	1 1/4
Intercolumnation	0.82	2.77			1/6	1 1/2
Interaxial	1.58	5.34			1/3	2 7/8
Interaxial dia.	4.1	13.9			6/7	7 1/2
Entablature hei.	0.99	3.34			1/5	
Architrave hei.	0.3	1				
Frieze hei.	0.34	1.15			1/14	
Dentil hei.	0.1	0.34				
Cornice wid.	0.23	0.78				
Cornice hei.	0.25	0.84				
Roof dia.	5.15	17.4	17.5	0.8%	1 1/12	
Roof hei.	1	3.4				
Finial wid.	0.39	1.32	1.4	2.3%	1/12	
Finial hei.	0.45	1.52				
Floorspace (square measure)	8.6	96.8				
Volume (cubic measure)	10.7	179.1				

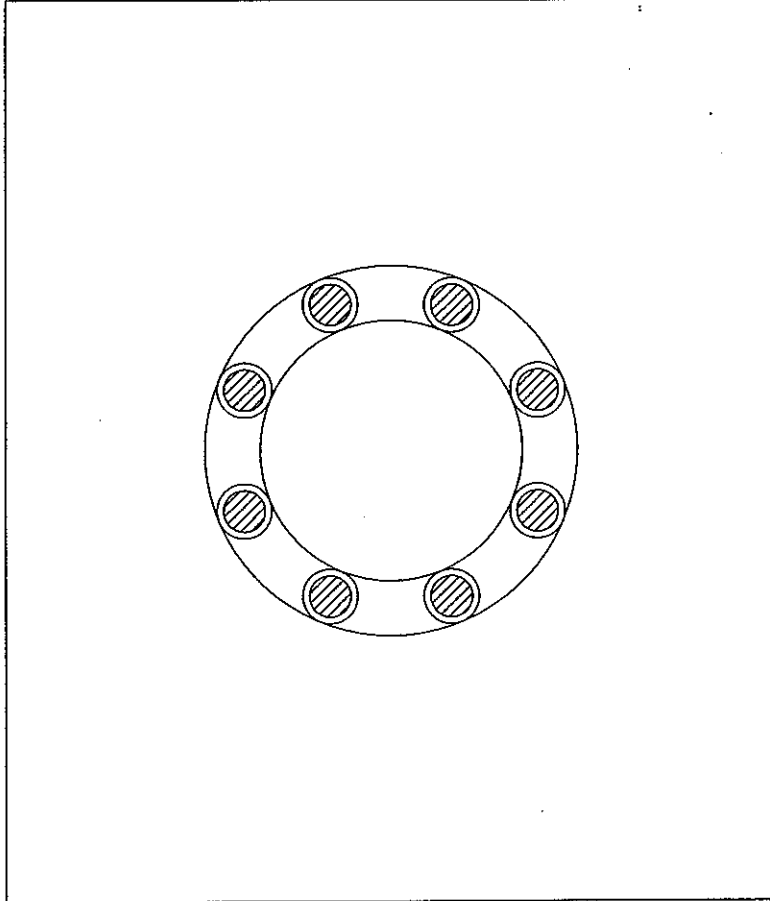
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: Scranton 1951, 17-34, pls. 11-2 and plans B-D.
Binder 1967, 106-7 fig. 115.

Chart #9. CORINTH: Rotunda





#9 CORINTH:
Rotunda
Scale 1:100

#10 DELOS: Hermes and Maia, Shrine

Context: Agora of the Compétaliastes or the Italians (60 m. long by 32 m. wide), near the commercial port (the Agora is bordered by the houses of the Theater Quarter, the Portico of Philip, and the W portico, see Bruneau and Ducat 1983, 117); enclosed in a precinct together with 2 rectilinear shrines, statues and altars

Date: late 2nd c. BC: dedicatory inscription (see 'Literary and epigraphical sources:

Inscriptions from Remains' below), and building materials and techniques (see text)

Patrons: members of the Hermaist fraternity

Description: round monopteros (2.975 m. in dia., Naxian marble) with a 2-step krepis, 4 Doric columns, an Ionic entablature, and a conical roof

Remains: part of the foundations (gneiss), the krepis, the entablature (inscribed architrave, cornice), a capital?, and the roof (Naxian marble); an inscribed commemorative plaque was found nearby

Literary and epigraphical sources:

Inscriptions from 'Remains': *ID* 1738 = *CIL* III² 14203 (dedicatory inscription, architrave; cf. Durbach 1921-1922, 114-6 no. 86). For the commemorative plaque, see Hatzfeld 1912, 103.

Attribution: Serv. *Aen.* 9.406 (round temples to Mercury-Hermes).

Decoration: accompanying statue bases

Excavations: E. Ardaillon in the 1890s

Bibliography: Ardaillon 1896, esp. 435-6. Hatzfeld 1912, esp. 103-4 and 164-5. Durbach 1921-1922, 114-6 no. 86. Vallois 1923, pl. 3.13. Robert 1939, 12. Salviat 1963, esp. 259-64. Binder 1969, 94-7. Bruneau and Ducat 1983, 75. Seiler 1986, 139, 144, 146 and fig.65. Weber 1990, 111-2 and 223 cat. M16. Mavroianis 1995, 89-123.

Text: 60-1.

DELOS: Hermes and Maia, shrine

<i>actual measurements</i>	<i>ideal</i>					<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>roman feet</i>	<i>% difference</i>		<i>to critical dimension *</i>	<i>within columnar order **</i>
Monopteros ext. *	2.37	8				1	
Stair treads	0.2	0.68	0.67	-1.5%		1/12	
Stair risers	0.2	0.68	0.67	-1.5%		1/12	
Krepis dia. at base	2.975	10.05				1 1/4	
Krepis hei.	0.43	1.45				2/11	
Euthynteria wid.	2.519	8.51	8.5	-0.1%		1 1/16	
Euthynteria hei.	0.2	0.68	0.67	-1.5%		1/12	
Base dia. (columns)	0.25	0.84					1 1/4
Lower column dia. **	0.2	0.68	0.67	-1.5%		1/12	1
Capital hei.	0.35	1.18					1 3/4
Intercolumnation	1.49	5.04				5/8	7 1/2
Interaxial	1.74	5.88				3/4	8 7/9
Interaxial dia.	2.12	7.16				8/9	10 2/3
Entablature hei.	0.48	1.62				1/5	
Architrave hei.	0.2	0.68	0.67	-1.5%		1/12	
Frieze hei.	0.15	0.5				1/16	
Cornice wid.	0.2	0.68	0.67	-1.5%		1/12	
Cornice hei.	0.13	0.44	0.44	1.0%		1/18	
Roof dia.	2.715	9.17				1 1/7	
Roof hei.	0.93	3.14				2/5	
Floorspace (square measure)	4.4	50.3					
Volume (cubic measure)	6.1	115.1					

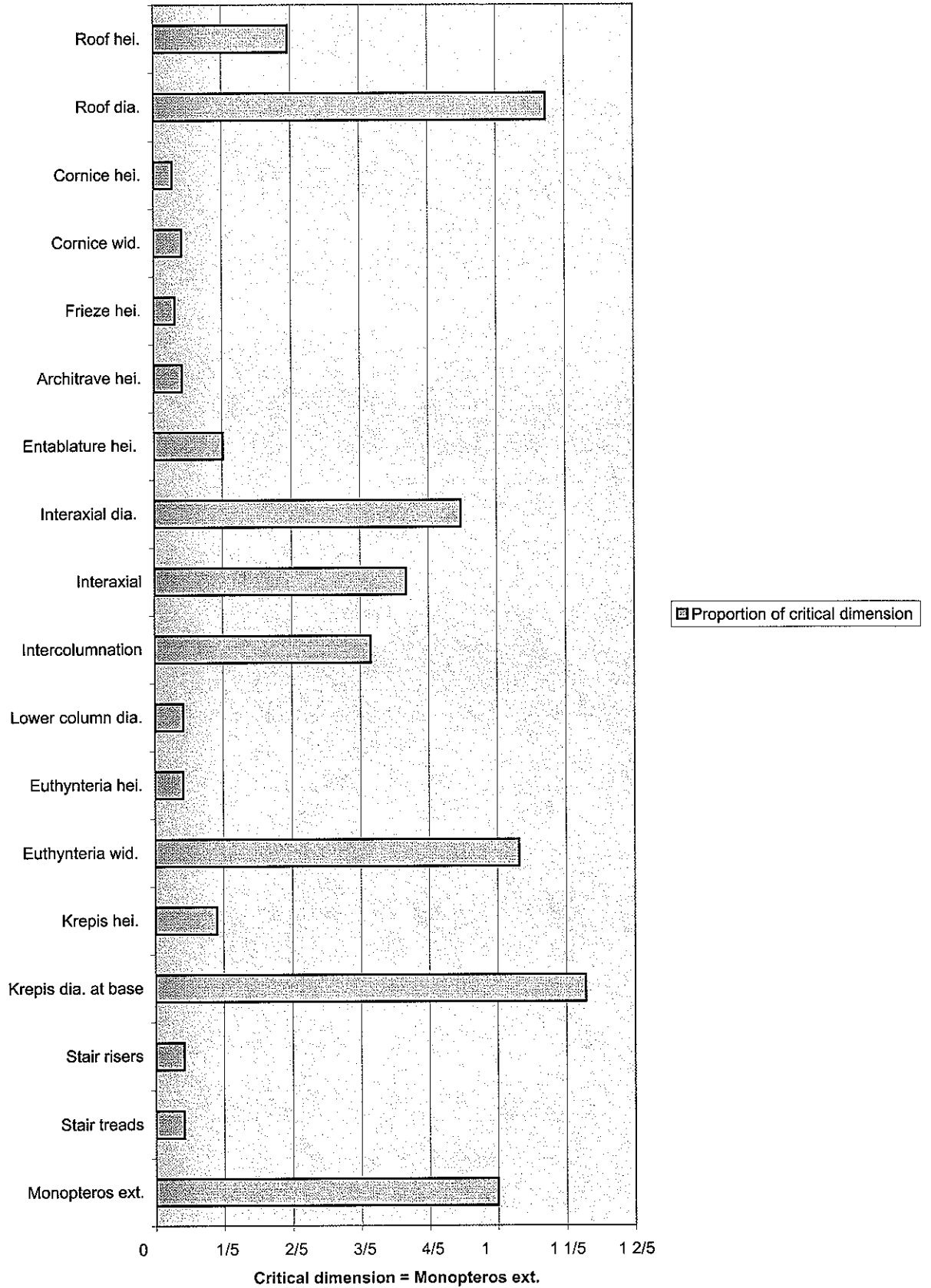
Note: * *critical dimension*

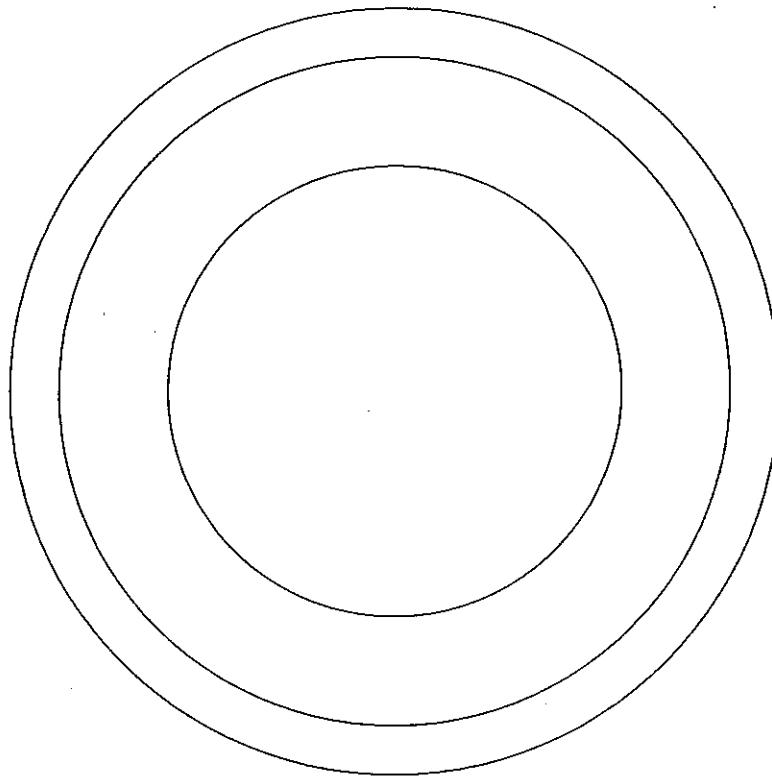
** *in relation to the lower column dia.*

Source: Ardaillon 1896, 435.

Salviat 1963, 259-60 fig. 3.

Chart #10. DELOS: Hermes and Maia, shrine





#10 DELOS:
Hermes and Maia, shrine
Scale 1:50

#11 DELPHI: Tholos, 580 BC

Context: Sanctuary of Apollo; incorporated into the Treasury of the Sikyons (after 548 BC), together with a monopteros (560 BC)

Date: 580 BC: construction of the treasury (*terminus ante quem*) and its possible connection to Cleisthenes

Patron: Cleisthenes? (see Seiler 1986, 53-4)

Description: peripteros (6.95 m. in dia., poros) with a 3-step krepis, 13 Doric columns, a Doric entablature (20 metopes), and a tent-shaped roof

Remains: fragments of the krepis, euthynteria, columns, and architrave (poros)

Excavations: H. Pomtow in ca. 1900

Previous attributions: music pavilion, a temple to Hestia or Gaia, or a treasury (see Seiler 1986, 54-5)

Bibliography: Pomtow 1910. Courby 1911, 132 fol. Robert 1939, 410-22. Bousquet 1960, 287 fol. Gruben and Berve 1961, 142 fig. 36 pl. 65. Seiler 1986, 40-55. Larouche and Nenna 1990, 241 fol. Weber 1990, 105 and 219 cat. M1. Bommelaer 1991, 120-3.

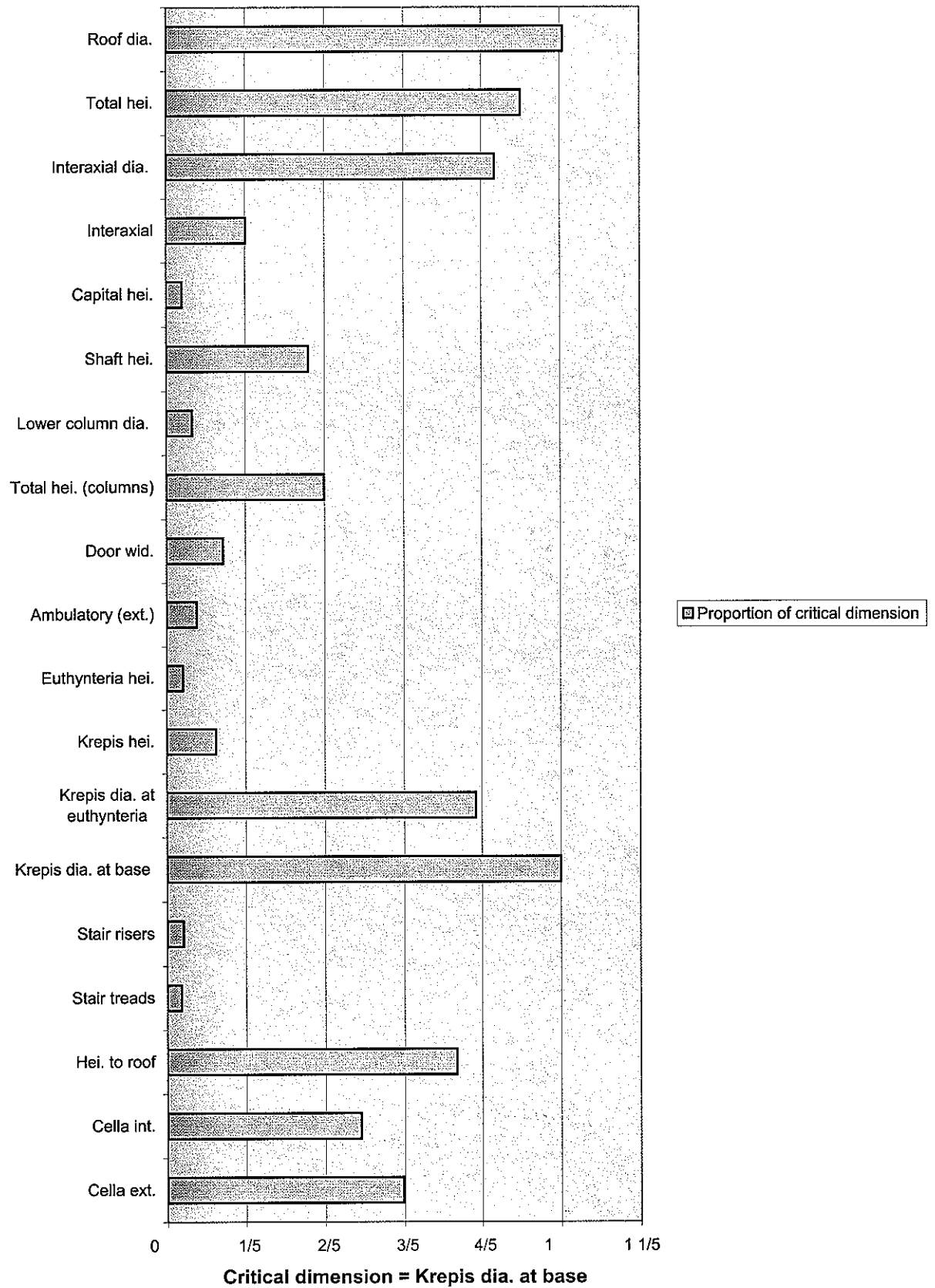
Text: 34-8.

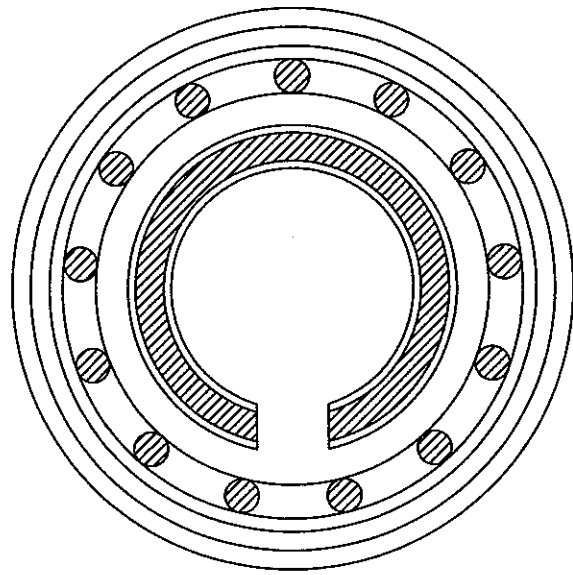
DELPHI: Tholos, 580 BC		<i>ideal proportional relationships</i>	
<i>actual measurements</i>	<i>meters</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Cella ext.	4.15	3/5	
Cella int.	3.4	1/2	
Stair treads	0.25	1/28	
Stair risers	0.29	1/24	
Krepis dia. at base *	6.95	1	
Krepis dia. at euthynteria	5.45	7/9	
Krepis hei.	0.87	1/8	
Euthynteria wid.	1.075		
Euthynteria hei.	0.29	1/24	
Ambulatory (ext.)	0.53	1/13	
Cella wall wid.	0.38		
Door wid.	1	1/7	
Total hei. (columns)	2.77	2/5	6
Lower column dia. **	0.46	1/15	1
Shaft hei.	2.5	9/25	5 3/7
Capital dia.	0.65		1 2/5
Capital hei.	0.28	1/25	3/5
Intercolumnation	0.95		2
Interaxial	1.4	1/5	3
Interaxial dia.	5.8	5/6	12 3/5
Architrave hei. (ext.)	0.55		
Floorspace (square measure)	9.1		
<i>reconstructed measurements</i>			
Entablature hei. (ext.)	1.45		
Frieze hei.	0.65		
Cornice wid.	0.3		
Cornice hei.	0.25		
Roof dia.	7	1	
Roof hei.	1.2		
Volume (cubic measure)	12.7		

Note: * *critical dimension*
 ** *in relation to the lower column dia.*

Source: Seiler 1986, 40-55, figs. 19-23 and 25, and table 1.

Chart #11. DELPHI: Tholos, 580 BC





#11 DELPHI:
Tholos, 580 BC
Scale 1:100

#12 DELPHI: Tholos, late 5th c.-370 BC

Context: Sanctuary of Athena Pronaia, Marmaria; sited on a plateau with rectangular temples and treasuries

Date: late 5th c.-370 BC: building materials and techniques, especially re. metopes

Architect: Theodoros Phokaieus

Patron: Athens

Description: peripteros (14.66 m. in dia., marble) with a 3-step krepis, a socle (interior), 20 Doric (exterior) and 10 Corinthian (interior) columns, a Doric entablature (exterior, 40 metopes), and an octagonal roof

Remains: part of the foundations (tufa), euthynteria (Elia limestone), krepis, cella wall (Pentelic marble and limestone?), floor (black and white marble), interior socle (Eleusinian limestone), door frame, exterior and interior columns, metopes, roof cornice, acroteria, roof tiles, and finial (Pentelic marble, except for the colored marble interior capitals)

Literary and epigraphical sources:

Marmaria: Paus. 10.8.6 fol. (NB: Pausanias does not mention the Tholos).

Decoration: marble floor with black and white radiating lozenges; metopes depicting amazonomachies and centauremachies; statue finial

Excavations: T. Homolle in ca. 1900 (discovered in 1838)

Previous attributions: identified as an Odeion (Thiersch), a Prytaneion (Pomtow), the Heroon of Phylakos (Price 1973, 68 n. 19; cf. Paus. 10.8.6 fol.), a Temple of Artemis (Bousquet, see Bommelaer 1991, 67), a Temple of Ge (de la Coste-Messelière, see Bommelaer 1991, 67), a hoploteria for Athena's sacred panoply (Lerat), an offering to Boreus (Laroche 1990, 54), and a treasury set up by the Thourioi in thanks for the dispersion of the Syracusan fleet, ca. 379 BC (Laroche 1990, 54)

Bibliography: Charbonneaux and Gottlob 1925. Robert 1939, 410-22. Amandry and Bousquet 1940-1941, 121-7. Roux 1952, 442-83; 1965, 37-53. Marcadé 1979, 151-70. Bousquet 1980, x-xi. Roux 1984, 161-2. Seiler 1986, 56-71. Roux 1988, 290-309. Laroche 1990, 51-5. Bommelaer 1991, 65-8. Hoepfner 2000, 99-107.

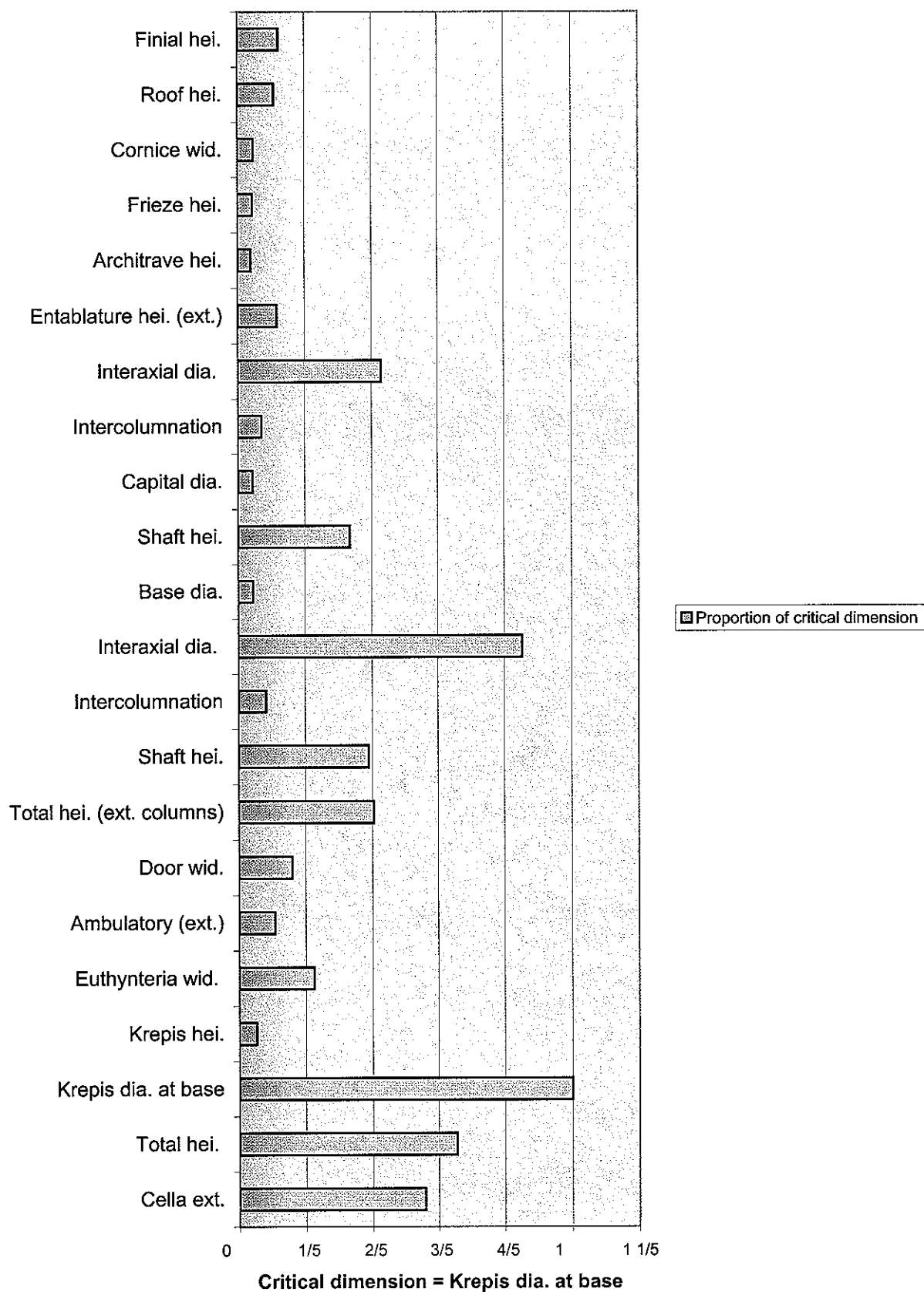
Text: 34-8.

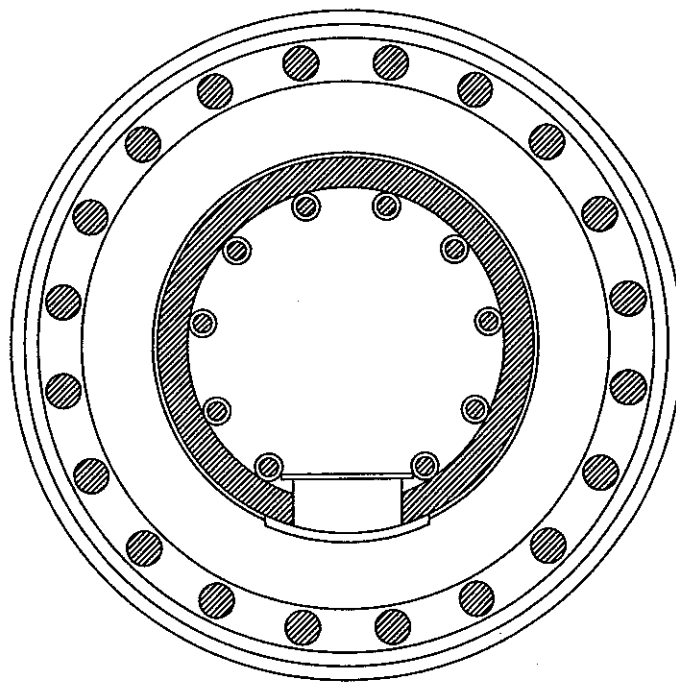
<i>DELPHI: Tholos, late 5th c.-370 BC</i>		<i>ideal proportional relationships</i>	
<i>actual measurements</i>	<i>meters</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Cella ext.	8.2	5/9	
Cella int.	6.9		
Total hei.	9.6	2/3	
Foundation hei.	0.1		
Stair treads	0.3		
Stair risers	0.207		
Krepis dia. at base *	14.66	1	
Krepis dia. at euthynteria	13.4		
Krepis hei.	0.77	1/19	
Euthynteria wid.	3.3	2/9	
Euthynteria hei.	0.238		
Ambulatory (ext.)	1.58	1/9	
Cella wall wid.	0.6		
Socle hei. (int.)	0.6		
Door dep.	1.5		
Door wid.	2.35	4/25	
Door hei.	4.6		
Door lintel	0.6		
Total hei. (ext. columns)	5.93	2/5	8
Lower column dia. **	0.75		1
Shaft hei.	5.71	2/5	7 3/5
Capital dia.	0.88		1 1/6
Capital hei.	0.22		2/7
Intercolumnation	1.22	1/12	1 5/8
Interaxial	1.97		2 5/8
Interaxial dia.	12.5	6/7	16 2/3
Total hei (int. columns)	5.65		14 1/8
Base dia.	0.65	2/45	1 5/8
Base hei.	0.15		3/8
Lower column dia. **	0.4		1
Shaft hei.	4.9	1/3	12 1/4
Capital dia.	0.65	2/45	1 5/8
Capital hei.	0.6		1 1/2
Intercolumnation	1.05	1/14	2 5/8
Interaxial	1.7		4 1/4
Interaxial dia.	6.3	3/7	15 3/4
Entablature hei. (ext.)	1.722	2/17	
Architrave hei.	0.589	1/25	
Frieze hei.	0.654	2/45	
Cornice wid.	0.7	1/21	
Cornice hei.	0.479		
Acroteria wid.	0.2		
Acroteria hei.	0.25		
Roof dia.	14		
Roof hei.	1.6	1/9	
Finial wid.	0.9		
Finial hei.	1.8	1/8	
Floorspace (square measure)	37.4		
Volume (cubic measure)	46.0		

Note: * *critical dimension*
 ** *in relation to the lower column dia.*

Source: Seiler 1986, 56-71 figs. 27-8 and 30.

Chart #12. DELPHI: Tholos, late 5th c.-370 BC





#12 DELPHI:
Tholos, late 5th c.-370 BC
Scale 1:200

#13 EPIDAUROS: Tholos

Context: Sanctuary of Asklepios, beside the Abaton and the Temple of Asklepios (380s BC, N); oriented E

Date: 370-353 BC: building materials and techniques

Architect: Polykleitos

Patron: priesthood of Asklepios?

Description: peripteros (21.8 m. in dia., poros and Pentelic marble) with 6 foundation rings, an access ramp, a 3-step krepis, 26 Doric (exterior) and 14 Corinthian (interior) columns, a Doric (exterior) and Ionic (interior) entablature, and a conical roof

Remains: part of the foundations (poros), krepis (poros and Pentelic marble), floor (black and white marble), euthynteria, interior socle, door frame (Pentelic marble), cella wall (poros and Pentelic marble), exterior and interior columns (exterior of poros, interior of black Argive limestone), exterior and interior entablature (exterior of Pentelic marble, interior of black Argive limestone), the sima with water spouts, antefixes, roof tiles, and the finial (Pentelic marble)

Literary and epigraphical sources:

Function and attribution: Paus. 2.27.3 (*tholos*). IG IV P 103 Z. 1. 125.162 (*thumele*). Paus. 2.26.3-8 (possible heroon of Asklepios).

Decorative program: Paus. 2.27.3 (wall paintings).

Decoration: wall paintings (see 'Literary and epigraphical sources: Decorative program' above); black and white marble floor in radiating lozenge pattern; metopes with raised phiales (exterior); sima with lion-head water spouts; palmette antefixes; finial

Excavations: P. Kavvadias and W. Dörpfeld in 1882-1883 (discovered in 1669)

Previous attributions: identified as the snake pit, the tomb or the heroon of Asklepios (see Roux 1984, 169; cf. Paus. 2.26.3-8)

Bibliography: Robert 1939, 259 and 296-304. Roux 1984, 169. Seiler 1986, 71-88.

Text: 34-8.

EPIDAUROS: Tholos

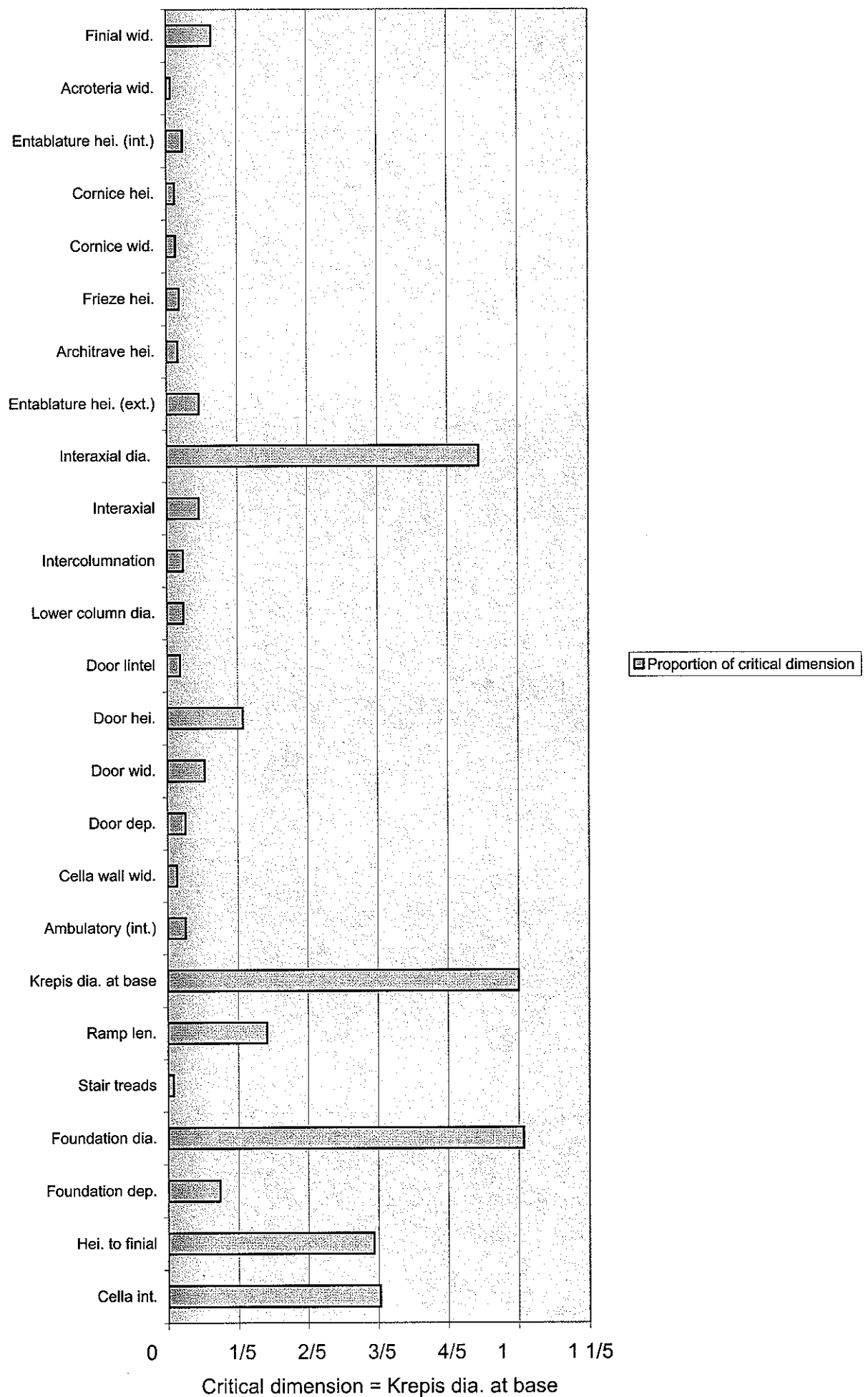
*ideal proportional relationships
to critical dimension * within columnar
order ***

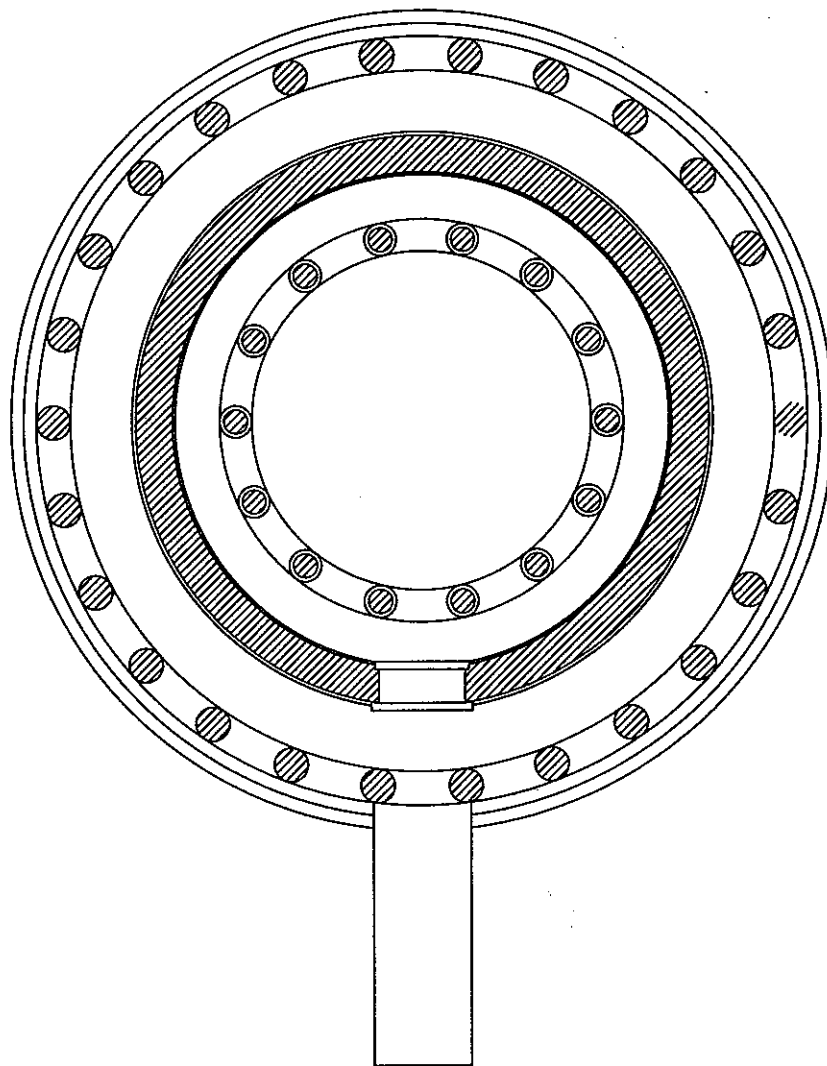
<i>actual measurements</i>	<i>meters</i>	<i>critical dimension *</i>	<i>within columnar order **</i>
Cella ext.	15.15		
Cella int.	13.2	3/5	
Hei. to finial	12.8	3/5	
Foundation dep.	3.2	1/7	
Foundation dia.	22.1	1	
Stair treads	0.34	1/64	
Stair risers	0.27		
Ramp len.	6.15	2/7	
Ramp wid.	2.6		
Krepis dia. at base *	21.8	1	
Krepis dia. at euthynteria	20.4		
Krepis hei.	0.85		
Euthynteria wid.	2.6		
Euthynteria hei.	0.3		
Ambulatory (ext.)	1.5		
Ambulatory (int.)	1.09	1/20	
Cella wall wid.	0.578	1/38	
Cornice wid.	0.17		
Cornice hei.	0.5		
Door dep.	1.09	1/20	
Door wid.	2.3	2/19	
Door hei.	4.7	2/9	
Door lintel	0.8	1/27	
Total hei. (ext. columns)	6.88		6 7/8
Lower column dia. **	1	1/22	1
Shaft hei.	6.5		6 1/2
Capital dia.	1.05		1 1/20
Capital hei.	0.38		3/8
Intercolumnation	0.99	1/22	1
Interaxial	1.99	1/11	2
Interaxial dia.	19.4	8/9	19 2/5
Total hei (int. columns)	6.74		10 2/3
Base dia.	0.85		1 1/3
Base hei.	0.2		
Lower column dia. **	0.63		1
Shaft hei.	5.9		9 3/8
Capital dia.	0.75		1 1/5
Capital hei.	0.63		1
Intercolumnation	1.25		2
Interaxial	2.1		3 1/3
Interaxial dia.	10		15 7/8
Entablature hei. (ext.)	2	1/11	
Architrave hei.	0.7	1/31	
Frieze hei.	0.78	1/28	
Cornice wid.	0.56	1/39	
Cornice hei.	0.52	1/42	
Entablature hei. (int.)	1	1/22	
Acroteria wid.	0.27	1/81	
Acroteria hei.	0.2		
Roof dia.	20.4		
Roof hei.	3		
Finial wid.	2.8	1/8	
Finial hei.	3		
Floorspace (square measure)	136.8		
Volume (cubic measure)	193.4		

Note: * critical dimension
** in relation to the lower column dia.

Source: Seiler 1986, 71-88 figs. 31-5.

Chart #13. EPIDAUROS: Tholos





#13 EPIDAUROS:
Tholos
Scale 1:200

#14 ILION: Rotunda

Context: acropolis, on axis with the Temple of Athena; rests on the opening to a well (5th or 4th c. BC), accessed via an underground cavity (Hellenistic period?)

Date:

I. late Hellenistic period: materials and techniques

II. Augustan period: limited restoration work

Description:

I. drum (1.85 m. in dia., marble) with a 2-step krepis, 6 Doric pilasters (exterior), windows, an entablature, and a conical roof

II as I.

Remains:

I. remains of the foundations, krepis, euthynteria, pilasters and screen walls (marble); accompanied by small altars? (poros; see Dörpfeld 1902, 229)

II. repairs to the screen walls (marble)

Excavations: in the mid-1800s

Bibliography: Dörpfeld 1902, 177-81, 228-9, and figs. 91-2. La Rocca 1993, 20.

Text: 34-8.

ILION: Rotunda**ideal proportional relationships
to critical within columnar****actual measurements****meters dimension * order ****

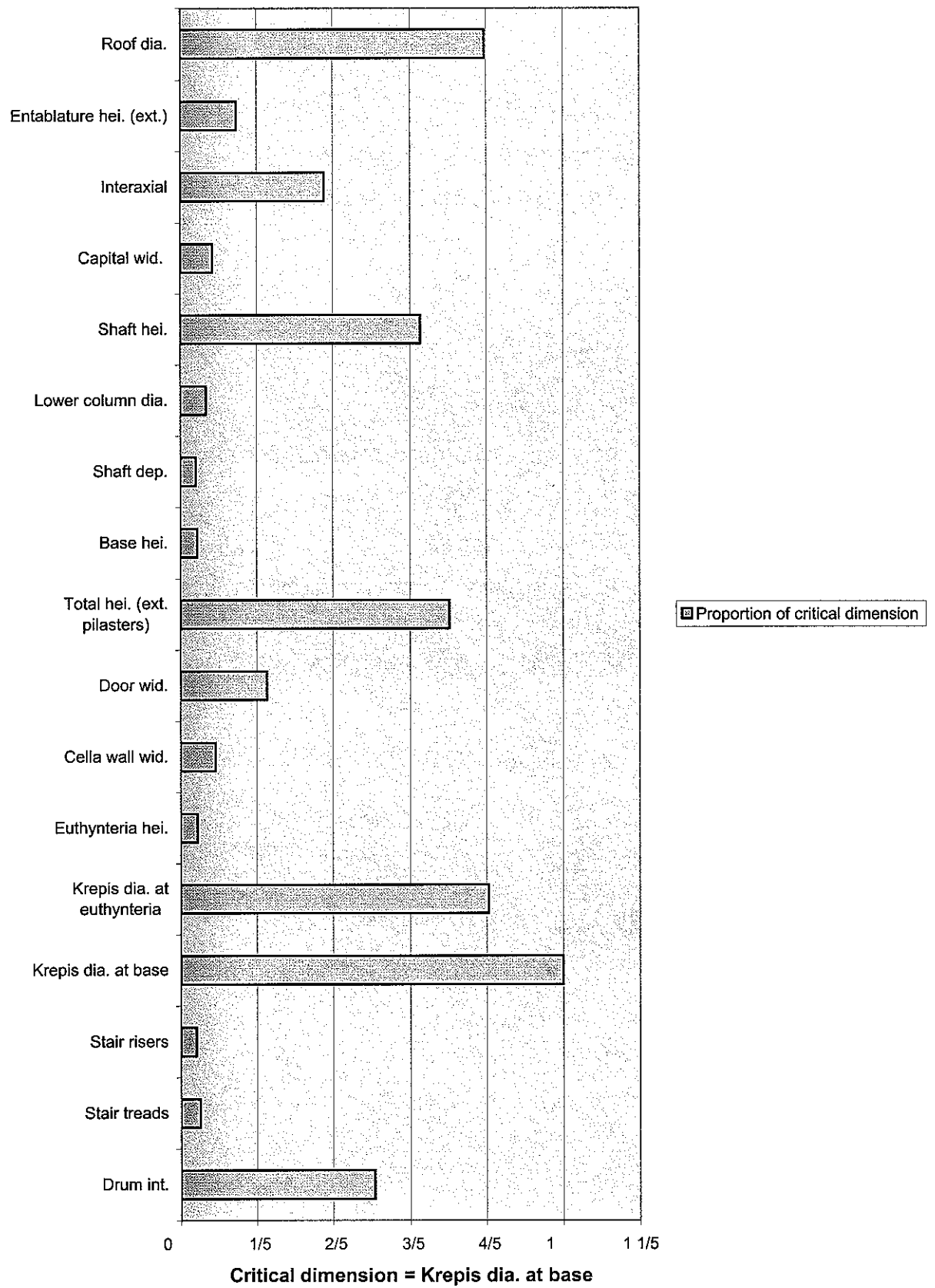
Drum ext.	1.28		
Drum int.	0.94	1/2	
Stair treads	0.09	1/20	
Stair risers	0.07	1/25	
Krepis dia. at base *	1.85	1	
Krepis dia. at euthynteria	1.49	4/5	
Krepis hei.	0.22		
Euthynteria hei.	0.08	1/23	
Cella wall wid.	0.17	1/11	
Door dep.	0.18		
Door wid.	0.42	2/9	
Total hei. (ext. pilasters)	1.3	5/7	10 5/6
Base wid.	0.18		1 1/2
Base hei.	0.08	1/23	2/3
Shaft dep.	0.07	1/25	7/12
Lower column dia. **	0.12	1/15	1
Shaft hei.	1.16	5/8	9 2/3
Capital wid.	0.15	1/12	1 1/4
Capital hei.	0.055		11/24
Intercolumnation	0.5		4 1/6
Interaxial	0.7	3/8	5 5/6
Floorspace (square measure)	0.69		

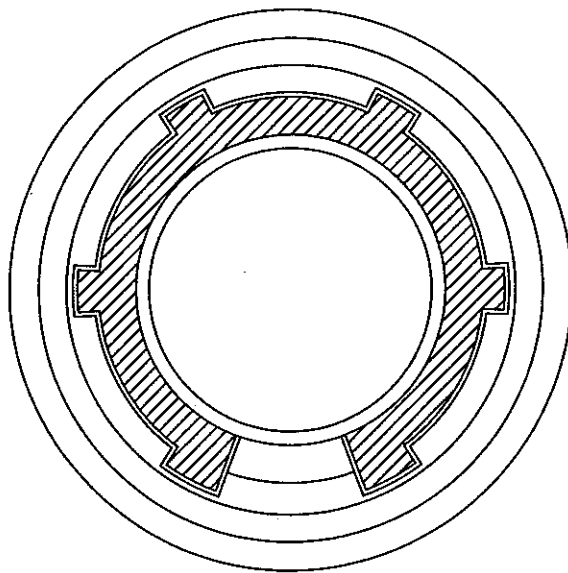
reconstructed measurements

Entablature hei. (ext.)	0.27	1/7	
Architrave hei.	0.11		
Frieze hei.	0.095		
Dentil hei.	0.015		
Cornice wid.	0.07		
Cornice hei.	0.05		
Roof dia.	1.47	4/5	
Roof hei.	0.25		
Volume (cubic measure)	0.7		

Note: * *critical dimension* ** *in relation to the lower column dia.***Source:** Dorpfeld 1902, 177-81 and 228-9, figs. 91-2.

Chart #14. ILION: Rotunda





#14 ILION:
Rotunda
Scale 1:25

#15 ISTHMIA: Palaimon-Melikertes, Temple

Context: rectilinear precinct next to the starting gates of the Stadium (pre-146 BC) and to the SE of the Sanctuary of Poseidon, to which it was linked by a monumental doorway (ca. 10 m. wide, E); oriented towards the doorway (E)

Date: Antonine period: height of the ground level (see Broneer 1973, 107-8 and 112), building materials and techniques (specifically the lime mortar, see Broneer 1973, 106), date of the ancient sources (on Pausanias' visit in 155-170 AD, see 'Literary and epigraphical sources: Location and description' below), and coins (see 'Iconographic sources' below)

Patron: Publius Licinius Priscus Iuventianus (see text)

Description: round monopteros (6.88 m. in dia., marble) on a high socle (7.0 m. per side), accessed by steps on all sides, with 11 columns (Corinthian?, see text), an entablature, acroterial sculpture (with dolphin and floral motifs, see text), and a dome topped by a pineapple finial; contained a statue of Palaimon (see 'Decoration' below)

Remains: foundations incl. a pit and a corridor (stone-faced concrete with the corridor revetted in stucco-covered poros, see text), and acroterial sculpture; to the E is an altar, while inside the precinct, 1st-2nd c. AD lamps were discovered in pits A and B (Broneer 1973, 102-4), together with terracotta pipes and unidentified fragments of statuary (Broneer 1973, 92-5 and 111)

Literary and epigraphical sources:

Cult of Palaimon-Melikertes: Hom. *Od.* 5.333, Eur. *Med.* 1282-9, Apollod. *Bibl.* 3.4.1-3, Ov. *fast.* 6.473-562 and *met.* 4.416-562, Varro *schol. Aen.* 5.241, Verg. *georg.* 1.436 and *Aen.* 5.239 and 822, and Hor. *epist.* 2.3.123 (birth and parentage). Plut. *Thes.* 25.5, Paus. 2.1.6, Ael. Arist. *Isthm.* 49, Philostr. *imag.* 2.16 and *Her.* 19.14, *Vita Soph.* 551, Hyg. *fab.* 2.5, 3.4, 4.1-2 and 5, and Auson. 21-2 (establishment of the cult at Isthmia). Paus. 2.1.3 (role in the Isthmian games).

Location and description: Paus. 2.1.3, 1.7, 2.1, and 3.4 (location in the precinct, *adyton*, statues, see 'Decoration' below).

Iconographic sources: coins minted under Hadrian, Marcus Aurelius, Caracalla, and Geta (MacDonald 1901, 104 no. 136, and Edwards 1933, 28 no. 111 pl. 3; cf. Imhoof-Blümer and Gardner 1888, 10-2 pls. 11-3, and *BMC Corinth* 1889, pl. 20.22).

Decoration: statue of Palaimon lying on a dolphin (see 'Iconographic sources' above and Weber 1990, 115) inside the Temple together with statues of Palaimon, Leucothea and Poseidon in the precinct (Paus. 2.2.1; see text)

Excavations: O. Broneer in 1955-1958 (both the precincts of Palaimon-Melikertes and of Poseidon)

Bibliography: Imhoof-Blümer and Gardner 1888, 10-2 pls. 11-3. MacDonald 1901, 104 no. 136. Edwards 1933, 28 no. 111 pl. 3. Robert 1939, 156-9, 179, 248, and 326. Will 1955, 169-80 and 210-2. Broneer 1958, esp. 23. Hawthorne 1958, 92-8. Broneer 1959, esp. 312-9; 1973, 3-6, 27, 42-50, 68-9, and 92-112. Weber 1990, 114-5 and 224-5 cat. M20.

Text: 186-8.

ISTHMLA: Palaimon-Melikertes, temple

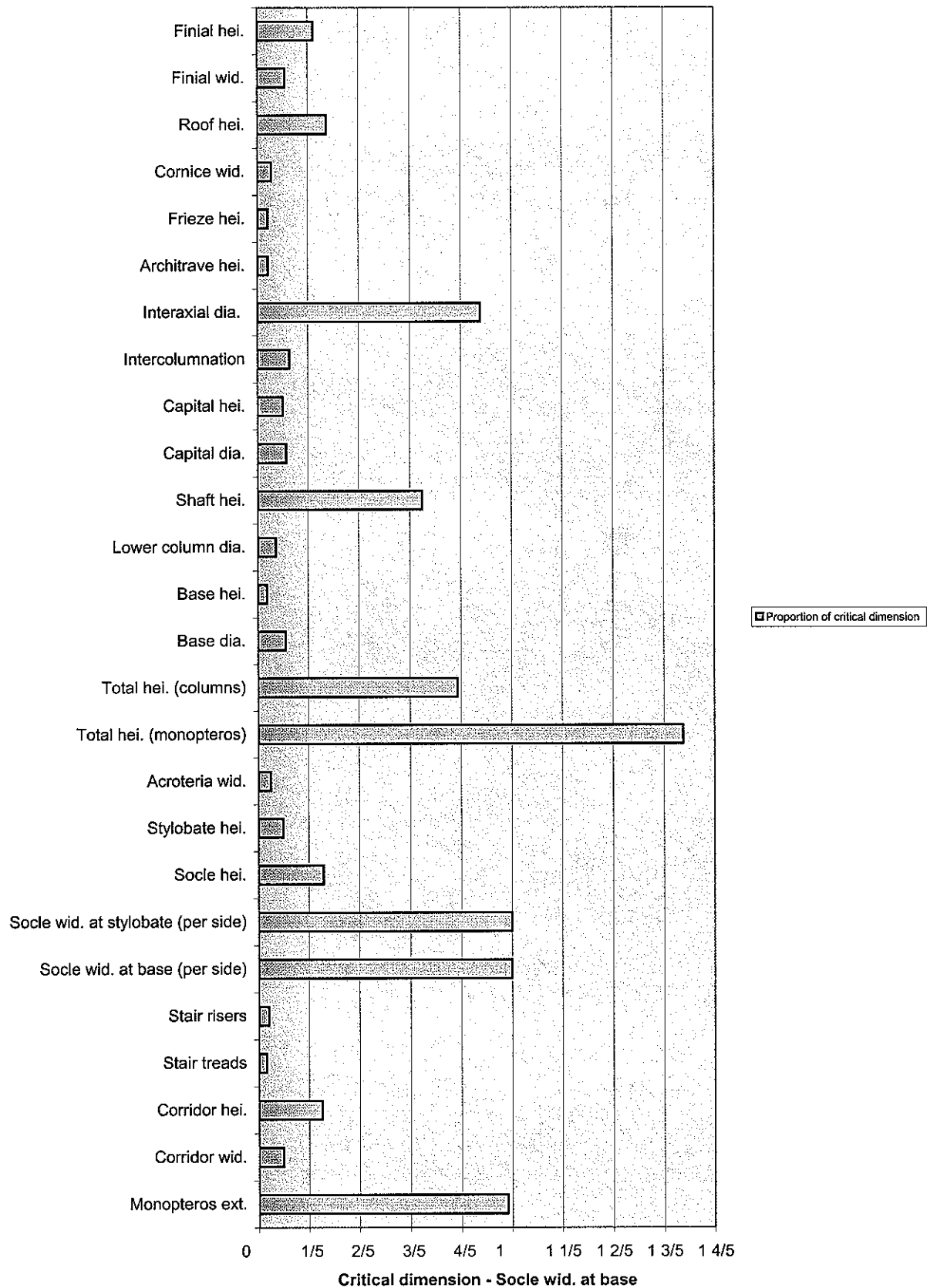
<i>actual measurements</i>	<i>ideal proportional relationships</i>				
	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i> <i>within columnar order **</i>
Monopteros ext.	6.88	23.24			1
Corridor wid.	0.68	2.3	2.35	2.2%	1/10
Corridor hei.	1.8	6.1	6.0	-2.5%	1/4
Foundation wid.	8	27			
Foundation len.	8.8	29.73			
Foundation hei.	2	6.75			
Stair treads	0.22	0.74			1/32
Stair risers	0.28	0.95			1/25
Socle wid. at base (per side) *	7	23.7			1
Socle wid. at stylobate (per side)	7	23.7			1
Socle hei.	1.8	6.1			1/4
Stylobate hei.	0.68	2.3	2.35	2.2%	1/10
Acroteria wid.	0.34	1.15			1/20
Acroteria hei.	0.67	2.26			
<i>reconstructed measurements</i>					
Total hei. (monopteros)	11.75	39.7			1 2/3
Total hei. (columns)	5.5	18.6			7/9 11
Base dia.	0.75	2.53	2.6	2.8%	1/9 1 1/2
Base hei.	0.25	0.84			1/28 1/2
Lower column dia. **	0.5	1.7			1/14 1
Shaft hei.	4.55	15.37			2/3 9
Capital dia.	0.8	2.7			1/9 1 3/5
Capital hei.	0.7	2.4			1/10 1 2/5
Intercolumnation	0.9	3			1/8 1 3/4
Interaxial	1.67	5.6			3 2/7
Interaxial dia.	6.16	20.81			7/8 12 1/4
Entablature hei. (ext.)	0.7	2.4			
Architrave hei.	0.3	1			1/24
Frieze hei.	0.3	1			1/24
Dentil hei.	0.1	0.3			
Cornice wid.	0.39	1.32			1/18
Cornice hei.	0.33	1.11			
Roof dia.	7.5	25.3			
Roof hei.	1.9	6.4	6.5	0.9%	3/11
Finial wid.	0.8	2.6			1/9
Finial hei.	1.55	5.24			2/9

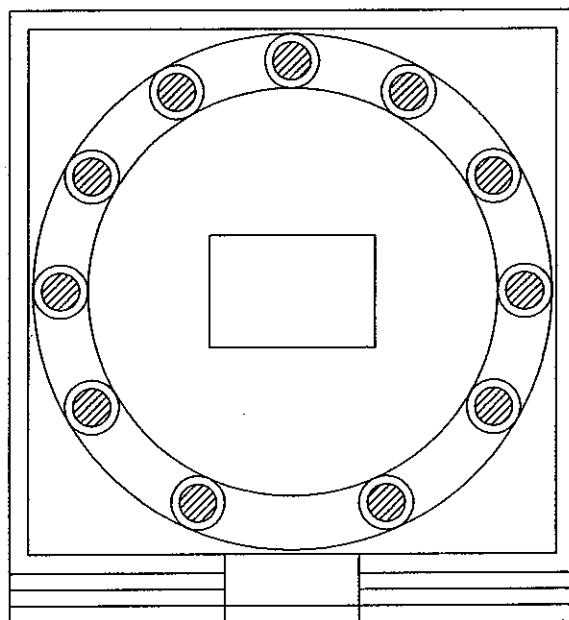
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: Broneer 1973, 109-12 plans 8-9 and pl. 73.

Chart #15. ISTHMIA: Palaimon-Melikertes, temple





#15 ISTHMIA:
Palaimon-Melikertes, temple
Scale 1:100

#16 KNIDOS: Aphrodite, Temple

Context: Sanctuary of Aphrodite Euploia; accessed via a ceremonial road, the Temple sits on a garden terrace (Ps. Luc. *am.* 8.11-18) aligned with an altar (E) and flanked by a rectangular treasury or shrine and its accompanying altar (W)

Date:

- I. post-4th c. BC: building materials and ceramic deposits (see Love 1972, 75, and 1973, 419-21)
- II. late Hellenistic or Roman period: stylistic analysis of the Corinthian capital (see Love 1972, 74, and 'Remains' below)

Description:

- I. round monopteros (17.3 m. in dia., stucco-covered sandstone) with a 3-step krepis preceded by 4 stairs, 18 Doric columns, and a Doric entablature
- II. as I, though with Corinthian columns and an Ionic entablature

Remains:

- I. the foundations (limestone with a rubble core), the stylobate, a column drum, a Doric capital, and fragments of the architrave? (stucco-covered sandstone; for the architrave, see Love 1972, 74); also extant are the Temple's altar, an inscribed circular monument (marble, see 'Literary and epigraphical sources: Inscriptions from Remains' below), a statue base (gray marble), and sculptural fragments (of Praxiteles' Aphrodite?, see Love 1972, 75-6) incl. a hand, a finger and drapery (Parian marble)
- II. a Corinthian capital (limestone) and fragments of the architrave? (stucco-covered sandstone, see Love 1972, 74)

Literary and epigraphical sources:

Inscriptions from 'Remains':

- I. ΠΡΑΞ[.....] Ξ[....]Ο [..] / ΚΑΙΑΓΥΜ [.....] ΑΑ[.] / ΥΠΕΡΤΑ[.....] ΣΚΛΕ[.] / ΘΑ (fragmentary inscription from the circular monument, which may refer to Praxiteles' Aphrodite, see Love 1972, 72-4).

Location and description: Ps. Luc. *am.* 8.11-18 (Temple, gardens).

Decorative scheme: Ps. Luc. *am.* 8.11-18 and Plin. *nat.* 26.4.21 (statue of Aphrodite).

Decoration: statue of Aphrodite by Praxiteles (see 'Remains' and 'Decorative scheme' above)

Excavations: M. J. Mellink in 1967-1968 and I. C. Love in 1969-1971

Bibliography: Schefold 1964, 56-9 fig. 2. Mellink 1968, 137-9; 1969, 216-9. Love 1970, 154-5 fig. 3; 1972, 70-6 fig. 9; 1973, 419-24. Koenigs and Radt 1979, 349 fol. n. 47. La Rocca 1986, 20. Weber 1990, 106-8. Roux 1992, 196-200.

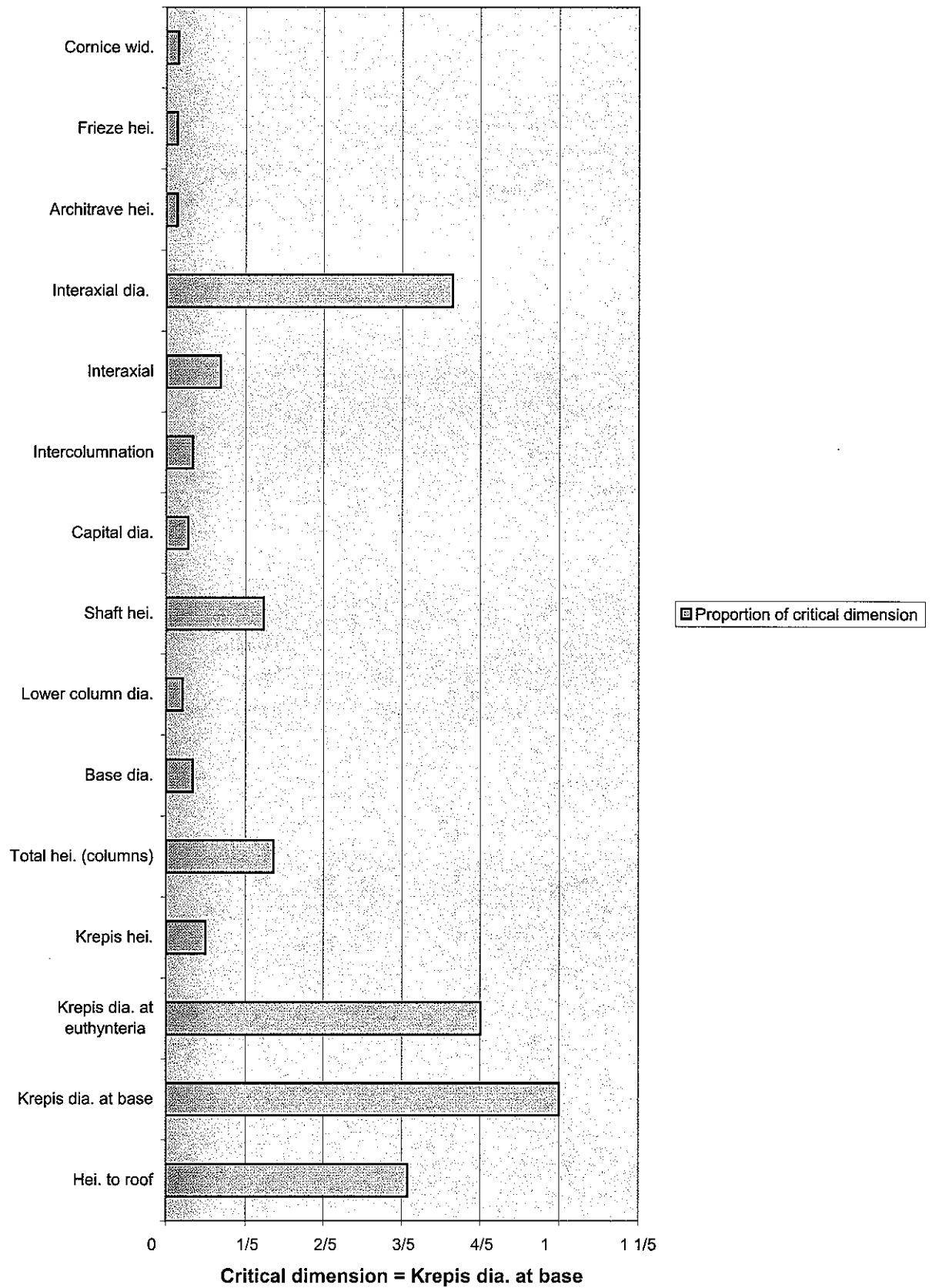
Text: esp. 174-8.

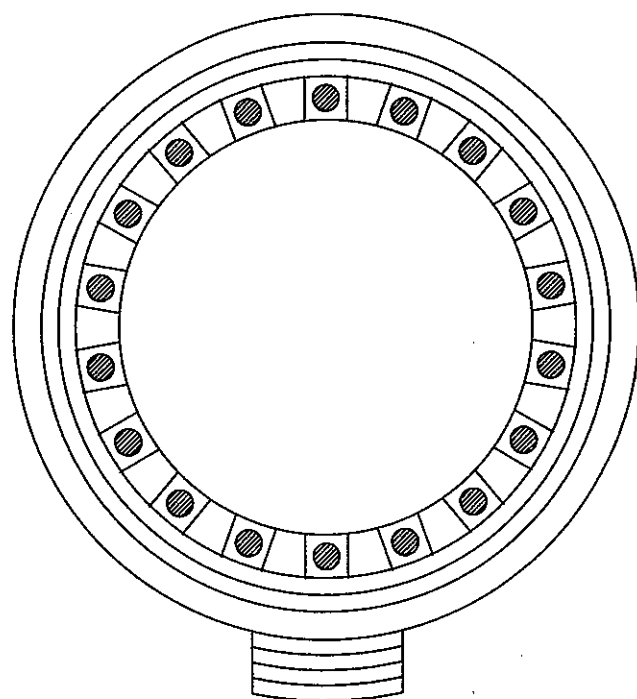
<i>KNIDOS: Aphrodite, temple</i>		<i>ideal proportional relationships</i>	
<i>actual measurements</i>	<i>meters</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Hei. to roof	10.2	3/5	
Foundation dia.	17.3		
Stair treads	0.4		
Stair risers	0.23		
Stairway len.	1.6		
Stairway wid.	4		
Krepis dia. at base *	16.6	1	
Krepis dia. at euthynteria	13.3	4/5	
Krepis hei.	1.66	1/10	
Euthynteria hei.	0.34		
Total hei. (columns)	4.55	3/11	6 1/2
Base dia.	1.135	1/15	1 5/8
Base hei.	0.18		1/4
Lower column dia. **	0.7	1/24	1
Shaft hei.	4.1	1/4	5 6/7
Capital dia.	0.9	1/18	1 2/7
Capital hei.	0.27		2/5
Intercolumnation	1.135	1/15	1 5/8
Interaxial	2.27	3/22	3 1/4
Interaxial dia.	12.1	3/4	17 2/7
Entablature hei. (phase I)	1.6		
Architrave hei.	0.45	1/37	1/37
Frieze hei.	0.45	1/37	1/37
Cornice wid.	0.5	1/33	1/33
Cornice hei.	0.7		
Roof dia.	1.6		
Floorspace (square measure)	95.0		
Volume (cubic measure)	969.3		

Note: * *critical dimension*
 ** *in relation to the lower column dia.*

Source: Love 1972, 70-6 figs. 5-9.

Chart #16. KNIDOS: Aphrodite, temple





#16 KNIDOS:
Aphrodite, temple
Scale 1:200

#17 LAVINIUM: Penates, Shrine

Context: near the Sanctuary of Frutis? (see text)

Date: 6th c. BC? (see text); date of the Sanctuary of Frutis (see text)

Founder: Aeneas?

Description: round monopteros

Remains: none

Literary and epigraphical sources:

Location: Varro *ling.* 5.144: *Oppidum quod primum conditum in Latio stirpis Romanae, Lavinium: name ibi dii Penates nostri* (Penates at Lavinium). Dion. Hal. 1.57.1 (Shrine at Lavinium).

Cult: *CIL* X 797 (priesthood). Macr. *Sat.* 3.4.11 and Serv. *Aen.* 2.296 (yearly sacrifices for Vesta and the Penates). Dion. Hal. 1.57.1 (location of the festival). Val. Max. 1.6.7; cf. Cic. *off.* 3.109 (festival 1st attested in 137 BC).

Decorative scheme: Varro *ling.* 5.144 (Penates, see 'Location' above). Dion. Hal. 67.3 (other Trojan cult objects at Lavinium). Verg. *Aen.* 7.59 fol. (sacred laurel tree).

Iconographic sources: late Republican coins (see Furtwängler 1900, pl. 38 no. 6); medallions of Hadrian and Antoninus Pius (see Robert 1939, 374, Castagnoli 1972, 78 fol., 109, and 113 fol., and Scott 1999c, 129)

Decoration: Trojan cult objects incl. the Penates (see 'Literary and epigraphical sources:

Decorative scheme' above); altar (see 'Iconographic sources' above); sacred tree (see

'Literary and epigraphical sources: Decorative scheme' and 'Iconographic sources' above)

Bibliography: Castagnoli 1972, 78 fol., 109, and 113 fol. Palombi 1997, 442-3 n. 31.

Text: 20-1.

#18 MAGNESIA ON THE MEANDER: Athena Poliouchos, Shrine

Context: near the Theater; orientation unknown

Date: 2nd c. AD: inscription (see 'Literary and epigraphical sources: Inscriptions from Remains' below) and see Roux 1992, 178 and 196

Founder: Apollonius (see 'Literary and epigraphical sources: Inscriptions from Remains' below)

Description: round monopteros? (3.38 m. in dia., marble?)

Remains: part of the inscribed architrave (marble?)

Literary and epigraphical sources:

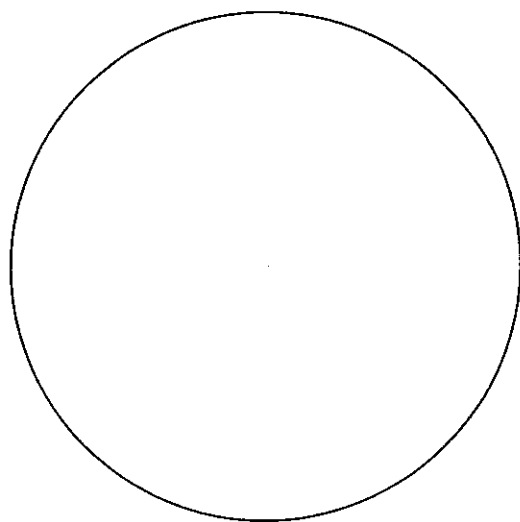
Inscriptions from 'Remains': Kern 1900, no. 216 (dedicatory inscription, architrave)

Excavations: unknown

Previous attributions: Roux (1992, 178) identifies it as a dedication of the city of Athens

Bibliography: Kern 1900, no. 216. Fiechter 1937, 309. Robert 1939, 72-3. Will 1951, 239. Roux 1992, 178 and 196.

Text: 184.



#18 MAGNESIA ON THE
MEANDER:
Athena Poliouchos, shrine
Scale 1:50

#19 MILETOS: Apollo Delphinios, Shrine

Context: Sanctuary of Apollo Delphinios, set in a porticoed court; flanked by exedrae

Date:

I. Hellenistic period: building remains (see 'Remains' below)

II. Julio-Claudian period: building remains (see 'Remains' below)

Description:

I. round monopteros? (11.72 m. in dia.)

II. round monopteros (11.72 m. in dia., marble) on a 3-step krepis with 12 columns

Remains:

I. part of the foundations

II. part of the foundations and krepis (marble-revetted concrete)

Decoration:

I. statue of Apollo Delphinios inside the Shrine (see Weber 1990, 114 and 224 cat. M19)

Excavations: G. Kawerau and A. Rehm in the early 1900s

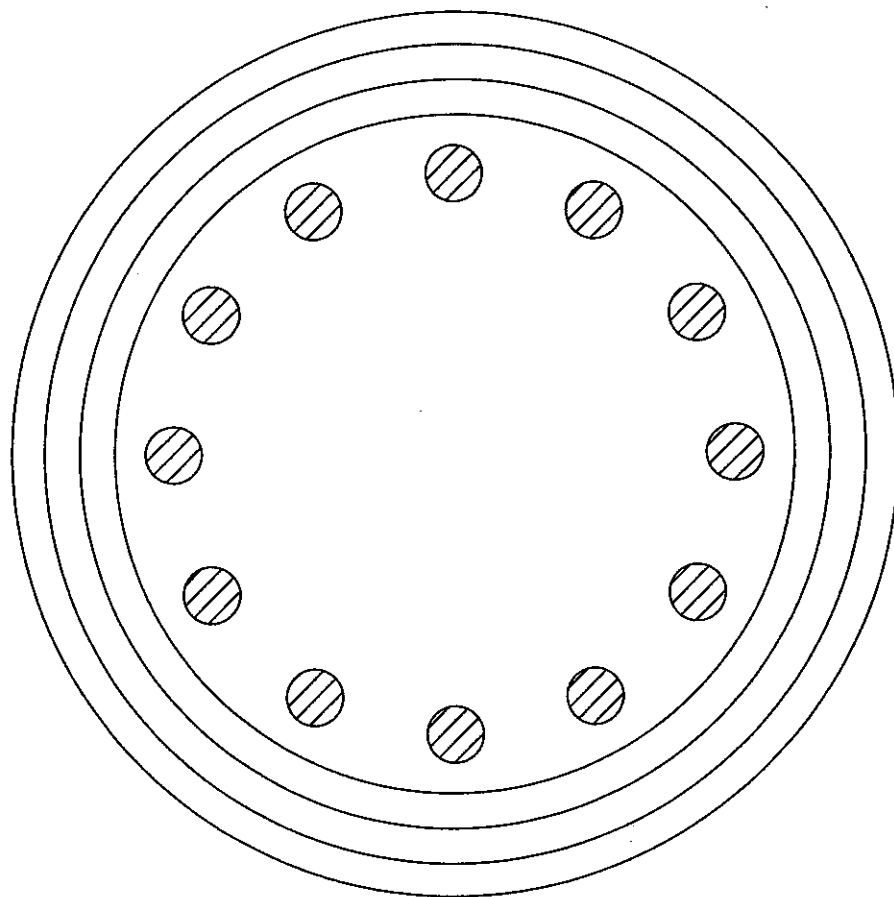
Bibliography: Kawerau and Rehm 1914, 147-50. Weber 1990, 114 and 224 cat. M19 pl. 55.207-8. Baldassarri 1998, 57.

Text: 130.

<i>MILETOS: Apollo Delphinios, shrine</i>		<i>ideal</i>
<i>actual measurements</i>	<i>meters</i>	<i>proportional relationships</i>
Stair Treads	0.465	1/25
Krepis dia. at base *	11.72	1
Krepis dia. at euthynteria	9	3/4
Base dia. (columns)	0.75	1/16
Intercolumnation	1.39	3/25
Interaxial	1.86	
Interaxial dia.	7.44	5/8
Floorspace	43.5	

Note: * *critical dimension*

Source: Kawerau and Rehm 1914, 147-8.



#19 MILETOS:
Apollo Delphinios, shrine
Scale 1:100

#20 NAPLES AREA: Eumelos, Vesta or Ceres, Shrine

Context: near S. Angelo a Nilo

Date: late Republic: inscription (see 'Literary and epigraphical sources' below)

Description: round

Remains: a round wall? (see Altmann 1906, 44)

Literary and epigraphical sources: *CIG* 5786 (building inscription?)

Bibliography: Altmann 1906, 44-5.

Text: 62.

#21 NAZZANO: Feronia, Temple

Context: *lucus Capenatis*, Sanctuary of Feronia

Date:

I. Republic (3rd c. BC?): ancient sources (see 'Literary and epigraphical sources: Location and date' below)

II. Imperial period?: column (see 'Remains' below)

Description: round (20 m. in dia.)

Remains:

I. 6 Ionic columns (5 of granite and 1 of Carian marble, which may pertain to an Imperial rebuilding, see Altmann 1906, 42), part of the frieze and the door frame; a seated female figure was found nearby

II see I.

Literary and epigraphical sources:

Location and date: Cato frg. 30, Verg. *Aen.* 7.697, Liv. 1.30.5, and Dion. Hal. 3.32.1 (*lucus Capenatis*, sanctuary of Feronia). Liv. 26.11.8 and Sil. 13.83 (Temple gifts and cult objects plundered by Hannibal, ca. 211 BC).

Excavations: R. Lanciani in the 1860s

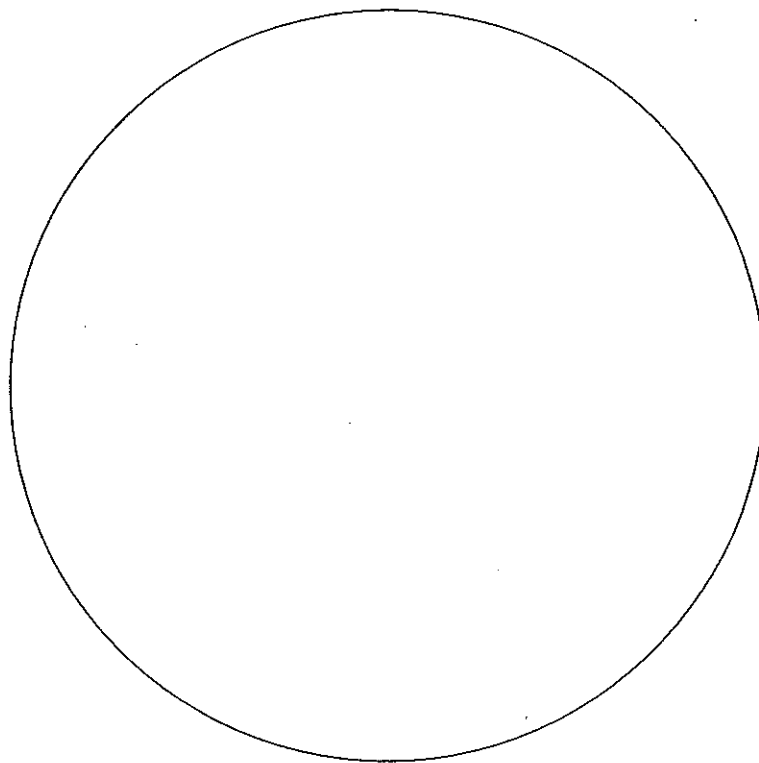
Bibliography: Lanciani 1870, 30-1. Jordan 1886, 8. Altmann 1906, 42. Wissowa 1912, 285.

Text: 62.

NAZZANO: Feronia, temple					
			ideal	%	ideal
actual measurements	meters	roman feet	roman feet	difference	proportional relationships
Total ext. *	20.0	68.0	68.0	0.0%	1
Floorspace (square measure)	314.2	3631.7			

Note: * *critical dimension*

Source: Jordan 1886, 8.



#21 NAZZANO:
Feronia, temple
Scale 1:200

#22 OLYMPIA: Philippeion

Context: old sanctuary, located near the Heraion and Pelopeion; oriented towards the Heraion (E)

Date: 338-320 BC: Pausanias (see 'Literary and epigraphical sources: Decorative program' below)

Patron: Philip II, king of Macedon, completed by his son, Alexander

Description: peripteros (15.4 m. in dia., limestone and marble) with a 3-step krepis, 18 Ionic columns (exterior) and 9 Corinthian pilasters (interior), 2 windows, 2 Ionic entablatures (interior and exterior), and a conical roof

Remains: part of the foundations, krepis, euthynteria, cella wall (muschelkalk and marble), columns (drums of muschelkalk, bases and capitals of limestone), pilasters (marble), entablatures (muschelkalk), and roof (marble)

Literary and epigraphical sources:

Decorative program: Paus. 5.20.9-10 (statues of the Macedonian royal family).

Decoration: statues (see 'Literary and epigraphical sources: Decorative program' above); Macedonian Ionic capitals; Peloponnesian Corinthian pilasters; curved statue bank

Excavations: in 1877-1878

Previous attributions: Baldassarri (1998, 56) identifies the Philippeion as a *thesauros*.

Bibliography: Robert 1939, 401-3. Miller 1973, 189-218. Binder 1969, 100 fol. Seiler 1986, 89-103. Baldassarri 1998, 56.

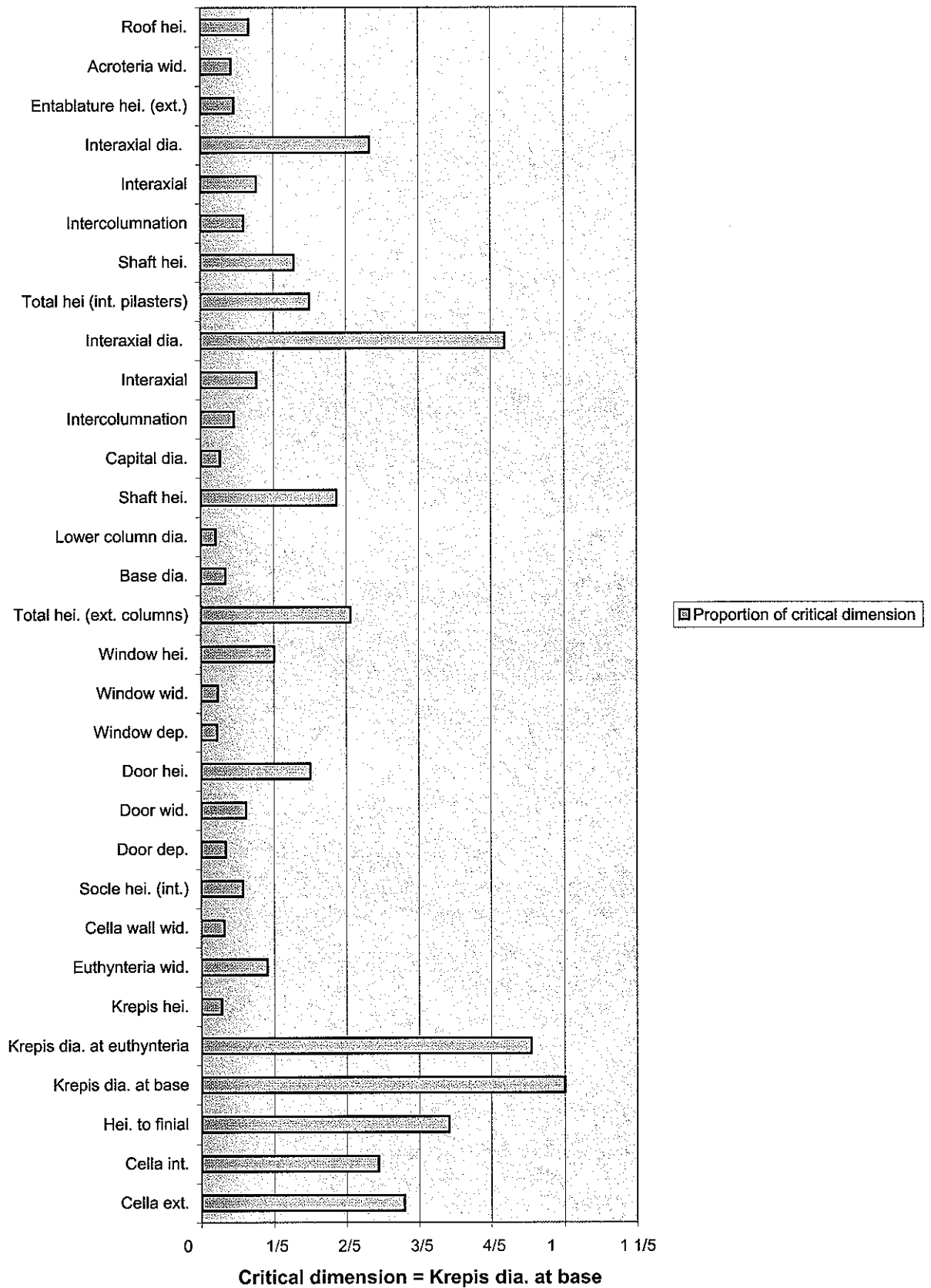
Text: 34-8.

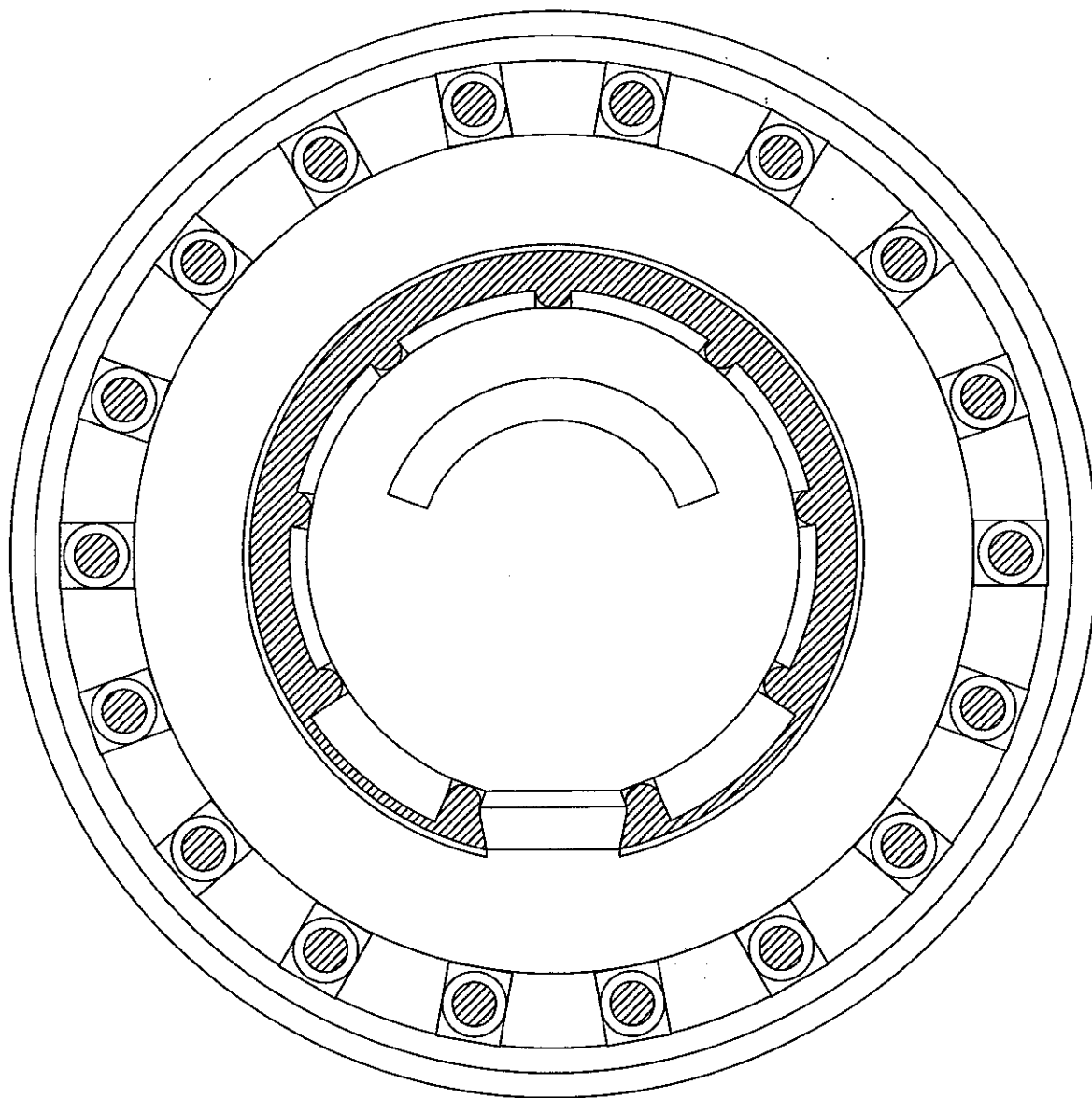
<i>OLYMPIA: Philippelon</i>		<i>ideal proportional relationships</i>	
<i>actual measurements</i>	<i>meters</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Cella ext.	8.6	5/9	
Cella int.	7.5	1/2	
Hei. to finial	10.5	2/3	
Foundation dep.	1.15		
Stair treads	0.35		
Stair risers	0.25		
Krepis dia. at base *	15.4	1	
Krepis dia. at euthynteria	14	10/11	
Krepis hei.	0.84	1/18	
Euthynteria wid.	2.8	2/11	
Euthynteria hei.	0.29		
Ambulatory (ext.)	1.6		
Cella wall wid.	0.98	1/16	
Cornice wid.	0.13		
Cornice hei.	0.25		
Socle hei. (int.)	1.75	1/9	
Door dep.	1	1/15	
Door wid.	1.9	1/8	
Door hei.	4.63	3/10	
Door jamb	0.1		
Door lintel	0.1		
Window dep.	0.67	1/23	
Window wid.	0.7	1/22	
Window hei.	3.1	1/5	
Window jamb	0.1		
Window lintel	0.1		
Total hei. (ext. columns)	6.35	2/5	10 1/4
Base dia.	1	1/15	1 3/5
Base hei.	0.3		1/2
Lower column dia. **	0.62	1/25	1
Shaft hei.	5.75	3/8	9 2/7
Capital dia.	0.8	1/19	1 2/7
Capital hei.	0.3		1/2
Intercolumnation	1.4	1/11	2 1/4
Interaxial	2.4	2/13	3 7/8
Interaxial dia.	12.9	5/6	20 4/5
Total hei. (int. pilasters)	4.55	3/10	9
Base dia.	0.55		1 1/9
Base hei.	0.2		2/5
Lower column dia. **	0.5		1
Shaft hei.	3.95	1/4	8
Capital dia.	0.5		1
Capital hei.	0.45		8/9
Intercolumnation	1.85	2/17	3 5/7
Interaxial	2.4	2/13	4 4/5
Interaxial dia.	7.25	7/15	14 1/2
Entablature hei. (ext.)	1.4	1/11	
Architrave hei.	0.45		
Frieze hei.	0.35		
Dentil hei.	0.2		
Cornice wid.	0.5		
Cornice hei.	0.4		
Entablature hei. (int.)	0.55		
Architrave hei.	0.2		
Frieze hei.	0.35		
Acroteria wid.	1.3	1/12	
Acroteria hei.	0.2		
Roof dia.	14.5		
Roof hei.	2	2/15	
Floorspace (square measure)	44.2		
Volume (cubic measure)	60.9		

Note: * critical dimension
 ** in relation to the lower column dia.

Source: Seiler 1986, 89-103 figs. 36-40.

Chart #22. OLYMPIA: Philippeion





#22 OLYMPIA:
Philippeion
Scale 1:100

#23 OSTIA: Lares Augusti, Shrine

Context: Forum, sited to the S of the Decumanus Maximus and opposite the Capitolium (N, 1st c. BC); no clear orientation

Date: 51 AD: inscriptions (see 'Literary and epigraphical sources: Inscriptions from Remains' below)

Patrons: L. Seius Hermeros, L. Seius Primus, and L. Seius Diomedes (see text)

Description: drum (5.7 m. in dia., brick-faced concrete) with 6 interior niches

Remains: the foundations, part of the cella wall (*opus testaceum*), and fragments of the cornice; 7 inscribed plates (marble, see text) were found nearby

Literary and epigraphical sources:

Inscriptions from 'Remains': Inv. nos. 32, 46, 84-7, and 101 (see Bloch 1962, 214-8).

Decoration: inscribed plaques (see 'Remains' above)

Excavations: G. Calza in the 1950s

Previous attributions: Calza (et al. 1953, 71; vs. Bloch 1962, 211-3) identified it as a nymphaeum

Bibliography: Calza et al. 1953, 71. Bloch 1962, 211-23. Alföldi 1973, 42. Meiggs 1973, 354, 379, and 596. Pavolini 1989, 103-4. Bakker 1994, 122-3, 129, 131-2, 192, 201, and 203. Pensabene 1996b, esp. 214-5.

Text: 128-9.

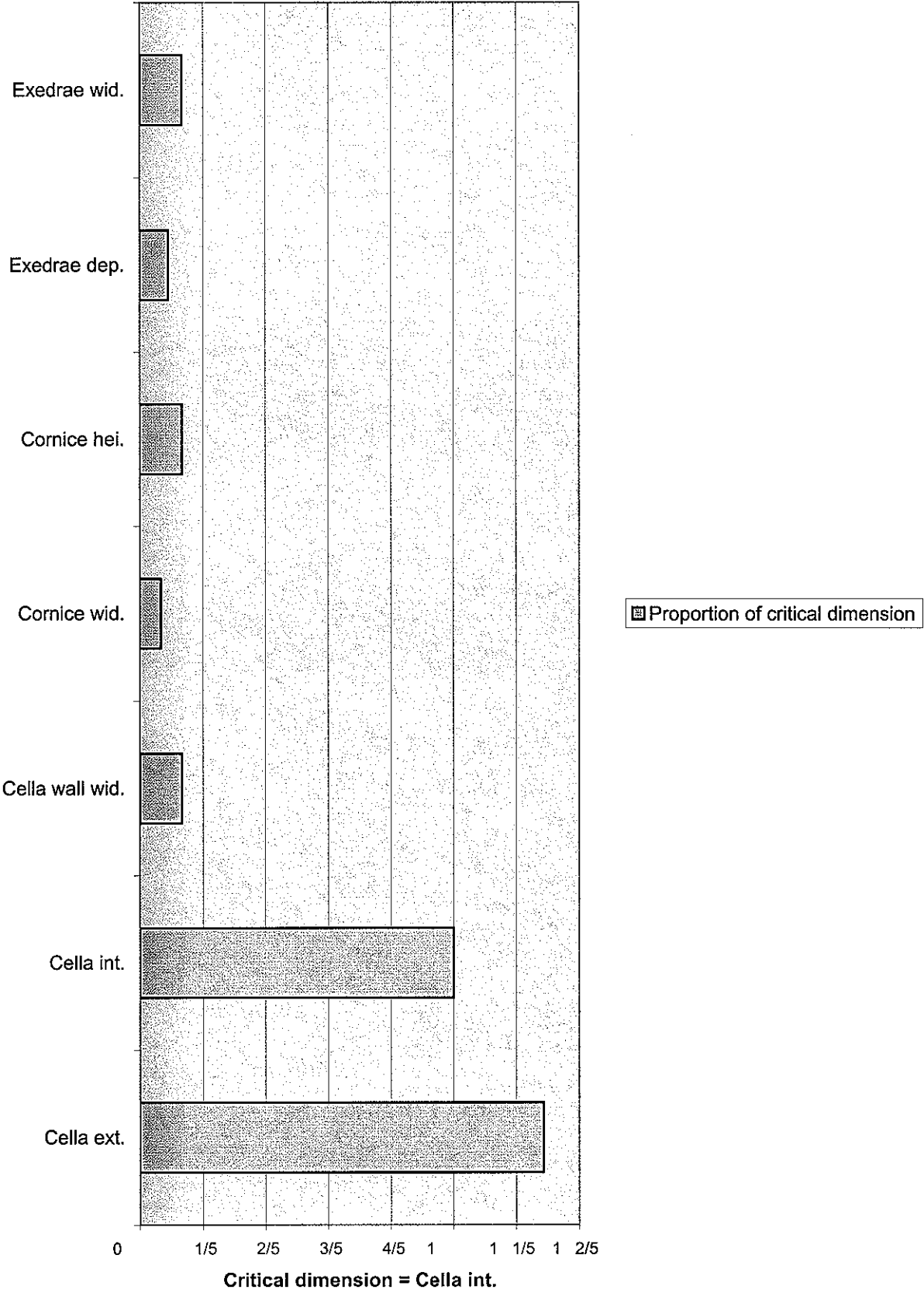
OSTIA: Lares Augusti, shrine

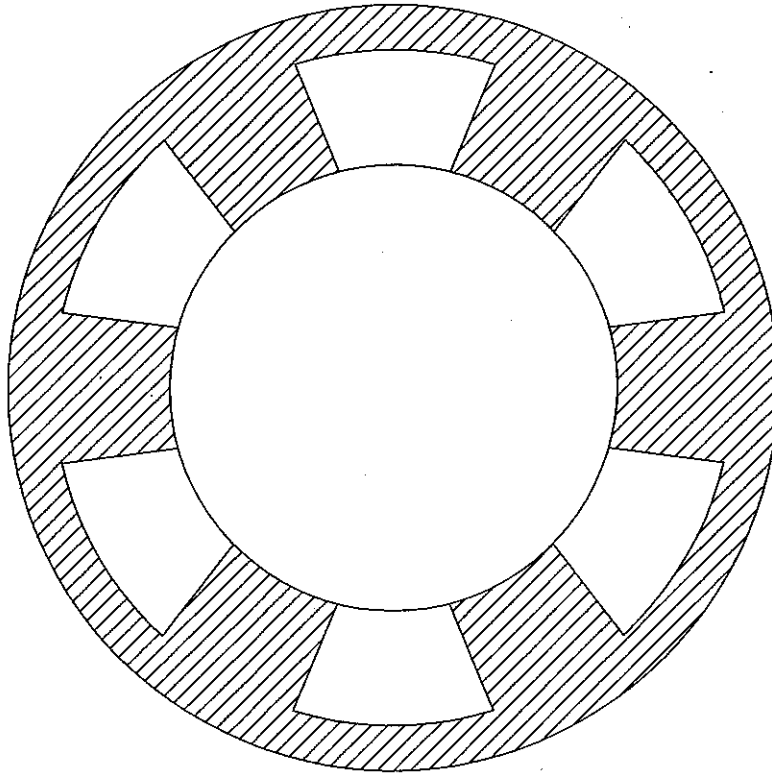
<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships</i>
Cella ext.	5.7	19.3			1 2/7
Cella int. *	4.5	15.2	15	-1.3%	1
Cella wall wid.	0.6	2			2/15
Cornice wid.	0.3	1			1/15
Cornice hei.	0.6	2			2/15
Exedrae dep.	0.4	1.35			1/11
Exedrae wid.	0.6	2			2/15
Floorspace (square measure)	15.9	181.5			

Note: * *critical dimension*

Source: Briggs 1962, 211-23 figs. 2-3.

Chart #23. OSTIA: Lares Augusti, shrine





#23 OSTIA:
Lares Augusti, shrine
Scale 1:50

#24 OSTIA: 'Pantheon' (I.XI.1)

Context: near the Forum, sited next to the Basilica (E, I.XI.5); oriented towards the Decumanus (N)

Date: under Alexander Severus: building materials and techniques (see Meiggs 1973, 550-1), and the statue of Alexander Severus (see 'Remains' below)

Patron: Alexander Severus? (see text)

Description: round (mainly marble-faced *opus testaceum*) with a 10-column porch (30.3 m. long by 5.9 m. wide, Attic-Asiatic bases, monolithic shafts, Corinthian capitals; fronted by steps and statue niches), an intermediate block (11.6 m. long by 1.4 m. wide, incl. Corinthian pilasters and 2 stairwells), and a domed drum (18.30 m. in dia., articulated with 7 niches flanked by 8 columns); preceded by a rectangular court (framed by steps which provide access to the statue niches, see text)

Remains: most of the foundations and podium (*opus vittatum mixtum* of brick and tufa, see text and Meiggs 1973, 550); porch: fragments of the steps, statue niches (marble-faced brick work), and columns (Luna marble bases and capitals, cipollino shafts); intermediate block: part of the pilasters, the stairwells (marble-faced brick work?, see text; 1 incl. a travertine pillar), and the base and cornice molding (marble, see text); drum: part of the walls (brick-faced concrete) and columns (marble pedestals and shafts); pavement of the porch, intermediate block and drum (multi-colored marble); court: fragments of the pavement, drains (white marble), steps, and statue niches (marble-faced brick work); a portrait head of Alexander Severus (*MNR* I 9, 360 no. R273) was found inside the Temple

Decoration: court and Temple pavement (see 'Remains' above); statue of Alexander Severus (see 'Remains' above); a portrait head of Gordian III (*MNR* I 1, 310 no. 186) and a base for a statue of his wife (*CIL* XIV Suppl. 4399) were added later

Excavations: C. Briggs in the 1920s (known from the early 1800s, see Briggs 1930, 162-3)

Previous attributions: Briggs (1930, 168) dates the Temple to the post-Constantinian period, while Meiggs (1973, 81) attributes its construction to Gordian III

Bibliography: Briggs 1930, 161-9. Calza et al. 1953, 151-4. Meiggs 1973, 81, 146, 550-1, and pl. 37a. Pensabene 1973, 31 no. 17, 95-6 nos. 336-9, pl. 2 no. 17, pls. 33-4 nos. 336-9, and pl. 86 no. 337. MacDonald 1976, 98 and 100. Pavolini 1989, 110. Bakker 1994, 172. Pensabene 1996b, esp. 201-4 and 209-10.

Text: 224-6.

OSTIA: 'Pantheon'

<i>actual measurements</i>	<i>ideal proportional relationships</i>					
	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Total ext. *	23.8	80.4	80	-0.5%	1	
Cella ext.	22.1	74.66			14/15	
Cella int.	18.3	61.8			7/9	
Porch len.	5.9	19.9			1/4	
Porch wid.	30.3	102.4			1 2/7	
Intermediate block len.	11.6	39.2	40	2.0%	1/2	
Intermediate block wid.	1.4	4.7			1/17	
Stairwells dia.	1.53	5.17	5.3	2.5%	1/15	
Stair treads (lower)	0.33	1.1				
Stair treads (landing)	0.7	2.4				
Stair risers	0.23	0.78				
Stairway len.	4	13.5			1/6	
Stairway wid.	10	33.8			3/7	
Stairway wid. (incl. balustrades)	14.9	50.3	50	-0.6%	5/8	
Podium hei.	2.56	8.65			1/9	
Podium cornice wid.	0.23	0.78				
Cella wall wid.	1.9	6.4			2/25	
Cella wall wid. (at exedrae)	0.7	2.4				
Exedrae dep. (rectangular)	1.9	6.4			2/25	
Exedrae wid.	4.4	14.9	15	0.7%	3/16	
Exedrae dep. (semicircular)	1.3	4.4	4.4	0.9%	1/18	
Exedrae wid.	3.8	12.8	13	1.6%	1/6	
Door dep.	0.3	1				
Door wid.	4.1	13.9				
Total hei. (porch columns)	7.3	24.7	24	-2.8%	3/10	11 2/9
Base wid.	1.15	3.89	4	2.8%	1/20	1 3/4
Base hei.	0.5	1.55				5/7
Lower column dia. **	0.66	2.2				1
Shaft hei.	6.1	20.9				9 1/2
Capital dia.	1.15	3.89	4	2.8%	1/20	1 3/4
Capital hei.	0.7	2.25				1
Intercolumnation	1.4	4.7			1/17	2 1/7
Interaxial	2.55	8.59				4
Pedestal wid. (int. columns)	1.3	4.4	4.4	0.9%	1/18	1 1/2
Lower column dia. **	0.85	2.87				1
Intercolumnation	5.8	19.6	20	2.0%	1/4	6 5/6
Interaxial	7	23.65	24	1.5%	3/10	8 1/4
Interaxial dia.	17	57.4			5/7	20
Cornice wid.	0.58	1.96				
Cornice hei.	0.73	2.47				
Floorspace (square measure)	263.0	2999.6				

reconstructed measurements

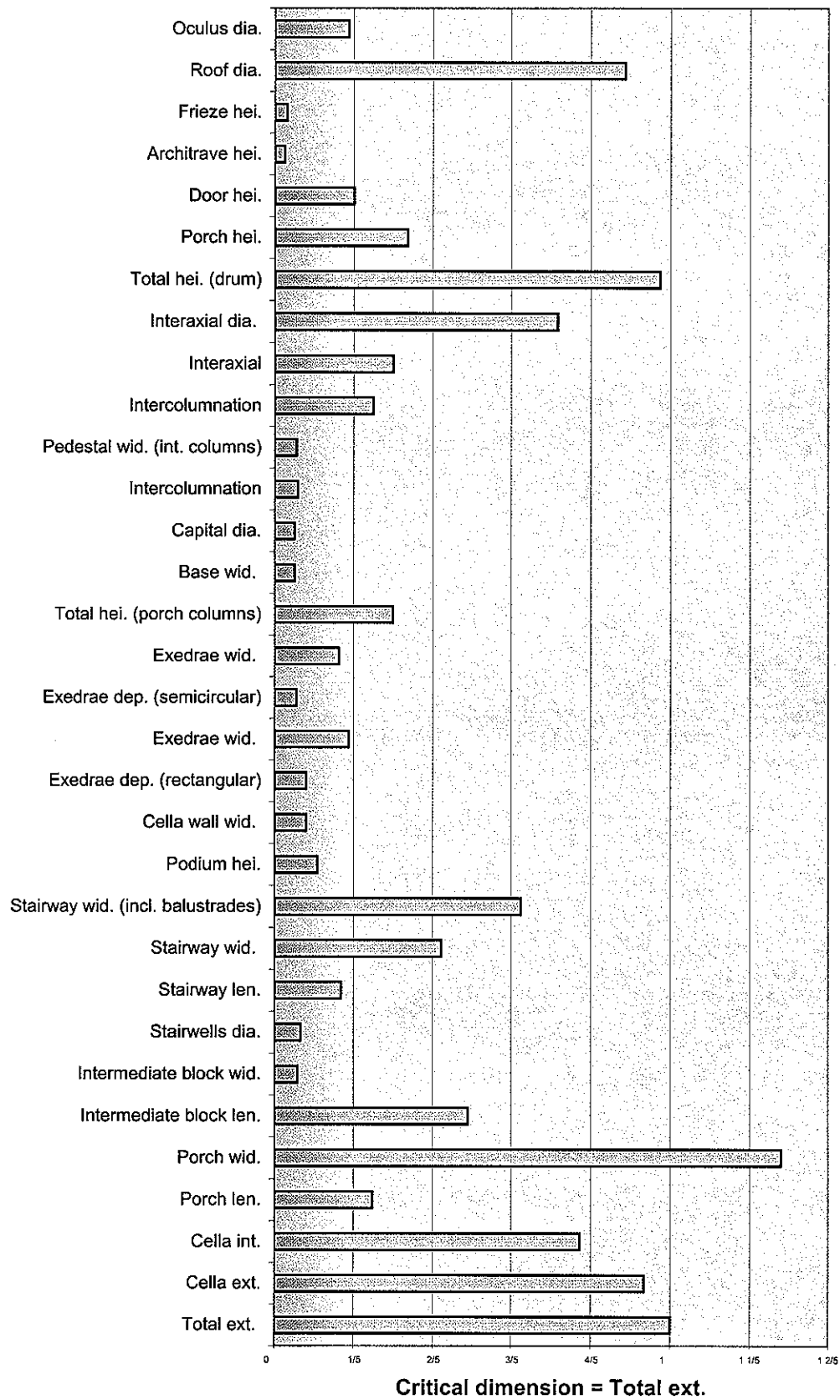
Total hei. (drum)	23.1	77.9			1	
Porch hei.	8	27			1/3	
Door hei.	4.76	16.1			1/5	
Entablature hei. (ext.)	2	6.9				
Architrave hei.	0.58	1.96	2	2.0%	1/40	
Frieze hei.	0.73	2.47	2.5	1.2%	1/32	
Roof dia.	21	70.95			8/9	
Roof hei.	6.42	21.7				
Oculus dia.	4.38	14.8	15	1.4%	3/16	
Volume (cubic measure)	817.2	24400.9				

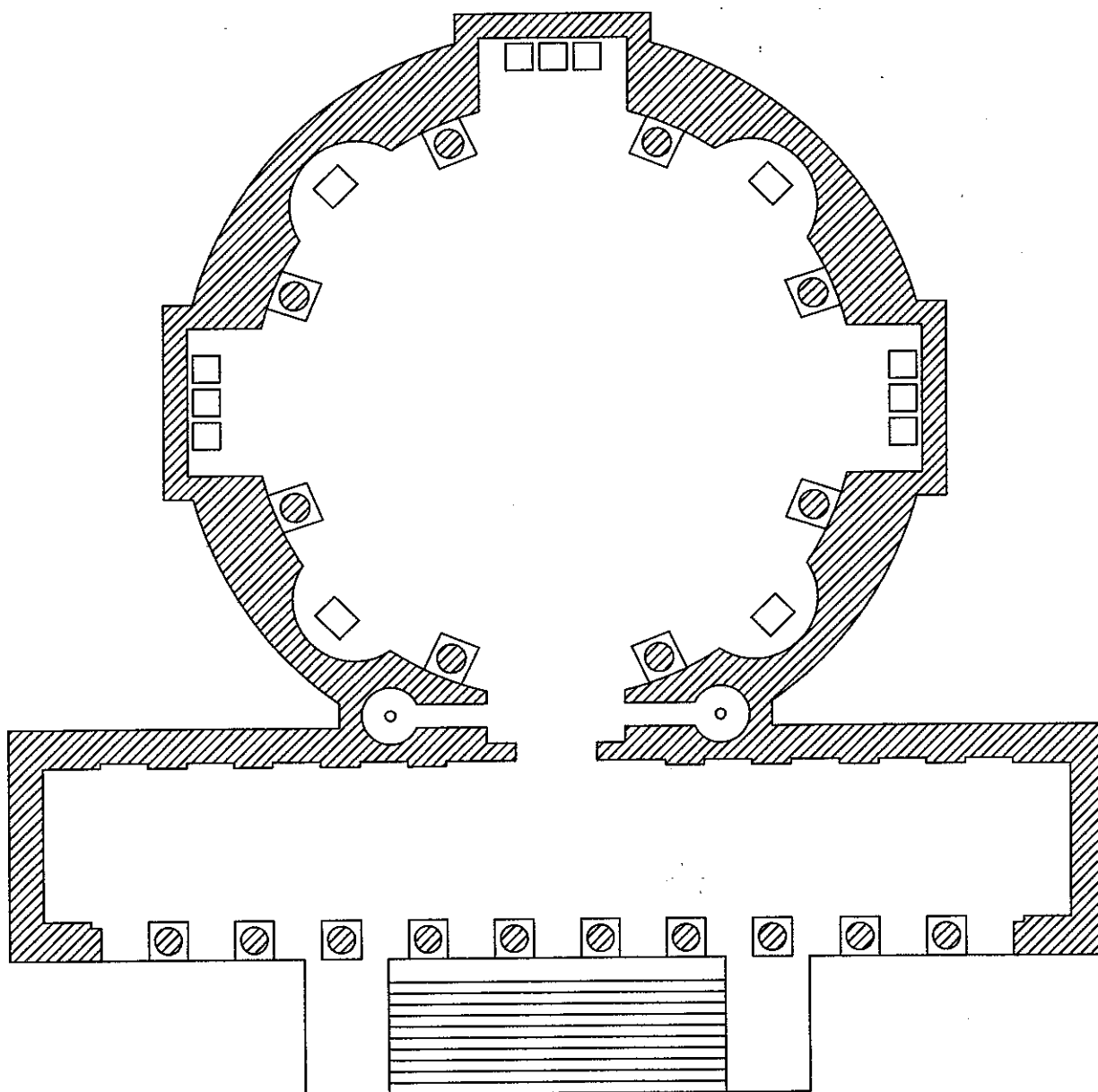
Note: * critical dimension

** in relation to the lower column dia.

Source: Briggs 1930, 164-5 pls. 54-6.

Chart #24. OSTIA: 'Pantheon'





#24 OSTIA:
'Pantheon' (1.XI.1)
Scale 1:200

#25 PELLA: Round court with tholoi annexes

Context: to the SW of the palace (4th c. BC); no clear orientation

Date: 2nd half of the 4th c. BC with mosaics of the late 4th c. BC: building materials and techniques comparable to the palace at Vergina (see Seiler 1986, 134)

Description: 3 drums (6.80 m. in dia., mostly limestone) with conical roofs, adjacent to a round court (30.48 m. in dia.)

Remains: most of the socle (limestone), some roof drains, and fragments of mosaic work and wall paintings

Decoration: mosaic flooring and wall paintings (see 'Remains' above)

Excavations: C. Makaronas in 1963-1964

Previous attributions: Seiler (1986, 133-5) sees the tholoi as dining rooms and round court as an assembly area, while Price (1973, 66-71) identifies the court as a dedication to Herakles Phylakos.

Bibliography: Makaronas 1964, 340 fol., fig. 5, and pls. 398-404; 1965, 414 fol., fig. 2 and pls. 469-70. Price 1973, 66-71. Salzmann 1982, 108 no. 105, and pl. 38.1-5. Seiler 1986, 129-35.

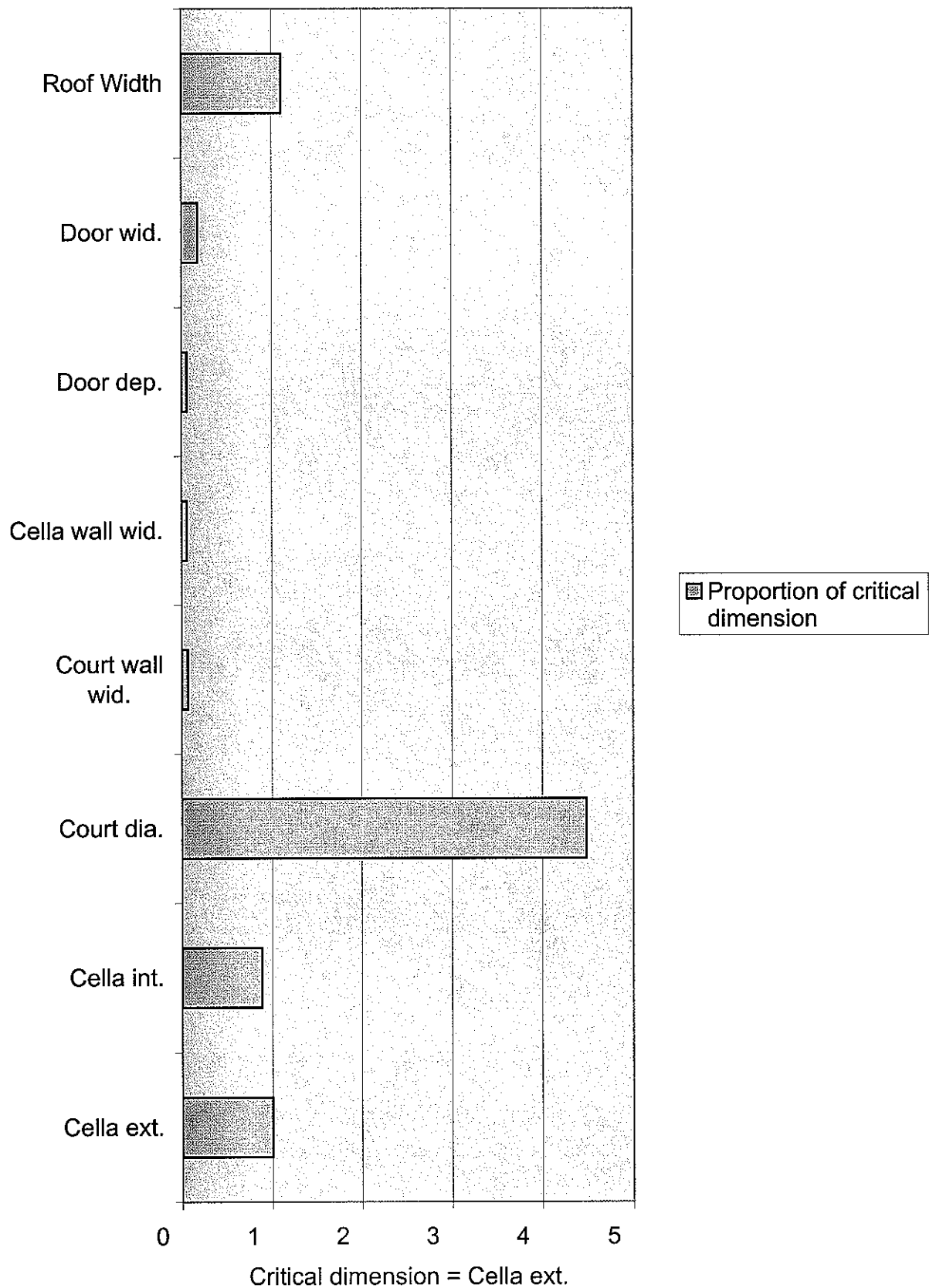
Text: 34-8.

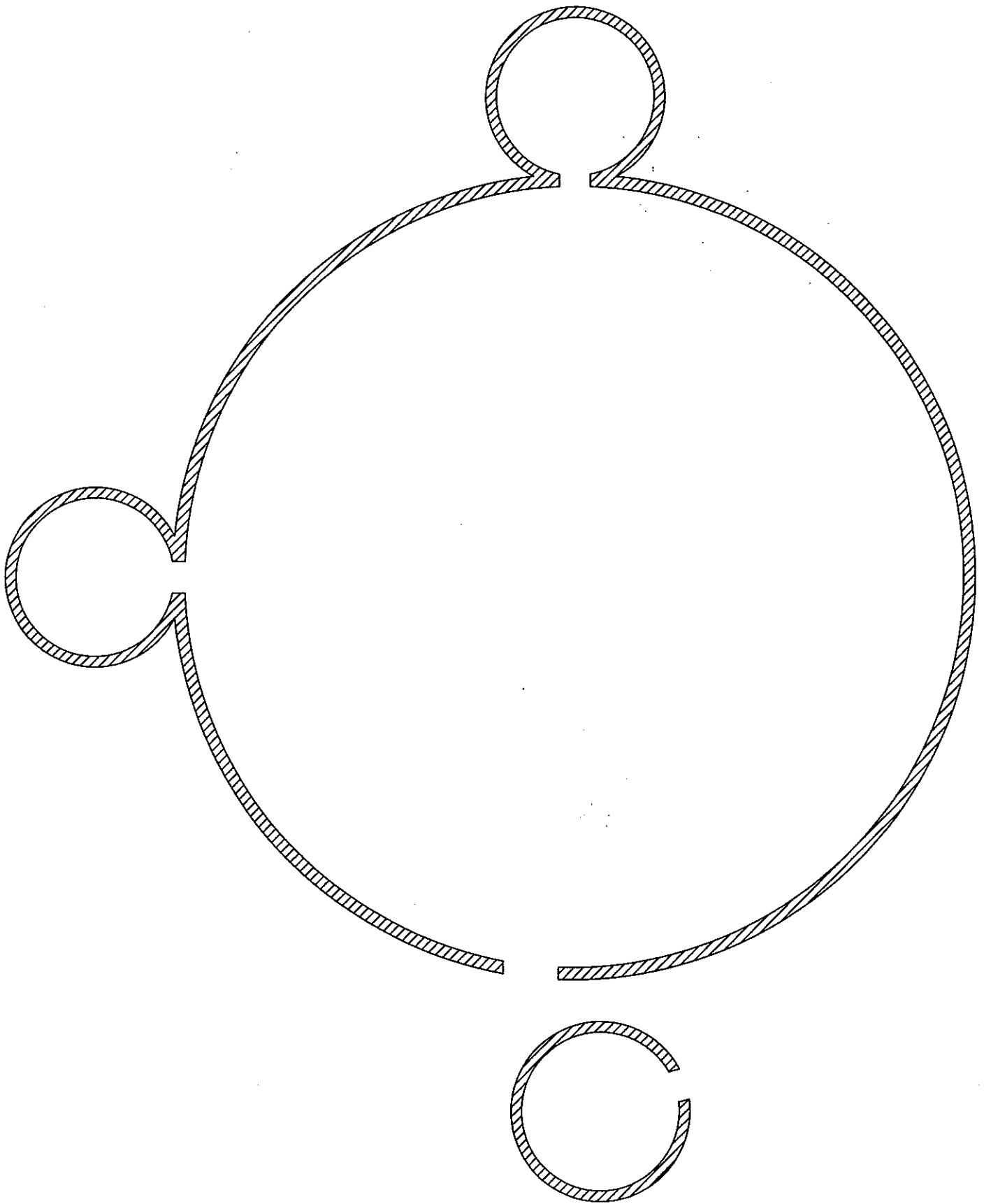
<i>PELLA: Round Court with tholoi annexes</i>		<i>ideal</i>
<i>actual measurements</i>	<i>meters</i>	<i>proportional relationships</i>
Cella ext. *	6.80	1
Cella int.	6.00	8/9
Court dia.	30.48	4 1/2
Court wall wid.	0.46	1/15
Court door wid.	2.10	
Cella wall wid.	0.4	1/17
Door dep.	0.4	1/17
Door wid.	1.2	3/17
Floorspace (square measure)	729.66	
<i>reconstructed measurements</i>		
Roof Width	7.5	1 1/9

Note: * *critical dimension*

Source: Seiler 1986, 129-35 figs. 59-60.

Chart #25. PELLA: Round Court with tholoi annexes





#25 PELLA:
Round court with tholoi annexes
Scale 1:200

#26 PERGAMON: Abaton

Context: Sanctuary of Zeus Asklepios Soter, at the SE corner of the precinct next to the Temple of Zeus Asklepios Soter (#27, Hadrianic); oriented towards the open court (SW, 120 m. long by 90 m. wide)

Date: ca. 200 AD; building materials and techniques (see text)

Description: drum (31.95 m. in dia., mainly andesit, brick and concrete) on 2 levels, the lower with a central core and 3½ rings of 17 pillars and walls indented with 14 windows (see text) and the upper with 6 exedrae flanked by Corinthian? pilasters and topped by a dome (see text and Ziegenaus 1981, 98-9); the lower level is accessed by the portico and a cryptoporticus, and the upper by stairs and a ramp from the lower level

Remains: much of the lower level (andesit-faced concrete walls, pillars and stairs, marble revetment, and concrete barrel vaults; incl. an elaborate water distribution system, see Ziegenaus 1981, 88-92), and fragments of the floor (marble-revetted concrete?, see Ziegenaus 1981, 95), apses (brick semi-domes and revetment, see 'Decoration' below), and the revetment (see 'Decoration' below) of the upper level

Decoration: mosaics employed in the upper level (yellow, green, and blue glass, and red and white limestone, see Ziegenaus 1981, 100)

Excavations: T. Wiegand in 1930

Bibliography: Wiegand 1932, 16-20. Deubner 1938, 56-60. Robert 1939, 407-10. Habicht 1969, 9. Ziegenaus 1981, 76-100 pls. 25-45. Radt 1988, 259-60 and 267-70.

Text: 217-8.

PERGAMON: Adyton

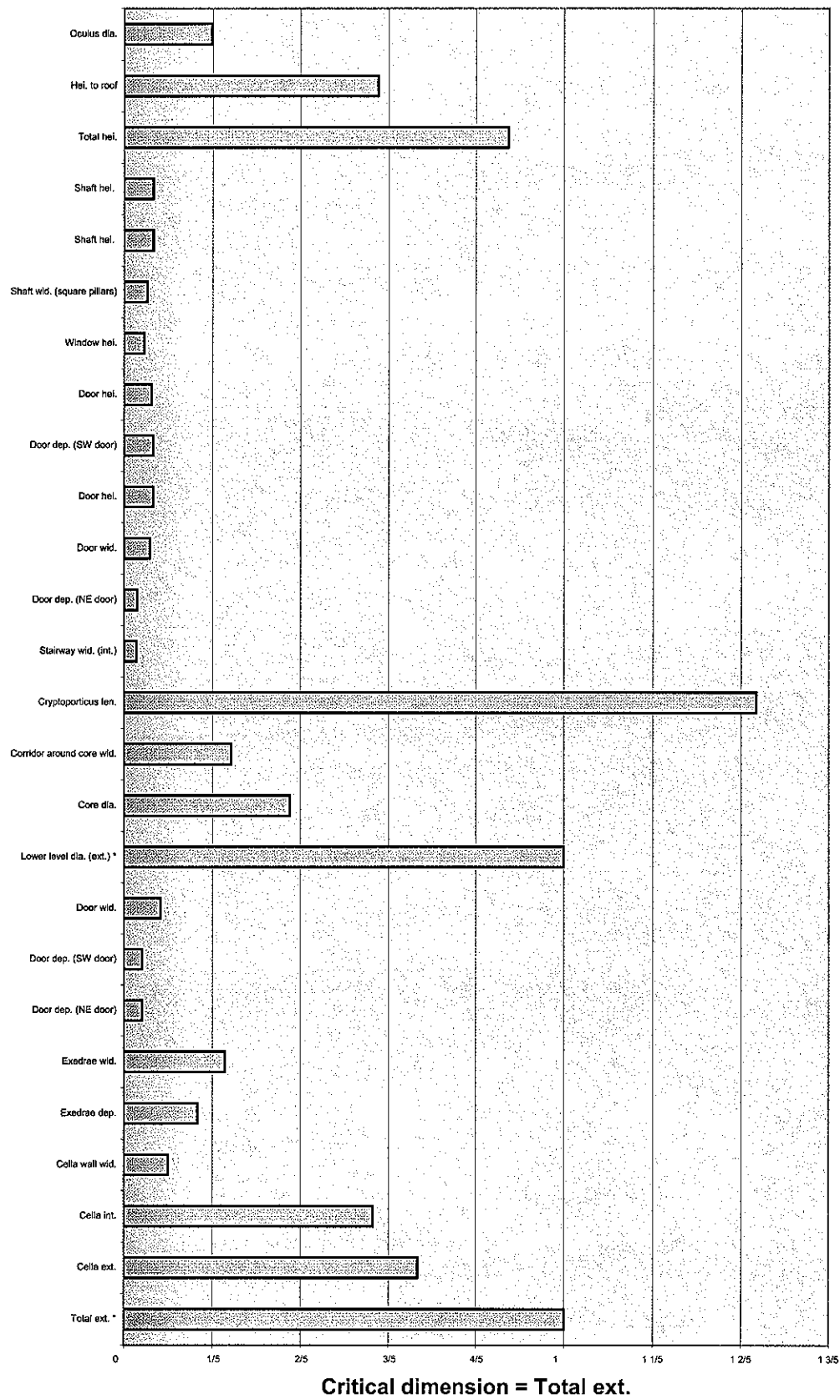
<i>upper level actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships</i>
Total ext. *	47.95	161.99	162	0.00%	1
Cella ext.	31.95	107.9			2/3
Cella int.	27.06	91.4			4/7
Cella wall wid.	4.89	16.5			1/10
Exedrae dep.	8	27			1/6
Exedrae wid.	11.05	37.33	37	-0.9%	2/9
Door dep. (NE door)	2	6.75			1/24
Door wid.	6.5	22			
Door dep. (SW door)	2	6.75			1/24
Door wid.	4	13.5			1/12
Floorspace (square measure)	1178.3	13431.9			
<i>lower level actual measurements</i>					
Lower level dia. (ext.) *	47.95	162			1
Lower level dia. (int.)	44.58	150.6			
Core dia.	18.04	60.95			3/8
Corridor around core wid.	11.63	39.3			1/4
Cryptoporticus len.	68.8	232.4			1 3/7
Stair treads	0.25	0.85			
Stairway wid. (ext.)	1.8	6.1			
Stairway wid. (int.)	1.38	4.66			1/35
Wall wid.	1.6	5.3			
Door dep. (NE door)	1.44	4.86			1/33
Door wid.	2.82	9.53			1/17
Door hei.	3.17	10.7			1/15
Door dep. (SW door)	3.12	10.5			1/15
Door wid.	2.46	8.31			
Door hei.	3	10.1			1/16
Window wid.	1.28	4.32			
Window hei.	2.15	7.26			1/22
Shaft wid. (square pillars)	2.5	8.45			1/19
Shaft hei.	3.29	11.1			1/15
Shaft wid. (narrow pillars)	1.1	3.7			
Shaft hei.	3.29	11.1			1/15
<i>upper level reconstructed measurements</i>					
Total hei.	41.9	141.55			7/8
Hei. to roof	27.6	93.2			4/7
Oculus dia.	9.5	32.1			1/5
Volume (cubic measure)	7302.8	19556.3			

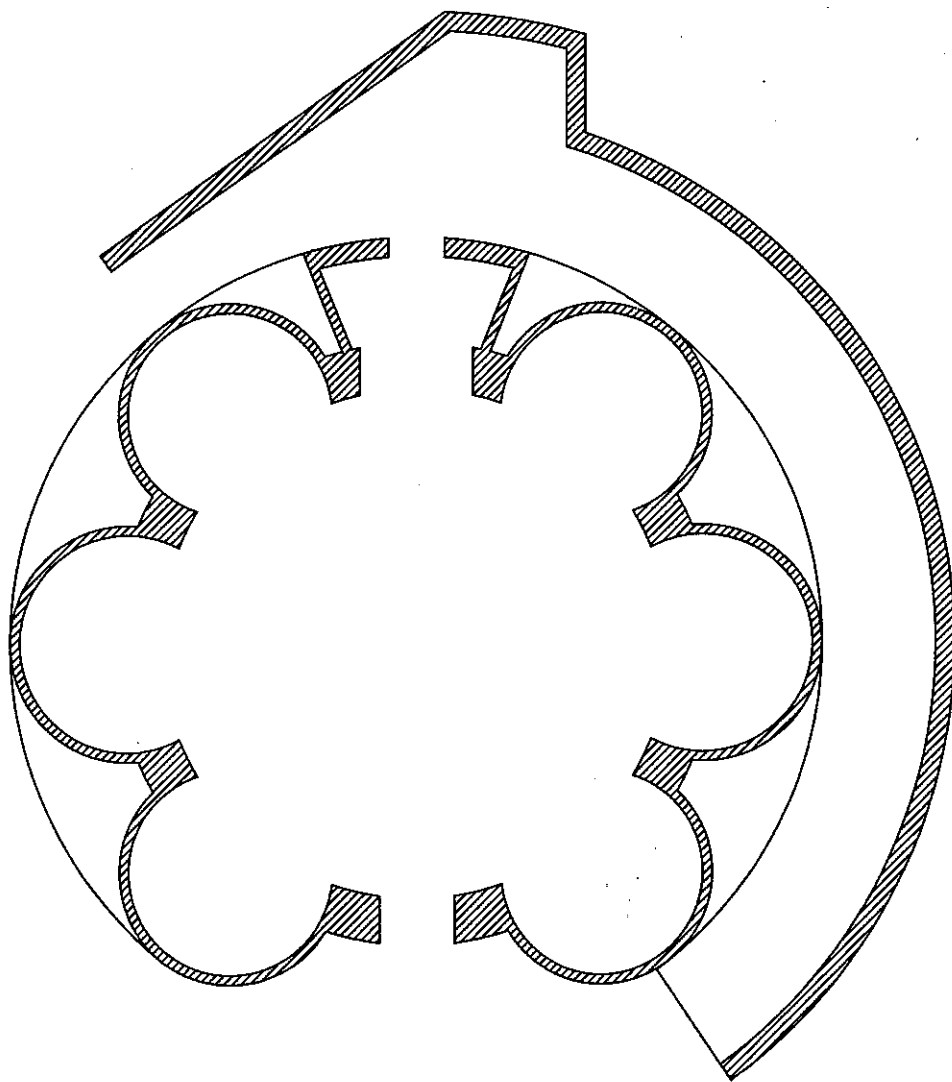
Note: * critical dimension

** in relation to the lower column dia.

Source: Ziegenaus 1981, 76-100 pls. 25-45.

Chart #26. PERGAMON: Abaton





#26 PERGAMON:
Abaton
Scale 1:400

#27 PERGAMON: Zeus Asklepios Soter, Temple

Context: Sanctuary of Zeus Asklepios Soter, along the E side of the precinct between the Propylon (Hadrianic, see text) and the Abaton (200 AD, see #26 and text); oriented towards the open court (W, 120 m. long by 90 m. wide)

Date: Hadrianic period (123-129 AD?, see Gros 1996a, 182); Ael. Arist. *Isthm.* 42.4 (see 'Literary and epigraphical sources: Attribution' below), building materials, techniques and style (see text)

Patron: L. Cuspius Rufinus (see text)

Description: round (marble and andesit, see 'Remains' below) with a rectangular pronaos (10.4 m. long by 14.5 m. wide, accessed by steps, consists of 4 columns with Attic bases, fluted shafts and Corinthian capitals, and a pediment), an intermediate block (7.6 m. long by 16 m. wide, comprises 2 pilasters with Attic bases, monolithic shafts, and Corinthian capitals, and a pediment), and a drum (28 m. in dia., accessed by 2 steps, incl. 3 semi-circular and 4 rectangular exedrae, pilasters with Attic bases and Corinthian capitals, and an entablature), whose dome is reached by a stair tower (5.28 m. wide by 4.92 m. deep); 2 rooms flank the stairs to the drum (see Ziegenaus 1981, 38-9)

Remains: most of the foundations and podium (andesit and concrete, see Ziegenaus 1981, 30-2); pronaos: fragments of the steps (marble-revetted concrete), 1 column drum, the entablature, and the pediment's cornice and sculpture (marble, see 'Decoration' below); intermediate block: fragments of the pilasters (1 marble capital and 2 granite shafts), the entablature, coffers, and the pediment's cornice (marble); drum: fragments of the walls (andesit ashlar masonry), the floor and wall revetment (various marbles and mosaics, see 'Decoration' below), the pilasters, the entablature (marble), and the dome (rubble and mortar)

Literary and epigraphical sources:

Attribution: Ael. Arist. *Isthm.* 42.4 (quoted by Habicht 1969, 13 n. 17).

Iconographic sources:

Cult statue?: coins of Marcus Aurelius and Commodus (see Deubner 1938, 54)

Decoration: pediment of the pronaos: heads of Athena and a giant (see Radt 1988, 261); rotunda: paving and wall revetment (incl. blue-violet and yellow Phrygian marbles, see Wiegand 1932, 13-4; vs. Ziegenaus 1981, 45 and 65), marble statue base in the E niche; dome and E niche: mosaics (glass, gilded glass, and stone, see Ziegenaus 1981, 66; the gold-ground mosaics are probably Christian, cf. Wiegand 1932, 12, and Ward-Perkins 1989, 120)

Excavations: T. Wiegand in 1930

Bibliography: Wiegand 1932, 11-20. Deubner 1938, 29-60. Robert 1939, 405-7. Habicht 1969, 9-14. Le Glay 1976, 347-72. MacDonald 1976, 98 figs. 102-3. Koenigs and Radt 1979, 340-3. Ziegenaus 1981, 30-75 pls. 9-24. Hoffman 1983, 95-103. Rasch 1985, 125. Radt 1988, esp. 250-71. Gros 1996a, 182-3.

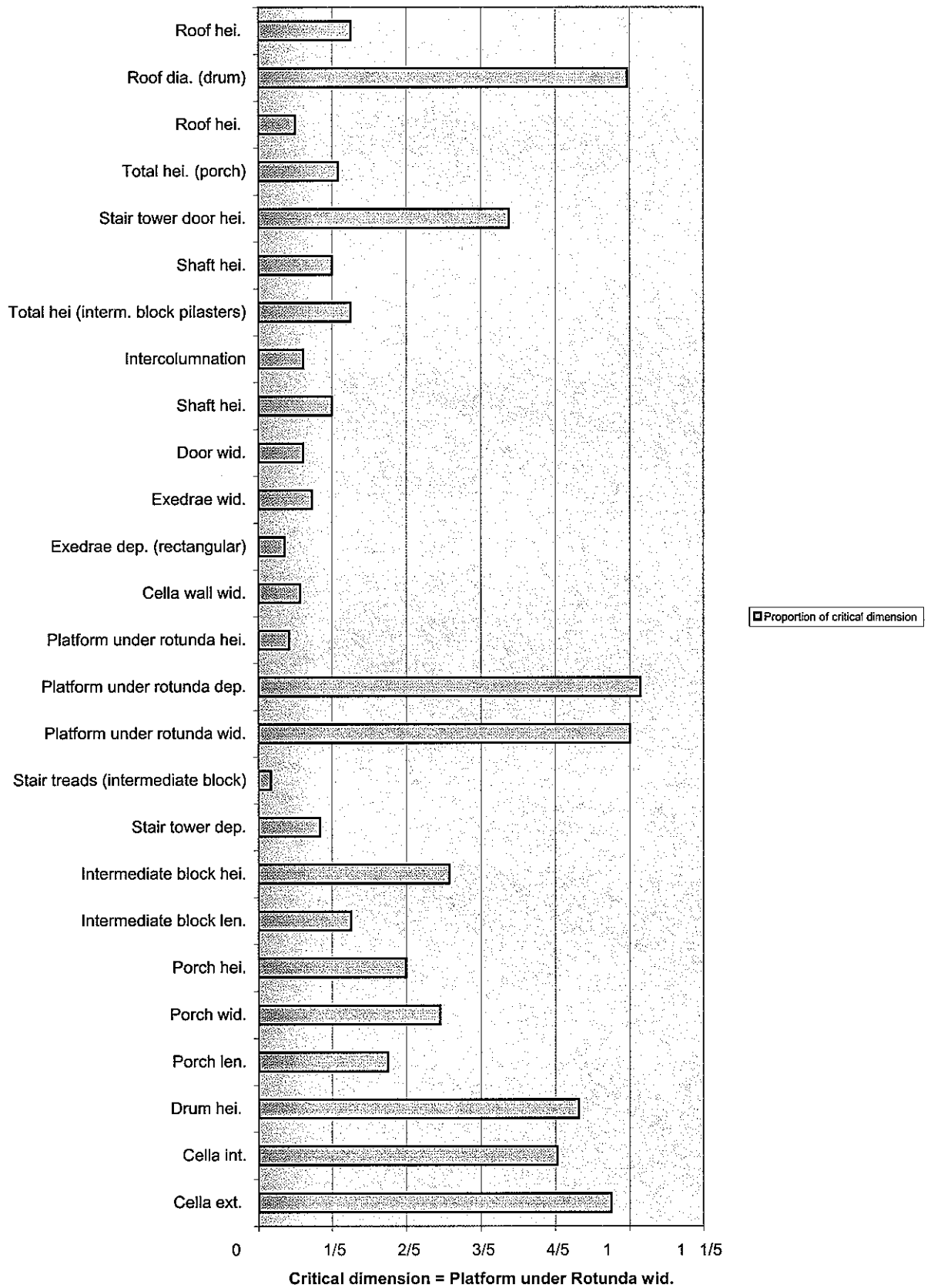
Text: 172-4.

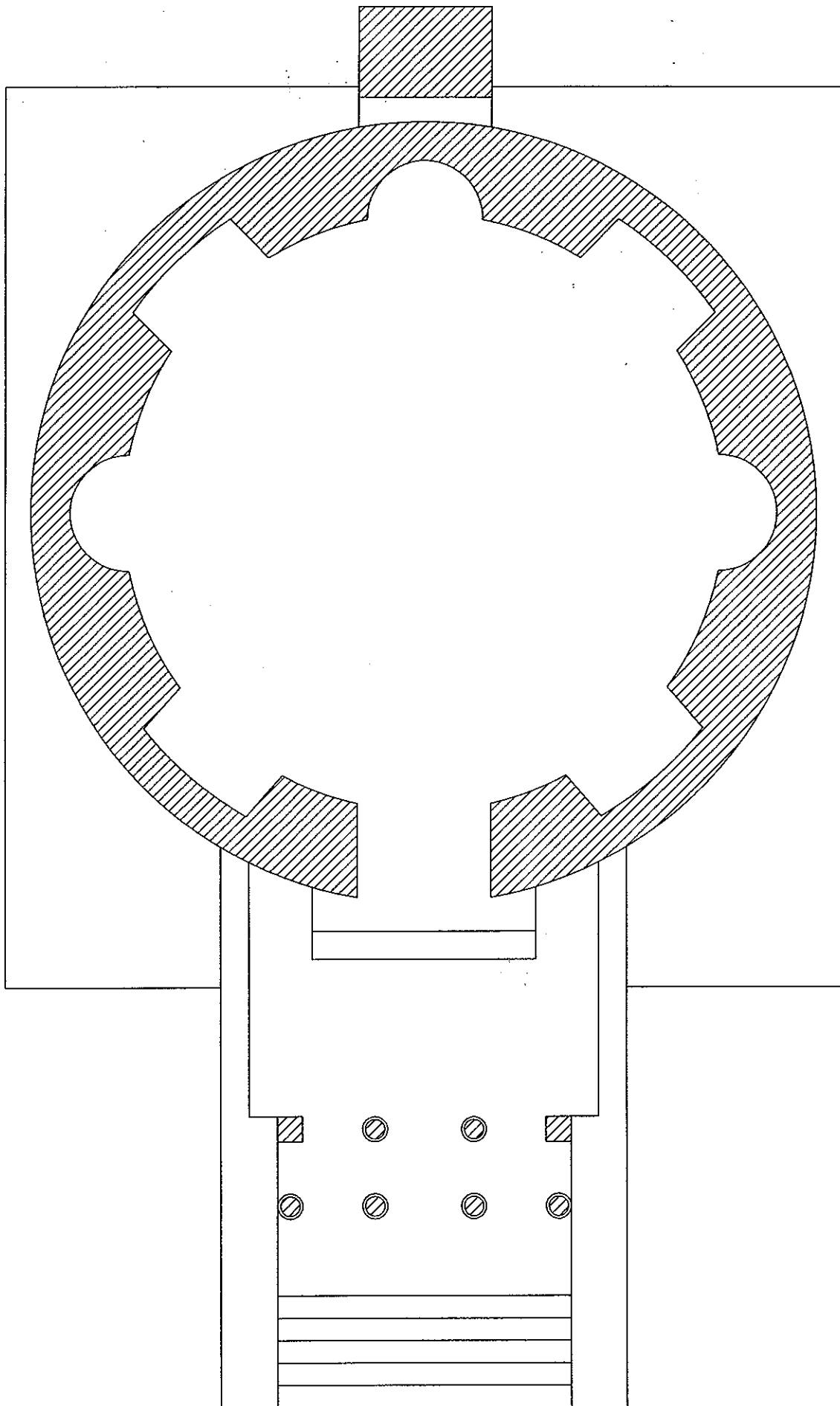
actual measurements	ideal proportional relationships				
	meters	roman feet	roman feet	% difference	to critical dimension * within columnar order **
Cella ext.	28	94.6	95	0.4%	19/20
Cella int.	23.85	80.57			4/5
Drum hei.	25.53	86.25			6/7
Porch len.	10.4	35.1	35	-0.3%	7/20
Porch wid.	14.5	49			1/2
Porch hei.	11.8	39.9			2/5
Intermediate block len. (incl. 2 stairs)	7.6	25.7	25	-2.7%	1/4
Intermediate block wid.	16	54.1			
Intermediate block hei.	15.25	51.5			1/2
Coffers (smaller) (square measure)	0.564	6.44			
Coffers (larger) (square measure)	0.68	7.77			
Stair tower dep.	4.92	16.62			1/6
Stair tower wid.	5.28	17.84			
Stair tower door wid.	1.05	3.55			
Stair treads (porch)	0.8	2.7			
Stair risers	0.5	1.7			
Stair treads (intermediate block)	1	3.4			1/30
Stair risers	0.45	1.52			
Platform under rotunda wid. *	29.8	100.7	100	-0.7%	1
Platform under rotunda dep.	30.5	103			1 1/33
Platform under rotunda hei.	2.5	8.4			1/12
Cella wall wid.	3.35	11.32			1/9
Exedrae dep. (rectangular)	2.1	7.1			1/14
Exedrae wid.	4.6	15.5			
Exedrae dep. (semicircular)	2.3	7.8			
Exedrae wid.	4.3	14.5			1/7
Door wid.	3.6	12.16			1/8
Lower column dia. (porch column) **	0.678	2.29			1
Shaft hei.	5.92	20			1/5 8 3/4
Intercolumnation	3.62	12.23			1/8 5 1/3
Interaxial (corner columns)	10.7	36.15			15 4/5
Total hei (intermediate block pilasters)	7.2	24.3	25	2.9%	1/4 10 2/7
Base hei.	0.456	1.54			2/3
Lower column wid. **	0.7	2.36			1
Shaft hei.	5.92	20			1/5 8 1/2
Capital hei.	0.8	2.7			1 1/7
Entablature hei. (porch)	0.65	2.2			
Architrave hei.	0.25	0.84			
Frieze hei.	0.4	1.4			
Cornice wid.	0.45	1.52			
Cornice hei.	0.45	1.52			
Entablature hei. (int.)	1.383	4.67			
Cornice wid.(intermediate block)	0.63	2.13			
Cornice hei.	0.34	1.15			
Cornice wid. (drum)	0.9	3			
Cornice hei.	0.9	3			
Floorspace (drum) (square measure)	446.8	5098.4			
reconstructed measurements					
Stair tower door hei.	20	67.57			2/3
Door hei.	6.2	20.95			
Total hei. (porch and intermediate block)	6.4	21.6			2/9 9 3/7
Base dia.	0.9	3			1 1/3
Base hei.	0.57	1.93			5/6
Capital dia.	1.1	3.7			1 5/8
Capital hei.	0.872	2.95			1 2/7
Acroteria wid. (porch)	0.9	3			
Acroteria hei.	1.4	4.7			
Acroteria wid. (intermediate block)	1.4	4.7			
Acroteria hei.	1.6	5.4			
Roof wid. (porch)	11.4	38.5			
Roof hei.	2.3	7.8			
Roof wid. (intermediary block)	15.6	52.7			
Roof hei.	3	10.1	10	-1.0%	1/10
Roof dia. (drum)	29.4	99.3			1
Roof hei.	7.4	25			1/4
Oculus dia.	4.7	15.88			
Volume (drum) (cubic measure)	1295.5	37823.4			

Note: * critical dimension
 ** in relation to the lower column dia.

Source: Ziegenaus 1981, 30-75 pls. 9-24.

Chart #27. PERGAMON: Zeus Asklepios Soter, temple





#27 PERGAMON:
Zeus Asklepios Soter, temple
Scale 1:200

#28 POMPEII: Monopteros

Context: Foro Triangolare, sited in front of the Doric temple (6th c. BC, NW) and beside the forum perimeter wall; orientation unknown

Date: late Republic (and earlier?): inscription (see 'Literary and epigraphical sources: Inscription from Remains' below)

Patron: Numerius Trebius, a *meddix tuticus*

Description: round monopteros (3.582 m. in dia., tufa) sited above a well with 8 Doric columns and an inscribed Doric entablature

Remains: part of the well, columns and entablature (tufa)

Literary and epigraphical sources:

Inscription from 'Remains': *Ni(umsis) Trebiis Tr(ebieis) med(diss) tiv(tiks) aamanaffed*, translated as "Numerius Trebius, son of Trebius, public *meddix*, promoted the construction (of this building)" (inscribed architrave; see La Rocca et al. 1994, 150-1)

Bibliography: Binder 1969, 97-8. La Rocca 1993, 20. La Rocca et al. 1994, 150-1.

Text: 41.

POMPEII: Monopteros

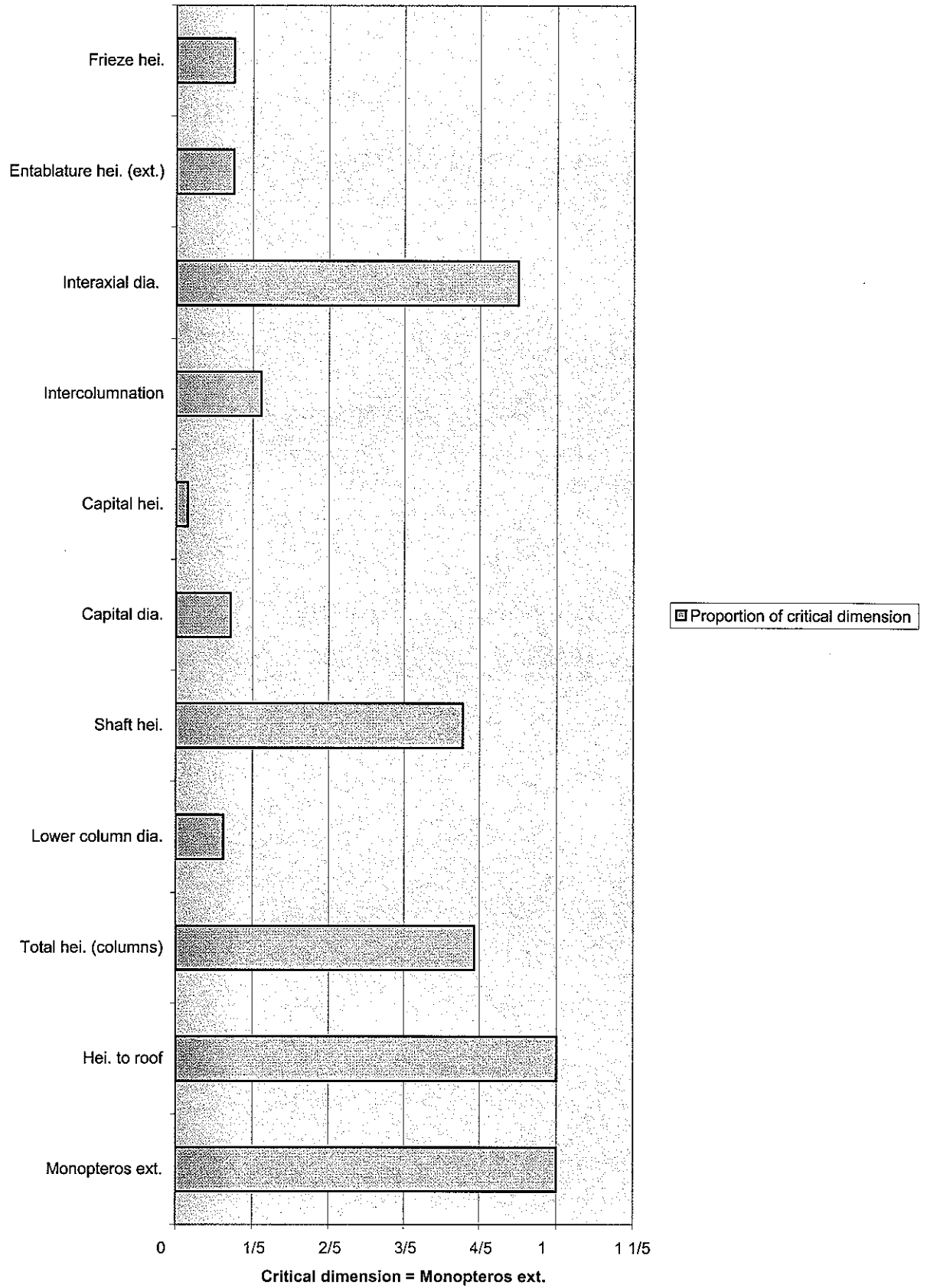
<i>actual measurements</i>					<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Monopteros ext. *	3.582	12.1	12.0	-0.8%	1	
Hei. to roof	3.578	12.1	12.0	-0.8%	1	
Well wid.	1.06	3.58				
Well hei.	0.76	2.6				
Total hei. (columns)	2.794	9.44			4/5	6 1/3
Lower column dia. **	0.44	1.49			1/8	1
Shaft hei.	2.684	9.07			3/4	6
Capital dia.	0.505	1.71			1/7	1 1/7
Capital hei.	0.11	0.37			1/33	1/4
Intercolumnation	0.815	2.75	2.7	-3.0%	2/9	1 5/6
Interaxial	1.255	4.24				2 5/6
Interaxial dia.	3.2	10.8			8/9	7 1/4
Entablature hei. (ext.)	0.527	1.78	1.8	1.1%	3/20	
Frieze hei.	0.527	1.78	1.8	1.1%	3/20	
Floorspace (square measure)	5.7	65.3				
Volume (cubic measure)	20.5	790.4				

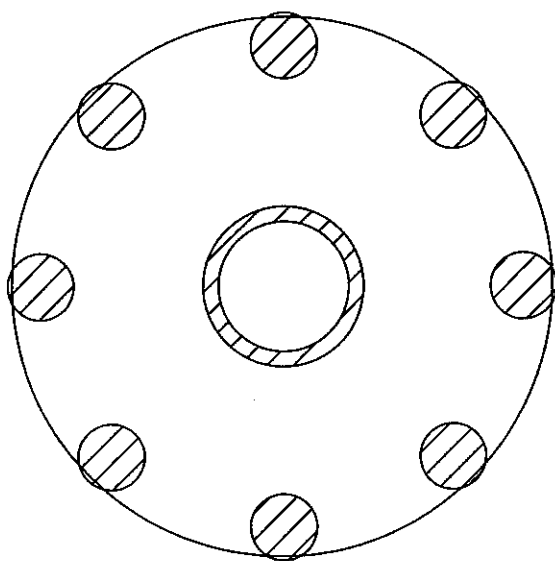
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: LaRocca and de Vos 1994, 150-1 fig. ?

Chart #28. POMPEII: Monopteros





#28 POMPEII:
Monopteros
Scale 1:50

#29 PORTUS: Liber Pater Commodianus, Shrine

Context: NE corner of Trajan's harbor

Date: under Commodus: *CIL* XIV 30 and 666 (inscriptions, see 'Literary and epigraphical sources: Inscriptions from Remains' below)

Patron: Iunia Marciana (see 'Literary and epigraphical sources: Inscriptions from Remains' below)

Description: round peripteros (marble?) rising from a high podium

Remains: part of the podium?, cella wall?, columns? (Attic bases and Corinthian capitals), and inscribed entablature (marble; for the entablature, see 'Literary and epigraphical sources: Inscriptions from Remains' below); a related inscription (see 'Literary and epigraphical sources: Inscriptions from Remains' below) was found nearby

Literary and epigraphical sources:

Inscriptions from 'Remains': *CIL* XIV 666: AVR.RVTILIVS. CAECILIA[NVS]
(entablature, see Lanciani 1868a, 181). *CIL* XIV 30: PRO.SALVTE.[IMP]/
M.AVRELI. COMMODI / ANTONINI.AVG / PII. FELICIS / LIBERO.PATRI /
COMMODIANO / SACRVM / IVNIA.MARCIANE / EX.VOTO.FECIT (inscription
found nearby, see Lanci 1864, 81-2).

Iconographic sources: Torlonia harbor relief (see Meiggs 1973, 165)

Bibliography: Lanci 1864, 81-2. Lanciani 1868a, esp. 181. Meiggs 1973, 165, 169, 385, and pl. 20.

Text: 183-4.

#30 PRAENESTE: Fortuna Primigenia, Shrine

Context: Terrace of the Hemicycles, upper Sanctuary of Fortuna Primigenia; in front of the E
exedra

Date:

- I. Republic (tied with Praeneste's foundation, see text and Coarelli 1993a, 20): well revetment
- II. 110-100 BC: stylistic analysis of capitals from the Shrine and the Hemicycles and of the cult images of the Shrine and the Temple of Fortuna Primigenia (see #31); materials and techniques employed in the cement vaults of the upper Sanctuary

Patron:

- I. unknown
- II. local merchants and magistrates

Description:

- I. round on a well
- II. round monopteros (3.3 m. in dia., marble) on a well with 7 Corinthian columns, a Doric frieze, and a conical roof; a stone transenna topped by metal grillwork filled out the intercolumnations

Remains:

- I. well revetment (*tufa opus quadratum*)
- II. most of the foundations, the well (revetted with *tufa opus incertum*), and the superstructure (marble); additional remains incl. fragments of a statue, a large circular altar, a base with a Doric frieze, and 2 fountains or lustral basins (marble?)

Literary and epigraphical sources:

Decorative program: Cic. *div.* 2.85 (cult statue of Fortuna Primigenia with Jupiter and Juno).

Decoration: cult statue; Doric base and circular altar (see 'Remains' above)

Excavations: F. Fasolo and G. Gullini in the late 1940s (after the Sanctuary was exposed by bombing in World War II)

Bibliography: Fasolo and Giulini 1953, 147-52. Degrassi 1954, 302. Gullini 1954, 133-47. Lugli 1954a, 305-8; 1954b, 51-87. Hanson 1959, 33-6. Brendel 1960, 41-7. Romanelli 1967, 51-5. Binder 1969, 98-100. Gullini 1973, 746-95. Coarelli 1976-1977, 337-9. Degrassi 1978, 147-64. Fittschen 1978, 339-40. Kähler 1978, 221-41. Magoffin 1978, 85-6. Mingazzini 1978, 211-7. Rakob 1978, 380. Blondel 1982, 168 fol. Lauter-Bufe 1987, 50-1. Weber 1990, 112 n. 594. Coarelli 1993a, 146.

Text: 57-60.

PRAENESTE: Fortuna Primigenia, shrine

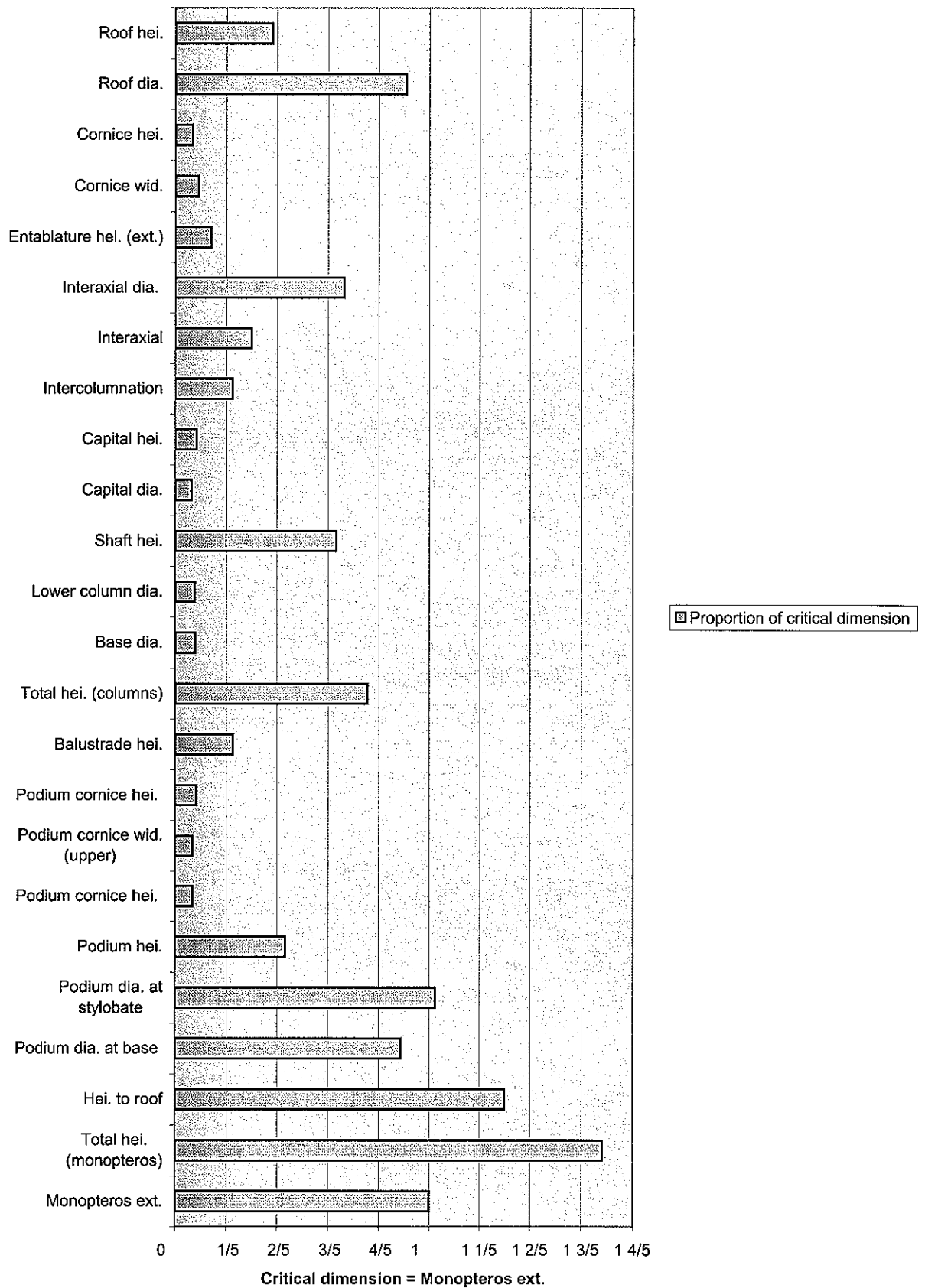
<i>actual measurements</i>	<i>ideal</i>				<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Monopteros ext. *	3.3	11.1	11.0	-0.9%	1	
Total hei. (monopteros)	5.48	18.51	18.5	-0.1%	1 2/3	
Hei. to roof	4.23	14.29			1 3/10	
Well dep.	7.5	25.34				
Well dia.	1.9	6.42				
Podium dia. at base	2.89	9.76			8/9	
Podium dia. at stylobate	3.33	11.25			1	
Podium hei.	1.41	4.76			3/7	
Podium cornice wid. (lower)	0.2	0.68		7		
Podium cornice hei.	0.22	0.74			1/15	
Podium cornice wid. (upper)	0.22	0.74			1/15	
Podium cornice hei.	0.27	0.91			1/12	
Balustrade hei.	0.73	2.5			2/9	
Total hei. (columns)	2.465	8.32			3/4	10
Base dia.	0.253	0.85			1/13	1
Base hei.	0.105	0.35				2/5
Lower column dia. **	0.253	0.84			1/13	1
Shaft hei.	2.08	7.02	7.0	-1.0%	5/8	8 1/3
Capital dia.	0.2	0.68			1/16	4/5
Capital hei.	0.27	0.91			1/12	1 1/12
Intercolumnation	0.73	2.47			2/9	3
Interaxial	1.0	3.38	3.3	-2.4%	3/10	4
Interaxial dia.	2.16	7.3			2/3	8 2/3
Entablature hei. (ext.)	0.45	1.52	1.55	2.0%	1/7	
Architrave hei.	0.075	0.25				
Frieze hei.	0.12	0.41				
Dentil hei.	0.035	0.12				
Cornice wid.	0.3	1			1/11	
Cornice hei.	0.22	0.74			1/15	
Roof dia.	2.98	10.07	10	-0.7%	10/11	
Roof hei.	1.25	4.2			3/8	
Floorspace (square measure)	1.81	20.43				
Volume (cubic measure)	5.9	175.6				

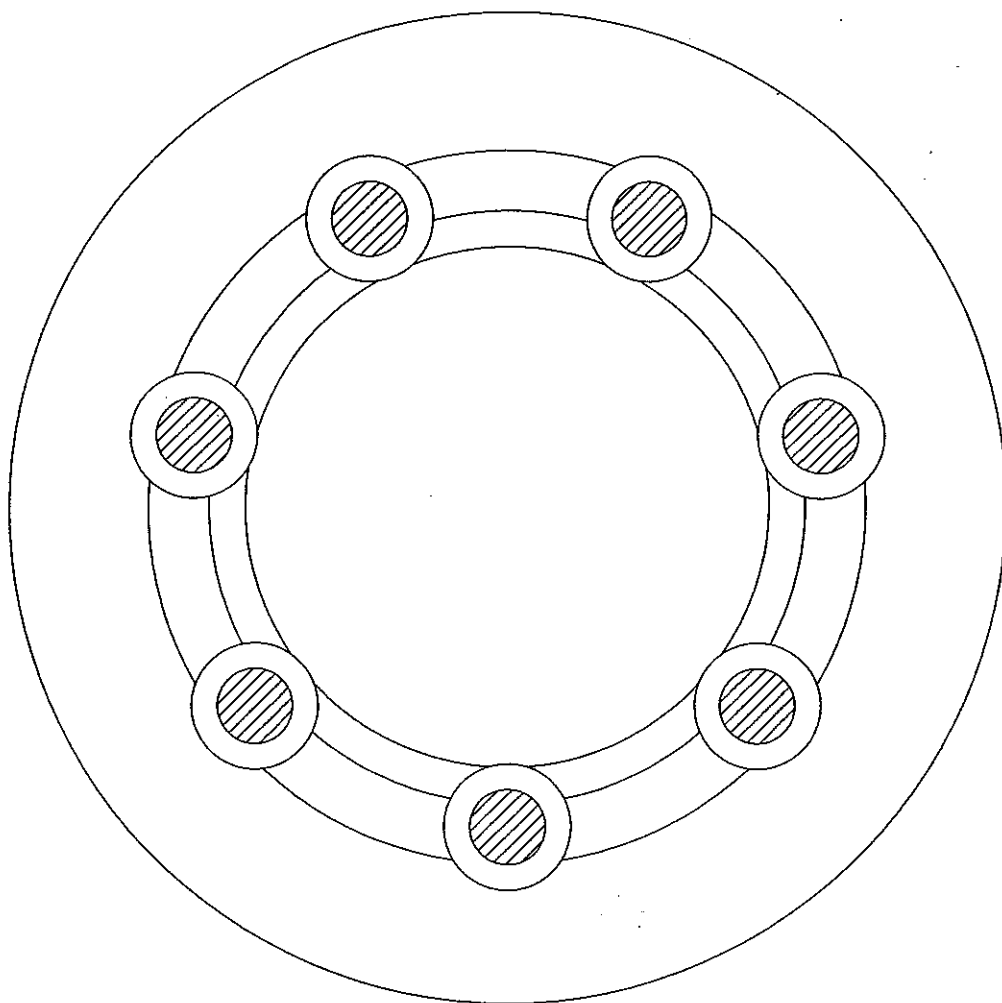
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: Fasolo and Giulini 1953, ??

Chart #30. PRAENESTE: Fortuna Primigenia, shrine





#30 PRAENESTE:
Fortuna Primigenia, shrine
Scale 1:25

#31 PRAENESTE: Fortuna Primigenia, Temple

Context: summit, upper Sanctuary of Fortuna Primigenia; behind a large hemicycle

Date: 110-100 BC: stylistic analysis of capitals from the Shrine of Fortuna Primigenia (#30) and the Terrace of the Hemicycles and of the cult images of the Temple and the Shrine of Fortuna Primigenia; materials and techniques employed in the cement vaults of the upper Sanctuary

Patron: local merchants and magistrates

Description: drum (12.2 m. in dia., *opus incertum*) topped by a cupola; accessed by stairs or ramps (see text)

Remains: 2 concentric walls (*opus incertum*); a statue of Isis-Tyche was found nearby (see text)

Literary and epigraphical sources:

Description: Medieval chronicle recording the Temple's destruction under Boniface VIII in 1298: *Palacium autem Caesaris aedificatum ad modum unius C propter primam litteram nominis sui, et templum palatio inhaerens opere sumptuosissime et nobilissime aedificatum ad modum S. Mariae Rotundae de urbe.* (i.e. the Pantheon, Rome #50).

Decorative scheme: Plin. *nat.* 33.61 (bronze cult image). Cic. *div.* 2.41.85-7 (olive tree).

Iconographic sources: drawings by P. Ligorio and fra' Giacondo (ca. 1515)

Decoration: grey-black marble statue of Isis-Tyche (see 'Remains' above); *lithostroton*; bronze cult statue; olive tree (see 'Literary and iconographic sources: Decorative scheme' above)

Excavations: F. Fasolo and G. Gullini in the late 1940s (after the Sanctuary was exposed by bombing in World War II)

Previous attributions: Weber (1990, 112-3 and 223 cat. M17; cf. Kähler 1978, 222 fig. 4) reconstructs it as a Corinthian monopteros, while Drerup (1966, 181 fol.) relates its cult statue to Victoria.

Bibliography: see #30. Fasolo and Gullini 1953, 187-91 and 259-60. Kähler 1978, 222 fig. 4. Drerup 1966, 181-96. Gullini 1973, 748-52 pl. 137.12a. Rakob 1990, 61-92. Weber 1990, 112-3 and 223 cat. M17. Rakob 1992, 13-8.

Text: 57-60.

PRAENESTE: Fortuna Primigenia, temple

<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships</i>
Total ext. *	15	51			1
Cella ext.	12.2	41.2			4/5
Cella int.	8	27	27.2	0.7%	8/15
<i>reconstructed measurements</i>					
Total hei.	10.3	34.8	34	-2.3%	2/3
Stair treads	0.15	0.5			
Stair risers	0.18	0.6			
Stairway len.	4.3	14.5			2/7
Stairway wid.	0.9	3			1/17
Hei. above hemicycle	3.8	12.8			1/4
Cella wall wid.	2.1	7.1			1/7
Door wid.	1.4	4.7			1/11
Door hei. (at base of stairs)	7.2	24.3	25	2.9%	1/2
Door hei. (at top of stairs)	4.1	13.9			3/11
Roof dia.	8	27			9/17
Roof hei.	4.15	14			
Oculus dia.	2.1	7.1			1/7

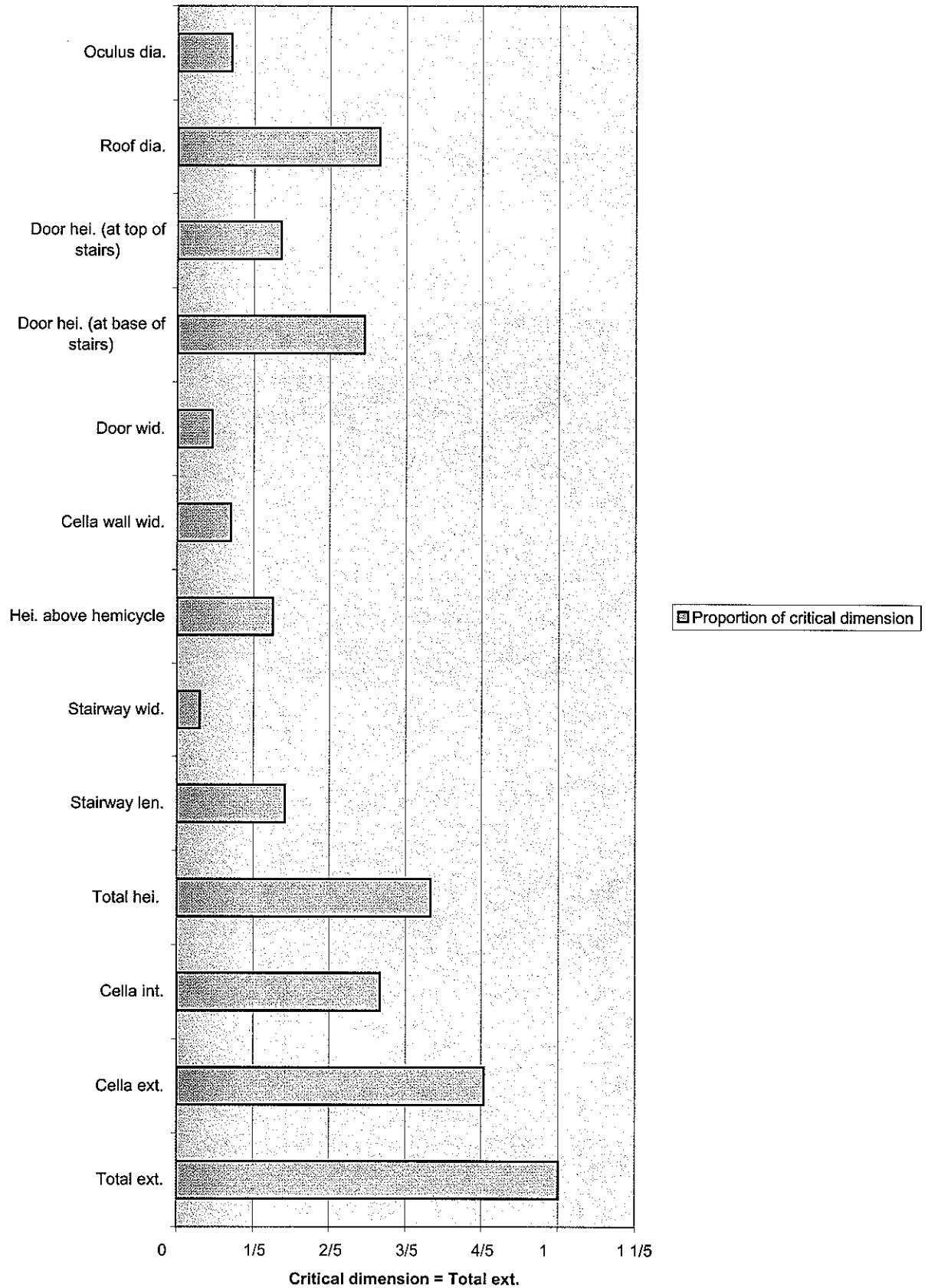
Note: * *critical dimension*

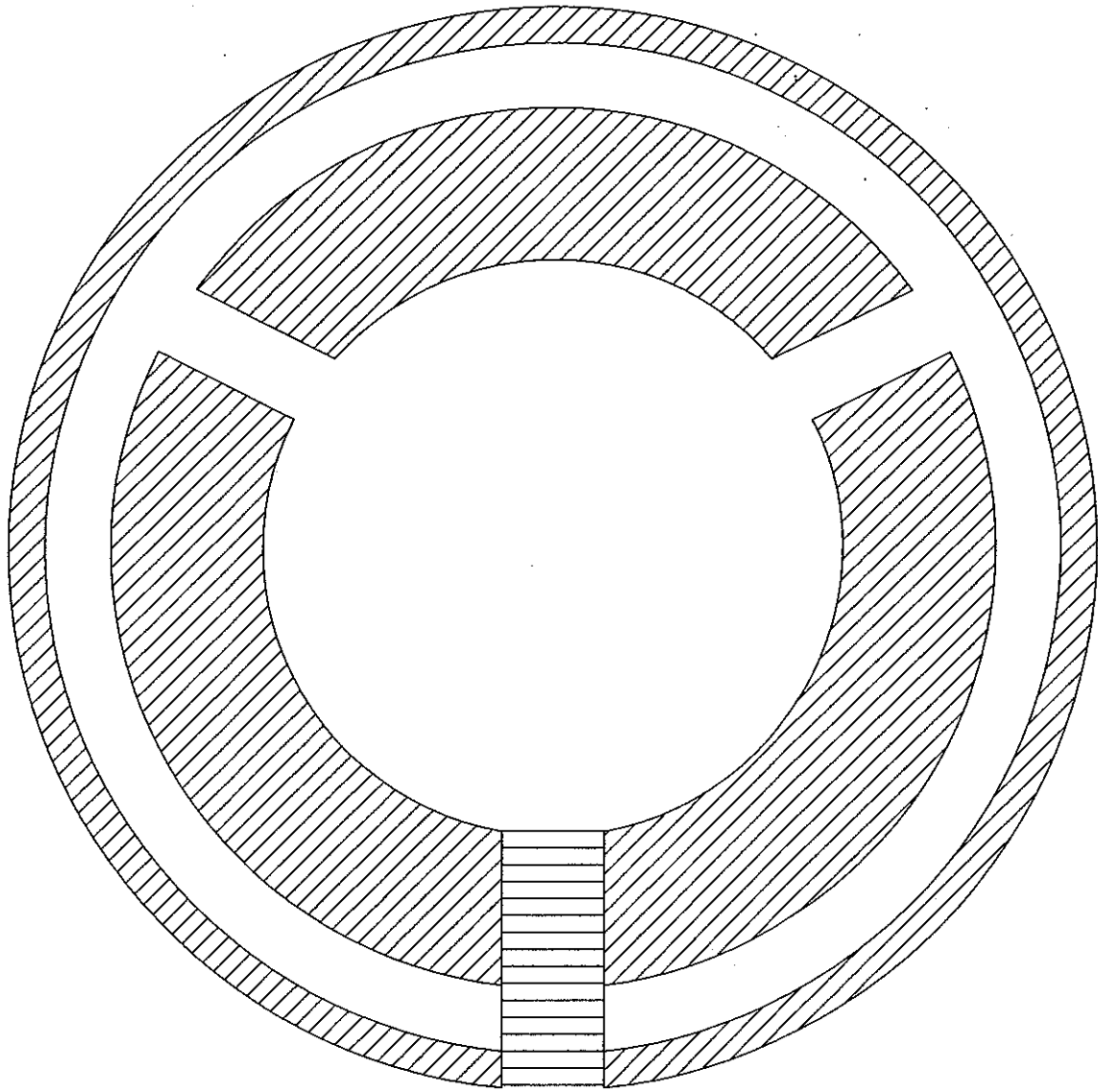
** *in relation to the lower column dia.*

Source: Coarelli 1987, ???

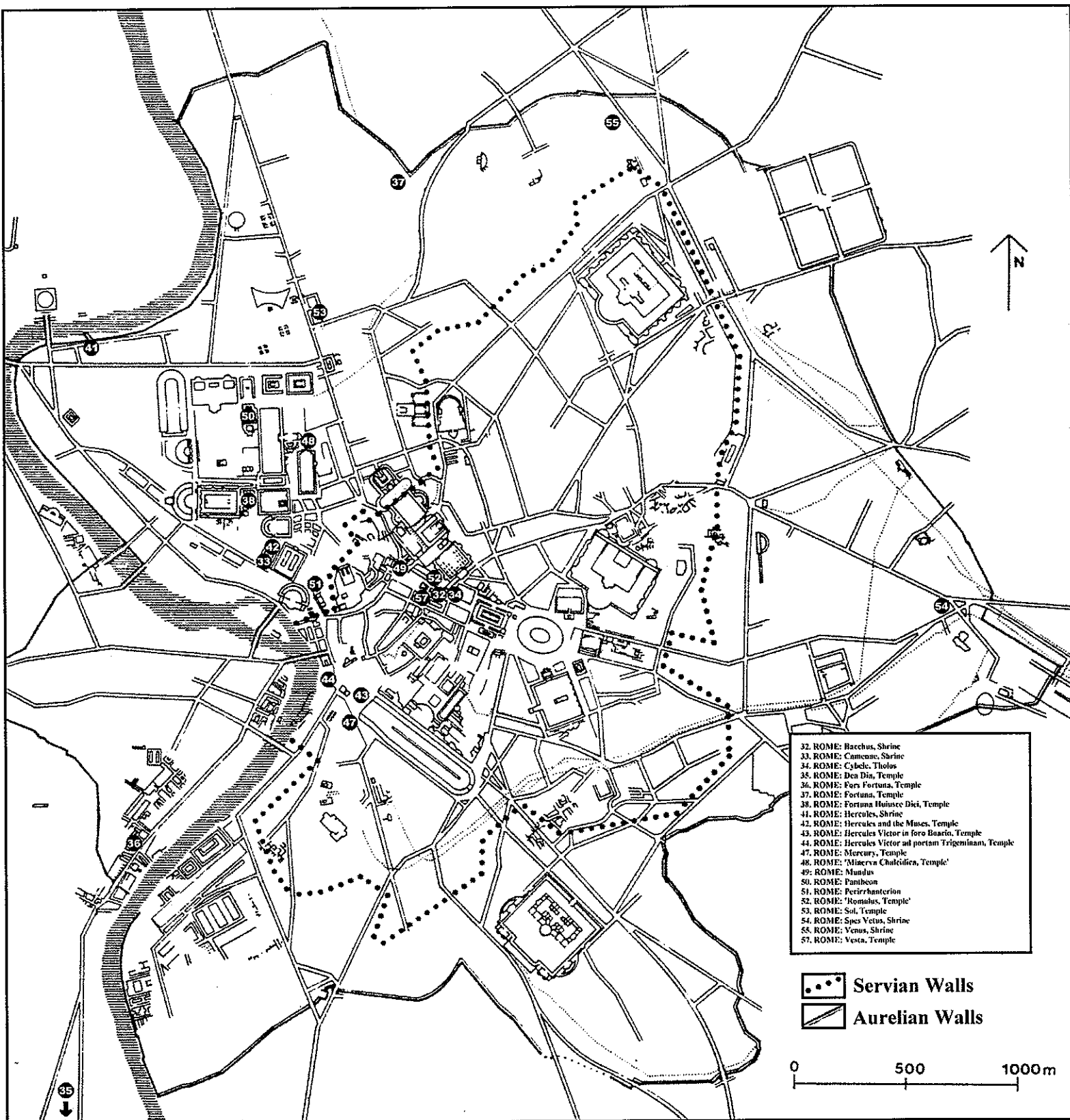
Rakob 1990, ???

Chart #31. PRAENESTE: Fortuna Primigenia, temple





#31 PRAENESTE:
Fortuna Primigenia, temple
Scale 1:100



#32 ROME: Bacchus, Shrine

Context: *summa Sacra via* (Regio VIII), located near the Tholus of Cybele (#34)

Date:

- I. late Republic: Mart. *epigr.* 1.70.9-10 (see 'Literary and epigraphical sources: Inscriptions from Remains' below)
- II. Antonine period (143-161 AD): *CIL* VI 36920 (dedicatory inscription, see 'Literary and epigraphical sources: Inscriptions from Remains' below)

Description:

- I. unknown
- II. round monopteros? (3.86 m. in dia., marble)

Patron:

- I. unknown
- II. Antoninus Pius

Remains:

- I. none
- II. entablature (marble, see 'Remains' below)

Literary and epigraphical sources:

Inscriptions from 'Remains':

- II. *CIL* VI 36920: [...]TONINVS / [...]IMP.II / [...]ESTITVIT, reconstructed as [*Libero patri Imp(erator) Caesar An[toninus] Aug(ustus), pont(ifex) max(imus) trib(unicia) pot(estate) ...] imp(erator) II [consul p(ater) p(atriciae) r]estituit* (dedicatory inscription, entablature).

Location and date: Mart. *epigr.* 1.70.9-10: *hac qua madidi sunt tecta Lyaei / et Cybeles picto stat Corybante tholus.*

Excavations: G. Gatti in 1899

Previous attributions: Bruhl (1953, 198) attributed the round shrine to Bacchus and a painted ceiling to Cybele, while, based on coins of Antoninus Pius (Gnecchi 1912, 22, Brown 1941, 19, and see Chap. VI #41), Coarelli (1982, 35; cf. Lugli 1946, 176) identified Bacchus' Shrine with an exedra near the Medieval porch on the *summa Sacra via*.

Bibliography: Richter 1885, esp. 418-25. Hülsen 1895b, esp. 25-7. Boni 1899, 265-7. Gatti 1899a, esp. 147-8; 1899b, 223. Hülsen 1902a, esp. 241 no. 21; 1902b, esp. 95-7. Vaglieri 1903, esp. 27-9. Jordan and Hülsen 1907, 103-4. Esdaile 1908, 368-74. Hülsen 1909, 238-9. Gnecchi 1912, 22-3 pl. 55.9. Platner and Ashby 1929, 321. Brown 1941, 20 and 170-3. Castagnoli 1941, esp. 66-7. Lugli 1946, 219-20; 1947, 174-9. Bruhl 1953, 197-9. Blake 1959, 7-8. Nash 1961-1962, Vol. 1: 165. Vermaseren 1977, 37 nos. 201-3. Coarelli 1982, esp. 34-9. Richardson, jr. 1992, 239. Rodríguez Almeida 1993c, 154-5.

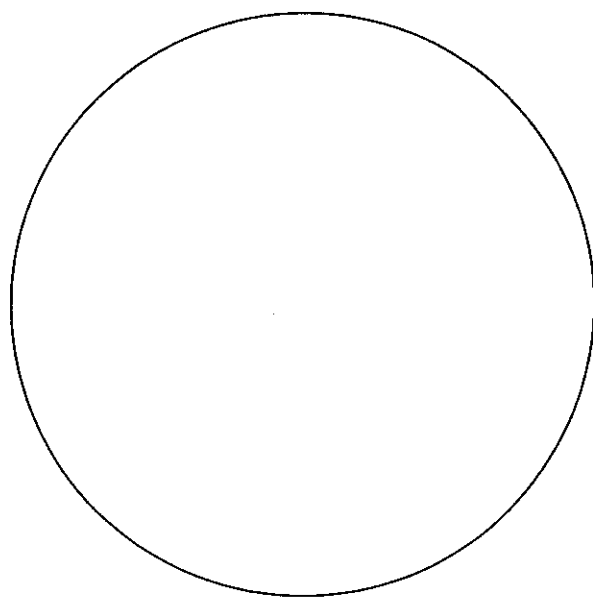
Text: 63-5 and 181-2.

ROME: Bacchus, shrine

<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships</i>
Total ext. *	3.86	13.04	13.0	-0.3%	1
Architrave hei.	0.33	1.1			1/12
Frieze hei.	0.25	0.84			
Floorspace (square measure)	11.7	133.6			

Note: * *critical dimension*

Source: Boni 1899, 265-6
Lugli 1947, 174.



#32 ROME:
Bacchus, shrine
Scale 1:50

#33 ROME: Camenae, Shrine

Context:

- I. 7th c. BC: near the Temple of Honos et Virtus and the Porta Capena (Regio I)
- II. 187 BC: Campus Martius (Regio IX), in front of the Temple of Hercules and the Muses (#42)

Date:

- I. 7th c. BC: ancient sources (see 'Literary and epigraphical sources' below)
- II. 187 BC: ancient sources and the Severan Marble Plan (see 'Iconographic sources' below)

Patron:

- I. Numa
- II. moved and restored? by M. Fulvius Nobilior (see text)

Description:

- I. drum? (bronze)
- II as I.

Literary and epigraphical sources:

Foundation: Serv. *Aen.* 1.8; Liv. 1.2; Plut. *Numa* 4 (Numa as the Shrine's founder).

Location:

- I. Liv. 29.11.13 (beside the Temple of Honos).
- II. Serv. *Aen.* 1.8 (incorporated into the Temple of Hercules and the Muses, #42).

Iconographic sources:

- II. Severan Marble plan (fr. 31)

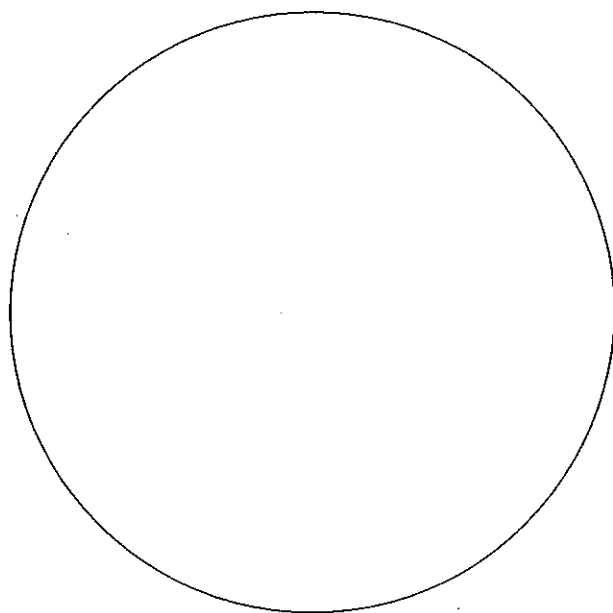
Bibliography: See #42. Jordan and Hülsen 1907, 206-8. Frothingham 1914, 309. Platner and Ashby 1929, 89.

Text: 18-9 and 41-5.

<i>ROME: Camenae, shrine</i>				
<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>
Total ext. *	8.0	27.0		
Floorspace (square measure)	50.3	572.6		
				<i>ideal proportional relationships</i>
				1

Note: * *critical dimension*

Source: Severan Marble Plan fr. 31.



#33 ROME:
Camenae, shrine
Scale 1:100

#34 ROME: Cybele, Tholus

Context: summa Sacra via (Regio VIII), located near the Shrine of Bacchus (#32) and possibly beside the SW corner of the Basilica of Maxentius-Constantine (ca. 4th c. AD)

Date:

- I. late Republic: Cass. Dio 46.33.3 (see 'Literary and epigraphical sources: Location and date' below)
- II. Domitianic period: Mart. *epigr.* 1.70.9-10 (see 'Literary and epigraphical sources: Location and date' below), coins (see 'Iconographic sources' below), the reliefs (see 'Remains' below), and the building materials and techniques employed in the foundations (see text)

Description:

- I. unknown
- II. round drum or monopteros? (see text)

Patron:

- I. P. Cornelius Scipio Corculum? (see text)
- II. Domitian? (see text)

Remains:

- I. none
- II. 2 terracotta reliefs (see 'Decoration' below) and foundations? (2.5 m. in dia., brick-faced concrete)

Literary and epigraphical sources:

Location and date:

- I. Cass. Dio 46.33.3.
- II. Mart. *epigr.* 1.70.9-10: *hac qua madidi sunt tecta Lyaei / et Cybeles picto stat Corybante tholus.*

Decorative scheme:

- I. Cass. Dio 46.33.3 (statue of Cybele).
- II. Mart. *epigr.* 1.70.9-10 (paintings, see 'Literary and epigraphical sources: Location and date' above).

Iconographic sources:

- II. K  thmann and Overbeck 1973a, 41-2 no. 77 (Domitian's coin)

Decoration: statue of Cybele and paintings of the Corybantes (see 'Literary and epigraphical sources: Decorative scheme' above); terracotta reliefs illustrating the goddess, enthroned and flanked by two lions, aboard a boat (see text and Dohrn 1966, 820 no. 2046)

Excavations:

- II. G. Gatti in the 1890s

Previous attributions: Temple illustrated on coins of Faustina the Younger (K  thmann and Overbeck 1973a, 7-8 no. 44, and Vermaseren 1977, 37; vs. Esdaile 1908, 368-74, and Richardson, jr. 1992, 243, who link them with the Palatine Temple of Magna Mater); Cybele shown on the Haterii relief (Vaglieri 1903, 28, Jordan and H  lsen 1907, 103-4, Esdaile 1908, 369, Graillet 1912, 334, Platner and Ashby 1929, 325, and Lugli 1946, 219, and 1947, 177-8; vs. Blake 1959, 8, and Richardson, jr. 1992, 243, who see Cybele as a personification of the Palatine temple).

Bibliography: See #32. Graillet 1912, 332-4. Platner and Ashby 1929, 324-5. Jucker 1959, 62 pl. 2. Nash 1961-1962, Vol. 2: 34. Dohrn 1966, 820 no. 2046. K  thmann and Overbeck 1973a, 41-2 no. 77. Richardson, jr. 1992, 242-3. Rodr  guez Almeida 1993e, 338.

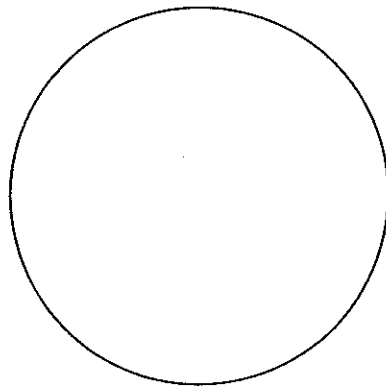
Text: 63-5 and 155-6.

ROME: Cybele, tholus

<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships</i>
Total ext. *	2.5	8.4			1
Foundation dia.	2.5	8.4			
Floorspace (square measure)	4.9	55.4			

Note: * *critical dimension*

Source: Gatti 1899, ???



#34 ROME:
Cybele, tholus
Scale 1:50

#35 ROME: Dea Dia, Temple

Context: Sanctuary of Dea Dia (6th c. BC-Severan period, see text), 5th milestone of the via Campana-Portuensis; sited in a *lucus* at the summit and oriented towards the *Tetrastylum-Caesareum*, *papiliones*, and *balneum* at the base (S)

Date: under Alexander Severus: building materials and techniques (see text and Lanciani 1868c, 106)

Patron: Fratres Arvales

Description: drum (21.1 m. in dia., revetted in marble) with a sloping roof, ringed by Corinthian pilasters and a Corinthian entablature (3-fascia architrave, blank frieze course, and an elaborate modillion cornice) on its exterior, and Corinthian pilasters and 15 niches in its interior (see text and Lanciani 1868c, 105-6); rests on foundations comprising an annular gallery, 2 straight galleries and 11 niches

Remains: most of the foundations (brick and travertine, see text and Lanciani 1868c, 105), and fragments of the cella wall, pilasters (shafts and volutes of the Corinthian capitals), entablature (architrave, frieze, and cornice), roof tiles, and antefixes (marble); rests on a terrace (mortar and basalt on a pebble base, with 2 boundary walls of *opus latericium*, Augustan?, see Scheid 1990, 143, and Adam 1994a, 146-7) together with a round altar (travertine)

Literary and epigraphical sources:

Location: Strab. 5.3 (quoted by Pellegrini 1865, 3; cf. text and Scheid 1976, 639-47, and 1990, 96-101).

Patron: Plin. *nat.* 18.6, Gell. 7 [6].7, and Varro 1.1.5 (foundation of the Fratres Arvales).

Decorative scheme: *CIL* VI 2104a 1.25 (altar). *CIL* VI 2104a 1.31 and 2067 1.5 (2 statues). *CIL* VI 2104a 1.30 and 2067 1.2 (12 marble seats).

Iconographic sources: plan by P. Ligorio (*Arch. Cort. Tor.* XVIII 64, incl. a description of the Temple: "Lo qual tempio fu rotondo, secondo la mostrata pianta. Dove attorno e dentro li nicchii et difuori fra essi attorno le parieti erano le imagini togate et col capo velato coronate di spiche di grano dell'imperatori romani et delle mogliere entrate nel sacerdotio, ove havevano sacrificato et purgati gli augurj dei portenti accaduti, et le quai statute erano alte dieci palmi. et vi erano di quelle piccioline dell'altri huomini illustri, et cominciavano da Romolo: di marmo con i suoi epitaphii, come avemo posto in questo luogo copiato di coloro, i quali havemo veduto quivi dedicati..."; cf. De Rossi 1858, 57-8, Henzen 1868, x-xi, Lanciani 1868c, 105), and possibly a drawing by Peruzzi or Sangallo (see Abeken 1841, 121)

Decoration: the Annals inscribed on plaques displayed in the *lucus* (see text)

Previous attributions: Visconti (quoted by Lanciani 1868c, 106) identifies the round building as a tomb, while Pellegrini (1865, 5 and 10) sees it as the Caesareum. Henzen (1868, x-xi; see 'Iconographic sources' above) notes that the statues of Roman emperors mentioned by Ligorio are more likely to have been located in the Tetrastylum.

Excavations: T. Mommsen and P. Ceccarelli in the 1860s, J. Scheid and H. Broise in the 1970s and 1980s

Bibliography: Abeken 1841, 121-3. De Rossi 1858, 54-79. Pellegrini 1865. De Rossi 1866, 53-62. Henzen 1867a, 225-96; 1867b, 37-55. De Rossi 1868, 25-32. Henzen 1868, 47-53. Lanciani 1868c, 105-7 pls. 4-5. Visconti and Lanciani 1884, esp. 27-8 pl. 1. Gatti 1904, 317-24. Altmann 1906, 63-9. Scheid 1976, 639-67. Broise and Scheid 1985, 542-4; 1986, 399; 1987. Scheid 1987, 583-95. Broise and Scheid 1993, 144-57. Scheid 1990, esp. 95-172. Coarelli 1992b, 39-42. Patterson 1999, 135.

Text: 219-24.

ROME: Dea Dia, temple

actual measurements	ideal				ideal proportional relationships	
	meters	roman feet	ideal roman feet	% difference	to critical dimension *	within columnar order **
Cella ext.	21.1	71.3			1	
Foundation dia.	22	74			1 1/25	
Annular gallery wid.	2.57	8			1/9	
Straight gallery wid.	2.46	8.3				
Niches wid. (wide)	2.37	8			1/9	
Niches dep.	1.5	5.1			1/14	
Niches wid. (narrow)	2.21	7.5			2/19	
Niches dep.	0.8	2.7				
Podium dia. at base	22.4	75.7			1 1/16	
Podium dia. at stylobate *	21.1	71.3			1	
Podium hei.	3.6	12.2			1/6	
Cella wall wid. (w/o ext. pilasters)	2.4	8.1			1/9	
Shaft dep. (ext. pilasters)	0.2	0.6				1/5
Lower pilaster wid. **	0.86	2.91			1/25	1
Capital wid.	0.94	3.2			1/22	1 1/10
Entablature hei. (ext.)	1.89	6.4			1/11	
Architrave hei.	0.57	1.93				
Frieze hei.	0.57	1.93				
Cornice wid.	0.66	2.23				
Cornice hei.	0.75	2.53				
Floorspace (square measure)	208.7	2384.5				

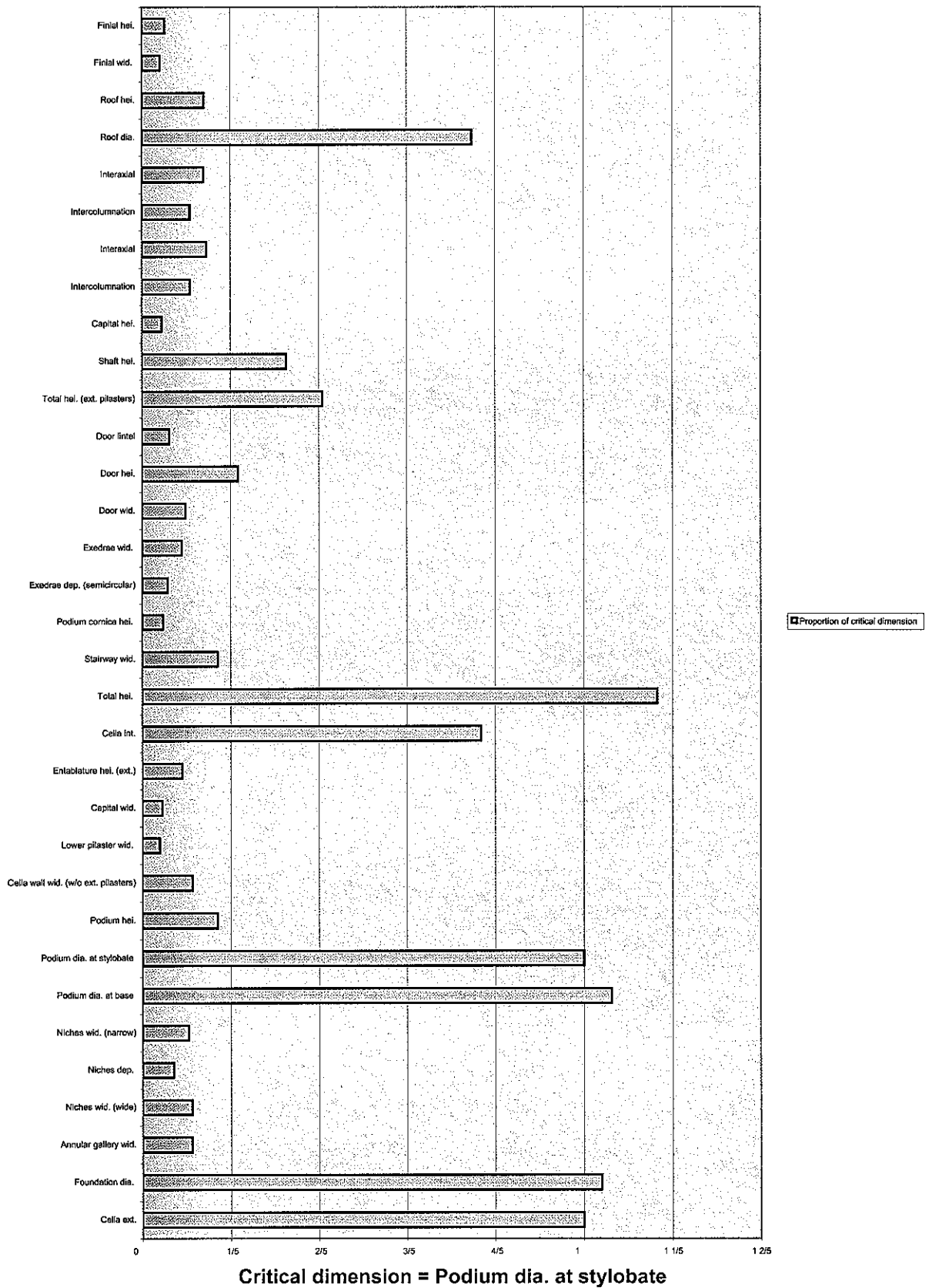
reconstructed measurements						
Cella int.	16.2	54.7			3/4	
Total hei.	24.6	83.1			1 1/6	
Stair treads	0.18	0.61				
Stair risers	0.26	0.88				
Stairway len.	3.4	11.5				
Stairway wid.	3.6	12.2			1/6	
Podium cornice wid. (lower)	0.2	0.7				
Podium cornice hei.	1	3.4			1/21	
Podium cornice wid. (upper)	0.3	1				
Podium cornice hei.	0.2	0.7				
Exedrae dep. (rectangular)	1.3	4.4				
Exedrae wid.	2	6.8				
Exedrae dep. (semicircular)	1.2	4.1			1/17	
Exedrae wid.	1.9	6.3			1/11	
Door wid.	2.1	7.1			1/10	
Door hei.	4.6	15.5			2/9	
Door jamb	0.6	2				
Door lintel	1.3	4.4			1/16	
Total hei. (ext. pilasters)	8.6	29.1			2/5	
Base wid.	0.76	2.6				
Base hei.	0.76	2.6				
Shaft hei.	6.9	23.3			1/3	
Capital hei.	0.94	3.2			1/22	
Intercolumnation	2.3	7.8			1/9	
Interaxial	3.1	10.4			1/7	
Shaft dep. (int. pilasters)	0.2	0.68				
Lower pilaster wid. **	0.65	2.2				1
Intercolumnation	2.3	7.8			1/9	3 1/2
Interaxial	2.95	10.0			1/7	4 1/2
Roof dia.	15.8	53.3			3/4	
Roof hei.	2.9	9.9	10	1.0%	1/7	
Finial wid.	0.9	3			1/24	
Finial hei.	1.1	3.7			1/19	
Volume (cubic measure)	259.8	4416.7				

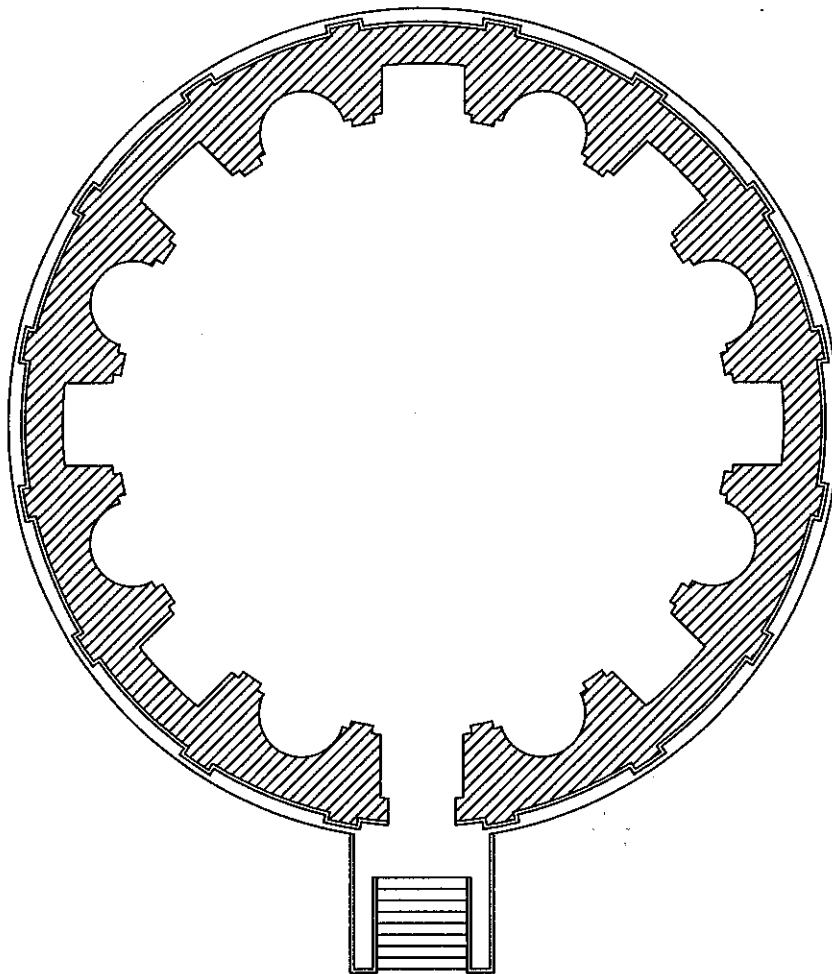
Note: * critical dimension

** in relation to the lower column dia.

Source: Lanciani 1868c, 105-7 pls 4-5.

Chart #35. ROME: Dea Dia, temple





#35 ROME:
Dea Dia, temple
Scale 1:200

#36 ROME: Fors Fortuna, Temple

Context: 1st milestone of the via Campana-Portuensis

Date: 6th c. BC: patron, building and votive remains

Patron: Servius Tullius

Description: round? on a rectangular platform (see text)

Remains: rectangular platform; a votive deposit with Archaic bronze statuettes was found nearby

Literary and epigraphical sources:

Attribution: Cic. *fin.* 5.70, and Ov. *fast.* 6.773-86 (*dies natalis* of both Temples).

Location: *fast. Amit.*, *fast. Esq.*, *VIII Kal. Iul.*, Varro *ling.* 6.17, Ov. *fast.* 6.733 fol., Liv. 10.46.14, and Tac. *ann.* 2.41 (Temples at the 1st and 6th milestones).

Patron: Plut. *Rom.* 74 and *fort. Rom.* 10 (Servius Tullius' role in the Temples' foundation).

Iconographic sources: Severan Marble Plan (fr. 28; see Coarelli 1992b, 39)

Previous attributions: Visconti, Lanciani 1884, 28) and Gatti (1904, 319-20) identify it with a hexastyle temple found in the gardens of Caesar.

Bibliography: Visconti 1860, 415-7. Visconti and Lanciani 1884, 27-8. Gatti 1904, 319-20. Scheid 1990, 150-4. Coarelli 1992b, 41-53.

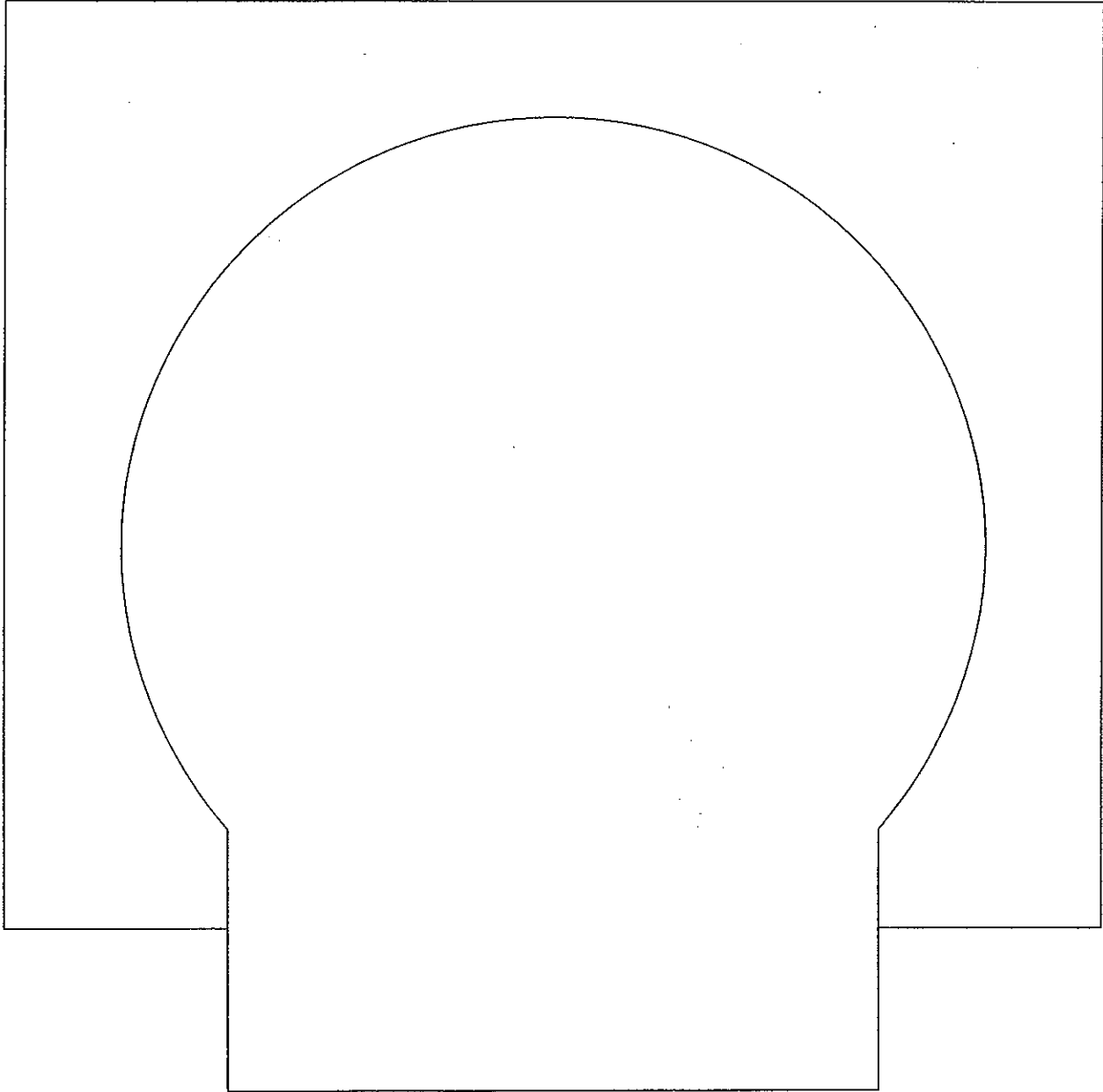
Text: 19-20.

ROME: Fors Fortuna, temple

<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships</i>
Cella ext.	26.0	88.0			4/5
Porch len.	19.6	66.2			3/5
Porch wid.	4.9	16.6			3/20
Socle len. *	33.0	111.0			1
Socle wid.	28.0	95.0			6/7
Floorspace (square measure)	530.9	6082.1			

Note: * *critical dimension*

Source: Severan Marble Plan fr. 28.
Coarelli 1992b, 43.



#36 ROME:
Fors Fortuna, temple
Scale 1:200

#37 ROME: Fortuna, Temple

Context: in the Horti Lucullani/Aciliorum (see text, and for the Horti's extent, see Broise and Jolivet 1996a, 67-8), Pincio (Regio VII); the Temple was sited above a large nymphaeum (see text)

Date:

- I. Archaic or Republican period: building materials and techniques, and the inscription (*CIL* VI 184)
- II. Claudian period: building materials and techniques
- III. 4th c. AD: building materials and techniques, and the Regionary Catalogues (see 'Literary and epigraphical sources: Location' below)

Patron:

- I and III. unknown
- II. Valerius Asiaticus

Description:

- I. unknown
- II. round?
- III. drum (22 m. in dia., *opus vittatum mixtum*) with 7 rectangular niches (interior), 5 pilasters? (exterior), and a dome with an oculus, preceded by a rectangular porch? (see text)

Remains:

- I. part of the columns (tufa shafts and Tuscan capitals), walls (tufa *opus quadratum*), and an inscription
- II. two walls (tufa *opus reticulatum*)
- III. the Temple's foundations and cella walls (*opus vittatum mixtum*, restored in *opus vittatum*), wall revetment (black marble veined with white), and paving (white marble)

Literary and epigraphical sources:

Inscription from 'Remains':

- I. *CIL* VI 184: FORTVNAE BONAE SALVTARI.

Location:

- II. Frontin. *aq.* 22.2 (locates gardens). *CIL* VI 1231c = 31537c and 37023 (CIIX) (Horti enclosed within the pomerium by Claudius, see Broise and Jolivet 1996a, 68).
- III. *Reg. Cat.* 110, 172, 218 VZ 1 (*templa II nova Spei et Fortunae*).

Patron:

- II. Tac. *ann.* 11.1 and Cass. Dio 60[61].31 (Valerius Asiaticus' building program in the Horti).

Iconographic sources: plans by Ligorio (ca. 1552-1564, *Cod. Taur.* XIV f. 128v-29r) and Bufalini (1551, see Broise and Jolivet 1996b, 455 fig. 41); maps by X. Paciotti (1557), M. Cantaro (1576), S. Du Pérac (1577), and A. Tempesta (1593, see Frutaz 1962, pls. 196, 228, 239, 255, and 264).

Decoration:

- III. marble wall revetment and paving (see 'Remains' above)

Excavations: H. Broise and V. Jolivet in 1998

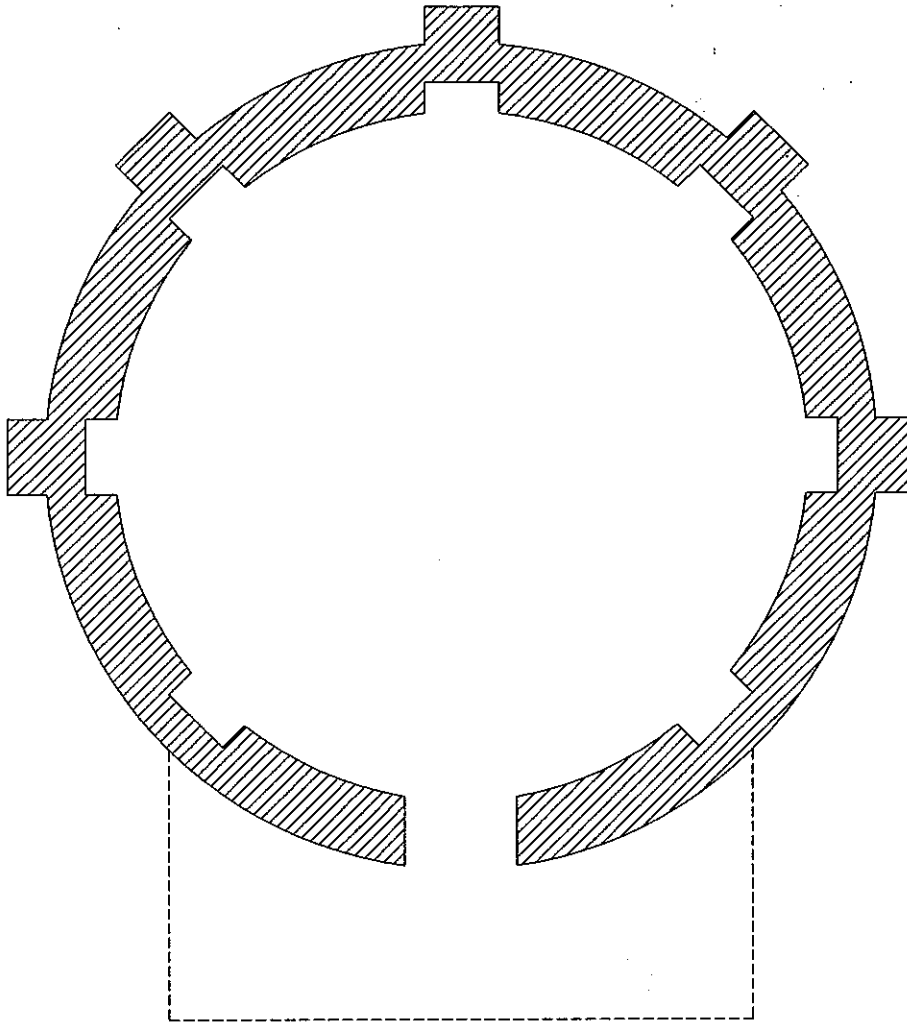
Bibliography: Lanciani 1868b, 119-28; 1891a, 132-5. Platner and Ashby 1929, 264 and 268-9. Riemann 1951, 1511 fol. and 1521 fol. Frutaz 1962, pls. 196, 228, 239, 255, and 264. Nash 1961-1962, Vol. 2: 488-90. Grimal 1969, 128-31. Jolivet and Robine 1984, 523-4. Broise and Jolivet 1985, 529-31; 1986, 398; 1987a, 747-61; 1987b, 498-500; 1988, 525-7; 1989, 513-4; 1990, 472-4; 1991a, 338-42; 1991b, 9-40. Campbell and Nesselrath 1992, 41-53. Broise, Dewailly and Jolivet 1992, 493-5. Richardson, jr. 1992, 195-6 and 200. Broise, Dewailly and Jolivet 1993, 440-3. Moneti 1993b, 5-24. Broise 1994, 450-1. Moneti 1994, 5-18. Aronen 1995b, 267. Broise and Jolivet 1995, 496-501; 1996a, 67-70; 1996b, 451-5. De Spirito 1996b, 353. Broise and Jolivet 1997a, 441-3; 1997b, 119-23. Moneti 1997, 123-5. Broise and Jolivet 1998, 492-5; 1999, 265-7.

Text: 125-8 and 237.

<i>ROME: Fortuna, temple</i>				
<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>
Cella ext. *	22	74		1
Foundation dia.	22	74		
Niche dep.	0.84	2.84		1/26
Floorspace (square meaasure)	380.1	4300.9		

Note: ** critical dimension*

Source: Broise and Jolivet 1999, 266 and fig. ???



#37 ROME:
Fortuna, temple
Scale 1:200

#38 ROME: Fortuna Huiusce Diei, Temple

Context: Area Sacra di Largo Argentina, Campus Martius (Regio IX); enclosed within the Porticus Minucia Vetus (107 BC?, 40 m. wide by 62 m. long, see text), limited by the Porticus Pompei (61-55 BC, W), and the porticus of the Via delle Botteghe Oscure (Imperial period, E); the Temple is flanked by the rectangular Temples A and C

Date:

- I. late 2nd-early 1st c. BC: building materials and techniques, and the Temple's attribution (see text and 'Literary and epigraphical sources: Attribution' below)
- II. mid-1st c. BC: ceramic remains in the Temple's podium fill (Coarelli 1981a, 21)
- III. Domitianic period: building materials and techniques, and the Porticus' travertine pavement (see text)

Patron:

- I. Q. Lutatius Catulus (see text)
- II-III. unknown

Description:

- I. round peripteros (22.9 m. in dia. with a cella of 11.8 m. in dia., tufa and travertine) with 18 columns (Attic-Asiatic bases, fluted shafts, Corinthian capitals) on ring foundations and a raised podium fronted by 6 steps
- II. drum (22.9 m. in dia., tufa) on ring foundations and a raised podium fronted by 6 steps, flanked by statue bases
- III. as II.

Remains:

- I. most of the foundations and podium (core comprises 2 rings of Anian tufa and *opus incertum*, faced with tufa, see text), stairs (travertine-revetted tufa), stylobate (travertine), fragments of the cella wall (*opus quasi-reticulatum* of tufa), 6 columns (travertine bases and capitals, Anian tufa shafts), 1 block of the entablature? (Pentelic marble, see text), and some roof tiles (marble); a statue base is embedded in the inner ring of the foundations, while statue fragments were found beside the Temple (Pentelic marble, see text)
- II. most of the podium facing and moldings (peperino) and fragments of the cella wall (tufa blocks with travertine revetment); 2 bases flanking the stairs (tufa, see text; vs. Coarelli 1981a, 20, who suggests that the bases and statue groups were prior to phase II; cf. 'Decoration' below)
- III. fragments of the cella wall (brick-faced concrete and stucco) and possibly part of the mosaic pavement (white tesserae, see Coarelli 1981a, 21); the steps (travertine) and nearby altar and statue base (marble-revetted brickwork) may be somewhat later (see Gros 1996a, 270)

Literary and epigraphical sources:

Location: *fast. Pinc.* = CIL I² 217, 219 and 323, and Plin. *nat.* 34.54 and 60 (Temple of Fortuna Huiusce Diei in Campo). CIL VI 10223 (2 porticus Minucia).

Date and foundation:

I. fast. Pinc. = CIL I² 217, 219 and 323 (*dies natalis* of 30 July).

Founder:

I. Plut. *Mar.* 26.2 (Catulus' vow at the Battle of Vercellae, 101 BC).

Attribution:

I. see 'Literary and epigraphical sources: Location'. Varro *rust.* 3.5.9-12 (*aedes Catuli*, aviary). Cic. *leg.* 2.28 (*Fortuna Huiusce Diei*).

Decorative program:

II-III?. Cic. *Verr.* 2.4.4.126 and Plin. *nat.* 34.54 and 60; cf. Procop. *bell.* 1.15.11 (8 statues by Pythagoras of Samos, 3 statues by Phidias, and a stone replica of the Palladium brought by Diomedes from Troy).

#38 ROME: Fortuna Huiusce Diei, Temple, cont.

Decoration:

- I. colossal acrolith of Fortuna Huiusce Diei (see text); black and white floor mosaics; first style wall painting; lion protomes and palmette antefixes (see Coarelli 1981a, 19-20)
II-III?. statues (see 'Literary and epigraphic sources: Decorative program' above) on 2 oblong bases (6.66 m. long by 2.10 m. wide) placed on either side of the Temple's stairs; fragments of mosaic paving? (see 'Remains' above)

Excavations: G. Marchetti-Longhi in the 1930s; re-examined in the 1970s-80s in conjunction with the publication of Coarelli et al. 1981

Previous attributions: identified as the Temple of Venus *in calcaro* (De Rossi 1893, 192), the Temple of Hercules Magnus Custos *ad circum Flaminium* (Lanciani 1946, 123; cf. Viscogliosi 1996b, 13-4), and the Temple of Iuno Regina *in circo Flaminio* (Marchetti-Longhi 1970-1971, 23 and 60-1).

Bibliography: Van Buren and Kennedy 1919, 59-66. Frank 1924, 105-6 and 130-1. Platner and Ashby 1929, 216 and 252. Marchetti-Longhi 1932, 253-346. Wall 1932, 31-54. Wijkström 1932, 17-30. Marchetti-Longhi 1933a, 163-94; 1933b, 103-33; 1936, 83-139. Boyancé 1940, 64-71. Marchetti-Longhi 1943-1945, 57-95. Castagnoli 1948, 93-193. Marchetti-Longhi 1956-1958, 45-98. Lugli 1957, 309. Marchetti-Longhi 1960. Strong and Ward-Perkins 1962, 1-30. Shoe 1965, 177 and 182-4. Coarelli 1968b, 365-73. Heilmeyer 1970, 36, 53 and 78. Marchetti-Longhi 1970, 117-58; 1970-1971, esp. 20-4, 33-9, 46-8, 52-3, and 61. Nicolet 1976, 29-51. Verzar 1976-1977, 378-98. Coarelli 1980, 191-217; 1981a, esp. 19-21 and 38-40. von Hesberg 1981a, 19-60. Champeaux 1982, 154-70. Rickman 1983, 105-8. Ziolkowski 1986, 623-41. Camardo 1987-1988, 346. Richardson, jr. 1992, 156. Ziolkowski 1992, 94-6 and 212-4. Coarelli 1995k, 315-20. Schorner 1995, 9. Gros 1996a, 269-70. Viscogliosi 1996b, 13-4. Coarelli 1997, 296-345; 1999m, 168.

Text: 51-5 and 154.

ROME: Fortuna Huiusce Diei, temples I & II

ideal proportional relationships

<i>actual measurements, temple I & II</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Hei. to entablature	16.4	55.4	56	1.1%	7/8	
Foundation dep.	4.15	14				
Foundation wid.	14.2	48				
Stair treads	0.45	1.52			1/42	
Stair risers	0.425	1.44				
Stairway len.	5.3	17.9	18	0.6%	2/7	
Stairway wid.	11.6	39.2	40	2.0%	5/8	
Podium dia. at base	22.9	77.4	78	0.8%	1 2/9	
Podium dia. at stylobate *	19.2	64.86	64	-1.3%	1	
Podium hei.	2.5	8.45	8.5		2/15	
Podium cornice wid. (lower)	0.425	1.44				
Podium cornice hei.	0.85	2.87			1/22	
Podium cornice wid. (upper)	0.425	1.44				
Podium cornice hei.	0.425	1.44				
Stylobate hei.	0.22	0.74				

actual measurements, temple I

Cella ext.	11.8	39.9	40	0.3%	5/8	
Cella int.	9.5	32.1	32	-0.3%	1/2	
Ambulatory (ext.)	1.5	5.1	5	-2.0%	1/13	
Cella wall wid.	1.5	5.1	5	-2.0%	1/13	
Door dep.	0.9	3			1/21	
Door wid.	3	10.1	10	-1.0%	3/19	
Total hei. (ext. columns)	13.1	44.3	45	1.6%	7/10	10 5/12
Base dia.	1.9	6.4			1/10	1 1/2
Base hei.	0.6	2			1/32	
Lower column dia. **	1.28	4.32			1/15	1
Shaft hei.	10.85	36.66	36	-1.8%	9/16	8 1/3
Capital dia.	1.5	5.1	5	-2.0%	1/13	1 3/19
Capital hei.	1.65	5.57			2/23	1 2/7
Intercolumnation	2.5	8.5			2/15	2
Interaxial	4.4	14.9			3/13	3 4/9
Interaxial dia.	16.2	54.7	56	2.4%	7/8	13
Floorspace (square measure)	70.9	809.3				

actual measurements, temple II

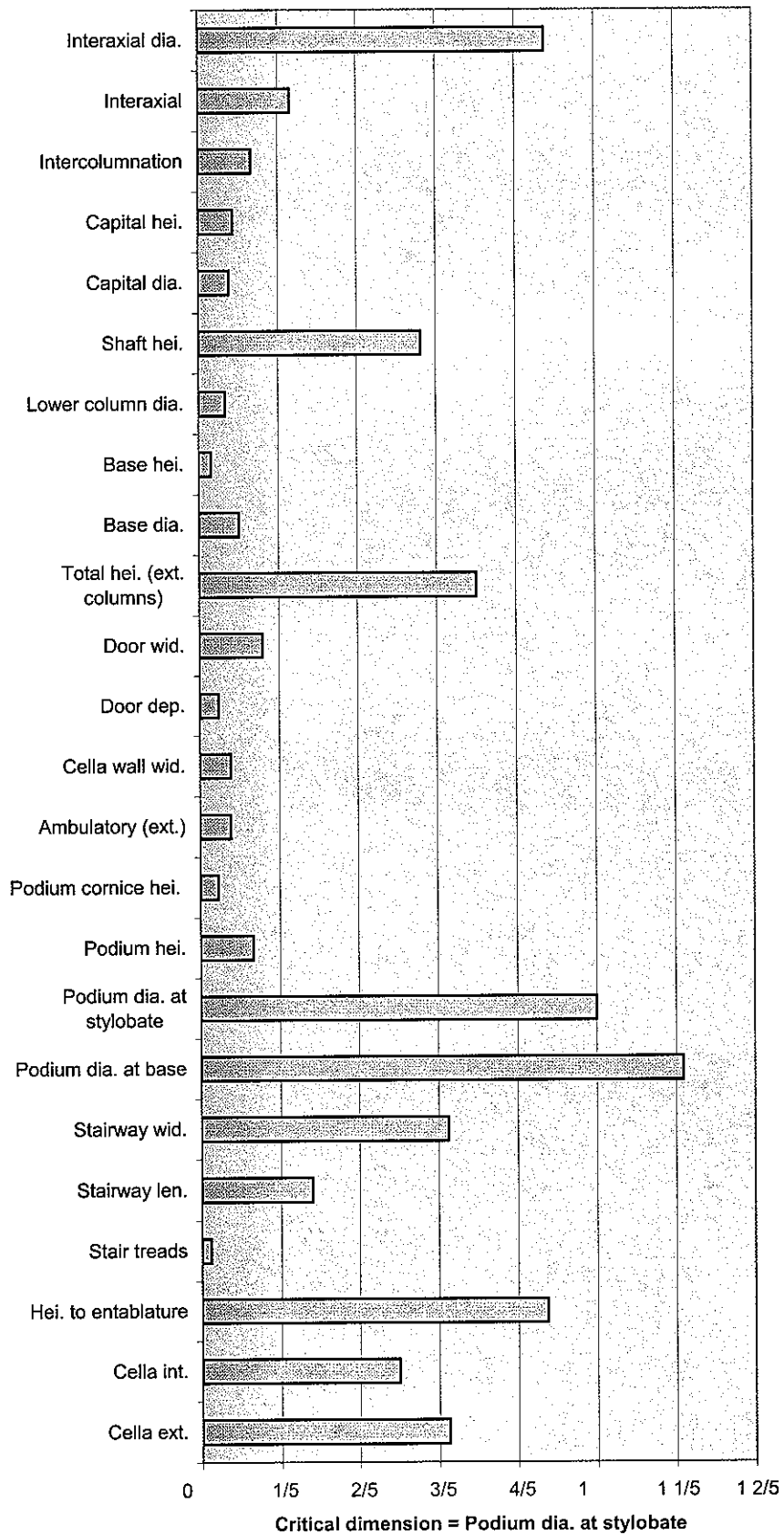
Cella ext.	17.3	58.4	58	-0.7%	9/10	
Cella int.	15.8	53.4			5/6	
Cella wall wid.	0.88	3			1/21	
Door dep.	0.7	2.4				
Door wid.	5.1	17.2			4/15	
Floorspace (square measure)	196.1	2239.6				

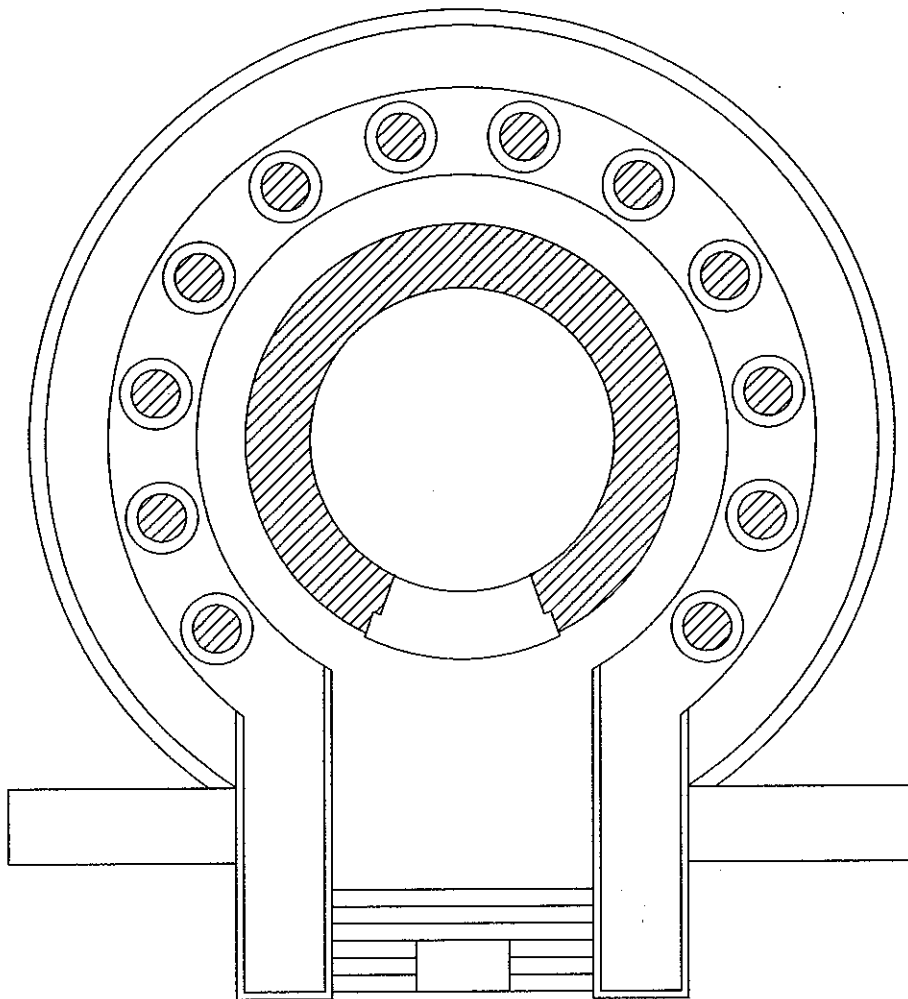
Note: * critical dimension

** in relation to the lower column dia.

Source: Coarelli et al 1981, passim. figs. ???

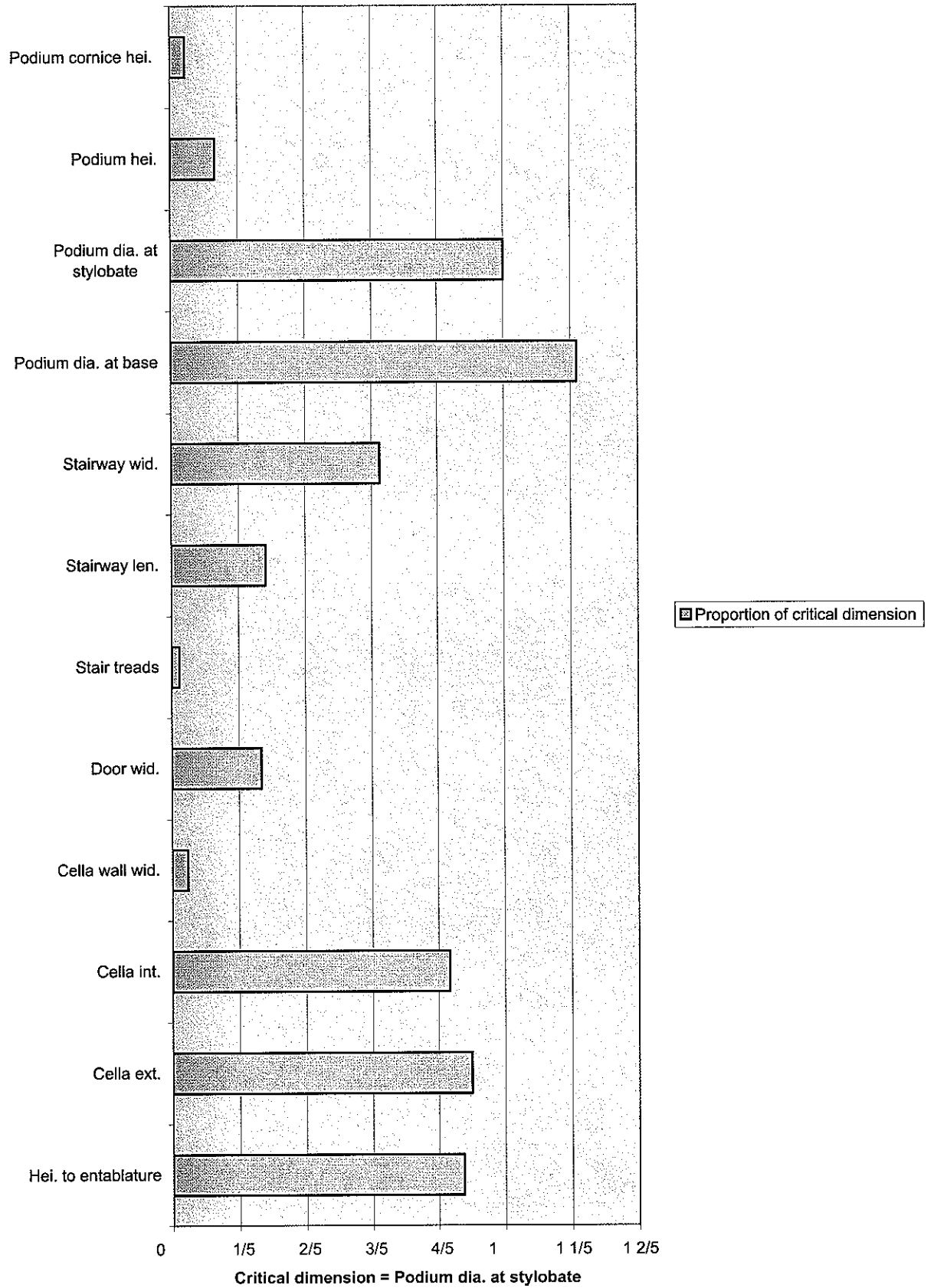
Chart #38.1. ROME: Fortuna Huiusce Diei, temple I

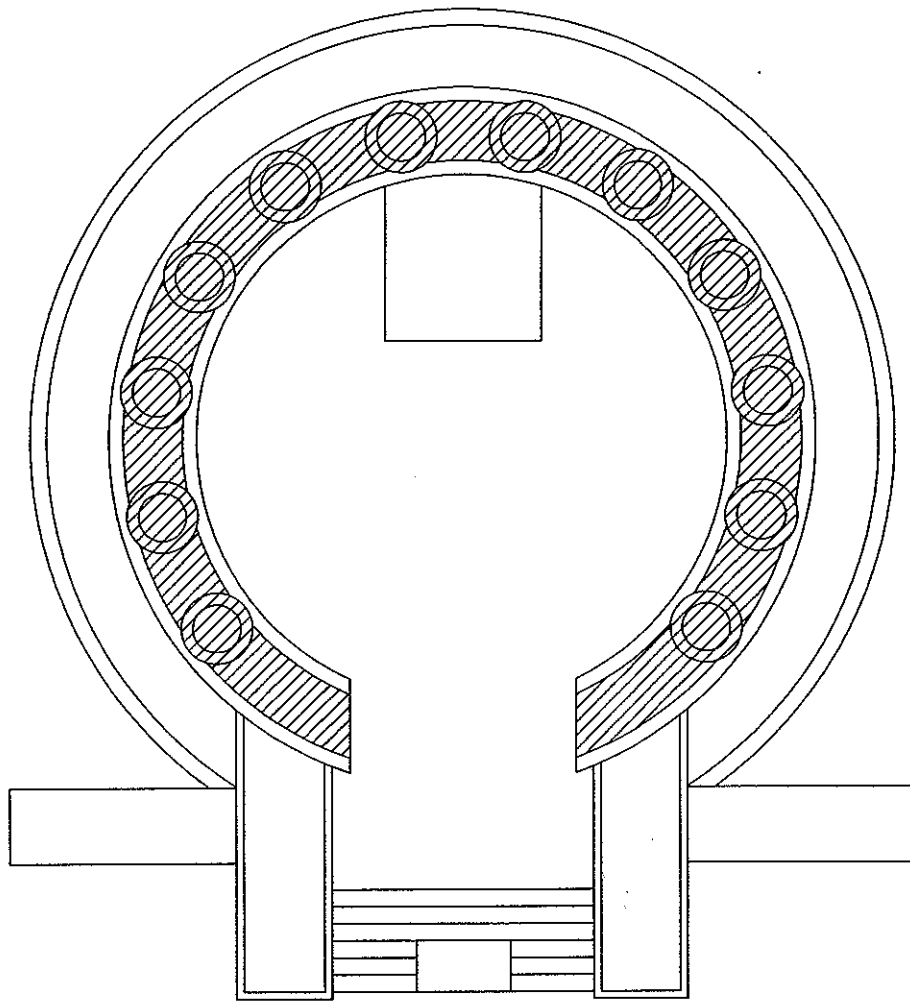




#38 ROME:
Fortuna Huiusce Diei, temple I
Scale 1:200

Chart #38.2 ROME: Fortuna Huiusce Diei, temple II





#38 ROME:
Fortuna Huiusce Diei, temple II
Scale 1:200

#39 ROME: Genius Senatus, Shrine

Context: unknown

Date: under Antoninus Pius (158-159 AD): coins (see 'Iconographic sources' below)

Description: monopteros (see text) topped by a pediment or a dome; contains a statue of the Genius Senatus? (see text)

Remains: none

Iconographic sources: coins minted under Antoninus Pius (*BMCEmp* IV 135 no. 915, 137-8 nos. 926-30, 145 no. 967-9, 324, 347-8 no. 2046, 350-1 nos. 2053-7, 353, 355, and 357-9 nos. 2093-7)

Decoration: statue of the Genius Senatus? (see 'Iconographic sources' above and text)

Bibliography: Birt 1845, 1613-25. *BMCEmp* IV lvi-ii, lxxiv, 135, 137-8, 145, 324, 347-8, 350-1, 353, 355, and 357-9. Hill 1989, 17 and 39. Palombi 1995b, 365-8.

Text: 182-3.

#40 ROME: Gens Flavia, Temple

Context: *ad Malum Punicum* (Regio VI), set within a rectangular precinct (see text) accessed via an arch? (see Torelli 1987, 569, Coarelli 1995i, 368, and text)

Date: Domitianic period (89-96 AD): dates of the ancient sources (particularly Martial and Statius, see 'Literary and epigraphical sources: Location' below and text) and of the deaths of Julia and Domitian (see text), and coins? (see text and 'Iconographic sources' below)

Patron: Domitian

Description: rectangular with a podium and 10 columns supporting a triangular pediment

Remains: 2 sets of foundations and podia (see text), and reliefs (see text; they may have formed part of the Temple or its entrance arch)

Literary and epigraphical sources:

Location: Mart. *epigr.* 9.1.8-10, 3.12, and 34.1-2, Stat. *Silv.* 4.3.19 and 5.1.240-1, Suet. *Dom.* 1.1.9: *Domitianus natus est VIII Kal. Novemb. ... regione urbis sexta ad Malum Punicum, domo quam postea in templum gentis Flaviae convertit*, and *Hist. Aug. Claud.* 3.6 and *trig. tyr.* 33.6; cf. Pomp. Leto, *Cod. Vat. Lat.* 3394 and *Cod. Barberin. Lat.* 28 (*ad Malum Punicum*). *Curiosum:* *Regio VI. Alta Semita. Continet: ... Statuam Mamuri, Templum Dei Quirini, Hortos Salustianos, Gentem Flabiam, Thermas Diocletianas ...* (in Regio VI, see text for the *Notitia*).

Date: Martial and Statius (ca. 95-96 AD, see 'Literary and epigraphical sources: Location' above and text). Suet. *Dom.* 5 and 17.3, and *Chronogr. a.* 354, 146 (contains Julia's ashes). Suet. *Dom.* 17 (contains Domitian's ashes). Stat. *Silv.* 5.1.240 fol. (may contain the ashes of Vespasian and Titus). Suet. *Dom.* 15 (struck by lightning in 96 AD). *Hist. Aug. Claud.* 3.6 (restored by Claudius Gothicus).

Symbolism: Mart. *epigr.* 9.1.8-10, 3.12, 20.1, 34.1-2 and 7, and Stat. *Silv.* 4.2.60, 3.18-9, and 5.1.240-1 (as a reflection of the heavens and a symbol of Rome's *aeternitas*).

Iconographic sources: sestertii minted under Domitian in 95-96 AD (*RIC* II 206 no. 413, *BMCEmp* II 407 no. *, pl. 80.12, and see text); reliefs (see Paris 1994c, 32 figs. 1-2)

Bibliography: Altmann 1906, 88. *RIC* II 206 no. 413. Platner and Ashby 1929, 247. *BMCEmp* II 407 no. *, pl. 80.12. Haberey 1960, esp. 292 and pl. 42.1. Ambrogi 1985, 104-8. Rodríguez Almeida 1986, esp. 56-8. Torelli 1987, esp. 563-72. Richardson, jr. 1992, 181. Gazda 1994, 93-5. Marconi 1994, 84-91. Paris 1994b, 9-14; 1994c, 15-31; 1994d, 33; 1994e, 35-7; 1994f, 39-41; and 1994g, 75-83. Paris and Gazda 1994, 44-73. Candilio 1995, 193-202. Coarelli 1995i, 368-9.

Text: 161-4.

#41 ROME: Hercules, Shrine

Context: to the E of the Pons Aelius, W Campus Martius (Regio IX), rests on a pier that extends into the Tiber; the hemicycle backs onto the Tiber (N, see text and 'Description' below)

Date:

- I. Julio-Claudian period: stylistic analysis of the capitals and base (see text)
- II. under Antoninus Pius: medallion (see text and 'Iconographic sources' below)

Patron:

- I. unknown
- II. Antoninus Pius?

Description:

- I. round monopteros (4.20 m. in dia., Luna marble?, see below) set inside a hemicycle (19 m. in dia., Luna marble?, see below) with 15 columns and 2 projecting antae, preceded by a rectangular altar; rests on a pier (50 m. long by 9.6 m. wide, Grotta Oscura and Anian tufa)
- II. as I.

Remains:

- I. 2 capitals (Luna marble, part of the monopteros or the hemicycle, see text) and possibly part of the monopteros' inscribed entablature (now lost, see text); a rectangular altar (Luna marble) and possibly a round altar (now lost, see text) were found nearby
- II. none

Literary and epigraphical sources:

Inscriptions from 'Remains':

- I. LIB[ER] (dedicatory inscription?, entablature, see text).

Iconographic sources:

- II. medallion of Antoninus Pius (see Gneecchi 1912, 22, Brown 1941, 19, and text)

Decoration:

- I. ornate lion-skin capitals, the rectangular and the round? altars (see 'Remains' above)
- II. a cult statue (see 'Iconographic sources' above and text)

Excavations:

- I. D. Marchetti in 1890-1891 uncovered the pier, the base, and 2 capitals (now in the Museo Nazionale Romano); a third capital was discovered later (now in the Vatican)

Previous attributions: Dayan (1979) and Paris (1979, 264-5) see the altar as a base for a statue of Hercules, while Nash (1961-1962, Vol. 1:165) links the medallion to the Shrine of Bacchus (#32).

Bibliography: Marchetti 1891, esp. 45-6. Azzurri 1892, 175-8. Gneecchi 1912, 22-3 pl. 55.9. Platner and Ashby 1929, 251. Brown 1941, 170-3. Lippold and Amelung 1956, 192-3. Nash 1961-1962, Vol. 1:165. Strong 1961, 91-2 fig. 42. von Mercklin 1962, 277-8. von Steuben 1963-1972, Vol 1: 468 no. 40, and Vol. 3: 113 no. 2190. Dayan 1979, 334-5. Paris 1979, 264-5. Vermeule 1981, 30. La Rocca 1984, 63. Flambard 1987, esp. 203-4. Richardson, jr. 1992, 185. Rodríguez Almeida 1993c, 154-5.

Text: 132-4 and 181-2.

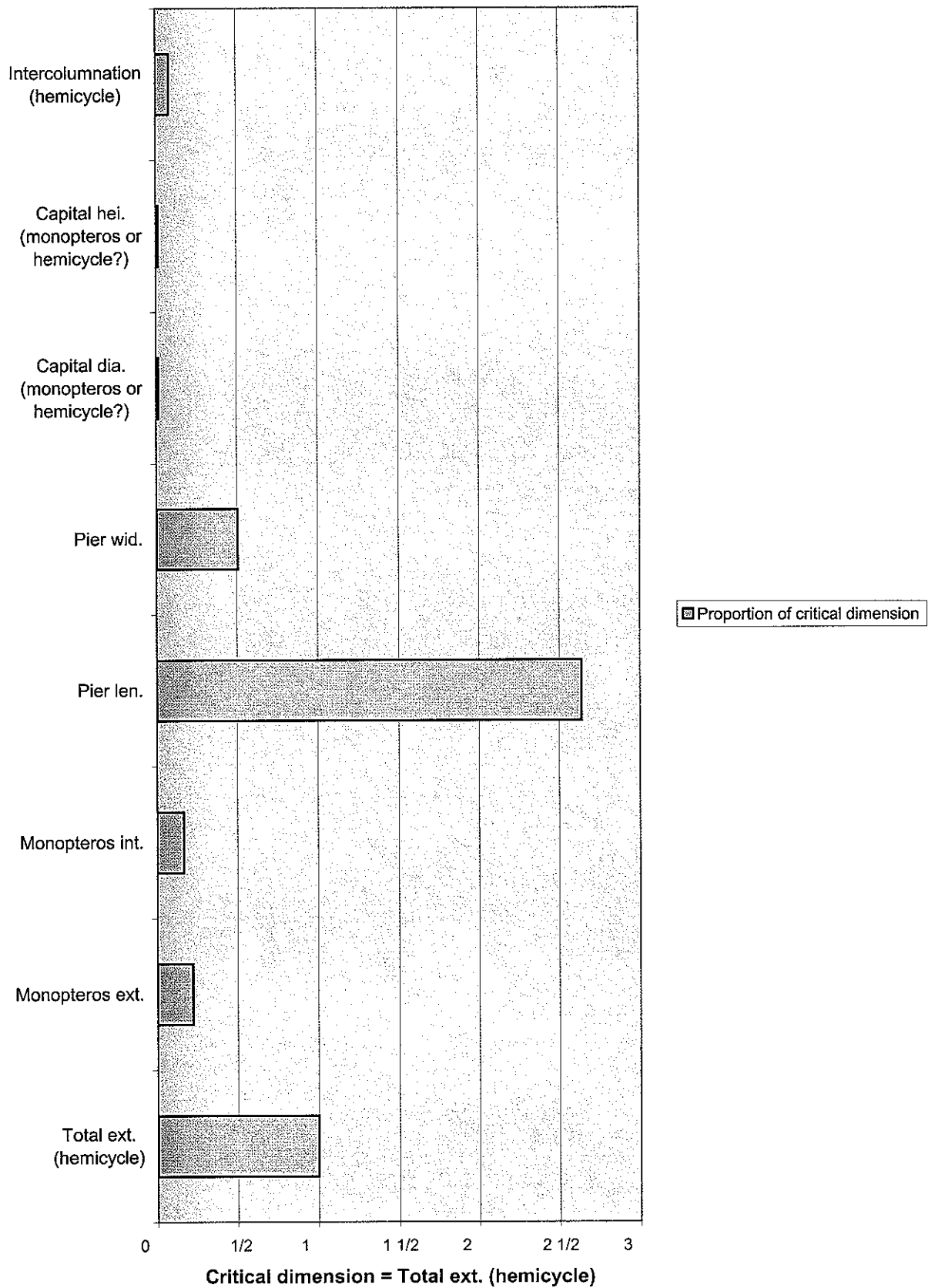
ROME: Hercules, shrine

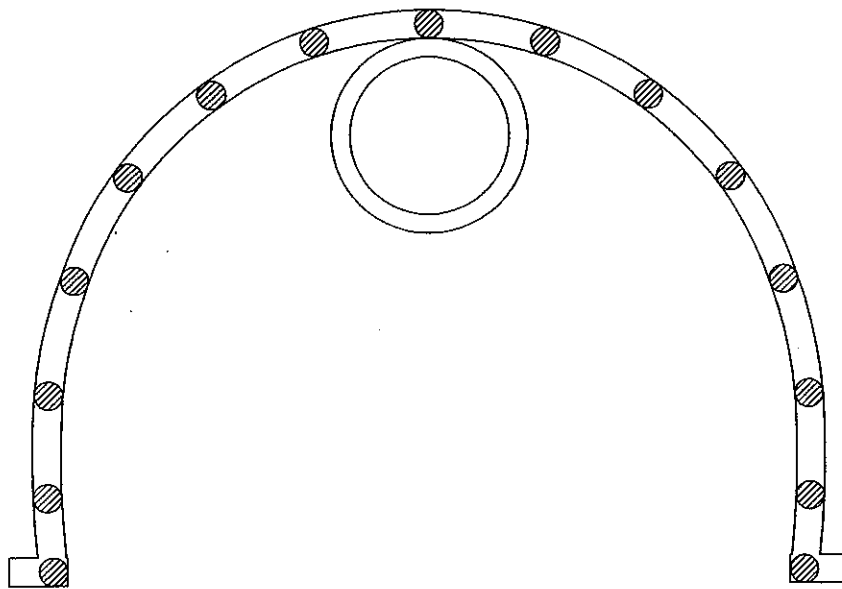
<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships</i>
Total ext. (hemicycle) *	19	64			1
Monopteros ext.	4.2	14.19			2/9
Monopteros int.	3.15	10.6			1/6
Pier len.	50	168.9			2 2/3
Pier wid.	9.6	32.5			1/2
Capital dia. (monopteros or hemicycle?)	0.26	0.88			1/73
Capital hei. (monopteros or hemicycle?)	0.29	0.98			1/65
Intercolumnation (hemicycle)	1.5	5.3			1/12
Interaxial dia.	3.68	12.40			
Floorspace (square measure)	7.8	88.2			

Note: * *critical dimension*

Source: Marchetti 1891, 45 pl 3.

Chart #41. ROME: Hercules, shrine





#41 ROME:
Hercules, shrine
Scale 1:200

#42 ROME: Hercules and the Muses, Temple

Context: Campus Martius (Regio IX), enclosed within the Porticus Philippi (29 BC); the Porticus is bordered by the Circus Flaminius (220 BC, SW), a wig market (NW), and the Porticus Octaviae (previously the Porticus Metelli, 146 BC, NE); the Temple is oriented towards the Circus Flaminius (SW)

Date:

- I. 187 BC: ancient sources (see 'Literary and epigraphical sources: Attribution' below), and building remains
- II. 29 BC (Temple rebuilt and Porticus constructed): ancient sources (see 'Literary and epigraphical sources: Foundation and rebuildings' below)
- III. Augustan period (Porticus rebuilt): ancient sources (see 'Literary and epigraphical sources: Foundation and rebuildings' below)

Patron:

- I. M. Fulvius Nobilior
- II. L. Marcius Philippus
- III. Augustus

Description:

- I. drum (12 m. in dia., tufa revetted in Pentelic marble and capellaccio) with a pronaos and 4 stairs; rests on a two-level? platform indented with rectangular niches (see text)
- II and III. as I, but enclosed within a columnar portico

Remains:

- I. part of the podium of a rectangular pronaos (tufa *opus quadratum* revetted in Pentelic marble) and a curved foundation (capellaccio blocks; see Gianfrotta 1985, 376-84, and Viscogliosi 1996c, 18); an inscribed statue base was found nearby (see Marabini-Moevs 1981, 47 and 58)
- II and III. none

Literary and epigraphical sources:

Inscriptions from 'Remains' and 'Iconographic sources': *CIL* VI 1307 (statue base); Severan Marble plan: AEDIS HERCVLI[S MVSAR]VM.

Attribution: Plut. *Rom.* 59, and Serv. *Aen.* 1.8 (*aedes Herculis et Musarum*). Cic. *Arch.* 27: *Fulvius non dubitavit Martis manubias Musis consecrare* (Fulvius dedicates the Muses to Mars). Eumen. *inst. schol.* 7-8: *aedem Herculis Musarum in circo Flaminio Fulvius ille Nobilior ex pecunia censoria fecit, non id modo secutus, quod ipse litteris et summi poetae amicitia duceretur, sed quod in Graecia cum esset imperator acceperat Heraclem Musagetem esse, id est comitem ducemque Musarum, idemque primus novem signa Camenarum ex Ambraciensi oppido translata sub tutela fortissimi numinis consecravit ut res est, quia mutuis opibus et premiis invari ornarique deberent: Musarum quies defensione Herculis et virtus Herculis voce Musarum* (Temple dedicated to Hercules and the Muses).

Location: Ov. *trist.* 3.1.69 fol. (near the theaters of Balbus, Marcellus and Pompey). Ov. *am.* 3.167-8, and Mart. *epigr.* 5.49.12-3 (neighboring wig market).

Foundation and rebuildings:

- I. *fast. Phil.* = *CIL* I 344-5 (*dies natalis* of 13 June).
- II. Liv. 40.51.6 (*porticus ad fanum Herculis* of M. Fulvius Nobilior). Ov. *fast.* 6.799-812 (Philippus' additions). Ov. *fast.* 6.797; cf. Mart. *epigr.* 4.49.13 (*dies natalis* of 30 June).
- III. Suet. *Aug.* 29.5 (Augustus' restoration of the Porticus Philippi).

#42 ROME: Hercules and the Muses, Temple, cont.

Decorative program:

- I. Cic. *Verr.* 2.4.4.126, and Plin. *nat.* 34.54 (statues plundered). Pol. 21.30.9, Liv. 38.9.13, *Vir. ill.* 52.2, Plin. *nat.* 5.35.66, Eumen. *inst. schol.* 7-8 and *Paneg.* 9.7.3 (statues of Ambracian Muses, see 'Literary and epigraphical sources: Attribution' above). Ov. *fast.* 6.812 and *am.* 3.167-8, and Plin. *nat.* 5.35.66 (statue of Hercules Musagetes). Serv. *Aen.* 1.8, and Propert. 4.2.59-64 (Shrine of the Camenae #33). Macr. *Sat.* 1.12.16, and Varro *ling.* 6.33 (copies of the *Fasti*).
- II. Plin. *nat.* 35.66, 114 and 144 (Greek paintings by Zeuxis and Theorus and 3 statues by Antiphilus).

Function: Cic. *fam.* 7.1.1, Hor. *epist.* 2.2.90 and 7.37, Val. Max. 3.7.11, Plin. *nat.* 34.19, Iuv. 7.38, Mart. *epigr.* 3.20.8-9 and 4.61.3-4, and Porph. *Hor. Sat.* 1.10.37-8 (as the Collegium Poetarum).

Iconographic sources: Severan marble plan (fr. 31); Campania plaque (see Marabini Moevs 1981, 5 and 47); denarii minted by Q. Pomponius Musa in 66 BC (see Marabini Moevs 1981, 8-10); late Republican crater from Cerdo (see Marabini Moevs 1981, 47-8); 1st c. BC Arretine ware (see Marabini Moevs 1981, 21-2)

Decoration:

- I-III. statues of the Ambracian Muses and Hercules Musagetes, the Shrine of the Camenae (#33), and copies of the *Fasti* (see 'Literary and epigraphical sources: Decorative program' above)
- II-III. Greek paintings and statues (see 'Literary and epigraphical sources: Decorative program' above)

Excavations: P. A. Gianfrotta in the early 1980s

Previous attributions: Castagnoli (1961) suggested that Fulvius rededicated the Temple of Hercules Magnus Custos to Hercules and the Muses after setting up Numa's Shrine (#33) and the Ambracian Muses, while Richardson, jr. (1977, 355-6 and 361; cf. Cancik 1969, 324) proposed that Fulvius set up a small shrine to the Muses which was amplified, in the course of Philippus' restoration (see text), into a full-scale Temple complex.

Bibliography: Bayet 1926b, 239-40 and 351-3. Lundstrom 1929, 89-109. Platner and Ashby 1929, 255. Boyancé 1955, 184-90. Castagnoli 1961, 608-10. Tamm 1961, 157-67. Cancik 1969, 323-8. Marchetti-Longhi 1970, 145-8. Crowther 1973, 575-80. Richardson, jr. 1977, 355-61. Marabini Moevs 1981, 1-58. Martina 1981, 49-68. Castagnoli 1983a, 93-104. Gianfrotta 1985, 376-84. Richardson, jr. 1992, 187. Ziolkowski 1992, 50-3. Coarelli 1995k, 303 and 305. Viscogliosi 1996c, 17-9.

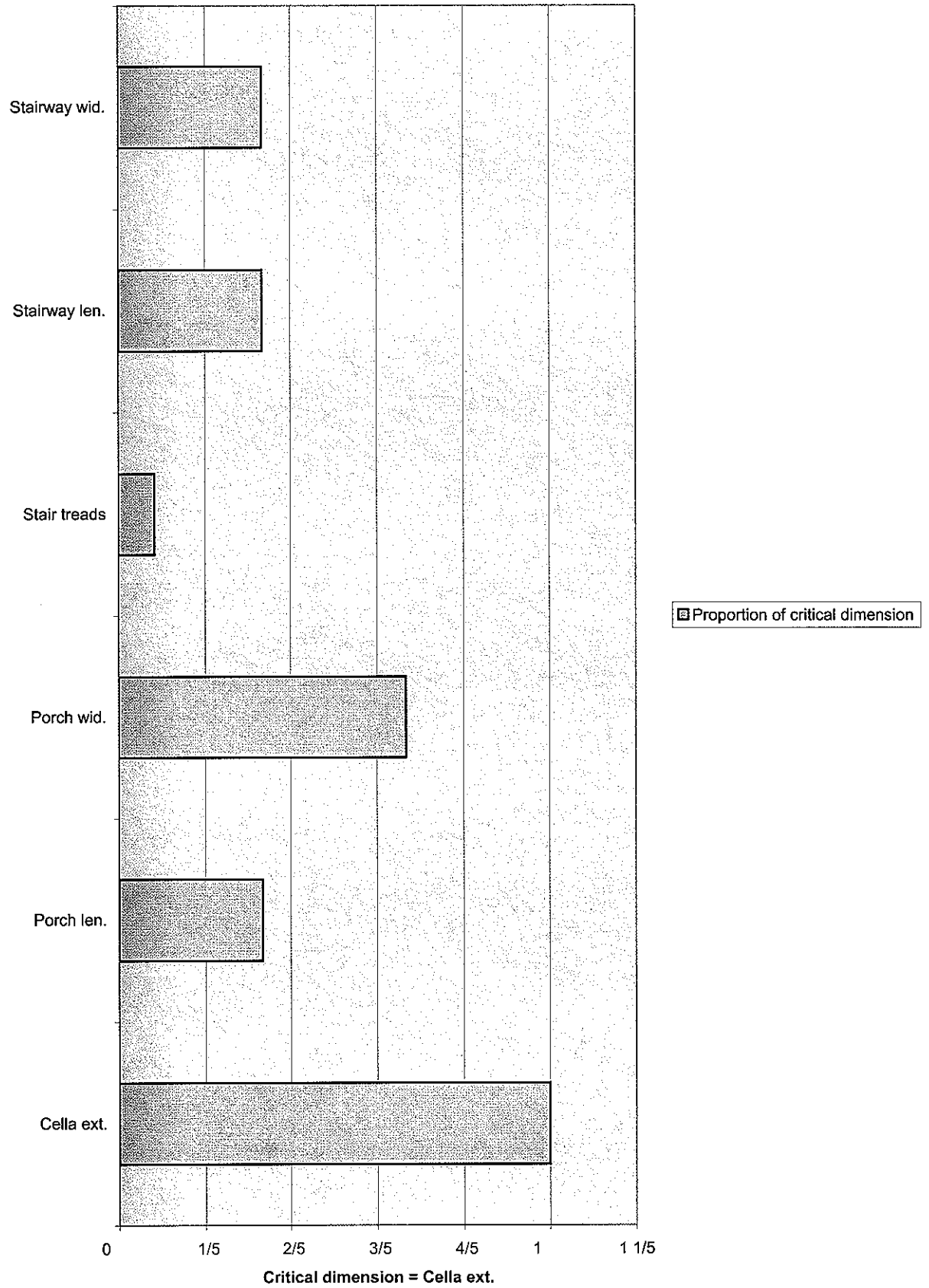
Text: 41-5.

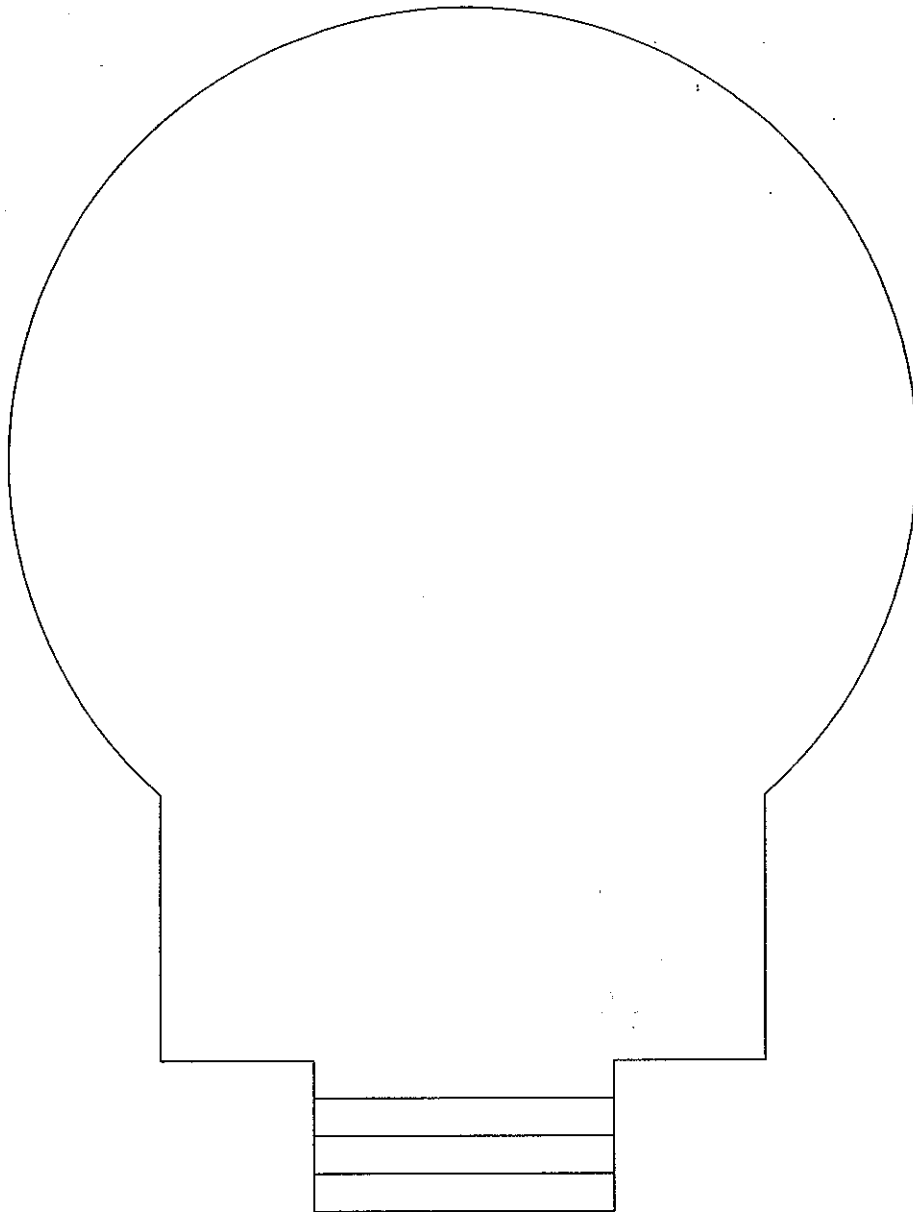
<i>ROME: Hercules and the Muses, temple</i>				
<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>
Cella ext. *	12	40.5		
Porch len.	4	13.5		
Porch wid.	8	27		
Stair treads	1	3.4		
Stairway len.	4	13.5		
Stairway wid.	4	13.5		
Floorspace (square measure)	113.1	1288.3		
			<i>ideal proportional relationships</i>	
			1	
			1/3	
			2/3	
			1/12	
			1/3	
			1/3	

Note: ** critical dimension*

Source: Severan Marble Plan fr. 31.

Chart #42. ROME: Hercules and the Muses, temple





#42 ROME:
Hercules and the Muses, temple
Scale 1:100

#43 ROME: Hercules Victor in foro Boario, Temple

Context: forum Boarium (Regio IX); beneath the ex-Palazzo dei Musei di Roma

Date: 142 BC: ancient sources (see 'Literary and epigraphical sources: Founder' below)

Patron: L. Aemilius Paulus, P. Cornelius Scipio Aemilianus, the *familia* of Hercules, or T. Quinctius Flaminius (see text)

Description: round peripteros (28 m. in dia., marble?) with a 2-step krepidoma, 18 exterior columns (Attic bases, monolithic shafts, Tuscan capitals), 5 interior niches (see Giovenale 1927, 378-9), 1 window, and a conical roof (see text)

Remains: a statue of Hercules (see 'Decoration' below)

Literary and epigraphical sources:

Location and attribution: Serv. *Aen.* 8.363 (cf. Macr. *Sat.* 3.6.10): *sed Romae Herculis Victoris aedes duae sunt, una ad portam Trigeminam, alia in foro Boario*, Liv. 10.23.3: *in sacello Pudicitiae Patriciae quae in foro Boario est ad aedem rotundam Herculis*, and Fest. p. 282 L: *Pudicitiae signum in foro Boario est, ubi familiaria aedisset Herculis* (location in foro Boario). Plin. *nat.* 10.79 (temple of Hercules, where no flies or dogs could enter). Serv. *Aen.* 9.406 (round Temples dedicated to Hercules). Varro in *Schol. Dan. Aen.* 8.363: *victor ... quod omne genus animalium deinceps vicerit* (Hercules Victor).

Founder: Plut. *Aem. Paul.* 17.19 (L. Aemilius Paulus). Liv. 40.51.4, and Plut. *praec. ger.* 20.4 (P. Cornelius Scipio Aemilianus).

Decorative program: Plin. *nat.* 35.4.19 (Pacuvius' paintings). Plin. *nat.* 35.23 (paintings comparable to the *tabulae* of Hostilius Mancinus). Serv. *Aen.* 3.407 and 8.288, and Macr. *Sat.* 3.6.17 (statue of Hercules).

Iconographic sources: drawing by B. Peruzzi (ca. 1503-1513; cf. 16th c. descriptions cited in Lyngby 1954, 9-13, Lanciani 1989, 95, and Coarelli 1992a, 88-9).

Decoration: Pacuvius' paintings; a bronze statue of Hercules (2.50 m. high) found under Sixtus IV; a relief depicting Hercules, Virtus and Voluptas (see 16th c. descriptions under 'Iconographic sources')

Excavations: destroyed under Pope Sixtus IV (1471-1484)

Previous attributions: see text and Scaliger's reading of Fest. p. 282 L: *Aemiliana aedis est Herculis*, Mommsen's reading: *ubi familia edisset* (i.e. *sedisset*) *Herculis*, and Palmer's reading: *ubi Flaminii aedis est Herculis*.

Bibliography: Giovenale 1927, 377-81. Platner and Ashby 1929, 257-8. Lyngby 1954, 8-31. Cressedi 1984, 249-96. Ziolkowski 1988, 309-33. Lanciani 1989, 94-5, 101, and 106. Palmer 1990, 234-44. Coarelli 1992a, 84-92 and 164-80. Richardson, jr. 1992, 188-9. Coarelli 1995k, 362. Coarelli 1996b, 11-2; 1996c, 15.

Text: 45-8.

ROME: Hercules Victor in foro Boario, temple

ideal proportional relationships

reconstructed measurements	ideal		% difference	ideal proportional relationships	
	meters	roman feet		to critical dimension *	within columnar order **
Cella ext.	15.5	52.36		4/7	
Cella int.	12.5	42.23	42	-0.5%	7/15
Total hei.	23.4	79.1		7/8	
Stair treads	0.8	2.7		1/33	
Stair risers	0.4	1.4		1/64	
Krepis dia. at base	28	94.6		1 1/20	
Krepis dia. at euthynteria *	26.4	89.2	90	0.9%	1
Krepis hei.	0.8	2.7		1/33	
Euthynteria hei.	0.4	1.4		1/64	
Ambulatory (ext.)	2.75	9.29			
Cella wall wid.	1.5	5.1	5	-2.0%	1/18
Door wid.	2.9	9.8	10	2.0%	1/9
Door hei.	9.6	32.4			
Door jamb	1	3.4			
Door lintel	1.6	5.4		3/50	
Window wid.	0.8	2.7		1/33	
Window hei.	2.9	9.8		1/9	
Window jamb	0.6	2		1/45	
Window lintel	0.6	2		1/45	
Total hei. (ext. columns)	15.5	52.4		4/7	10 1/2
Base dia.	2.3	7.8			1 5/9
Base hei.	0.6	2		1/45	2/5
Lower column dia. **	1.5	5.1	5	-2.0%	1 1/18
Shaft hei.	13.7	46.3		1/2	9 1/4
Capital dia.	2.5	8.4			1 2/3
Capital hei.	1.25	4.22			5/6
Intercolumnation	1.7	5.7			1 1/7
Interaxial	4	13.5		3/20	2 5/7
Interaxial dia.	21	70.9		4/5	14 1/6
Entablature hei. (ext.)	2.6	8.8	9	2.3%	1/10
Architrave hei.	0.6	2		1/45	
Frieze hei.	0.8	2.7		1/33	
Dentil hei.	0.5	1.7			
Cornice wid.	0.7	2.4			
Cornice hei.	0.7	2.4			
Roof wid.	21.7	73.3		4/5	
Roof hei.	3.7	12.5		1/7	
Floorspace (square measure)	122.7	1400.7			
Volume (cubic measure)	228.8	5491.3			

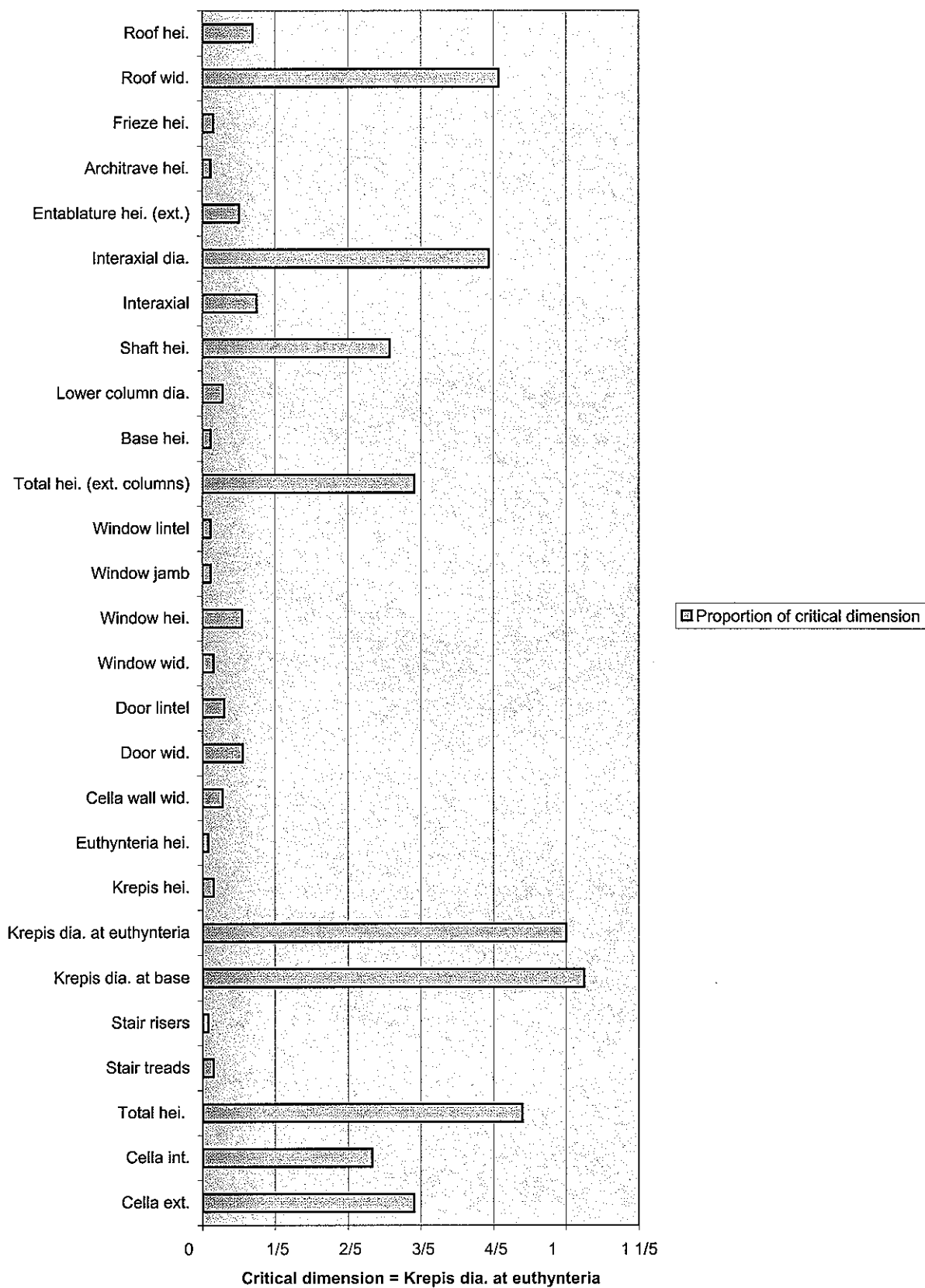
Note: * critical dimension

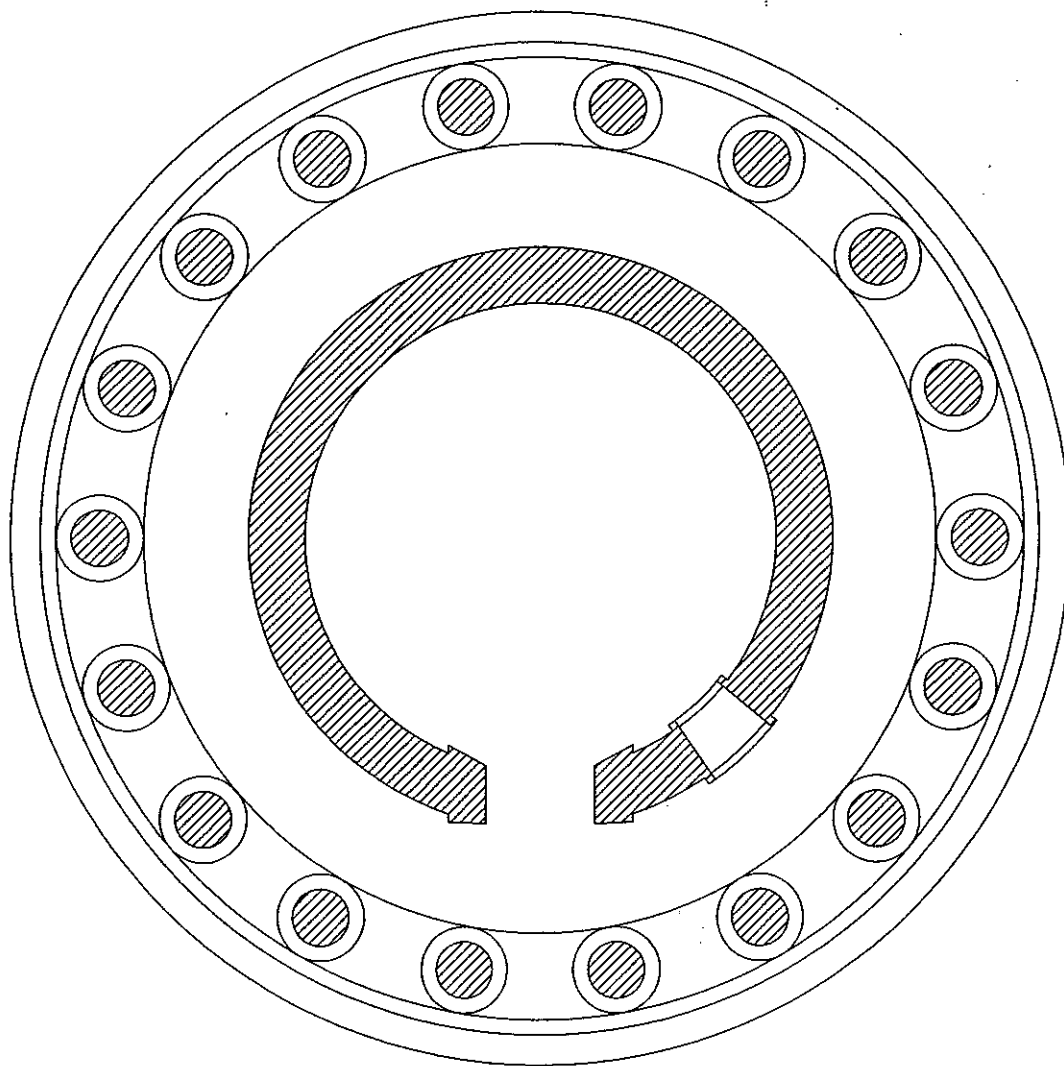
** in relation to the lower column dia.

Source: Peruzzi's drawing.

Giovenale 1927, 378-9.

Chart #43. ROME: Hercules Victor *in foro Boario*, temple





#43 ROME:
Hercules Victor in foro Boario,
temple
Scale 1:200

#44 ROME: Hercules Victor *ad portam Trigeminam*, Temple

Context: forum Boarium (Regio IX), on M. Fulvius Nobilior's port extension (179 BC) next to the rectangular Temple of Portunus (early 2nd c.-1st c. BC, N); oriented E

Date:

- I. late 2nd c. BC: *terminus post quem* of the port extension (ceramic remains), and building materials and techniques (see text)
- II. Tiberian period: Luna marble column drums and capitals (see 'Remains' below)

Architect:

- I. Hermodorus of Salamis? (see text)
- II. unknown

Patron:

- I. M. Octavius Hersennus or L. Mummius Achaicus (see text)
- II. unknown

Description:

- I. round peripteros (22.7 m. in dia., marble and travertine) with ring foundations, a 4-step krepis, 20 columns (Attic bases, fluted shafts, Corinthian capitals), 2 windows, a Corinthian entablature, coffers, and a conical roof

II as I.

Remains:

- I. most of the foundations (Grotta Oscura tufa), krepis (tufa faced with Pentelic marble), euthynteria (travertine), cella walls (travertine revetted in Pentelic marble), columns (Group A #1-4, 6-7, and 19-20: Pentelic marble drums and capitals, and Group C #5 and 8: Pentelic marble drums), and some roof tiles and acroteria (Pentelic marble); an inscribed statue base (marble) was found nearby
- II. repairs to the cell walls (Luna marble) and columns (Group B #5, 8, 9-14, and 16-8: Luna marble drums and capitals, and Group C #5 and 8: Luna marble capitals); fragments of the paving (various colored marbles)

Literary and epigraphical sources:

Inscriptions from 'Remains':

- I. CIL VI 33936: [*Hercules Victor cognominatus vulg]o Olivarius opus Scopae minoris* (statue base).

Location and attribution: Serv. *Aen.* 8.363, and Macr. *Sat.* 3.6.10 (*Hercules ad Portam Trigeminam*, quoted in #43). Serv. *Aen.* 9.406 (round temples dedicated to Hercules). Varr. in *Schol. Dan. Aen.* 8.363: *victor ... quod omne genus animalium deinceps vicerit* (Hercules Victor). Varro *ling.* 6.19, *Not. (Fortunium in Regio XI), fasti Vallen., Allif.* and *Amit. = Inscr. It.* 13.2, 148-9, 180-1 and 190-1 (neighboring Temple of Portunus).

Foundation and date: *fasti Antiat.* and *Allif. (dies natalis* of 13 August).

Decoration:

- I-II. a statue of Hercules Victor (see 'Remains' above); a marble antefix block depicting an eagle preparing for flight
- II. a multi-colored marble pavement (see 'Remains' above)

Excavations: standing since antiquity

Previous attributions: since the Renaissance, it has been identified as the 'Temple of Vesta,' while the neighboring Temple of Portunus has been interpreted as the Temple of Fortuna Virilis.

Bibliography: Frank 1924, 136. Platner and Ashby 1929, 255 and 257. Lyngby 1954, 32-61. Lugli 1957, 178-83. Strong and Ward-Perkins 1960, 7-32. Shoe 1965, 196-8. Rakob 1969, 275-84. Coarelli 1970-1971a, 176-81; 1970-1971b, 241-65. Rakob and Heilmeyer 1973. Palmer 1976-1977, 135-61. von Hesberg 1980, 99-102 and 171. Cressedi 1984, 249-96. Ziolkowski 1988, 309-33. Palmer 1990, 234-44. Coarelli 1992a, 92-102 and 180-204. Richardson, jr. 1992, 187 and 189. Coarelli 1996e, 19-20; 1996g, 22-3.

Text: 45-6 and 48-51.

ROME: Hercules Victor ad portam Trigeminam, temple

ideal proportional relationships

<i>actual measurements</i>	<i>meters</i>	<i>greek feet</i>	<i>ideal greek feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Cella ext.	9.906	29.98	30.0	0.1%	3/5	
Cella int.	8.53	25.82				
Foundation dep.	4.1	12.4	12.5	0.8%		
Stair treads	0.4	1.2				
Stair risers	0.28	0.85	0.83	-2.0%	1/60	
Krepis dia. at base	22.7	68.7	66.7	-2.9%	1 1/3	
Krepis dia. at euthynteria *	16.517	49.99	50.0	0.0%	1	
Krepis hei.	1.1	3.3	3.33	1.0%	1/15	
Euthynteria hei.	0.24	0.73	0.75	2.7%	1/67	
Ambulatory (ext.)	2.07	6.27	6.25	-0.3%	1/8	
Cella wall wid.	0.688	2.08			1/24	
Cornice wid. (cella wall)	0.2	0.6			1/83	
Cornice hei.	0.43	1.3				
Door dep.	1	3.05	3	-1.6%	3/50	
Door wid.	2.94	8.9				
Door jamb	0.6	1.8			1/28	
Window wid.	1.5	4.6	4.55	-1.2%	1/11	
Window hei.	3.1	9.4			3/16	
Window jamb	0.4	1.2				
Window lintel	0.6	1.8			1/28	
Total hei. (incl. plinth)	10.66	32.26	32.5	0.7%	2/3	11 3/5
Total hei. (not incl. plinth)	10.43	31.57			5/8	11 1/3
Base dia.	1.2	3.6			1/14	1 2/7
Base hei.	0.26	0.787			1/64	2/7
Lower column dia. **	0.957	2.78			1/18	1
Shaft hei.	8.91	26.9			7/13	9 2/3
Capital dia.	1.9	5.8				2
Capital hei.	1.26	3.81			1/13	1 3/8
Intercolumnation	1.21	3.66	3.75	2.5%	3/40	1 1/3
Interaxial	2.42	7.32	7.5	2.5%	3/20	2 5/8
Interaxial dia.	15.2	46	45.0	-2.2%	9/10	16 5/9
Floorspace (square measure)	57.1	523.6				

reconstructed measurements

Total hei.	14.7	44.5	45.0	1.1%	9/10	
Door hei.	6.75	20.43	20.0	-2.1%	2/5	
Door lintel	1.45	4.39				
Entablature hei. (ext.)	2.12	6.42			1/8	
Architrave hei.	0.75	2.3			1/22	
Frieze hei.	0.72	2.18			1/23	
Dentil hei.	0.35	1.06			1/47	
Cornice wid.	0.45	1.36			1/37	
Cornice hei.	0.3	0.9			1/56	
Roof dia.	17.5	53			1 1/15	
Roof hei.	3.7	11.2			2/9	
Volume (cubic measure)	163.2	3466.1				

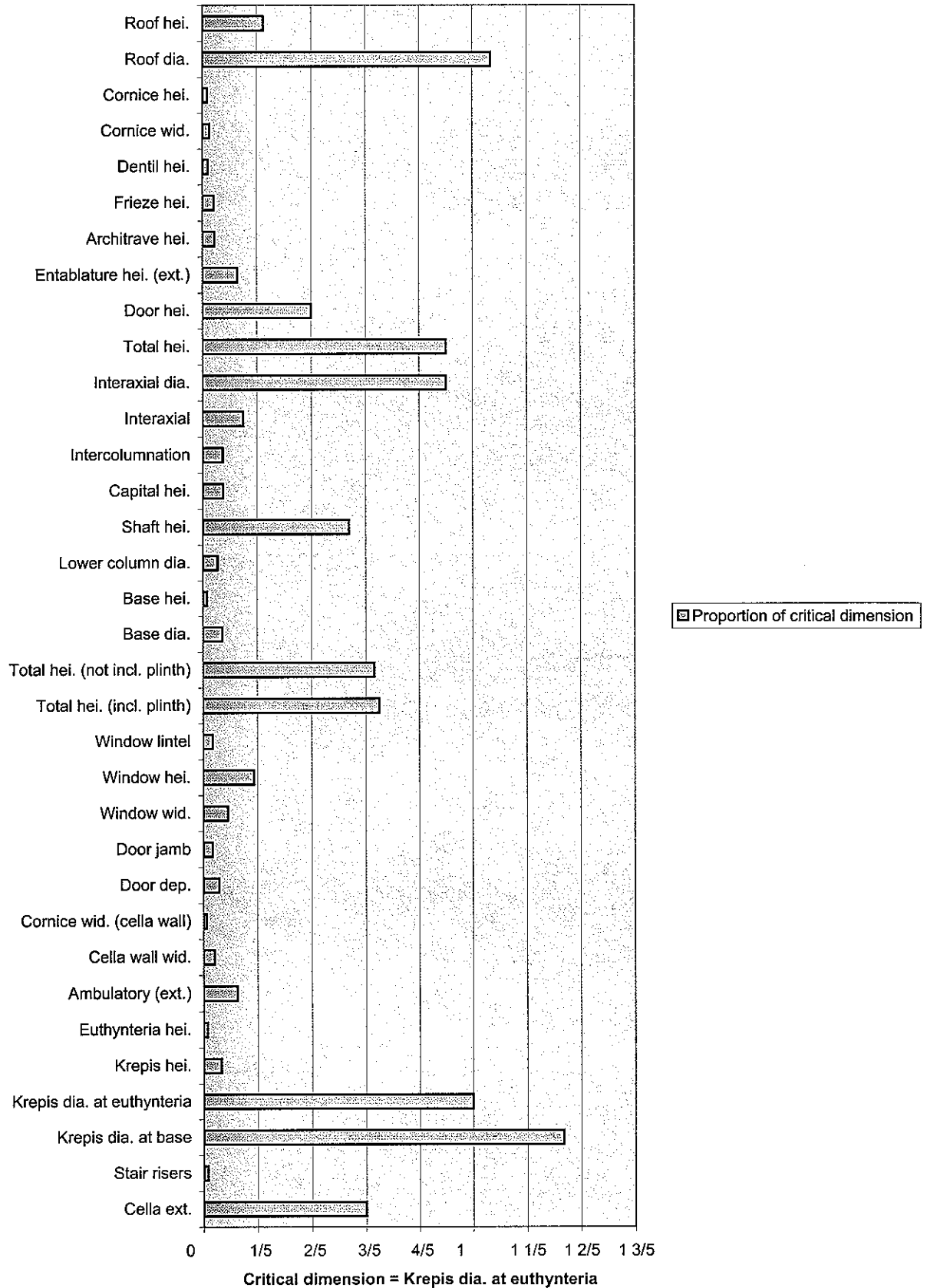
Note: * critical dimension

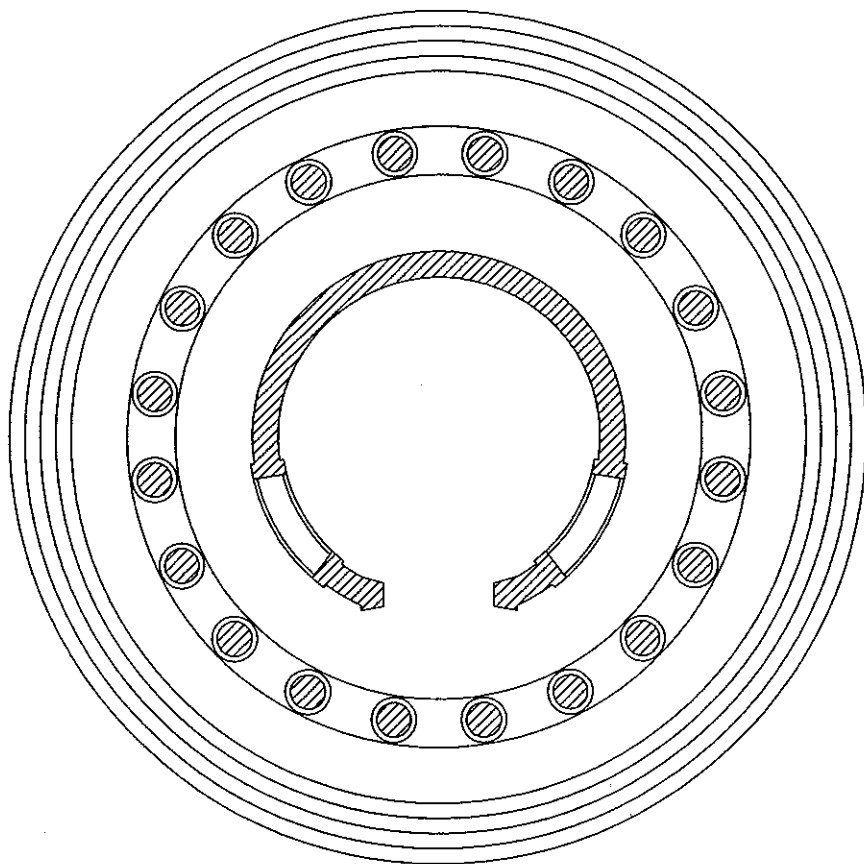
** in relation to the lower column dia.

Source: Rakob and Heilmeyer 1973, passim figs. ???

Wilson Jones 1989, ???

Chart #44. ROME: Hercules Victor *ad portam Trigemina*, temple





#44 ROME:
Hercules Victor ad portam
Trigeminam, temple
Scale 1:200

#45 ROME: Juno Martialis, Temple

Context: Campus Martius (Regio IX) or Campus Martialis, located near the Porta Caelimontana (Regio V)

Date: 251 AD: coins (see 'Iconographic sources' below)

Patron: Trebonianus Gallus? (see text)

Description: round monopteros on a stepped krepis with Corinthian columns, an entablature, and a domed roof topped by antefixes and acroteria

Iconographic sources: coins minted under Trebonianus Gallus (identified by the legend IVNO MARTIALIS; *RIC* IV.3 161-2 nos. 26 and 35, 164 no. 54, 166 no. 69, and 171 nos. 109-12; cf. Brown 1941, 121-5, 360-1, and 363)

Decoration: cult statue of Iuno Martialis inside the temple; herms? outside

Bibliography: Roscher 1890-1897, esp. 586-7 and 611-2. Gneecchi 1912, 50. *RIC* IV.3 161-2 nos. 26 and 35, 164 no. 54, 166 no. 69, and 171 nos. 109-12. Brown 1941, 121-5, 360-1, and 363. Alföldi 1955, esp. 62-5. Kütthmann and Overbeck 1973a, 72-3. Hill 1989, 17-8. Steinby 1996a, 123.

Text: 229-30.

#46 ROME: Mars Ultor, Temple

Context: Capitoline (Regio VIII)

Date: 20 BC: the return of the ensigns from Parthia (see 'Literary and epigraphical sources: Foundation and location' below and text)

Patron: the Senate in honor of Augustus

Description: round monopteros? resting on a 3-5 step krepis with Corinthian columns, a Corinthian? entablature, and a domed roof

Remains: none

Literary and epigraphical sources:

Foundation and location: Cass. Dio 54.8.3: "a temple of Mars Ultor on the Capitol for the reception of the standards, in imitation of that of Jupiter Feretrius, (was) decreed on (Augustus') orders and carried out by him." trans. Rich (Temple built as a repository for the ensigns, modeled after the Temple of Jupiter Feretrius).

Iconographic sources: coins minted by M. Durmius, P. Petronius Turpilianus, and L.

Aquillius Florus: SIGN. RECEP. (*BMCEmp* I 3 fol. nos. 10-7 pl. 1.7-9, 8 nos. 40-2 pl. 2.2, and 11 nos. 56-9 pl. 2.11-2); cuirass of the Augustus from Prima Porta; cistophoroi from Ephesus and Pergamon: IMP.IX.TR. PO.IV or PO.V (*BMCEmp* I cix fol., 114 no. 704 pl. 17.12, Sutherland et al. 1970, 33-7 and 81-4 pls. 34-5, and Giard 1976, 154 nos. 989-91 pl. 39); aurei and denarii from Colonia Patricia (CP) and Caesaraugusta (CA) in Spain: S.P.Q.R.IMP.CAESAR.LAVG.COS.XI.TRI.POT.VI and CIVIB.ET.SIGN.MILIT.A. PART.RECVP (*BMCEmp* I 65 nos. 366-70 pls. 7.18-20 and 8.1, 66 nos. 371-5 pl. 8.2-5 CP, and 58 no. 315 pl. 5.20 CA, *RIC* I 25 fol.; round temple, a chariot, an eagle and a small quadriga: Giard 1976, 179-81 nos. 1209-24 pls. 47-8 CP; a round temple, an eagle and two ensigns: Giard 1976, 179 nos. 1201-8 pl. 47 CP; a round temple and Mars Ultor: Giard 1976, 168 nos. 1104-14 pl. 44 CP and 193 no. 1329 pl. 54 CA)

Decoration: ensigns and eagles (see 'Literary, epigraphical and iconographic sources' above); cult statue (Spanish coins, see text)

Bibliography: Platner and Ashby 1929, 329-30. Gagé 1932, 61-92. Lugli 1946, 32; 1955, 381-3 nos. 203-15. Buchner 1961, 572-8. Degraasi 1963, 456-7 and 489-91. Kraus 1964, 66-75. Coarelli 1968a, 191 fol. Fuchs 1969, 38, 73-6, and 95, pls. 5.63-7 and 6.68-72. Sutherland et al. 1970, 33-7, 81-4 and 102 fol. K  thmann and Overbeck 1973a, 53-5 nos. 101-5. Giard 1976, 154, 168, 179-81, and 193. Gros 1976a, 127-9 and 166-9. Morawiecki 1976, 59-82. Simpson 1977, 91-4. Cassola 1981, 99-118. Croon 1981, 246-75. Simon 1981-1982, esp. 5-7. van der Vin 1981, esp. 121-8. Bonnefond 1987, 251-78. Siebler 1988, 155-68. Trillmich 1988, 514-6 cat. 341. Zanker 1988, 188-96. Hill 1989, 27 and 81. Alteri 1991, esp. 5-7. Richardson, jr. 1992, 245. Reusser 1993, 41, 49, and 206. Bustany 1994, 93 fol. Coarelli 1996h, 135-6. Reusser 1996, 230-1. Baldassarri 1998, 58-61. Rich 1998, 71-128.

Text: 109-15.

#47 ROME: Mercury, Temple

Context: near the starting gates of the Circus Maximus (Regio XI); orientation unknown

Date: 495 BC: ancient sources (see 'Literary and epigraphical sources: Foundation and attribution' below)

Patron: the Roman people empowered by the Senate; inaugurated by the centurion M. Laetorius

Description: rectangular? (see text)

Remains: none

Literary and epigraphical sources:

Foundation and attribution: Mart. *epigr.* 7.74-5, Macr. *Sat.* 1.12.19, Lyd. *mag.* 4.80, and *Philocal. fast.* = CIL I² 213, 216, 221, 264, and 318 (Temple dedicated to Mercury and possibly Maia). Serv. *Aen.* 9.406: *Aedes autem rotundas tribus diis dicunt fieri debere, Vestae, Dianae, vel Herculi, vel Mercurio* (round temples dedicated to Mercury?).

Location: Liv. 2.21.7 and 27.5-6, and Val. Max. 9.3.6 (near the Circus Maximus). Ov. *fast.* 5.669-70, Apul. *met.* 6.8.1.2.3, Tac. *ann.* 12.24.1-2, and Tert. *spect.* 8.1-6 (on the slopes of the Aventine near the starting gates). Not. VZ I, p. 133, and *Mir.* 29, 61 VZ 3 (Regio XI).

Cult: Liv. 2.21.7, Ov. *fast.* 5.669-70, Fest. p. 135 and 148 L, Mart. *epigr.* 12.67.1, and *Philocal. fast.* = CIL I² 213, 216, 221, 264, and 318 (*dies natalis* of the Ides of May). Liv. 2.27.5, Fest. p. 148, Cic. *ad Q. fr.* 2.5.2, Ov. *fast.* 5.699 fol., and CIL I 14.2105 and 186.206 (institution of the *collegium mercatorum* or *Mercurialium*).

Iconographic sources: sesterces minted in 172-173 AD (*BMCRE* IV cxxxix, Küthmann and Overbeck 1973a, 46-7 no. 87, and Hill 1989, 37); Severan Marble Plan fr. 8h

Bibliography: Waltzing 1895-1896, Vol. 1: 35, and Vol. 2: 250. Jordan and Hülsen 1907, 118. Platner and Ashby 1929, 339. Kroll 1932, esp. 975-82. Küthmann and Overbeck 1973a, 46-7 no. 87. Versnel 1974, 114-51. Combet-Farnoux 1980, 266-77; 1981, esp. 461-6. Zevi 1987, 121-32. Hill 1989, 37. Richardson, jr. 1992, 252. Andreussi 1996a, 245-7.

Text: 21-3.

#48 ROME: 'Minerva Chalcidica, Temple'

Context: Campus Martius (Regio IX), sited between the Porticus Divorum and the Serapeum
Date: Domitianic period: ancient sources and coins (see 'Literary and epigraphical sources:

Patron' and 'Iconographic sources' below)

Patron: Domitian

Description: round with 4 sets of steps, 4 doors, 4 niches, and a base? (see text)

Remains: none

Literary and epigraphical sources:

Inscriptions from 'Iconographic sources': the Severan Marble Plan: MI[NE]RVA

CH[ALCIDIC]A. O. Panvinio's drawing: *T(emplum) isidis et serapidis alias solis serapidis alias solis prope arcum camilianum in angulo plateae T(empli) Minervae.*

Location and attribution: see the Severan Marble Plan (see 'Literary and epigraphical sources: Inscriptions from Iconographic sources' above). *Curios. urb.* 125 VZ I (Campus Martius, Regio IX). *Mir.* 22, 50 VZ III: *iuxta Pantheon templum Minervae Chalcidiae* (between the Temple of Isis and the Pantheon). *Itin. Eins.* 195 VZ II: *Minervium, ibi S. Maria* (early Medieval church; cf. *Cod. Cenc.* 136 and *Taur.* 138; *S. Maria in Minerva, Paris.* 42; *S. Maria de Minerva*, and *Sign.* 176: *S. Maria supra Minervam*).

Patron: *Chronogr. a.* 354 p. 146M; cf. Cassiod. *chron.* 727 and Hier. *chron. a. Abr.* 2110p (Domitian's Temple of Minerva Chalcidica).

Iconographic sources: Severan Marble Plan fr. 35; coins minted under Domitian, ca. 94 AD (*RIC* II 178 no. 206 D, *BMCEmp* II 346 no. 241 pl. 67.7, and Hill 1989, 28-9); drawing by O. Panvinio (*Cod. Vat. Lat.* 3439 f. 25r) based on a drawing by P. Ligorio (*Cod. Paris.* f. 309)

Bibliography: Bellori 1673, 23 pl. 5. Lanciani 1883a, esp. 42; 1888, 3-11, Hülsen 1903, esp. 39-46. Petersen 1903, esp. 320. Jordan and Hülsen 1907, 375 and 577 n. 48. Lundström 1929, 369. *RIC* II 178 no. 206 D. Hülsen 1927, 346. Platner and Ashby 1929, 316 and 344. *BMCEmp* II 346 no. 241 pl. 67.7. Lugli 1938, 110-2. Sjöquist 1946, 99-105. Castagnoli 1952, 97-102. Nash 1959, esp. 133-5. Carettoni et al. 1960, 97-102. Nash 1961-1962, Vol. 2: 66. Schürmann 1985, 13-5. Hill 1989, 28. Richardson, jr. 1992, 256. Virilouvet 1995, 77-80. de Caprariis 1996, 255.

Text: 157-61.

ROME: 'Minerva Chalcidica, temple'
reconstructed measurements

Marble Plan

Total ext.
Cella ext. *
Cella int.
Base at center wid.
Stair treads
Stairway len.
Stairway wid. (bottom)
Stairway wid. (top)
Niche dep.
Niche wid.
Floorspace (square measure, based on Total ext.)
Floorspace (square measure, based on Cella int.)

		<i>ideal</i>	<i>%</i>	<i>ideal</i>
	<i>meters</i>	<i>roman feet</i>	<i>roman feet</i>	<i>proportional relationships</i>
	29	98		1 1/2
	19	64.2	64	-0.31%
	9.3	31.4	32	1.91%
	2.5	8.4		2/15
	1.2	4.1	4	-2.44%
	5	16.9		4/15
	6	20.2		6/19
	3	10.1		3/19
	2.5	8.4		2/15
	8	27		3/7
	660.5	7543.0		
	67.9	774.4		

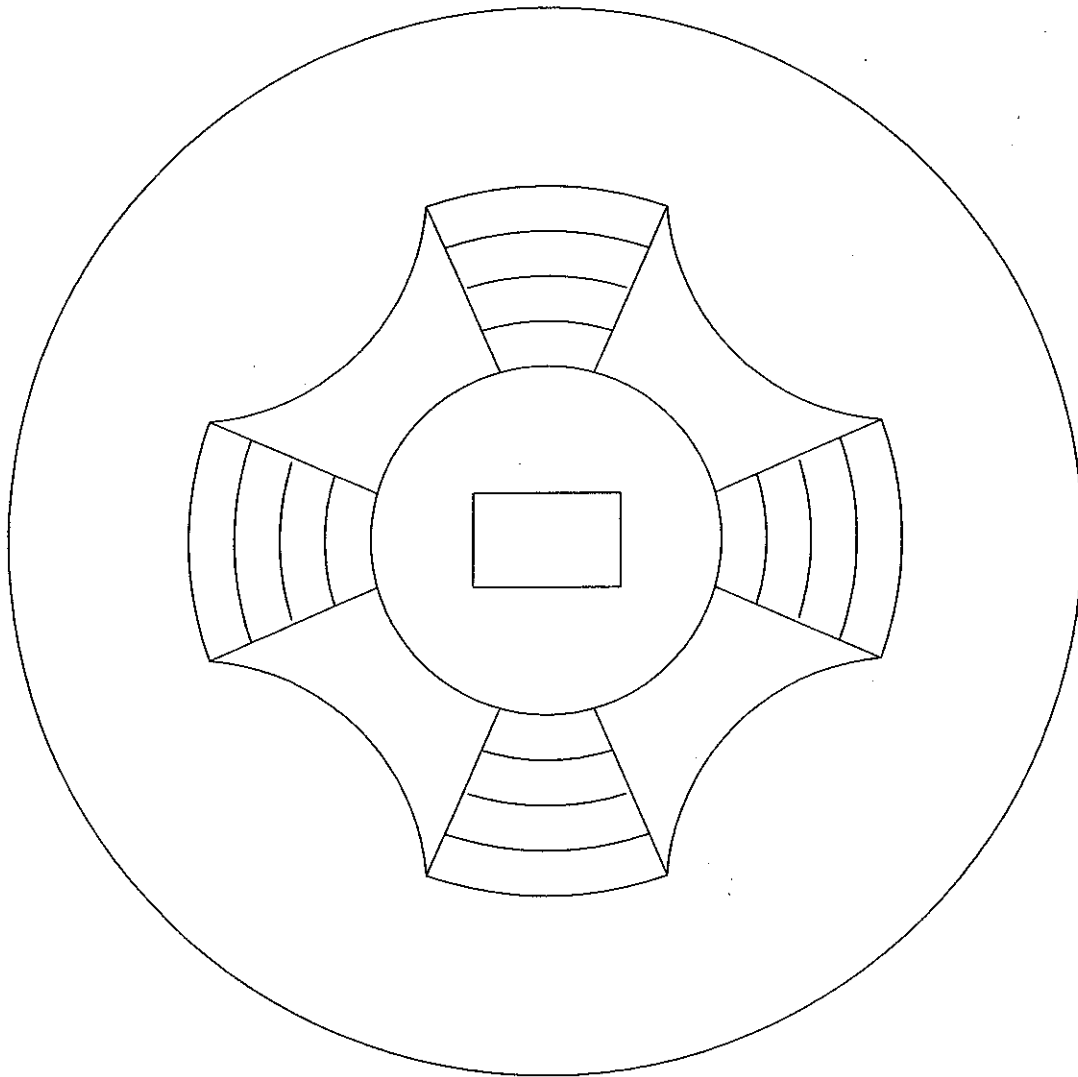
Ligorio's Plan

Total ext. *
Cella ext.
Cella int.
Ambulatory (ext.)
Ambulatory (int.)
Cella wall wid.
Door wid.
Base wid. (ext.)
Intercolumnation
Interaxial
Base wid. (int.)
Floorspace (square measure)

	24	81.1			1
	19.2	64.9			4/5
	16.8	56.8			7/10
	2.4	8.1			1/10
	2.4	8.1			1/10
	1.2	4.1	4.0	-1.3%	1/20
	2.7	9.1			1/9
	1.2	4.1	4.0	-1.3%	1/20
	3	10.1			1/8
	4.2	14.1			4/23
	1.2	4.1	4.0	-1.3%	1/20
	221.7	2533.9			

Note: * *critical dimension*

Source: Severan Marble Plan fr. ??
Ligorio's drawing.



#48 ROME:
'Minerva Chalcidica, temple'
Scale 1:200

#49 ROME: Mundus

Context: Forum (Regio VIII), near the Comitium, to the NW of the Rostra, and in front of the Temple of Concordia; set within a walled precinct delimited to the N by the Ara Saturni (7th-6th c. BC); oriented W (based on the door to the *pars inferior*)

Date:

- I. 7th c. BC: ancient sources (see 'Literary and epigraphical sources' below)
- II. late 2nd c. BC: stylistic analysis of the entablature (see text and Verzar 1976-1977, 383-93)
- III. Severan period: building materials and techniques (see 'Remains' below)

Patron:

- I. Romulus?
- II and III. unknown

Description:

- I. round pit
- II. round monopteros (4.45 m. in dia., travertine) with an Ionic entablature and a bronze roof? (see Verzar 1976-1977, 385)
- III. round monopteros (4.45 m. in dia., Luna marble and travertine) with an Ionic entablature

Remains:

- I. none
- II. the upper part of the entablature (travertine; may incl. soffits, see Verzar 1976-1977, 393); statue base (travertine)
- III. foundations (3 brick rings around a concrete core) and the lower part of the entablature (Luna marble; incl. indentations for capitals, see Verzar 1976-1977, 385)

Literary and epigraphical sources:

Location: Ov. *fast.* 4.820-4 (center of the *sulcus primigenius*). Plut. *Rom.* 11.2 (near the Comitium). Schol. *Verg.* 3.104, Varro *ling.* 7.6, and Ov. *fast.* 4.819 fol. (adjacent to the Ara Saturni). Reg. *Cat.* 174 VZ I (between the *templum Concordiae* and the *templum Saturni Vespasiani et Titi*). *Itin.Eins.* 177, 191, 195 VZ II: S. *Sergii, ubi Umbilicum*.

Attribution: Fest. p. 126 L; cf. *CIL* X 3926 (*Mundus Cereris*). Macr. *Sat.* 16.16-8: *nec patente mundo, quod sacrum Diti patri et Proserpinae dicatum est, meliusque occlusa Plutonis fauce eundum ad proelium putaverunt. Unde et Varro scribit: "Mundus cum patet, deorum tristium atque infernum quasi ianua patet."* (*sacellum Ditis et Proserpinae*; cf. Macr. *Sat.* 1.7.30-1, 7.37, and 11.48 fol., and Varro *ling.* 1.11.48 fol. and 16.18). Not. Reg. 8 and *An. Eins.* 1.5, 7.7, 8.8; cf. Fest. p. 144 L (*Umbilicus Urbis*).

Temple description: Fest. p. 144 L: *Mundo nomen inpositum est ab eo mundo, qui supra nos est: forma enim eius est, ut ex [h]is qui intravere cognoscere potui, adsimilis illae. Eius inferiorem partem, veluti consecratam Dis Manibus clausam omni tempore nisi [h]is diebus qui supra scripti sunt maiores c(ensuerunt habenda)m* (2 parts; cf. Schol. *Verg.* 3.104).

Iconographic sources: drawing by P. Ligorio (*Cod. Neap.* 35, p. 145)

Excavations: L. Canina in 1803 (discovered during the excavation of the Arch of Septimius Severus)

Previous attributions: Bunsen (1834, 21) identified the foundations with the *Miliarium aureum*, while Richardson, jr. (1992, 404) links the *Umbilicus Romae* and the *Miliarium*, and Palombi (1995b, 365-8; cf. Cass. Dio 47.2.3 and 50.8.2, and von Sydow 1973, 573-4) sees the Mundus as the shrine of the Genius Populi Romani.

Bibliography: Bunsen 1834, 21. Canina 1848-1856, pl. 8. Lanciani 1967, 281. von Sydow 1973, 573-4. Coarelli 1976-1977, 346-77. Verzar 1976-1977, 378-98. Verduchi 1982-1984, 329-40. Coarelli 1983b, 199-226. Castagnoli 1986a, 32-6. Palombi 1995b, 365-8. Coarelli 1996k, 288-9 fig. 187. Mari 1996, 250. Andreussi 1999, 97. Coarelli 1999i, 95-6.

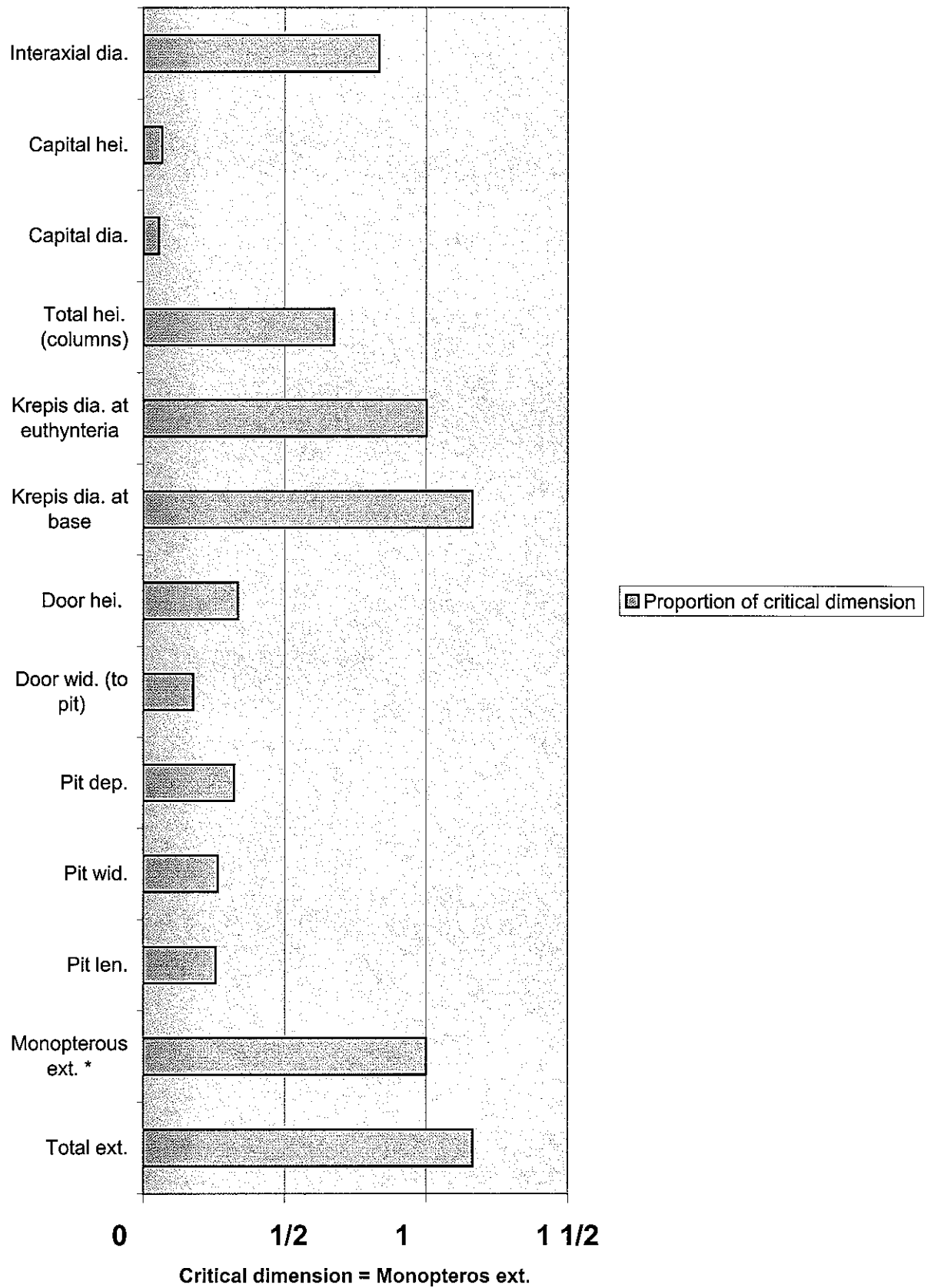
Text: 40-1 and 216-7.

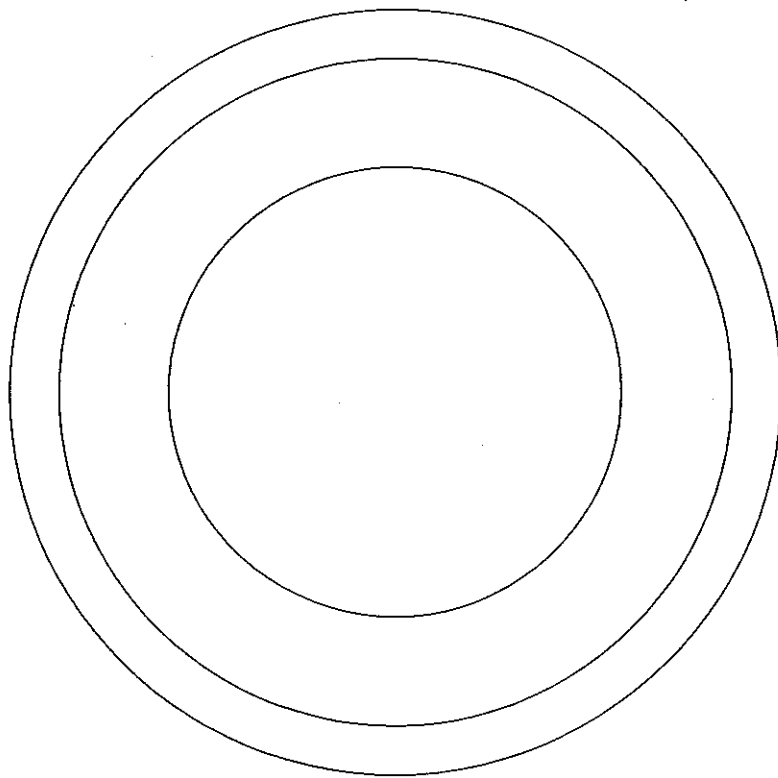
<i>ROME: Mundus</i>					
<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships</i>
Total ext.	5.1	17.23	17.5	1.6%	1 1/6
Monopterous ext. *	4.45	15			1
Foundation dia. (ring 1)	5.1	17.2			
Foundation dia. (ring 2)	4.45	15			
Foundation dia. (ring 3)	3	10.1			
Pit len.	1.14	3.85			1/4
Pit wid.	1.17	3.95			5/19
Pit dep.	1.43	4.83	4.8	-0.6%	8/25
Door wid. (to pit)	0.78	2.64			3/17
Door hei.	1.45	4.9	5	2.0%	1/3
Krepis dia. at base	5.1	17.23	17.5	1.6%	1 1/6
Krepis dia. at euthynteria	4.45	15.03			1
Total hei. (columns)	3	10.1			2/3
Capital dia.	0.245	0.83			1/18
Capital dei.	0.3	1			1/15
Interaxial dia.	3.7	12.5			5/6
Floorspace (square measure)	15.6	176.7			

Note: * *critical dimension*

Source: Coarelli 1983, 220; 1996, 288-9 fig 187.

Chart #49. ROME: Mundus





#49 ROME:
Mundus
Scale 1:50

#50 ROME: Pantheon

Context: Campus Martius (Regio IX), flanked to the S by the South Building (Basilica Neptuni?, see text), to the E by the Saepta, and to the W by the Stagnum Agrippae; oriented towards the Basilica Neptuni (S) or the Mausoleum of Augustus (N) in periods I and II (see 'Date' below), and towards the Mausoleum of Augustus (N) from period III (see 'Date' below)

Date:

- I. 25 BC: *CIL* VI 896.1 = *ILS* 129 (dedicatory inscription) and Cass. Dio 53.27 (see 'Literary and epigraphical sources: Foundation and attribution' below)
- II. Domitianic period: *Chronogr. a.* 354, *Hier. chron. a. Abr.* 2105, and the upper bedding layer
- III. Hadrianic period (118-128 AD): *CIL* XV 276, 362, 649a, 811b and c, 1106b, and 1406 (brick stamps) and the standing building
- IV. under Antoninus Pius: *Hist. Aug. Pius* 8
- V. under Septimius Severus and Caracalla: *CIL* VI 896.2 = *ILS* 129 (dedicatory inscription) and possible repair work (see text and 'Remains' below)

Architect:

- I. and II. 25 BC and Domitianic period: unknown
- III. Hadrianic period: Apollodorus of Damascus? (see text)
- IV. and V. under Antoninus Pius, Septimius Severus, and Caracalla: unknown

Patron:

- I. 25 BC: M. Vipsanius Agrippa
- II. Domitianic period: Domitian
- III. Hadrianic period: Hadrian
- IV. under Antoninus Pius: Antoninus Pius
- V. under Septimius Severus and Caracalla: Septimius Severus and Caracalla

Description:

- I. 25 BC: either, by Beltrami's reconstruction: rectangular (travertine and tufa *opus quadratum*) with a prostyle porch (21.76 long by 7.95 wide) and a transverse cella (43.76 long by 19.82 wide) preceded by a circular court? (55.8 m. in dia.) or, by La Rocca's reconstruction: round (travertine and tufa *opus quadratum*) with a rectilinear porch (43.76 long by 19.82 wide) leading to a circular court, possibly ringed by an annular vault (55.8 m. in dia., concrete)
- II. Domitianic period: as I.
- III. Hadrianic period: round (brick-faced concrete revetted in marble) with a rectangular pronaos (34.07 m. wide by 15.62 m. deep; preceded by 4-5 stairs, incl. 16 Corinthian columns in 4 rows and 4 pilasters), a rectangular intermediate block (32.8 m. wide by 4.65-9.85 m. deep; incl. 2 exedrae and stair wells), and a drum (43.44 m. in dia.; 1st tier incl. 14 Corinthian columns fronting 7 exedrae, 8 aediculae with 2 Corinthian columns each, and numerous pilasters, above which are a 2nd tier and a cupola, see text), preceded by a rectangular porticus (120 m. long by 60 m. wide, probably of marble-faced *opus testaceum*; incl. Corinthian columns)
- IV. and V. under Antoninus Pius, Septimius Severus and Caracalla: as III.

Remains:

- I. 25 BC: travertine and tufa blocks beneath the Hadrianic pronaos and intermediate block, round wall (*opus reticulatum*; see Lanciani 1897, 482-3, and Gruben and Gruben 1997, 60), the lower of 2 concrete pavement levels below the rotunda's floor (1.20 m. thick at 3.15 m. deep), and possibly steps (see text)
- II. Domitianic period: the upper of 2 concrete pavement levels below the rotunda's floor (0.30 m. thick at 2.15 m. deep), marble paving? (see Gruben and Gruben 1997, 55, 59, and 61), and possibly steps (see text)

#50 ROME: Pantheon, cont. (1)

- III. Hadrianic period: almost the entire pronaos (structure of marble faced *opus testaceum*, Corinthian columns with granite shafts, and Pentelic marble bases and capitals; the bronze drop-vault ceiling was removed by Pope Urban VIII), intermediate block (marble-faced *opus testaceum*) and drum (structure of *opus testaceum* with 6 horizontal bands of aggregate, Corinthian columns and pilasters of giallo antico, pavonazzetto, and Pentelic marbles, veneer of various marbles and precious stones; the dome's bronze revetment was removed in the 8th c. AD, cf. *LPD* 1.343 and *VZ* 2.251); from the rectangular pronaos, most of the Corinthian columns of granite with Pentelic marble bases and capitals, and the pavement of marble and travertine (see de Fine Licht 1966, 25-34) are extant
- IV. under Antoninus Pius: none
- V. under Septimius Severus and Caracalla: possible reinforcement of the drum or repairs to the marble veneer of its 2nd interior tier

Literary and epigraphical sources:

Inscriptions from 'Remains':

- I and III. 25 BC and Hadrianic period: *CIL* VI 896.1 = *ILS* 129: M. AGRIPPA L. F. COS. TERTIVM FECIT (Agrippa's dedicatory inscription restored by Hadrian, entablature, see 'Date' above).
- V. under Septimius Severus and Caracalla: *CIL* VI 896.2 = *ILS* 129: *Pantheon vetustate corruptum cum omni cultu restituerunt* (Septimius Severus' and Caracalla's dedicatory inscription, entablature, see 'Date' above).

Function and attribution:

- I. See above and Cass. Dio 53.27: "Also he completed the building called the Pantheon. It has this name, perhaps because it received among the images which decorated it the statues of many gods, including Mars and Venus; but my own opinion of the name is that, because of its vaulted roof, it resembles the heavens. Agrippa, for his part, wished to place a statue of Augustus there also and to bestow upon him the honor of having the structure named after him; but when the emperor would not accept either honor, he placed in the temple itself a statue of the former Caesar and in the pronaos statues of Augustus and himself." trans. de Fine Licht (Agrippa as founder, explanation of 'Pantheon', proposed temple to Augustus). Suet. *Aug.* 97 (site of Augustus'/Romulus' apotheosis?, see text).
- II. Domitianic period: see 'Date' above.
- III. Hadrianic period: see 'Date' above and *Hist. Aug. Hadr.* 19.10: *Roma instauravit Pantheon, Saepia, Basilicam Neptuni ... Lavacrum Agrippae* (Hadrian's restoration of the southern Campus Martius). Cass. Dio 69.7.1 and *Cod. Theod.* 14.3.10 (Hadrianic tribunal located in the Pantheon).
- IV. under Antoninus Pius: see 'Date' above.
- Other: *CIL* VI 2041 = *ILS* 229 (Arval meeting place, pre-59 AD). Oros. *hist.* 7.12.5 and Hier. *chron. a. Abr.* 2126 (destroyed by lightning under Trajan). *LPD* I 317 and *VZ* II 251 (Pantheon transformed into S. Maria ad Martyres, 609 AD). *POxy* III 412.63-8 (library attached to the Pantheon, see text).

Decorative scheme:

- I. 25 BC: Plin. *nat.* 34.13 and 28 (Diogenes' caryatids and pedimental sculpture).
- I-V. 25 BC to Caracalla: Cass. Dio 53.27, Plin. *nat.* 34.13 (statues of Mars, Venus, Divus Iulius, Augustus, and Agrippa, see above). Cass. Dio 54.1.1, Plin. *nat.* 9.58, and Macr. *Sat.* 3.17.18 (statues of Mars and Venus).

Iconographic sources:

- III-V. architectural plan found near the Mausoleum of Augustus (see text). *Cod. Chigi P.* vii.9 (drawing illustrating the 2nd interior tier of the drum). *Anon. Magliab* 10, and Ulrichs 155, *VZ* 4.122 (drawing illustrating the 'Arcus Pietatis', see 'Decoration' below and Boatwright 1987, 263-4).

#50 ROME: Pantheon, cont. (2)

Decoration:

I. 25 BC: caryatids and pedimental sculpture

I-V. 25 BC to Caracalla: statues of Mars, Venus, Divus Iulius, Augustus, and Agrippa

III-V. Hadrianic period to Caracalla: floor and wall veneers (pavonazzetto, porphyry, giallo antico, and gray granite); portico: marble altar or statue base ('Arcus Pietatis', see text), pronaos: reliefs (see text); drum: statues of the deified emperors? (see text)

Excavations:

I. 25 BC: L. Beltrami in the 1890s, additional excavations in the 1990s

II. Domitianic period: Beltrami

III-V. Hadrianic period to Caracalla: standing

Previous attributions: see text

Bibliography: Nissen 1873, 549-57. Beltrami 1929. Platner and Ashby 1929, 382-6. De Angelis d'Ossat 1930, 211-5. Terenzio 1932, 52-7. Granger 1933, 57-61. Gatti 1940, 61-75. Castagnoli 1948, 93-193. Ziegler 1949, 697-747. Will 1951, 233-46. Nash 1961-1962, Vol. 2: 171-5. de Fine Licht 1966. Gros 1976a, 36 n. 141, 58, 65 n. 92, 112, 145-6, and 149. MacDonald 1976. Ziegler 1979b, 468-74. Geertman 1980, 203-29. Loerke 1982, 40-55. MacDonald 1982, 94-121. Coarelli 1983a, 41-6. Micheli 1984, 55-64. Godfrey and Hemsoll 1986, 195-209. Hutchinson and Mark 1986, 24-34. Jacobson 1986, 69-85. Boatwright 1987, 33-7, 43-51, and 263-4. Davies, Hemsoll and Wilson Jones 1987, 133-53. Saalman 1988, 121-2. Wandschneider 1989, 9-24. Ward-Perkins 1989, 23-5, 74, 111-8, 121-3, 128, and 469 n. 5. Wilson Jones 1989a, 35-69; and 1989b, 106-51. Heilmeyer 1990b, 107-10. Herdejürgen 1990, 123-31. Tortorici 1990, 19-55. Martines and Pelletti 1991, 3-10. Richardson, jr. 1992, 283-6. Ziolkowski 1994, 261-77. Coarelli 1995k, 327-31. Gros 1996a, 174-9. Viscogliosi 1996a, 341. Coarelli 1997, esp. 548-51. Gruben and Gruben 1997, 3-74. Pellegrini 1997, 476 fol. Thomas 1997, 163-86. Claridge 1998, 201-6. Gatti 1999, 228-9. La Rocca 1999b, 280-3. Virgili 1999, 284-5. Ziolkowski 1999, 54-61. Wilson Jones 2000, 177-213.

Text: 103-9, 156, 167-72, 181-2, and 226.

ROME: Pantheon
actual measurements
Pantheon I-II
meters
roman feet
ideal
%
ideal proportional relationships
to critical
within columnar
dimension *
order **

Cella len. (ext.)	43.76	147.8				
Cella wid.	19.82	67.0				
Cella len. (int.)	40.79	137.8				
Cella wid.	16.32	55.1				
Porch len.	21.76	73.5				
Porch wid.	7.95	26.9				
Cella wall wid.	1.6	5.4				
Floorspace	665.7	7597.8				

Pantheon III-V

Total ext. len.	76.5	258.4				1 5/7
Cella ext.	55.8	188.5				1 1/4
Cella int.	43.57	147.2				1
Total hei.	44.94	151.8				1
Hei. to springing of dome	22.03	74.43				1/2
Hei. to first drum level	13.1	44.26	44	-0.6%		2/7
Hei. to second drum level	8.9	30.07				1/5
Porch dep.	15.62	52.77				5/14
Porch wid.	34.07	115.1				3/4
Intermediate block dep. (by entrance)	4.65	15.71				2/19
Intermediate block dep. (by edge)	9.85	33.28				2/9
Intermediate block wid.	32.8	110.8				3/4
Intermediate block hei. (from podium)	30.5	103.04				9/13
Foundation dep.	4.5	15.2				
Foundation wid. (wall)	7.3	24.66				
Stair treads	0.38	1.28				
Stair risers	0.31	1				
Podium hei.	1.32	4.46	4.5			1/33
Podium cornice wid. (drum)	0.2	0.7				
Podium cornice hei.	1	3.4				1/44
Cella wall wid.	6.2	20.95				1/7
Cornice wid. (ext., 1st tier)	2.65	8.95				1/17
Cornice hei.	2.1	7.1				1/21
Cornice wid. (ext., 2nd tier)	4	13.5				1/11
Cornice hei.	3.2	10.8				1/14
Cornice wid. (ext., 3rd tier)	4.6	15.5	15.0	-3.0%		1/10
Cornice hei.	4	13.5				1/11
Exedrae dep. (rectangular)	4.15	14				1/11
Exedrae dep. (semicircular)	4	13.5				1/11
Exedrae wid. (both)	8.1	27.4				2/11
Exedrae hei.	13.1	44.3	44	-0.7%		2/7
Aediculae dep.	0.9	3				1/50
Aediculae wid.	3.85	13				2/23
Aediculae hei.	8.3	28				3/16
Door dep.	1.5	5.1	5	-2.0%		1/30
Door wid.	5.98	20.2	20	-1.0%		2/15
Door hei.	11.8	39.9	40	0.3%		4/15

ROME: Pantheon (cont'd)		ideal proportional relationships					
actual measurements		ideal		%	to critical	within columnar	
Pantheon I-II	meters	roman feet	roman feet	difference	dimension *	order **	
Total hei. (porch columns)	14.153	47.81			6/19	9 5/9	
Base dia.	2.1	7.1			1/21	1 3/7	
Base hei.	0.735	2.48			1/60	1/2	
Lower column dia. **	1.48	5			1/30	1	
Shaft hei.	11.8	39.86	40	0.4%	4/15	8	
Capital dia.	2	6.75			1/22	1 1/3	
Capital hei.	1.63	5.51			1/27	1 1/9	
Intercolumnation	2.4	8.1			1/18	1 5/8	
Interaxial	4.52	15.27	15	-1.8%	1/10	3	
Total hei. (exedrae)	10.65	35.98	36	0.1%	6/25	9 2/3	
Base dia.	1.4	4.7			1/32	1 1/4	
Base hei.	0.54	1.83			1/82	1/2	
Lower column dia. **	1.105	3.73			1/40	1	
Shaft hei.	8.86	29.93	30	0.2%	1/5	8	
Capital dia.	1.5	5.1	5	-2.0%	1/30	1 1/3	
Capital hei.	1.25	4.22			1/35	1 1/8	
Intercolumnation	1.9	6.4			1/23	1 5/7	
Interaxial	3.3	11.15				3	
Interaxial dia. *	44.52	150.41	150	-0.3%	1	40 2/9	
Total hei. (aediculae)	4.5	15.2	15	-1.3%	1/10	5 5/9	
Base dia.	0.9	3			1/50	1 1/9	
Base hei.	0.35	1.2				4/9	
Lower column dia. **	0.8	2.7			1/56	1	
Shaft hei.	3.5	11.8	12	1.7%	2/25	4 4/9	
Capital dia.	0.75	2.5			1/60		
Capital hei.	0.5	1.7			1/88	5/8	
Intercolumnation	2	6.76			1/22	2 1/2	
Interaxial	2.9	9.8	10	2.0%	1/15	3 5/7	
Entablature hei. (ext., porch)	3.335	11.27					
Architrave hei.	1.005	3.4			1/44		
Frieze hei.	0.98	3.3			1/45		
Cornice wid.	1.1	3.7			1/40		
Cornice hei.	1.35	4.56	4.5	-0.3%	1/33		
Entablature hei. (int., 1st tier)	2.51	8.5			1/18		
Architrave hei.	0.785	2.65			1/57		
Frieze hei.	0.775	2.6			1/58		
Cornice wid.	0.75	2.5			1/60		
Cornice hei.	0.95	3.2			1/47		
Entablature hei. (int., 2nd tier)	1.75	5.9	6	1.7%	1/25		
Architrave hei.	0.65	2.2			1/68		
Frieze hei.	0.5	1.7			1/88		
Cornice wid.	0.5	1.7			1/88		
Cornice hei.	0.6	2			1/75		
Roof dia.	55.6	187.8			1 1/4		
Roof hei.	13.9	47	48	2.1%	8/25		
Oculus dia.	8.92	30.14			1/5		
Floorspace (square measure)	1491.0	17017.9					
Volume (cubic measure)	7115.7	234464.8					

Note: * critical dimension

** in relation to the lower column dia.

Source: de Fine Licht 1966, 35-59 and 89-136.

Gruben and Gruben 1997, fig. 29.

Wilson Jones 2000, 220 fig. 9.3

Chart #50.1. ROME: Pantheon

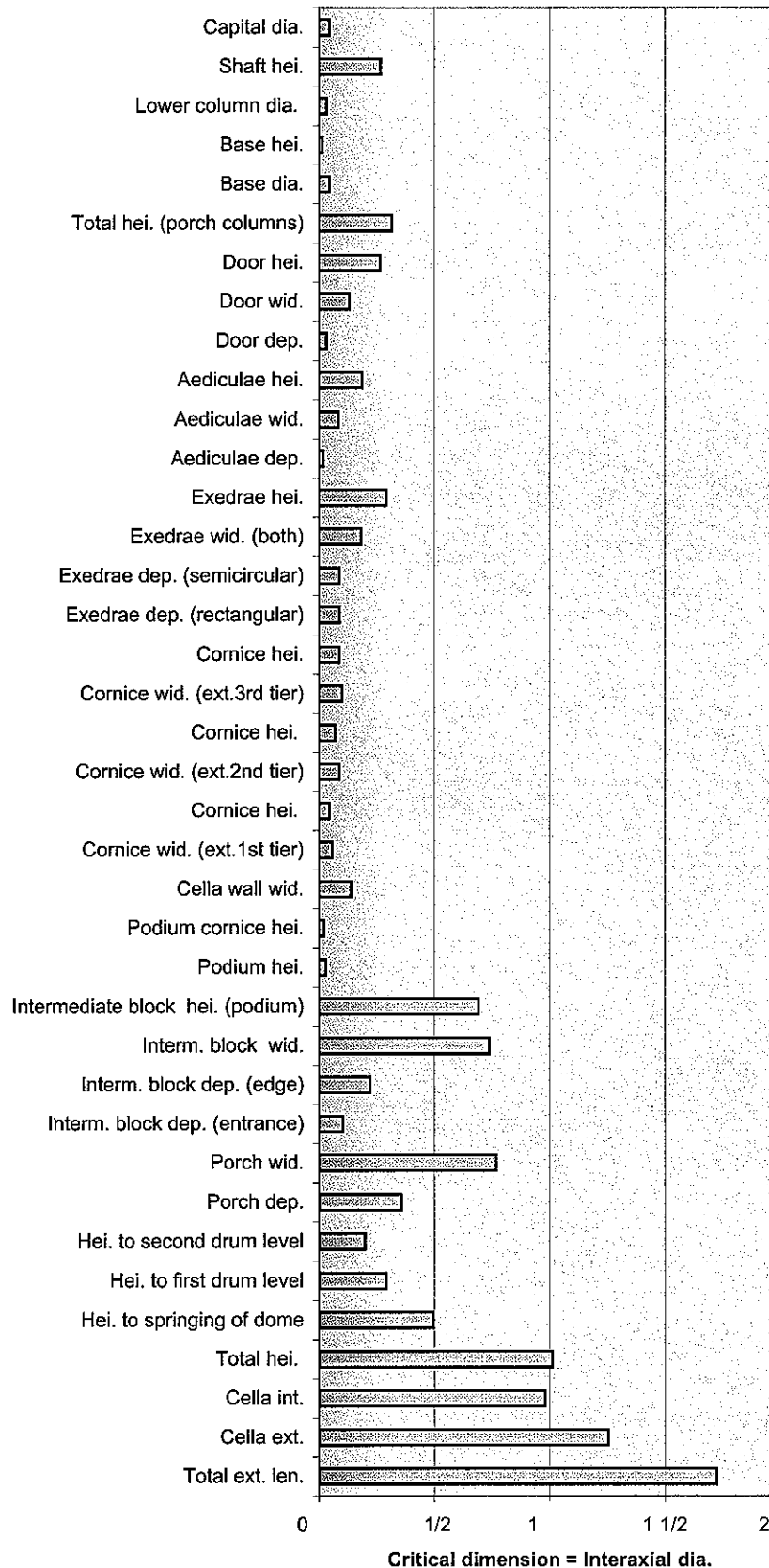
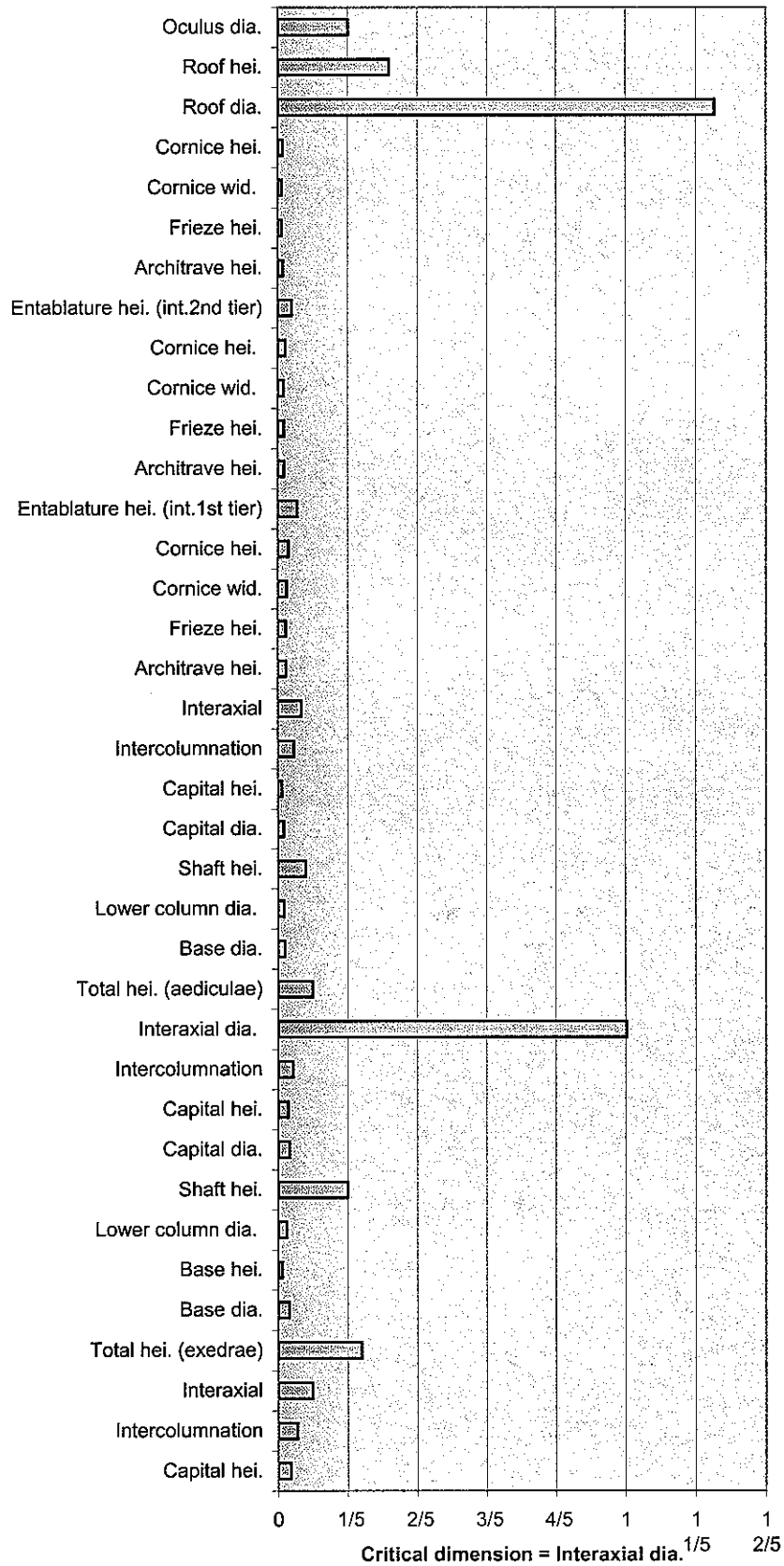
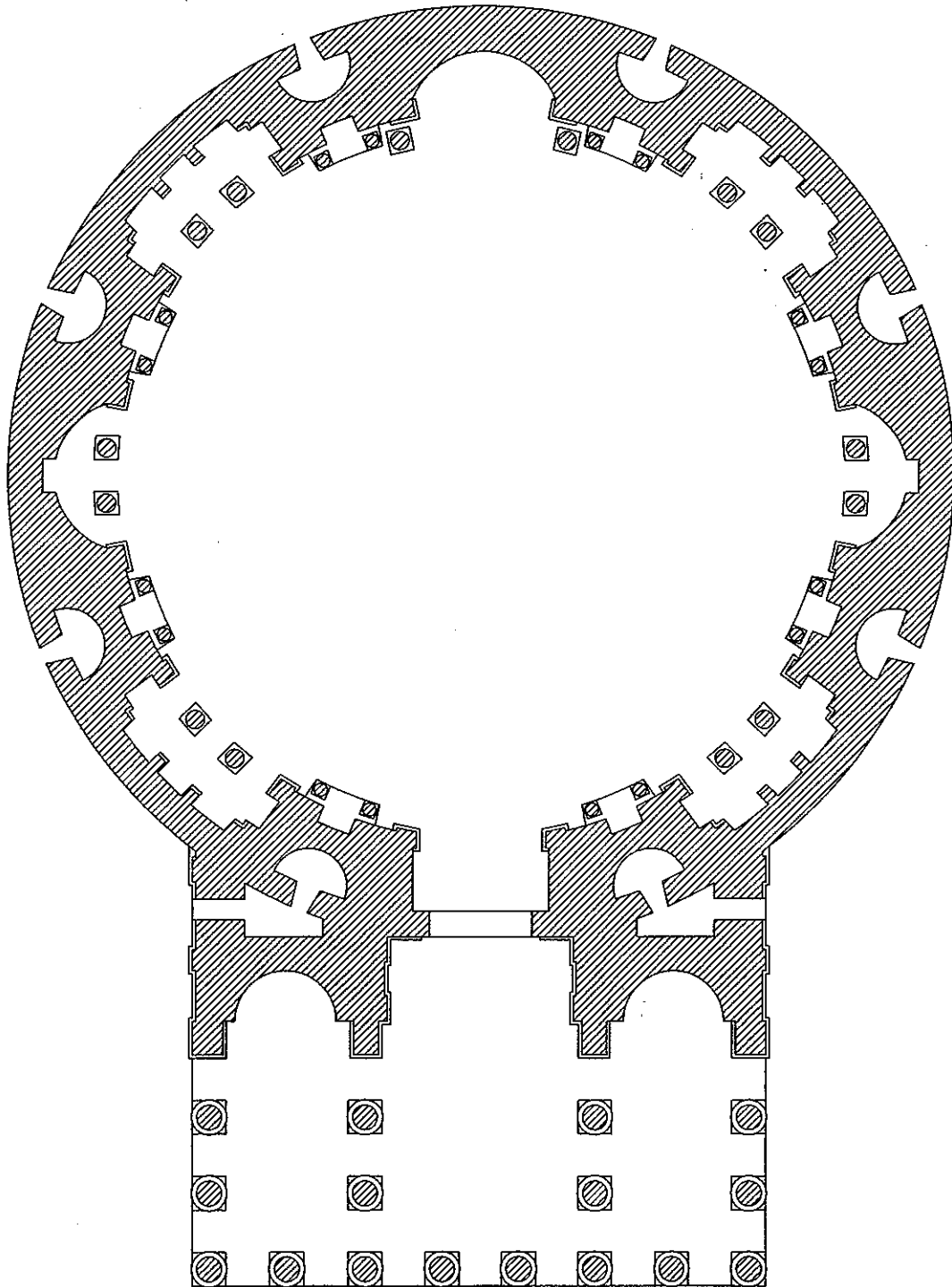


Chart #50.2. ROME: Pantheon





#50 ROME:
Pantheon
Scale 1:400

#51 ROME: Perirrhanterion

Context: Prata Flaminia, to the S of the Campus Martius (Regio IX); oriented (based on its threshold, see La Rocca 1993, 18) towards the Temple of Apollo Medicus (NE; 431 BC, restored several times, incl. ca. 30 BC)

Date:

- I. Julio-Claudian period: foundations sited on the level of the Julio-Claudian pavement
- II. Vespasianic period: dedicatory inscription (see 'Literary and epigraphical sources: Inscriptions from Remains' below) and a stylistic analysis of the building fragments (see text)

Patron:

- I. unknown
- II. Vespasian

Description:

- I. round monopteros (5.20 m. in dia., marble) with Corinthian columns (number uncertain) and an entablature carved on both sides
- II. as I.

Remains:

- I. foundations (concrete, travertine, and tufa)
- II. 2 capitals and much of the entablature (white marble)

Literary and epigraphical sources:

Inscriptions from 'Remains':

- II. *Imp. Caesar Vesp[asianus]* (dedicatory inscription, entablature).
source of Apollo:

- I. Frontin. *aq.* 1.4: *fontium memoria cum sanctitate adhuc exstat et colitur: salubritatem aegris corporibus adferre creduntur, sicut Camenarum, Apollinaris et Iuturnae* (lustral sources in Rome; cf. Liv. 3.63.7). TGL VI 910: *erat praeterea vas purum in templis aut concionibus, aqua lustrali plenum, qua ritu ethnico aut sacerdotes aut aeditui perspergere solebant eos qui ingrediebantur* (definition of *perirrhanterion*).

Excavations: A. M. Colini in the 1930s

Previous attributions: Colini (1940) suggested that the foundations formed the base for an altar.

Bibliography: Colini 1940, 9-40. Guarducci 1949-1950, esp. 69. Gagé 1955, 73 fol. Coarelli 1965-1967, esp. 43-4 and 66; 1993b, 48; and 1993e, 290-1. La Rocca 1993, esp. 17-29. Rodríguez Almeida 1993a, esp. 37-43. Viscogliosi 1993, 49-54. Aronen 1995a, 257. La Rocca 1995, esp. 108-10; and 1999a, 79-80.

Text: 130-2 and 153-4.

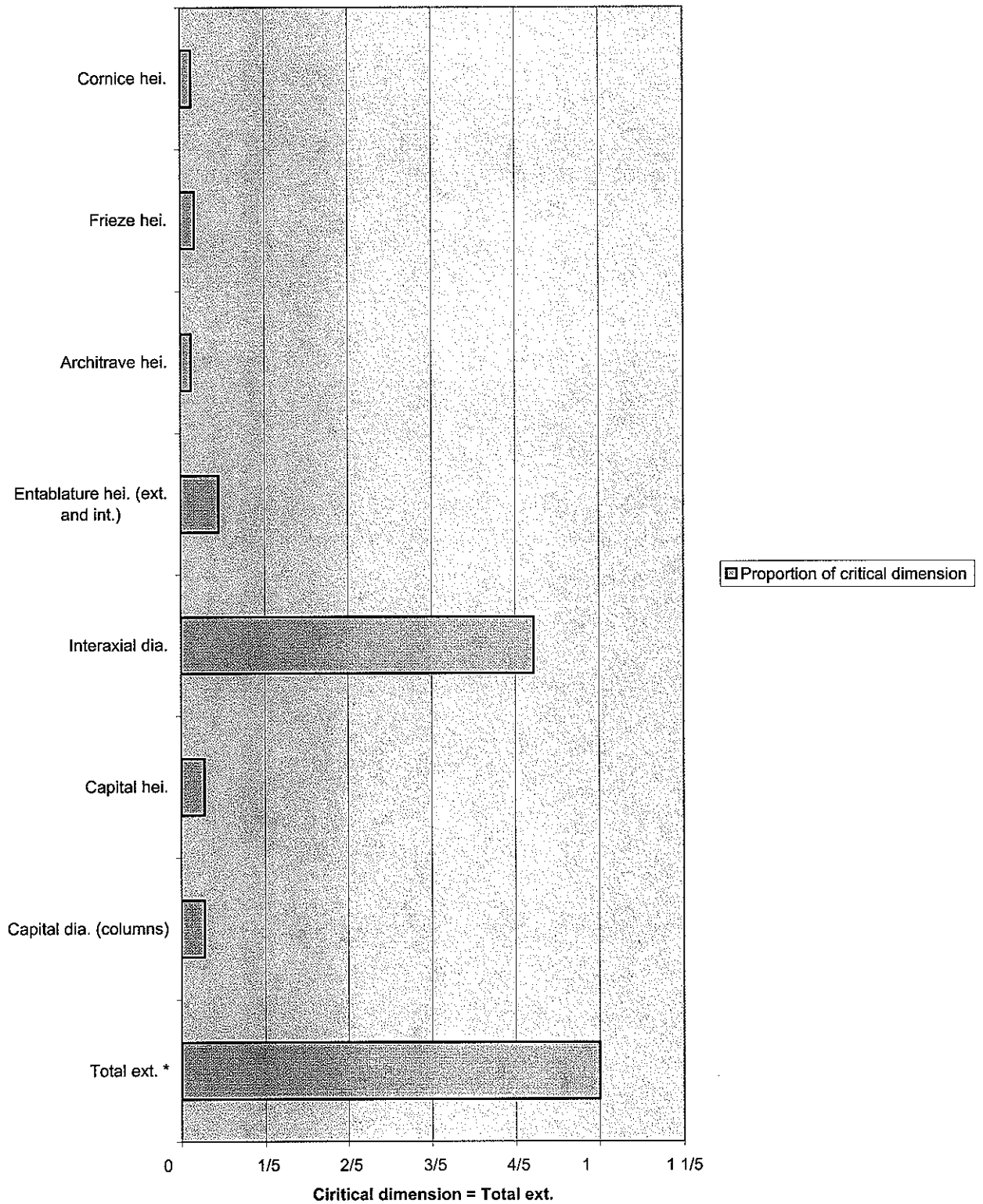
<i>ROME: Perirrhanterion</i>					
<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships</i>
Total ext. *	5.2	17.57	18	2.4%	1
Foundation dia.	5.2	17.57			
Capital dia. (columns)	0.3	1			1/18
Capital hei.	0.3	1			1/18
Interaxial dia.	4.5	15.2	15	-1.3%	5/6
Entablature hei. (ext. and int.)	0.48	1.62			1/11
Architrave hei.	0.135	0.46	0.45	-2.2%	1/40
Frieze hei.	0.18	0.61	0.6	-1.6%	1/30
Dentil hei.	0.025	0.084			
Cornice hei.	0.14	0.47			1/38
Floorspace (square measure)	21.2	242.5			

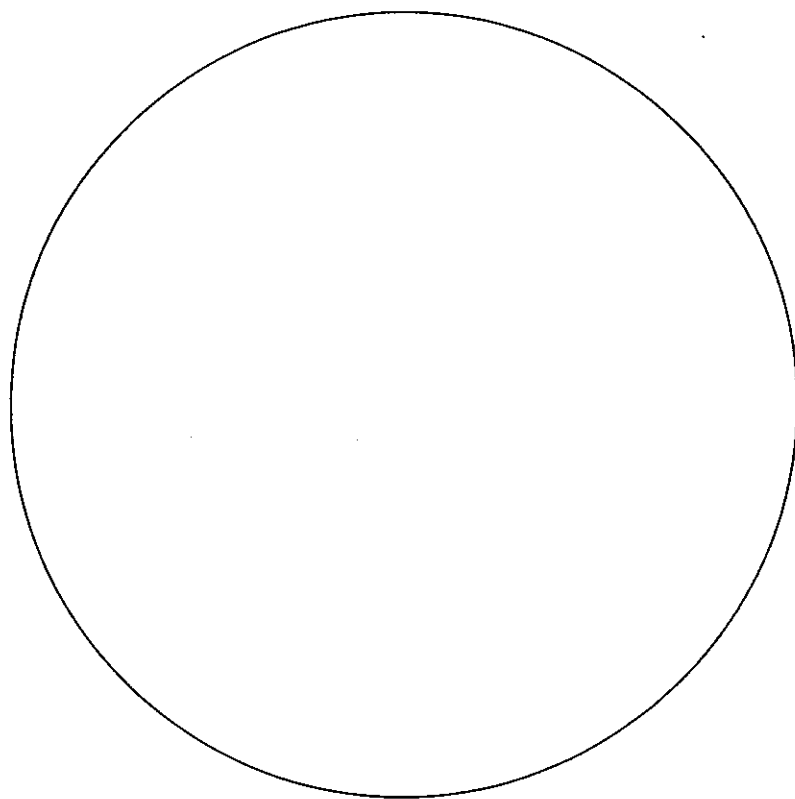
Note: * *critical dimension*

Source: La Rocca 1993, figs. 2 and 7-8.

Author's photos from the Museo Montemartini.

Chart #51. ROME: Perirrhanterion





#51 ROME:
Perirrhanterion
Scale 1:50

#52 ROME: 'Romulus, Temple'

Context: *summa Sacra Via* (Regio IV), between the Temple of Antoninus Pius and Faustina and the Basilica of Maxentius-Constantine; oriented towards the *via Sacra* (S)

Date:

- I. under Maxentius: coins (see 'Iconographic sources' below), and building materials and techniques (see text)
- II. under Constantine: inscription (see 'Literary and epigraphical sources: Date' below), and curved walls flanking the entrance (see 'Remains' below and text)

Patron:

- I. Maxentius
- II. Constantine or the Senate in his honor

Description:

- I. rotunda (17.5 m. in dia., brick-faced *opus concretum* and marble) fronted by 2 columns (plinths, Attic bases, monolithic shafts, Corinthian capitals), with 4 doors and 4 windows, an architrave, and a dome with an oculus, linked to 2 apsidal side halls (ca. 12.90 m. long by 6.13 m. wide) each fronted by 2 columns (plinths, Attic bases, monolithic shafts, Corinthian capitals) and roofed with cross vaults, and to an earlier rectangular hall that forms part of the Templum Pacis (Flavian, rebuilt under the Severans and Diocletian, see text)
- II. as I, though with concave walls (incl. 2 tiers of statue niches, see text) linking the rotunda and the side halls

Remains:

- I. rotunda: much of the foundations and superstructure (brick-faced *opus concretum*; foundations may pertain to an earlier building, see Fiore 1981, 81 and text), the door frame (white marble), the doors (bronze), 2 columns (white marble bases and capitals, porphyry shafts; the travertine plinths are 17th c., see Frazer 1964, 96), the architrave (white marble), and the dome (peperino, tufa, and travertine); side halls: much of the superstructure (brick-faced *opus concretum*), 2 columns (Luna marble plinths, white marble bases and capitals, cipollino shafts), and part of the vault (from the W hall, brick-faced *opus concretum*?); rectangular hall: part of an apsidal wall (brick-faced *opus concretum*?) and a door shared with the rotunda
- II. concave walls (brick-faced *opus concretum*)

Literary and epigraphical sources:

Attribution: *Acta* of Pignatarius, *Vita* of Gregorius, *Vita* of Paul I, *Martyrol. Adonis*, a *bolla* of Innocent II, *Ordo romanus* of Benedict, *Mirabilia Urbis*, and the archives of S. Maria Nova (9th c. sources naming the 'Temple of Romulus,' see de Ruggiero 1913, 210, and Lugli 1947, 185).

Location: *Notitia* Regio IV: *Meta Sudantem. Templum Romae et Veneris. Aedem Iovis Statoris. Viam Sacram. Basilicam Constantinianam. Templum Faustinae. Basilicam Pauli. Forum Transitorium. Siburam* (Regio IV, see text and Coarelli 1983b, 26-31 and 33, 1986, 4-10, and 1995k, 106).

Date:

- II. *CIL* VI 1147 in *Cod. Vat. Lat.* 3439 f. 14: IMP. CAES CONSTANTIN .. MAXIM .., and *Cod. Vat. Lat.* 6780 f. 45: *in quorum peristiliis ad huc supersunt litterae MAXIMO... MP...., ab alia CONSTANTIN*, reconstructed as [*Imp. Caes. Fl. Constantino*] *Maximo* [*Triu*]mp(hatori) [*semper Victori* or *Augusto SPQR*] (inscription naming Constantine cited by Ligorio and Panvinio).
- Other: *LPD* LVI *vita Felic.* IV: *hic fecit basilicam Ss. Cosmae et Damiani in urbe Roma in loco qui appellatur via Sacra iuxta templum urbis Romae* ('Temple' converted into the vestibule of Ss. Cosma e Damiano, ca. 526-530 AD).

#52 ROME: 'Romulus, Temple', cont.

Iconographic sources: coins minted under Maxentius: first series (Roman *folles*: *RIC* VI 377 no. 207, 379 no. 226, 381 nos. 239-40 pl. 7; Ostian *aurei*: *RIC* VI 400 no. 1; Ostian *folles*: *RIC* VI 404 no. 34 pl. 7; Cohen 1888, 182-4 nos. 2-9), second series type 1 (Roman *folles*: *RIC* VI 382 nos. 243-57 pl. 7), second series type 2 (Roman *folles*: Cohen 1888, 184 nos. 11-2), second series type 3 (Ostian *folles*: *RIC* VI 404 nos. 24-33; Cohen 1888, 182 no. 1 and 184 no. 10), and second series types 2 and 3 with statues (Roman *folles*: *RIC* VI 382 nos. 243-57 pl. 7; Cohen 1888, 184 nos. 11-2); drawings by Ligorio (*Cod. Vat. Lat.* 3439 f. 14) and Panvinio (*Cod. Vat. Lat.* 6780 f. 45, see above); Renaissance drawings illustrating the rotunda (*Cod. Vat. Lat.* 3439 29r and 31r)

Excavations: R. Lanciani in the 1870s-1890s and P. B. Whitehead in the 1910s-1920s (for a full history of excavation and restoration work undertaken since the Renaissance, see Talamo 1981a, 17-22)

Previous attributions: first identified as the Heroon or Temple of Romulus (Nibby 1848-1849, 710, De Rossi 1866, 61, Lanciani 1883a, 33, Jordan and Hülsen 1907, 10, de Ruggiero 1913, 209, Bernhart 1926, 131, Platner and Ashby 1929, 450, Dörries 1954, 225, and Nash 1961-1962, Vol. 2: 268), the 'Temple' has since been interpreted as the *templum Sacrae Urbis* or *Urbis fanum* (cf. Aur. Vict. *Caes.* 11.26; Whitehead (later retracted) and Biasiotti cited in Lugli 1946, 225), a vestibule for the *Templum Pacis* (Whitehead 1927, 2, Frazer 1964, 78 and 1966, 391, Pisani Sartorio and Calza 1976, 152 n. 127, and Castagnoli 1988, 104), and under Constantine: a temple to Roma (Lucci 1964, 261) and an audience hall for the *praefectus Urbi* (Frazer 1964, 114-22, and see text).

Bibliography: Nibby 1848-1849, 710 fol. De Rossi 1866, 61 fol. Lanciani 1882, 33. Cohen 1888, vol. 7: 182-4 nos. 1-12. Jordan and Hülsen 1907, 10. de Ruggiero 1913, 209-13. Whitehead 1913, 148-53. Bernhart 1926, 131. Whitehead 1927, 2 fol. Platner and Ashby 1929, 450. Krautheimer 1937, 137-43. Brown 1941, 304. Lugli 1946, 225-6; 1947, 184-90; 1953, 1211-23. Dörries 1954, 225. King 1959, esp. 47, 62-4, and 71-3. Nash 1961-1962, Vol. 2: 268-71. Lucci 1964, esp. 261. Frazer 1964, 52-3 and 65-129; 1966, 385-92. *RIC* VI 377 no. 207, 379 no. 226, 381 nos. 239-40, 382 nos. 243-57, 400 no. 1, 404 nos. 24-34 pl. 7. Küthmann and Overbeck 1973a, 26-7 no. 42. Coarelli 1974, 94. MacDonald 1976, 99-100. Pisani Sartorio and Calza 1976, 152 n. 127. Arnaldi 1977, 271-80. Cima 1981, 103-20. Fiore 1981, 63-90. Flaccommio 1981b, 7-22. Lupi and Pettinau 1981, 35-62. Martini 1981, 91-100. Paparatti 1981, 101-2. Righetti 1981, 121-8. Talamo 1981a, 17-22; 1981b, 23-34. Coarelli 1983b, 26-33. Luschi 1984, 41-54. Rasch 1984, 76-8. Coarelli 1986, esp. 1-22. Steinby 1986, esp. 140. Castagnoli 1988, esp. 102-5. Hill 1989, 13-5. Grünwald 1990, 219 n. 249. Richardson, jr. 1992, 333-4. Coarelli 1995k, 96, 105-7, and 109-10. Papi 1999a, 210-2 figs. 85-90.

Text: 238-47.

ROME: 'Romulus, temple'

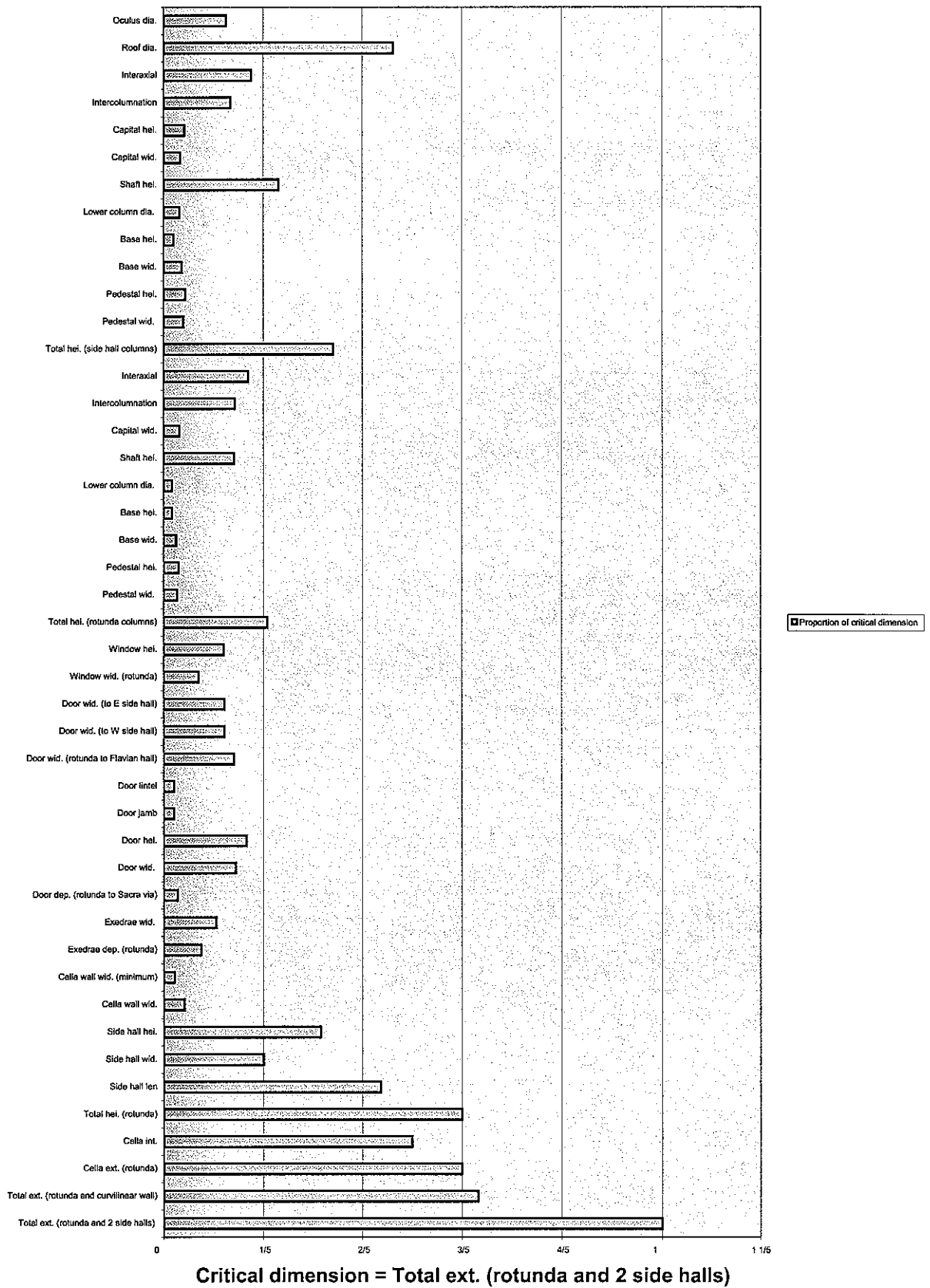
<i>actual measurements</i>	<i>ideal</i>				<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Total ext. (rotunda and 2 side halls) *	29.5	99.7	100	0.3%	1	
Total ext. (rotunda and curvilinear wall)	18.7	63.2			5/8	
Cella ext. (rotunda)	17.5	59.1	60	1.5%	3/5	
Cella int.	14.7	49.66	50	0.7%	1/2	
Total hei. (rotunda)	17.8	60.3	60	-0.5%	3/5	
Side hall len	12.9	43.6			3/7	
Side hall wid.	6.13	20.65	20.0	-3.0%	1/5	
Side hall hei.	9.3	31.4			6/19	
Foundation wid. (rotunda and 2 side halls)	29.5	99.7				
Foundation wid. (rotunda and curvilinear wall)	18.7	63.2				
Foundation wid. (wall)	2.1	7.1				
Foundation hei.	1.7	5.7				
Cella wall wid.	1.22	4.12			1/24	
Cella wall wid. (minimum)	0.65	2.2			1/45	
Cornice wid. (rotunda)	0.19	0.64				
Exedrae dep. (rotunda)	2.2	7.4			2/27	
Exedrae wid.	3.1	10.5			2/19	
Door dep. (rotunda to Sacra via)	0.8	2.8			1/36	
Door wid.	4.25	14.36			1/7	
Door hei.	4.9	16.6			1/6	
Door jamb	0.6	2.1			1/47	
Door lintel	0.6	2.1			1/47	
Door wid. (rotunda to Flavian hall)	4.15	14.02			1/7	
Door wid. (to W side hall)	3.6	12.2			1/8	
Door wid. (to E side hall)	3.6	12.2			1/8	
Window wid. (rotunda)	2	6.9			2/29	
Window hei.	3.45	11.7			3/25	
Total hei. (rotunda columns, flanking entrance)	6.2	20.8			5/24	12 1/4
Pedestal wid.	0.8	2.7			1/37	1 3/5
Pedestal hei.	0.9	3			1/33	1 3/4
Base wid.	0.75	2.53	2.5	-1.2%	1/40	1 1/2
Base hei.	0.5	1.7			1/59	1
Lower column dia. **	0.5	1.7			1/59	1
Shaft hei.	4.2	14.1			1/7	8 2/7
Capital wid.	0.95	3.2			1/31	1 8/9
Capital hei.	0.7	2.4				1 2/5
Intercolumnation	4.2	14.2			1/7	8 1/3
Interaxial	5	16.9			1/6	10
Total hei. (side hall columns)	10.1	34.1			1/3	10 5/7
Pedestal wid.	1.2	4.1	4	-2.4%	1/25	1 1/4
Pedestal hei.	1.3	4.4			1/23	1 3/8
Base wid.	1.1	3.7			1/27	1 1/6
Base hei.	0.6	2			1/50	5/8
Lower column dia. **	0.94	3.18			1/31	1
Shaft hei.	7	23.6			3/13	7 3/7
Capital wid.	1	3.4			1/30	1 1/15
Capital hei.	1.2	4.1			1/24	1 2/7
Intercolumnation	4	13.5			2/15	4 1/4
Interaxial	5.2	17.6			3/17	5 1/2
Roof dia.	13.7	46.3			6/13	
Roof hei.	2.2	7.4				
Oculus dia.	3.7	12.5			1/8	
Floorspace (rotunda) (square measure)	169.7	1936.9				
Floorspace (rotunda and side halls) (square measure)	327.9	3737.6				
Volume (rotunda) (cubic measure)	192.0	2785.6				

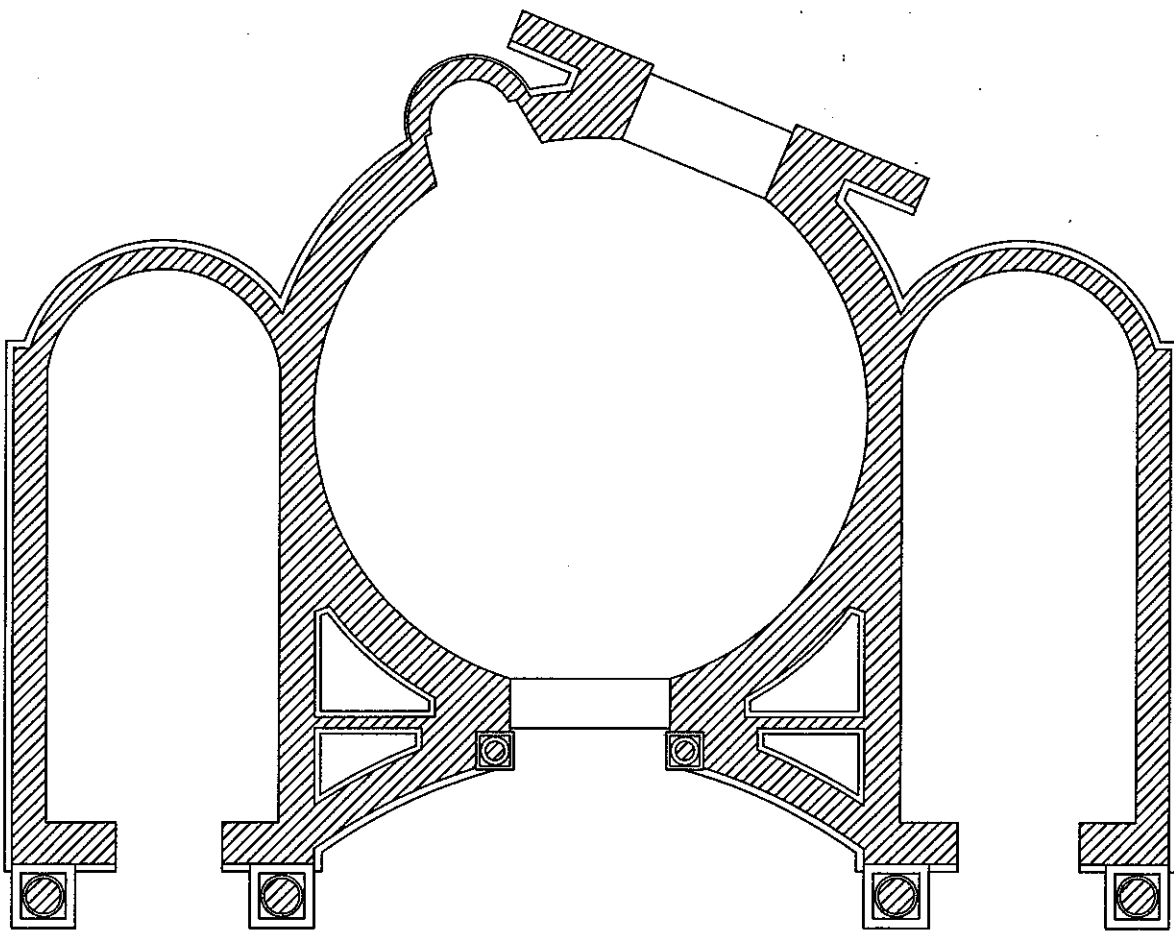
Note: * critical dimension

** in relation to the lower column dia.

Source: Fiore 1981, 67-81 pls. ???

Chart #52. ROME: 'Romulus, temple'





#52 ROME:
'Romulus, temple'
Scale 1:200

#53 ROME: Sol, Temple

Context: near S. Silvestro in Capite (Regio VII); set within a colonnaded portico probably oriented E or W (see text)

Date: Aurelian period (275 AD): ancient sources (see 'Literary and epigraphical sources: Foundation and dedication' below), and a stylistic analysis of the remains

Patron: Aurelian

Description: most likely round with a 10-column pronaos, an intermediate block, and a drum (incl. 7 niches, see text); set within a rectangular, colonnaded court with 9 apses and a monumental entrance

Remains: walls at the intersection of via della Vite and via del Moretto (*opus quadratum*; these may be 8th c. AD, see text), walls along the via della Vite (peperino), columns found near the via della Vite (cipollino, africano, and granite), and fragments of the Temple's or the portico's entablature (marble architrave, frieze, and cornice); also extant are 8 columns (porphyry) re-used in Constantinople (see 'Literary and epigraphical sources: Decorative program' below)

Literary and epigraphical sources:

Cult of Sol under Aurelian: *Hist. Aug. Aurelian.* 25, and Zos. 1.61.1 (mis-identified with Baal, see text).

Foundation and dedication: *Hist. Aug. Aurelian.* 35.3 (Aurelian's reforms, incl. the Temple's foundation). *Hier. chron. a. Abr.* 2291, *Cassiod. chron.* 990, 148 M, *Hist. Aug. Aurelian.* 1.3, 25.4-6, 35.3, and 39.2, *Aurel. Vict. Caes.* 35.7, and *Eutr.* 9.15.1 (Temple's dedication).

Location: *Not. Reg. VII*, 111, 172 VZ 1 (Regio VII). *Chronogr. a.* 354, 148 M: *templum Solis et castra in campo Agrippae dedicavit* (near the castra, i.e. the *Cohortes Urbanae*). *Hist. Aug. Aurelian.* 48.4: *in porticibus templi Solis fiscalia vina ponuntur*, and *CIL VI 1785 = 31931: falancariis qui de Ciconiis ad templum cupas referre consueverunt* (wine storage in the Temple's porticoes; cf. *CIL VI* 9189-90).

Appearance: *Hist. Aug. Aurelian.* 35: *templum solis fundavit et porticibus roboravit* (importance of porticoes). *Hist. Aug. Aurelian.* 1.3, 25.6, and 39.2, *Eutr.* 9.15.1, *Aurel. Vict. Caes.* 35.7, and Zos. 1.61 (temple described as an *opus magnificentissimum*).

Decorative program: *de ant. Constant.* 4.1.66 (8 porphyry columns re-used in Constantinople; see 'Iconographic sources' below). *Hist. Aug. Aurelian.* 28.5 and 39.6 (jewelry, gems and clothing). *Hist. Aug. Aurelian.* 10.2, cf. 11.8, 13.1, 14.4, and 38.2 (paintings). *Hist. Aug. quatt. tyr.* 3.4-6 (statue of Jupiter on a *sella curulis* constructed of elephant tusks). *Hist. Aug. Tac.* 9-12 (silver statue of Aurelian). Zos. 1.61 (statues of Belos and Helios). Zos. 1.61.2, *Hist. Aug. Aurelian.* 28.5, 39.6, and 41.11, and *Tac. ann.* 9.2 (booty from Palmyra used to decorate the Temple).

Iconographic sources: coins minted under Probus (*RIC V*² 55 no. 354, 62 fol. nos. 414-7, and 74 nos. 536-8; Hill 1989, 18 fig. 16); plan by Palladio (*RIBA X* 17r), elevation by Palladio (*RIBA XV* 11v), plan and elevation by Ligorio (*Cod. Turin. a.* II 3 J. 16), elevations by Ligorio (*Coll. Albani-Dal Pozzo* 10805 at Windsor, and *BNP Cod. Ital.* 1129 c. 315: "Questo è un lato del tempio del Sole ... Le colonne che divideno i nicchi l'un dal'altro, sono di porfido; quelle colonne, che mostro più minore, che ornano i detti nicchi erano di marmo gialle macchiate di rosso"); maps by Ligorio (1553 and 1561), Panvinio (1565), Du Pérac (1573 and 1574), and Cartaro (1579).

Decoration: jewelry, gems, clothing, paintings, and statues (see 'Literary and epigraphical sources: Decorative program' above)

Excavations: the walls and architectural fragments were found in 1867-1895

Previous attributions: in the Middle Ages, remains of the nymphaeum on the Pincio were attributed to the Temple (see Moneti 1992, 16, and #37). More recently, Moneti (1990, 16-8; vs. 1992, 16) identified the round temple on Palladio's plan as an altar, while Richardson, jr. (1992, 364) sees it as the macellum tholus of the Forum Suarium.

#53 ROME: Sol. Temple, cont.

Bibliography: Hülsen 1894, esp. 392-4. Lanciani 1894, esp. 297-307. Hülsen 1895a, 39-59. Lanciani 1895, esp. 94-101. Homo 1904, esp. 184-95. Jordan and Hülsen 1907, 452-6. Platner and Ashby 1929, 491-3. Lugli 1938, esp. 275-82. Turcan 1958, 255-62. Gullini 1960, esp. 34-6 and 54. Halsberghe 1972. Sotgiu 1975, esp. 1047-9. Passuello and Dissegna 1976, 66-7. Castagnoli 1978, 371-87. Coarelli 1982, esp. 47-8. Halsberghe 1984, 2181-201. Pettinau 1985, 20-3 no. I 5d fol. Turcan 1985, esp. 251-4. Le Glay 1987, 545-57. Hill 1989, 18 fig. 16. Ward-Perkins 1989, 417 and fig. 281. de Caprariis 1991-1992, 153-91. Richardson, jr. 1992, esp. 363-4. Torelli 1992, 105-31. Moneti 1993a, 153-71. Virioux 1995, esp. 52-9 and 123. Calzini Gysens and Coarelli 1999, 331-3.

Text: 230-7.

ROME: Sol, temple
reconstructed measurements
Palladio's Plan

Total ext.
Cella ext. *
Cella int.
Stair treads
Ambulatory (ext.)
Cella wall wid.
Door dep.
Door wid.
Lower column dia. (columns) **
Intercolumnation
Interaxial
Interaxial dia.
Floorspace (square measure)

	meters	roman feet	ideal roman feet	% difference	ideal proportional relationships to critical dimension *	within columnar order **
Total ext.	31.5	106.4			1 5/6	
Cella ext. *	17.2	58.1			1	
Cella int.	14.4	48.6			5/6	
Stair treads	0.7	2.4			1/24	
Ambulatory (ext.)	3.6	12.2			4/19	
Cella wall wid.	1.4	4.7			1/12	
Door dep.	1.4	4.7			1/12	
Door wid.	2.15	7.26			1/8	
Lower column dia. (columns) **	1.4	4.7			1/12	1
Intercolumnation	4	13.5			3/13	2 7/8
Interaxial	5.4	18.2			5/16	3 7/8
Interaxial dia.	25.8	87.2			1 1/2	18 5/9
Floorspace (square measure)	162.9	1855.1				

Ligorio's Plan & Elevation

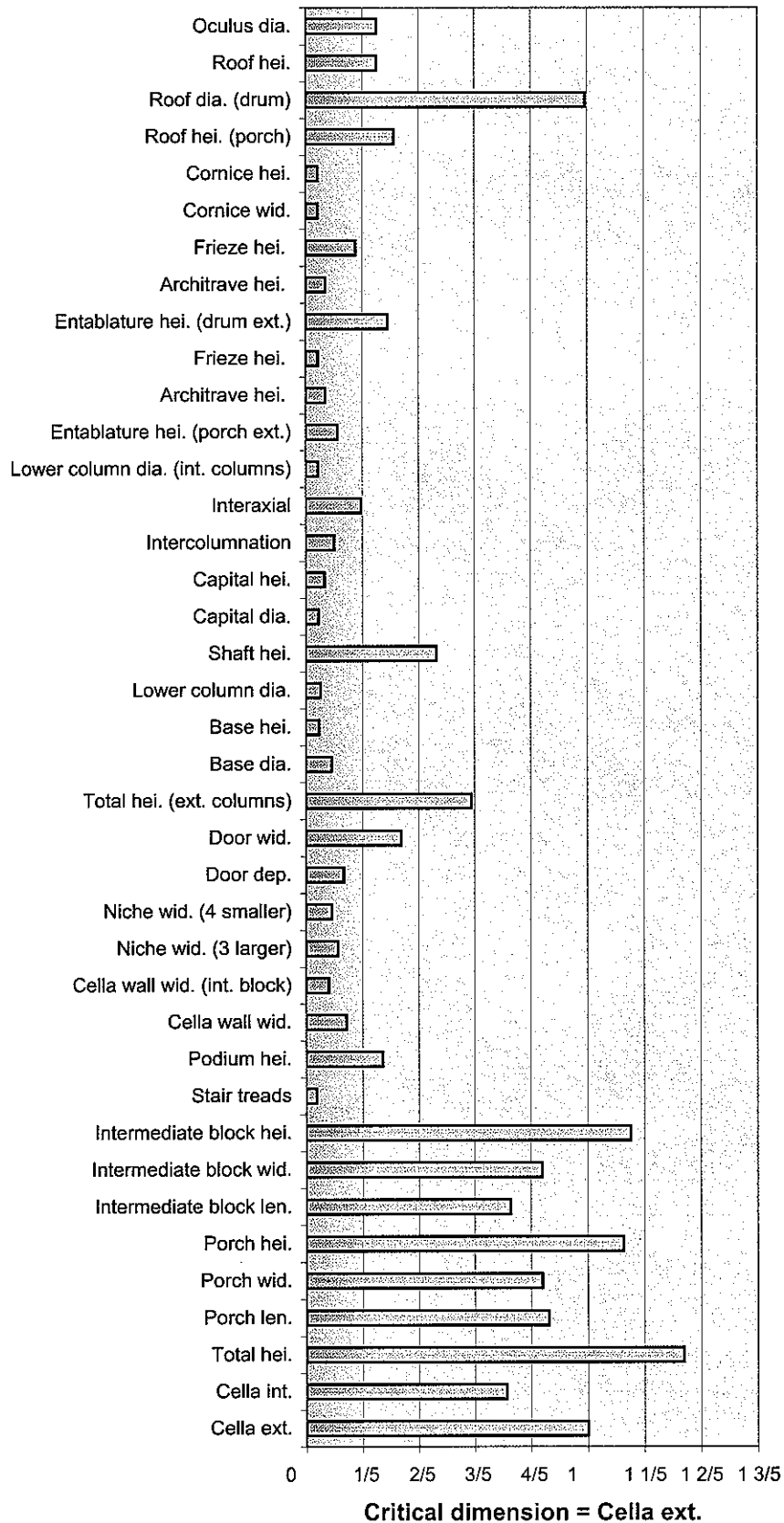
Cella ext. *
Cella int.
Total hei.
Porch len.
Porch wid.
Porch hei.
Intermediate block len.
Intermediate block wid.
Intermediate block hei.
Stair treads
Podium hei.
Cella wall wid.
Cella wall wid. (int. block)
Niche wid. (3 larger)
Niche wid. (4 smaller)
Door dep.
Door wid.
Total hei. (ext. columns)
Base dia.
Base hei.
Lower column dia. **
Shaft hei.
Capital dia.
Capital hei.
Intercolumnation
Interaxial
Lower column dia. (int. columns)
Entablature hei. (porch ext.)
Architrave hei.
Frieze hei.
Entablature hei. (drum ext.)
Architrave hei.
Frieze hei.
Cornice wid.
Cornice hei.
Roof hei. (porch)
Roof dia. (drum)
Roof hei.
Oculus dia.
Floorspace (drum) (square measure)
Volume (cubic measure)

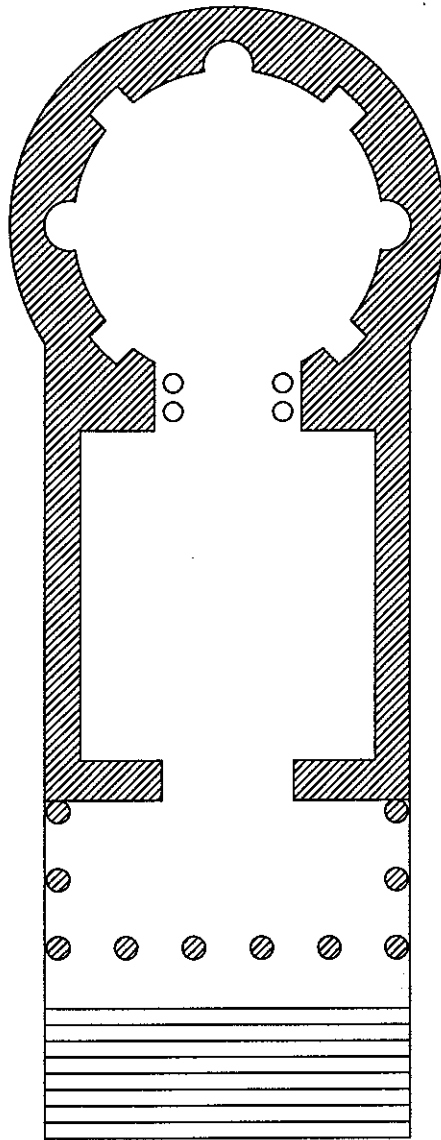
	meters	roman feet	ideal roman feet	% difference	ideal proportional relationships to critical dimension *	within columnar order **
Cella ext. *	23.1	78			1	
Cella int.	16.5	55.7			5/7	
Total hei.	30.9	104.5			1 1/3	
Porch len.	19.9	67.2			6/7	
Porch wid.	19.4	65.5			5/6	
Porch hei.	26	87.8			1 1/8	
Intermediate block len.	16.8	56.8			3/4	
Intermediate block wid.	19.4	65.5			5/6	
Intermediate block hei.	26.6	89.9			1 1/7	
Stair treads	0.85	2.87			1/27	
Podium hei.	6.3	21.3			2/7	
Cella wall wid.	3.3	11.1			1/7	
Cella wall wid. (int. block)	1.85	6.25			2/25	
Niche wid. (3 larger)	2.6	8.8			1/9	
Niche wid. (4 smaller)	2.1	7.1			1/11	
Door dep.	3.1	10.3			2/15	
Door wid.	7.8	26.4			1/3	
Total hei. (ext. columns)	13.6	45.9			3/5	11 1/5
Base dia.	2.1	7.1			1/11	1 3/4
Base hei.	1.1	3.7			1/21	9/10
Lower column dia. **	1.2	4.1			1/19	1
Shaft hei.	11	37.2			7/15	9
Capital dia.	1.05	3.55			1/22	6/7
Capital hei.	1.5	5.1			1/15	1 1/4
Intercolumnation	2.4	8.1	8	-2.8%	1/10	2
Interaxial	4.5	15.2			1/5	3 5/7
Lower column dia. (int. columns)	1	3.4			1/23	
Entablature hei. (porch ext.)	2.6	8.8			1/9	
Architrave hei.	1.6	5.4			2/29	
Frieze hei.	1	3.4			1/23	
Entablature hei. (drum ext.)	6.7	22.7			2/7	
Architrave hei.	1.6	5.4			2/29	
Frieze hei.	4.1	13.9			3/17	
Cornice wid.	1	3.4			1/23	
Cornice hei.	1	3.4			1/23	
Roof hei. (porch)	7.3	24.7			5/16	
Roof dia. (drum)	22.9	77.4			1	
Roof hei.	5.8	19.6			1/4	
Oculus dia.	5.8	19.6			1/4	
Floorspace (drum) (square measure)	213.8	2436.7				
Volume (cubic measure)	622.5	18206.6				

Note: * critical dimension
 ** in relation to the lower column dia.

Source: Palladio's plan (RIBA X 17r).
 Ligorio's plan and elevation (Cod. Turin. a. II 3J 16).
 Castagnoli 1978, 372 fig. 1 and 375 fig. 4.

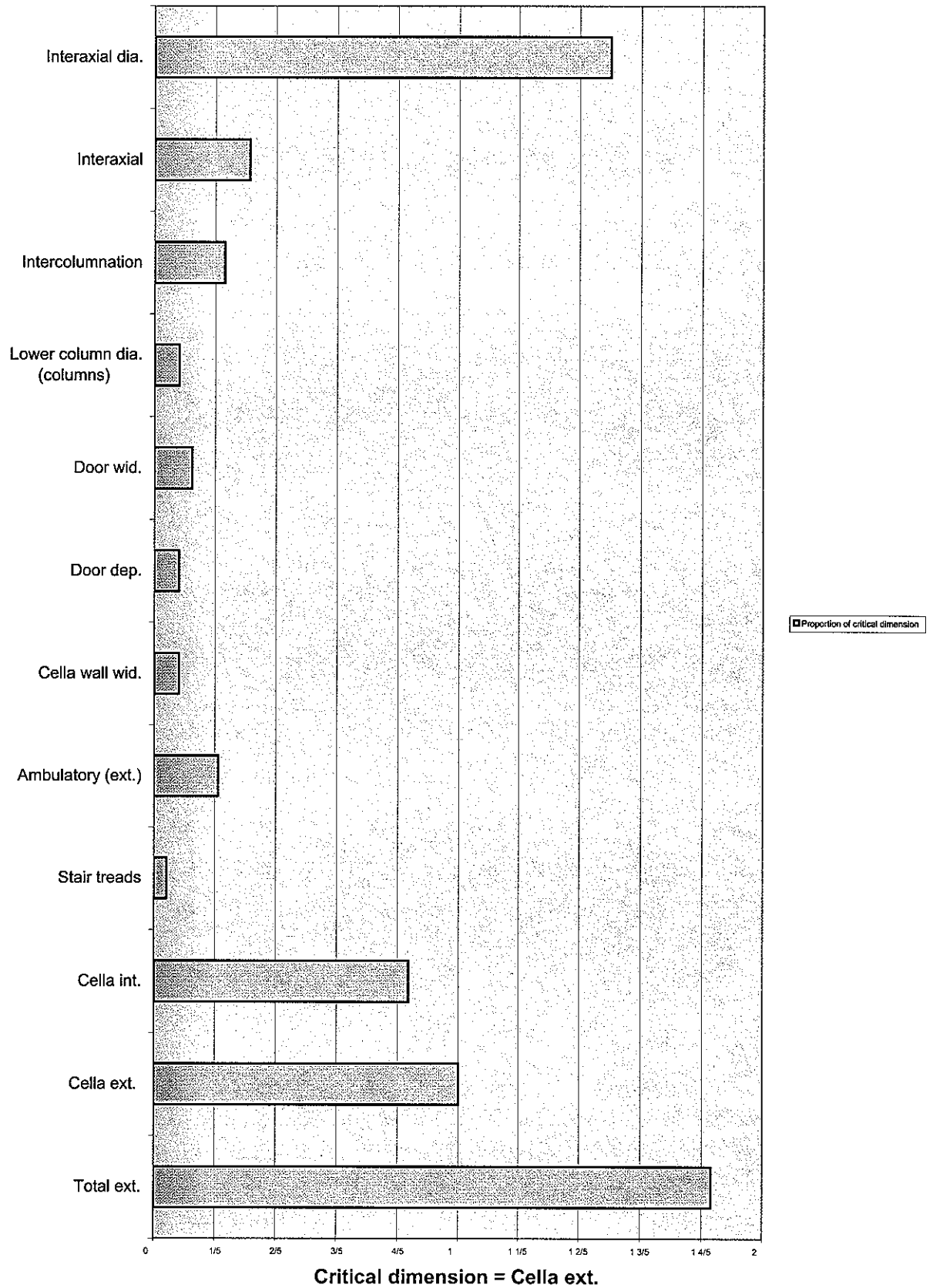
Chart #53.1 ROME: Sol, temple (after Ligorio)

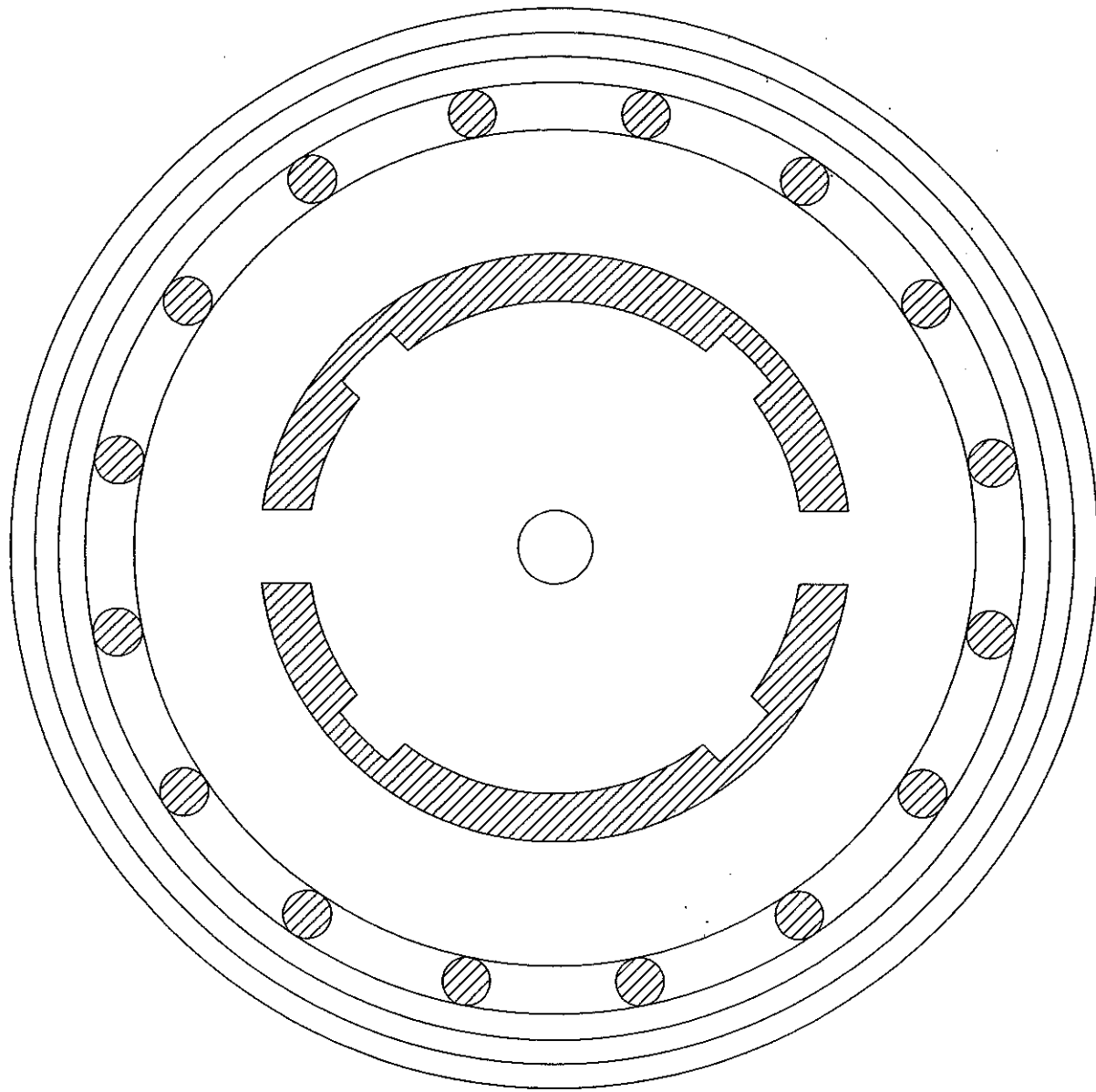




#53 ROME:
Sol, temple (after Ligorio)
Scale 1:400

Chart #53.2 ROME: Sol, temple (after Palladio)





#53 ROME:
Sol, temple (after Palladio)
Scale 1:200

#54 ROME: Spes Vetus, Shrine

Context: summit of the Esquiline (Regio V), at the intersection of via Labicana and via Praenestina (see Coarelli 1999h, 338); orientation unknown

Date: 477 BC: ancient sources (see 'Literary and epigraphical sources: Date' below)

Patron: unknown

Description: rectangular? (see text)

Remains: none

Literary and epigraphical sources:

Date: Liv. 2.51.2 and Dion. Hal. 9.24 (Shrine mentioned in the context of Horatius' victory).

Location: Frontin. *aq.* 5.19-21, 65, and 87, *Hist. Aug. Heliog.* 13.5, and *CIL* XV 5929 = *ILS* 7543 (toponym *ad Spem Veterem*).

Iconographic sources: coins minted under Antoninus Pius, ca. 158-160 AD (*BMCEmp* IV 135 no. 915, 137-8 nos. 926-30, 145 no. 967-9, 324, 347, 348 no. 2046, 350-1 nos. 2053-7, 353, 355, and 357-9 nos. 2093-7)

Bibliography: Jordan 1878, 462-3. Jordan and Hülsen 1907, 363-5. Platner and Ashby 1929, 494. *BMCEmp* IV lxxiv, 135, 137-8, 145, 324, 347-8, 350-1, 353, 355, and 357-9. Hill 1989, 17. Richardson, jr. 1992, 365. Coarelli 1999h, 338.

Text: 23-4.

#55 ROME: Venus, Shrine

Context: Horti Sallustiani (Regio VI; for the Horti's extent, see Santangelo 1941, 177-91 and Castelli 1988, 60), near the Porta Salaria and to the NE of S. Andrea in Quirinale (see Vacca in 'Literary and epigraphical sources: Description' below)

Date:

I. 1st c. BC (see text): inscription

II. under Nero: pipes (see Vacca in 'Literary and epigraphical sources: Description' below)

Patron:

I. Julius Theopompus in honor of Julius Caesar? (see text)

II. unknown

Description:

I. round peripteros (15.6 m. in dia., mainly marble) with 3-6 exterior and 4 interior stairs, 4 doors, 16 exterior (monolithic shafts, Corinthian or Composite capitals, see Vacca in 'Literary and epigraphical sources: Description' below) and 8 interior columns, and 12 exterior niches and a possible 12 interior niches

II as I

Remains:

I. part of the foundations, walls, pavement and wall revetment (alabaster, porphyry, serpentine and other marbles), columns (exterior: Carystian marble, interior: oriental alabaster), the inscribed entablature, and interior stairs were visible during the Renaissance (see Vacca in 'Literary and epigraphical sources: Description' below); additional inscriptions have been discovered near the Temple

II. lead pipes found near the Temple (see Vacca below)

Literary and epigraphical sources:

Inscriptions from 'Remains': *CIL* VI 5.667: VENERI. HORTORVM.

SALLVSTIANORVM. C. SALLVSTIVS. DRVSVS. AEDITVVS. D. D (building inscription cited by Panvinio; for a comparable inscription, see Fulvio 1527, 14). *CIL* VI 122 and 4327 = 30699 = *ILS* 3184 and 32451, and *CIL* VI 32468 (inscriptions citing dedications by *aeditui* and a *minister al[mae] Veneris ex ho[r]tis Sallustiani[s]*).

Description: Vacca et. al. 1704, 58: "Nelle vigne di Gabriele Vacca mio padre accanto Porta Salaria dentro le mura, vi è un fondo, dove si dice gli Orti Sallustiani. Cavandovi, trovò una fabbrica di forma ovata, con portico attorno ornato di colonne gialle, lunghe palmi diciotto, scanellate, con capitelli, a basi corintie. Detto ovato aveva quattro entrate con scale, che scendevano in esso al pavimento fatto di mischi con belli scompartimenti, ed a ciascuna di dette entrate vi erano due colonne di alabastro orientale sì trasparente, che il sole vi passava senza impedimento. Vi trovammo ... anche due condotti di piombo... con le seguenti lettere: NERONIS CLAUDIVS... Vi si trovarono anche molte medaglie sparse di Gordiano di metallo e d'argento... e quantità di mosaici..."

Iconographic sources: plans by P. Ligorio or O. Panvinio (*Cod. Vat. Lat.* 3439 f. 28r; text repeated in *Cod. Par. fonds St. Germain* 86 = *Cod. Ital.* 1129, and Hülsen 1889, 271-2); depicted on maps of Rome by Ligorio 1561, Panvinio 1565, Du Pérac 1573, 1574, and 1577, Cartaro 1576, and Nolli 1748 (copy of Bufalini, mid-1500s)

Decoration: multi-colored marble paving and revetment

Excavations: F. Vacca in the mid-1500s

Previous attributions: identified as a nymphaeum (Piranesi (later retracted), Venuti, and Nibby cited in Castelli 1988, 59 and figs. 5-6, and Hülsen 1889, 271-3), and as the Temple of Venus Erycina (see text and Lanciani 1888, 6-7, and 1897, 416, Jordan and Hülsen 1907, 416, Platner and Ashby 1929, 551-2, Lugli 1938, 333-7, Santangelo 1941, 138, Pace 1935-1949, 636, Schilling 1954, 256, Nash 1959, 132-3, Galinsky 1969, 180, Cipriani 1982, 55-7, and Richardson, jr. 1992, 408-9).

#55 ROME: Venus, Shrine, cont.

Bibliography: Fulvio 1527, 14. Hülsen 1884, 327. Lanciani 1888, 3-11. Hülsen 1889, 270-4. Jordan and Hülsen 1907, 415-6. Mancini 1913, 170. Platner and Ashby 1929, 552. Lugli 1938, 333-7. Santangelo 1941, esp. 138-40 and 178-9. Pace 1935-1949, 636-45 and fig. 168. Schilling 1954, 104-5, 233-48 and 256-61. Nash 1959, 132-7. Galinsky 1969, 178-88 and 243-57. Cipriani 1982, 25-8, 55-7, and 65. Coarelli 1983b, 214-5. Torelli 1984, 87-8 and 209. Castelli 1988, 53-62. Richardson, jr. 1992, 408-9. Coarelli 1995k, 10-2. Calandra 1996, 251. Chioffi 1996b, 84. Coarelli 1999k, 114-6; and 1999l, 116-7.

Text: 65-9.

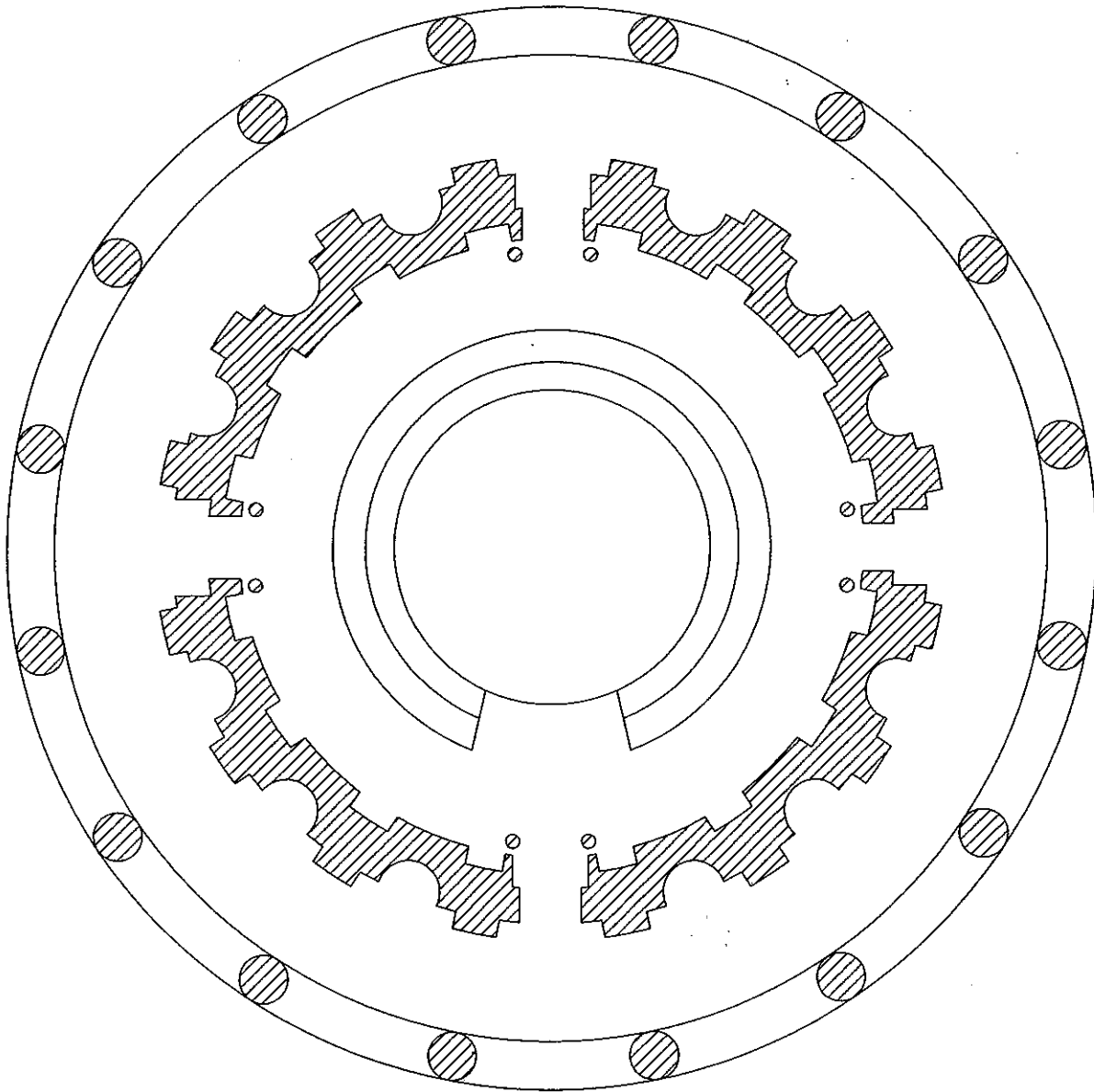
ROME: Venus, shrine

<i>reconstructed measurements</i>					<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Total ext.	15.6	52.7			1 3/4	
Cella ext.	10.9	36.8			1 2/9	
Cella int. *	9	30.4	30	-1.3%	1	
Stair treads	0.44	1.49			1/20	
Ambulatory (ext.)	1.8	6.1			1/5	
Cella wall wid.	0.91	3.07	3	-2.3%	1/10	
Niche dep.	0.5	1.7				
Niche wid.	0.9	3			1/10	
Door dep. (ext.)	0.91	3.07	3	-2.3%	1/10	
Door wid.	1.1	3.7			1/8	
Door wid. (int.)	0.9	3			1/10	
Lower column dia. (ext.) **	0.7	2.4			2/25	1
Intercolumnation	3	10.1	10	-1.0%	1/3	4 1/5
Interaxial	3.7	12.5			3/7	5 1/5
Interaxial dia.	14.8	50			1 2/3	20 5/6
Lower column dia. (int.) **	0.2	0.7				1
Intercolumnation	0.9	3			1/10	4 2/7
Interaxial	1.1	3.7			1/8	5 2/7
Interaxial dia.	8.3	28			14/15	40
Floorspace (square measure)	63.6	725.8				

Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: Vacca and Panvinio.



#55 ROME:
Venus, shrine
Scale 1:100

#56 ROME: Vesta, Shrine

Context: the House of Augustus, Palatine (Regio X)

Date: 12 BC: Augustus' succession to Pontifex Maximus, the *Fasti Caeretani* and *Praenestini* (see 'Literary and epigraphical sources: Foundation and date' below)

Patron: Augustus

Description: round monopteros on 3-step krepis?, with Ionic columns?, an entablature, and a conical roof

Remains: none

Literary and epigraphical sources:

Foundation and date: Ov. *fast.* 4.949 fol. and *met.* 15.854 fol. (threefold division of Augustus' house, dedications to Apollo and Vesta). *InscrIt* XIII² 66 = *CIL* I² 213: LOEDI FLORAE. FER(IAE) Q(VOD) E(O) D(IE) SIG(NVM) VEST(AE) IN DOMO P(ALATINA) DEDIC(ATVM) (*Fasti Caeretani*). *InscrIt* XIII² 132-3 = *CIL* I² 236: LVDI FLORAE. FERIAE EX S(ENATVS) C(ONSVLTO) QVOD EO DIE [...] ET [...] / VESTAE IN DOMO IMP. CAESARIS AVGVSTI PONTIF(ICIS) MAX(IMI) DEDICATAST QVIRINIO ET VALGIO CO(N)S(VLIBVS) (*Fasti Praenestini*).

Decorative scheme: Ov. *fast.* 6.295-6: *esse diu stultus Vestae simulacra putavi / mox didici curvo nulla subesse tholo* (cult statue of Vesta, also see the *Fasti Caeretani* above). *CIL* X 6441 (Privernum inscription naming the Palladium). Cic. *Scaur.* 23.48, Liv. 27.26.14, and Dionys. 1.69.2.4 and 2.66.5 (more than one Palladium in existence?). *R. Gest. div. Aug.* 21.2 (Augustus' *dona ex manubiis*).

Iconographic sources: Tiberian dupondii (*RIC* I² 99 nos. 74-6 pl. 12, and Hill 1989, 32); Flavian aurei (*RIC* II 21 no. 59, 22 nos. 69a-b, 33 no. 157, 34 no. 162, 35 no. 171, 36 no. 180, and 41 no. 230, and Hill 1989, 32); Side A of the Sorrento Base (see text); the Palermo relief (see text); a drawing by G. A. Dosio (Scheda 2039, Gabinetto Disegni e Stampe degli Uffizi, see Lanciani 1883b, 185 fol., Cassatella 1990, and Cecamore 1994-1995, 12-3 fig. 7)

Decoration: a statue of Vesta; a copy of the Palladium? (see text); Augustus' *dona ex manubiis* (see 'Literary and epigraphical sources: Decorative scheme' above)

Previous attributions: often identified with Suetonius' (*Nero* 31.1) *praecipua cenationum rotunda*, and Martial's (2.59) *Caesareus tholus* (see Cecamore 1994-1995, 9-10), Cecamore (1994-1995, 9-10) attributed the remains of a round building and a portico discovered beneath the triclinium and nymphaea of the Domus Flavia (*opus testaceum* with marble revetment and an *opus sectile* pavement; see Carettoni 1949, 78-9, and Cassatella 1986) to this Shrine.

Bibliography: Lanciani 1883b, 185 fol. Platner and Ashby 1929, 557. Rizzo 1932, 7-109. Brown 1941, 273-8. Carettoni 1949, 48-79. Degrassi 1955, 144-54. Stucchi 1959, 7-10. Nash 1961-1962, Vol. 2: 511. Guarducci 1964, 158-69. Paribeni 1964, 193-8. Degrassi 1966-1967, 77-116. Kolbe 1966-1967, 94-104. Guarducci 1971, 73-118. Küthman and Overbeck 1973a, 217. Gros 1976a, 20 n. 46, 32 n. 121, 35, 57 n. 32, 67 and 208. Cassatella 1986, 535-9. Cain 1989, 421-5 no. 132. Hill 1989, 31. Capelli 1990, 29-33. Cassatella 1990, 150-60. Fraschetti 1990, 342-5. Alteri 1991, 8. Richardson, jr. 1992, 413. Scott 1993b, 161-81. Cecamore 1994-1995, 9-32. Capelli 1994, esp. 136-8. Papi 1995, 169-70. Capelli 1999, 128-9.

Text: 117-22.

<i>ROME: Vesta, shrine (Cecamore)</i>				
<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>
Cella ext. *	35.4	119.6		
Cella int.	33.4	112.8		
Cella wall wid.	1	3.4		
Floorspace (square measure)	876.2	9993		
				<i>ideal proportional relationships</i>
				1
				1/35

Note: * *critical dimension*

Source: Cecamore 1994-1995, 11-2 figs. 2-5.

#57 ROME: Vesta, Temple

Context: Roman Forum (Regio VIII); from the early 2nd c. BC, its precinct (ca. 7th c., restored in the 3rd and 1st c. BC, see Scott 1993a, 16, and 1999c, 130) was delimited by the Palatine ramp (W; see Steinby 1993), the Atrium Vestae (S, 7th c. BC), and the Regia (N, 7th c. BC); oriented E

Date:

- I. 7th c. BC: ancient sources (see 'Literary and epigraphical sources: Foundation and rebuildings' below)
- II. 3rd c. BC: ancient sources (see 'Literary and epigraphical sources: Foundation and rebuildings' below), ceramic finds, and the pavement level (see text)
- III. 1st c. BC: coins (see 'Iconographic sources' below), ceramic finds, and an arch added to buttress the Temple's foundations (W; see Scott 1993a, 11-3, and 1999b, 126)
- IV. Neronian period: Tac. *ann.* 15.41 (see 'Literary and epigraphical sources: Foundation and rebuildings' below), *CIL* XV Suppl. 309-10 (brick stamps, see 'Literary and epigraphical sources: Inscriptions from Remains' below), and coins (see 'Iconographic sources' below)
- V. Flavian period: coins (see 'Iconographic sources' below)
- VI. Trajanic period: coins and reliefs (see 'Iconographic sources' below)
- VII. Severan period: building remains and coins (see 'Iconographic sources' below)

Patron:

- I. 7th c. BC: Numa
- II. 3rd c. BC: unknown
- III. 1st c. BC: Julius Caesar? (see text)
- IV. Neronian period: Nero
- V. Flavian period: Vespasian and Domitian
- VI. Trajanic period: Trajan
- VII. Severan period: Julia Domna

Description:

- I. 7th c. BC: round? (see Ov. *fast.* 6.254-60 and 295-8)
- II. 3rd c. BC: as I, though with its foundations (15.05 m. in dia., concrete) indented by a pit (2.50 m. by 2.47 m. by 2.45 m. by 2.30 m. per side and 4.5 m. deep, see Gjerstad 1960, 310)
- III. 1st c. BC: as II.
- IV. Neronian period: round with a stepped podium, Ionic columns, an entablature, and a dome
- V. Flavian period: as IV.
- VI. Trajanic period: round peripteros with a high podium, Ionic columns resting on plinths, grillwork, an entablature, and a dome topped by a finial
- VII. Severan period: as VI (14.6 m. in dia., marble revetted), though with the Corinthian order (20 exterior columns and exterior and interior pilasters with Attic-Ionic bases, fluted shafts, and Corinthian capitals, and a Corinthian entablature)

Remains:

- I. 7th c. BC: perimeter wall (capellaccio blocks)
- II. 3rd c. BC: foundations (concrete with Anian and Grotta Oscura tufa aggregate faced with *opus incertum*)
- III. 1st c. BC: tiles (terracotta) employed in refacing the pit, and fragments of the arch (travertine)
- IV. Neronian period: rebuilding of a collapsed drain and the E perimeter wall
- V. Flavian period: none
- VI. Trajanic period: none
- VII. Severan period: part of the podium incl. plinths (Luna marble revetment; the stratum of cement work may be a residue of additions to increase the height of the podium), the columns, the pilasters, the cella wall, the entablature, and the coffers (Luna marble)

#57 ROME: Vesta, Temple, cont. (1)

Literary and epigraphical sources:

Inscriptions from 'Remains':

IV. Neronian period: *CIL* XV Suppl. 309-10: M.FVLVIVS/ZOSIMVS F. (Claudian brickstamps, perimeter wall).

Location: Hor. *sat.* 1.9.1-43, Dionys. *ant.* 6.13, and Mart. *epigr.* 1.70.3-4 (near the *lacus Iuturnae* and the *aedes Castoris*).

Foundation and rebuildings:

I. 7th c. BC: Plut. *Numa* 11.1, Ov. *fast.* 6.254-62 and 295-8, Dion. Hal. 2.64.5-66.1, and Fest. p. 262 and 320 L (Numa's foundation). Gell. 14.7.7; cf. Ulp. *Dig.* 1.8.9.2. and Serv. *Aen.* 7.153 and 9.4 (Temple was not inaugurated).

II. 3rd c. BC: Liv. *perioch.* 19, Ov. *fast.* 6.437-54, Oros. *comm.* 4.11.9, Plin. *nat.* 7.141, and Val. Max. 1.4.5 (fire in 241, 3rd c. rebuilding). Liv. 26.27.4 (fire in 210 BC, Temple saved).

IV. Neronian period: Tac. *ann.* 15.41 and *hist.* 143 (Nero's reconstruction of the *delubrum Vestae cum Penatibus populi Romani*).

VII. Severan period: Herodian. 1.14.4 and Cass. Dio 72.24 (fire in 191 AD, Julia Domna's rebuilding).

Appearance:

III. 1st c. BC: Ov. *fast.* 6.254-60 and 295-8 (round form, thatch and willow construction, grillwork, lack of a cult image). Ov. *fast.* 6.281-2: *par facies templi: nullus procurrit in illo / angulus; a pluvio vindicat imbre tholus* (as a *tholus*). Plin. *nat.* 34.13 (bronze roof). Ov. *fast.* 4.731-4 (altar).

Other: Varro *ling.* 6.32 and Ov. *fast.* 6.297-8 and 713 (sacred fire, ash pit). Fest. p. 296 L: *locus intimus in aede Vestae tegetibus saeptus* (pit as a *penus Vestae*; cf. Dion. Hal. 2.66.3-6, Fest. p. 152 L, and Serv. *Aen.* 3.12).

Iconographic sources:

III. 1st c. BC: denarius of Q. Cassius, 57 BC, Rome (*RRC* I 452 nos. 428.1-2 pl. 52.2 and 3, and Cody 1973, 43-4) and cistophoric tetradrachms of C. Fannius, 49-48 BC, Ephesos, Apameia, Laodiceia, and Tralles (Cody 1973, 44-7 and 49)

IV. Neronian period: aurei and denarii of Nero, after 64 AD, Rome (*BMCEmp* I clxxv, 213 nos. 104-6 pl. 40.10-3, and *RIC* I² 153 nos. 61-2 pl. 18.61; cf. Fuchs 1969, 46 pl. 9, and 109).

V. Flavian period: coins (*RIC* II 21 nos. 59-60, 22 nos. 69a-b, 33 no. 157, 34 no. 162, 35 no. 171, 36 no. 180, 41 no. 230, 92 no. 659, 95 no. 690, and 97 no. 705; cf. Hill 1989, 32)

VI. Trajanic period: coins (*RIC* II 308 nos. 795-6), the Uffizi and Lateran reliefs (see text), drawings by an anonymous artist (Anonymous Destailleur), G. A. Dosio, G. da Sangallo (Temple's exterior, see text), and O. Panvinio (*Cod. Urs. Vat.* 3439 f. 28, Temple's interior)

VII. Severan period: coins of Julia Domna (*RIC* IV.1 171 nos. 584-7A pl. 9.10, 209 no. 868, 211 nos. 892a-4 pl. 11.6, 274 no. 392, 311 no. 594a-b, and 313 no. 607; cf. Cody 1973, 43 and Cecamore 1994-1995, 26 figs. 19-20) and of Caracalla (*RIC* IV.1 247 nos. 249-50, and *BMCEmp* V 450 nos. 101-2 pls. 70.5-6)

Decoration:

III. 1st c. BC: altar (Ov. *fast.* 4.731-4); serpent antefixes (see 'Iconographic sources' above)

IV. Neronian period: none

V. Flavian period: none

VI. Trajanic period: oak tree in the pit beside the Temple's stairs (as on the Uffizi and Lateran reliefs, see Scott 1993b, 16)

VII. Severan period: sacrificial implements illustrated on the frieze course; statue of Vesta displayed within the Hadrianic Shrine of the Lares Praestites to the E (see Scott 1993a, 11 and 17, and Coarelli 1995k, 100 and 102)

#57 ROME: Vesta, Temple, cont. (2)

Excavations:

II-VII. 3rd c. BC-Severan period: R. Lanciani in 1877-1884, G. Boni in 1898-1900 and R. T.

Scott in the late 1980s-early 1990s

VII. Severan period: restoration proposed by G. Boni in 1900, carried out by A. Bartoli in

1933 (fra Giocondo da Verona suggests that the Temple was nearly complete in 1489)

Bibliography: Jordan 1886, esp. 5-16. Lanciani 1897, 224-34. Gatti 1899c, esp. 50. Boni 1900, 159-89. Van Deman 1912, esp. 393. Platner and Ashby 1929, 557-9 and 608. Bartoli 1933, 259-60. Bloch 1936, 148-50. Lugli 1946, esp. 202-7. Blake 1947, 34, 176-7, 250 and 343. Mansuelli 1958, 168. Stucchi 1958, esp. 89-95. Blake 1959, 43-6. Gjerstad 1960, 310-20 and 372-4. Nash 1961-1962, Vol. 2: 505-9. Fuchs 1969, 46, 51-7, 94-6, 98, and 109.

Guarducci 1971, 73-118. Blake and Bishop 1973, 36-40. Cody 1973, 43-50. Gros 1976a, 18-21 and 208-9. Coarelli 1983, 33, 57, 64-8, 78, 236-47, and 266-70. Steinby 1987, 139-42. Hill 1989, 23-4. Lanciani 1989, 227-8. Weber 1990, 110 and 222-3 cat. M14. Alteri 1991, 6 and 9. Richardson, jr. 1992, 412-3. Ziolkowski 1992, 212. Scott 1993a, 11-7; and 1993b, 161-81. Coarelli 1995k, 99-104. Papi 1995, 169-70. Coarelli 1999n, 198-9. Scott 1999a, 189-92; 1999b, 125-8; and 1999c, 129-30.

Text: 16-8, 39-40, 130, 164-6, and 216-7.

ROME: Vesta, temple

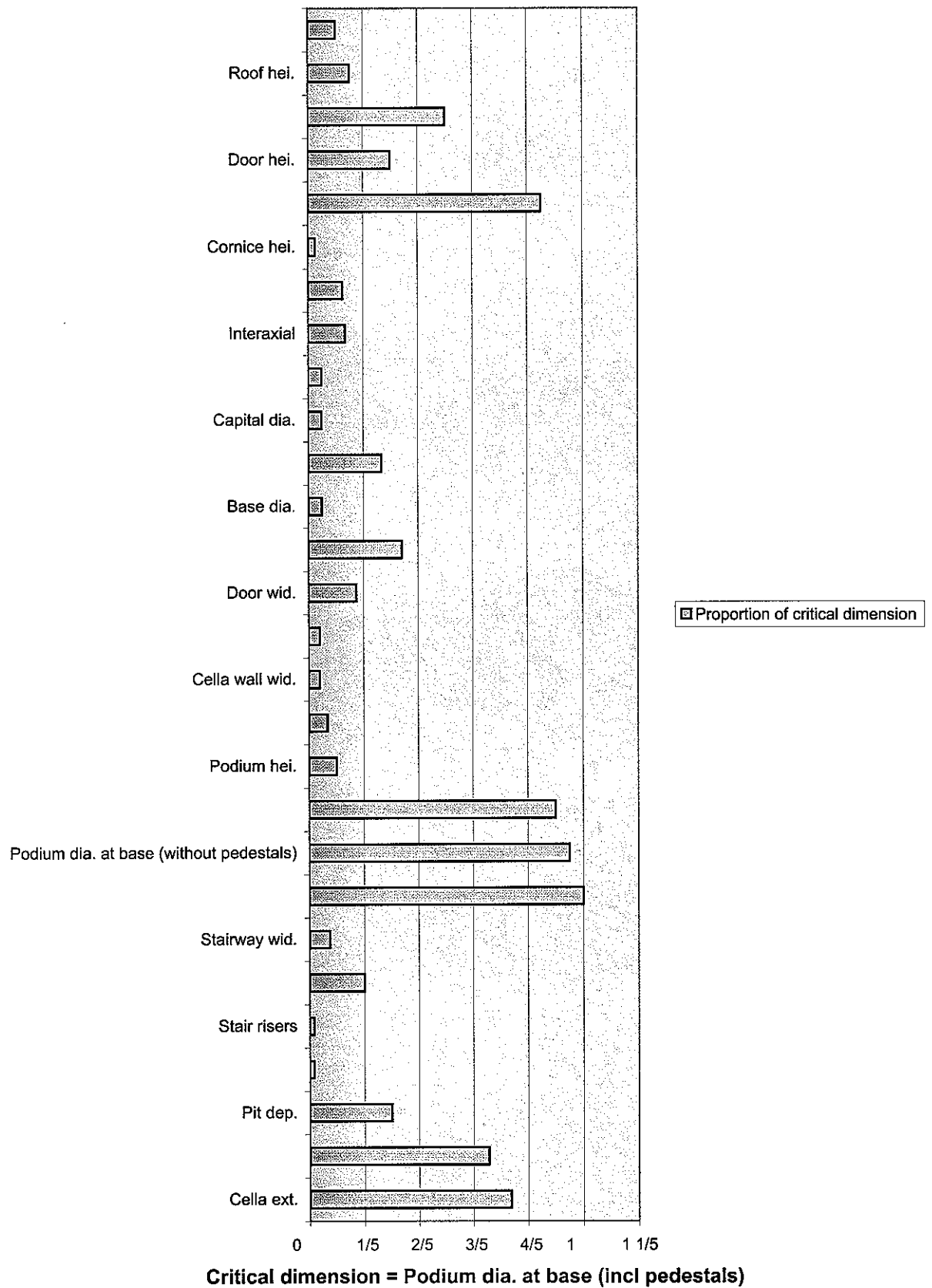
actual measurements	ideal					ideal proportional relationships	
	meters	roman feet	roman feet	% difference		to critical dimension *	within columnar order
Cella ext.	10.9	36.8				3/4	
Cella int.	9.7	32.8				2/3	
Pit dep.	4.5	15.2	15	-1.3%		3/10	
Foundation dia.	15.05	50.84					
Foundation hei.	2.17	7.33					
Stair treads	0.24	0.81				1/62	
Stair risers	0.23	0.78				1/64	
Stairway len.	3.02	10.2	10	-2.0%		1/5	
Stairway wid.	1.1	3.7				2/27	
Podium dia. at base (incl pedestals) *	14.6	49.3	50	1.4%		1	
Podium dia. at base (without pedestals)	14.1	47.6	47.5	-0.2%		19/20	
Podium dia. at stylobate	13.4	45.3	45	-0.7%		9/10	
Podium hei.	1.5	5.07	5	-1.4%		1/10	
Podium cornice wid.	0.2	0.7					
Ambulatory (ext.)	1	3.4				1/15	
Cella wall wid.	0.6	2				1/25	
Door dep.	0.6	2				1/25	
Door wid.	2.55	8.61				4/23	
Total hei. (ext. columns, ext. and int. pilasters)	5	17				1/3	10
Base dia.	0.7	2.4				1/21	1 2/5
Base hei.	0.4	1.3					3/4
Lower column dia. **	0.5	1.7					1
Shaft hei.	3.8	13				4/15	7 2/3
Capital dia.	0.7	2.4				1/21	1 2/5
Capital hei.	0.7	2.4				1/21	1 2/5
Intercolumnation	1.3	4.4					2 3/5
Interaxial	2	6.8				2/15	4
Interaxial dia.	14.3	48.3					28 2/5
Entablature hei. (ext.)	1.9	6.25				1/8	
Cornice hei.	0.4	1.25				1/40	
Floorspace (square measure)	73.9	845.0					
reconstructed measurements							
Total hei.	12.6	42.6				6/7	
Door hei.	4.4	15				3/10	
Roof dia.	7.4	25				1/2	
Roof hei.	2.2	7.4	7.5	1.4%		3/20	
Oculus dia.	1.5	5				1/10	
Volume (cubic measure)	96.2	1693.7					

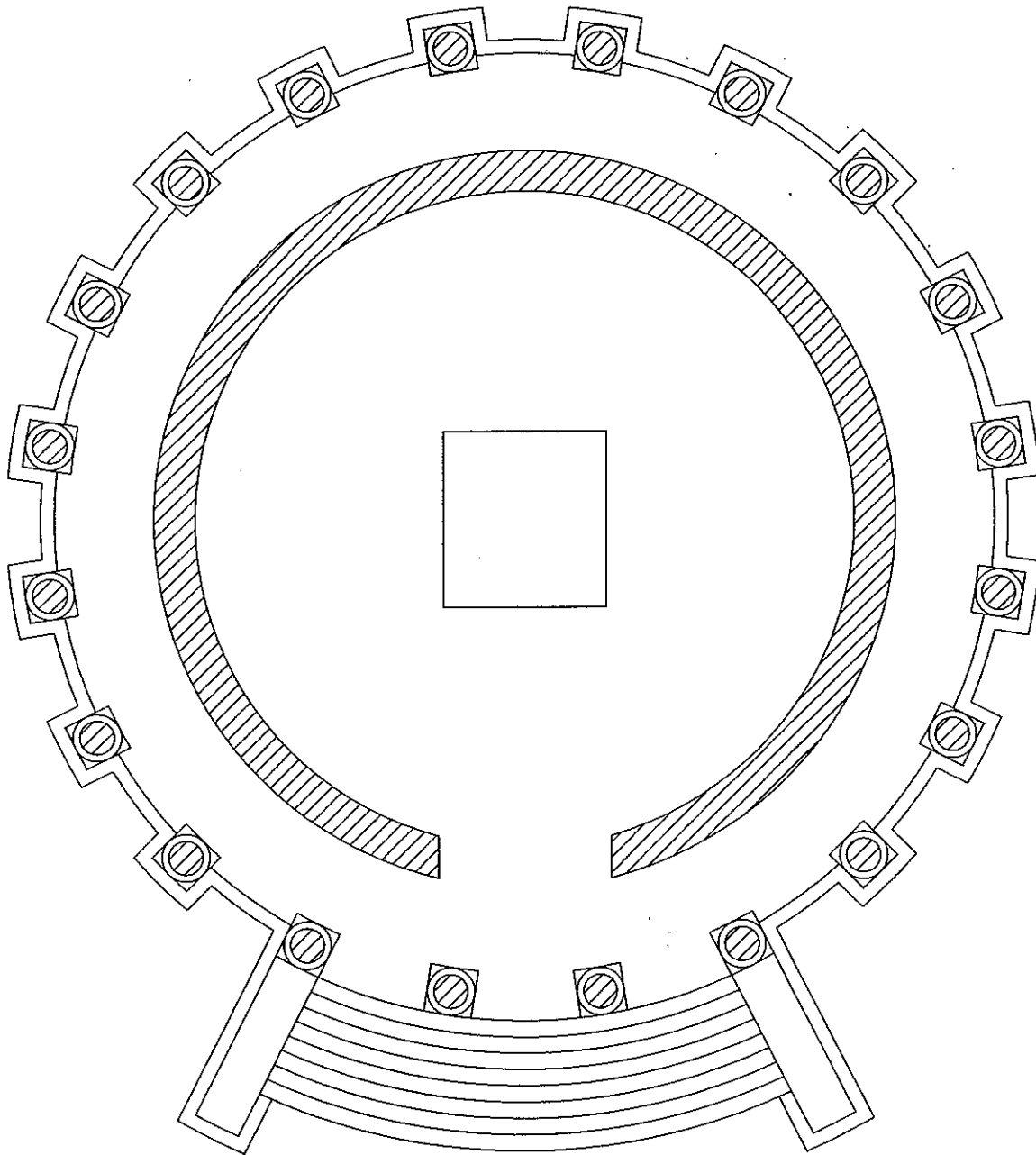
Note: * critical dimension

** in relation to the lower column dia.

Source: Scott 2000, 125-8 fig. 72.

Chart #57. ROME: Vesta, temple





#57 ROME:
Vesta, temple
Scale 1:100

#58 SAMOTHRACE: Arsinoeion

Context: Sanctuary of the Great Gods; accessed via a processional road, which also leads to a propylon (4th c. BC), a Hieron (ea. Hellenistic period), the Hall of the Votive Gifts (Archaic period), and the Altar Court (4th c. BC); oriented toward the road (W)

Date:

- I. 285 BC: dedicatory inscription (see 'Literary and epigraphical sources: Attribution' below)
- II. Roman period: roof reconstruction

Patron:

- I. Arsinoe II, the wife of the Macedonian king Lysimachos (or Arsinoe, the queen of Egypt and wife of Ptolemy II, ca. 275; Roux 1992, 93)
- II. unknown

Description:

- I. drum (19.4 m. in dia., Thasian marble) with ring foundations, a 3-step krepis, a socle, a Doric door, 44 Corinthian (interior) and Doric (exterior) pilasters, a Doric (exterior) and an Ionic (interior) entablature, and a conical roof (see McCredie et al. 1992, 87-9)
- II as I. with a pyramidal roof (see McCredie et al. 1992, 89-91)

Remains:

- I. part of the foundations (sandstone), socle, cella walls, pilasters, entablatures (Thasian marble), "altars" (colored marble, see 'Decoration' below), and roof tiles (terracotta)
- II. part of the sima (Thasian marble) and the roof tiles (terracotta)

Literary and epigraphical sources:

Attribution: *IG XII.8 227* (dedicatory inscription, exterior architrave; see McCredie et al. 1992, 233-9).

Decorative program: Paus. 5.20.9-10 (bronze acroteria).

Iconographic sources: relief from Cyzique (see Roux 1992, 222-5 fig. 143)

Decoration: bronze acroteria; an ornamented orthostate course; socles or "altars" decorated with bucrania, garlands, and phiales or rosettes in the intercolumnations

Excavations: G. Deville in 1866 (dedicatory inscription), A. Conze and G. Niemann in 1873-1875, and K. Lehmann and New York University in 1937-1967, completed by P. Lehmann, J. McCredie, and J. Kurtich in the 1980s

Previous attributions: identified as an assembly and festival hall (see Seiler 1986, 114-5).

Bibliography: Robert 1939, 358-62. Seiler 1986, 107-15. McCredie, Roux, Shaw and Kurtich 1992, passim. Roux 1992, passim.

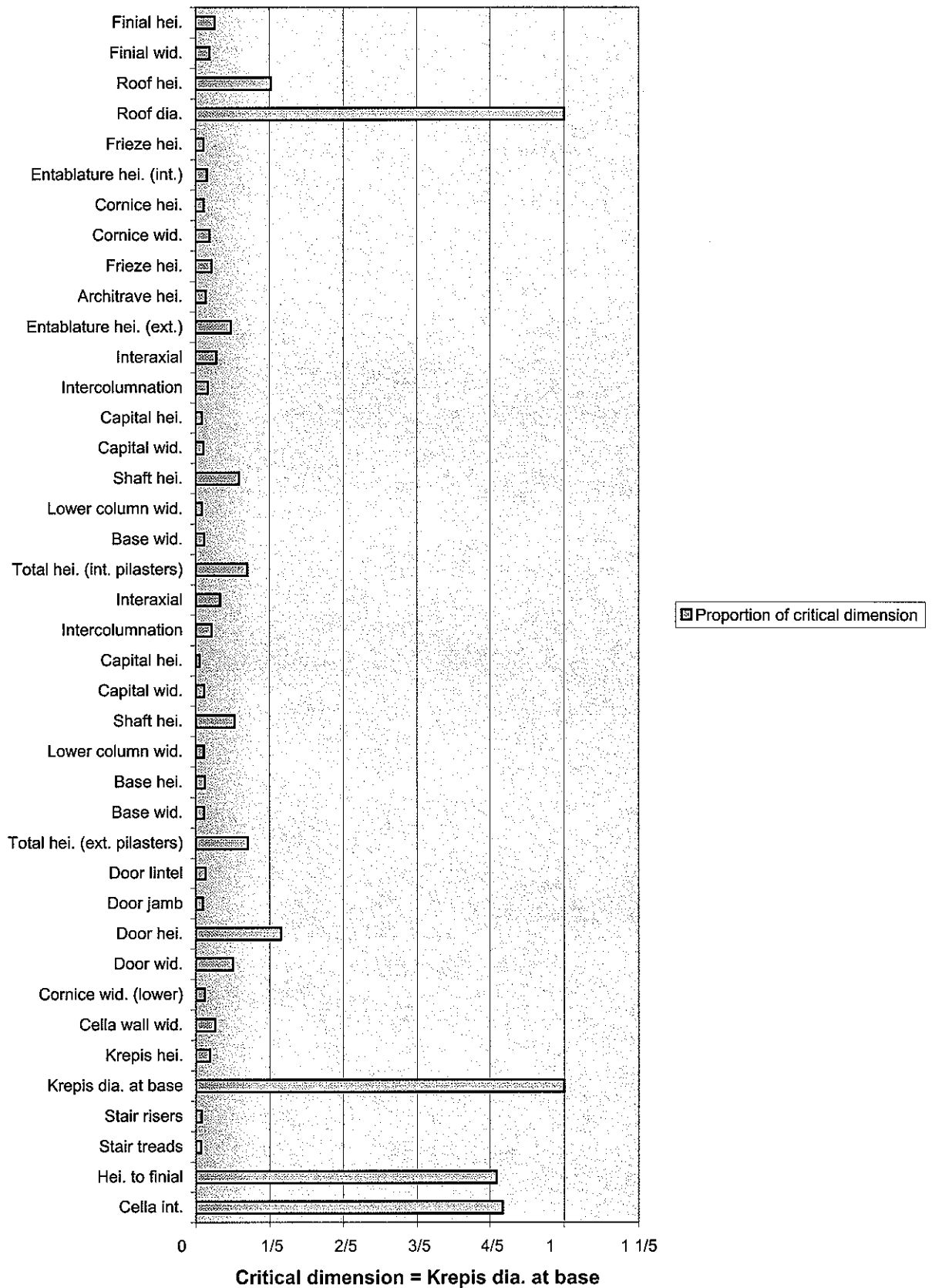
Text: 34-8.

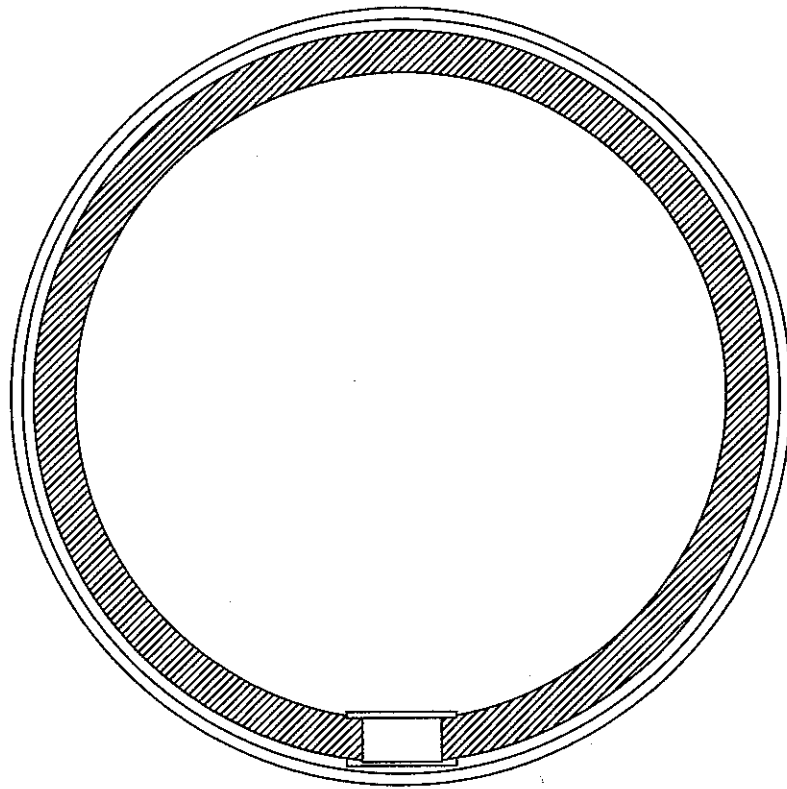
<i>actual measurements</i>	<i>meters</i>	<i>critical dimension *</i>	<i>within columnar order **</i>
Cella ext.	19.4		
Cella int.	17.2	5/6	
Hei. to finial	16.85	4/5	
Foundation dep.	0.5		
Foundation dia.	20.6		
Stair treads	0.3	1/69	
Stair risers	0.325	1/63	
Krepis dia. at base *	20.6	1	
Krepis dia. at euthynteria	19.3		
Krepis hei.	0.78	1/26	
Cella wall wid.	1.1	1/19	
Cornice wid. (lower)	0.5	1/41	
Cornice hei.	0.2		
Door wid.	2.1	1/10	
Door hei.	4.8	3/13	
Door jamb	0.4	1/52	
Door lintel	0.55	2/75	
Total hei. (ext. pilasters)	2.9	1/7	6 1/3
Base wid.	0.46	1/45	1
Base hei.	0.52	1/40	1 1/8
Lower column wid. **	0.46	1/45	1
Shaft hei.	2.15	2/19	4 2/3
Capital wid.	0.48	1/43	
Capital hei.	0.22	1/94	
Intercolumnation	0.9	1/23	2
Interaxial	1.36	1/15	3
Total hei. (int. pilasters)	2.89	1/7	8 1/4
Base wid.	0.475	1/43	1 1/3
Base hei.	0.115		1/3
Lower column wid. **	0.35	1/59	1
Shaft hei.	2.425	2/17	7
Capital wid.	0.45	1/46	1 2/7
Capital hei.	0.35	1/59	1
Intercolumnation	0.7	1/30	2
Interaxial	1.175	2/35	3 1/3
Entablature hei. (ext.)	1.97	2/21	
Architrave hei.	0.6	1/35	
Frieze hei.	0.9	1/23	
Cornice wid.	0.8	1/26	
Cornice hei.	0.47	1/44	
Entablature hei. (int.)	0.65	1/32	
Architrave hei.	0.2		
Frieze hei.	0.45	1/46	
Roof dia.	20.6	1	
Floorspace (square measure)	232.4		
Volume (cubic measure)	387.5		
<i>reconstructed measurements</i>			
Roof hei.	4.2	1/5	
Finial wid.	0.8	1/26	
Finial hei.	1.1	1/19	

Note: * *critical dimension*
** *in relation to the lower column dia.*

Source: Seiler 1986, 107-15 figs. 43-6.
McCredie et al. 1992, 29-91 pls. ???.

Chart #58. SAMOTHRACE: Arsinoeion





#58 SAMOTHRACE:
Arsinoeion
Scale 1:200

#59 SIDE: Tyche, Temple

Context: Agora, sited slightly off-center within a rectangular court defined by colonaded porticoes; oriented SW

Date: Hadrianic period: coins (see 'Iconographic sources' below) and architectural comparanda (see text)

Description: round peripteros (10.7 m. in dia., mainly marble) on a high podium fronted by 9 steps, with 12 columns and pilasters (Attic-Ionic bases, fluted shafts, and Corinthian capitals), 2 exterior Corinthian entablatures (3-fascia architraves, decorated frieze courses, modillion cornices, and simas with lion-head water spouts), a drop ceiling (see 'Decoration' below), coffer, and a conical roof topped by a pomegranate (see 'Iconographic sources' below)

Remains: part of the foundations and the podium (travertine and rubble fill incl. a broken column shaft, revetted in white marble), the steps, the columns, the pilasters, the entablatures, the ceiling, the coffer (white marble), and the roof (marble-plated? *opus caementicium*); a statue base may be embedded in the foundations (see Mansel and Bean 1956, 35)

Iconographic sources: coins minted under Gallienus (Vienna no. 29256) and at Salonina (Cambridge no. 8929; see Mansel and Bean 1956, figs. 47-8)

Decoration: ceiling decorated with 12 zodiac signs (see text); a cult statue of Tyche? inside the Temple (see 'Iconographic sources' above and text)

Excavations: F. Beaufort in 1811, E. Petersen in 1882-1885, and A. Mansel in the 1950s

Bibliography: Beaufort 1818, 98-9. Petersen 1892, 135-7. Mansel and Bean 1956, 31-7 figs. 31-8 and 47-8, pls. 37-8, 42 and 46. Heilmeyer 1970, 95 n. 373.

Text: 178-9.

SIDE: Tyche, temple

ideal proportional relationships

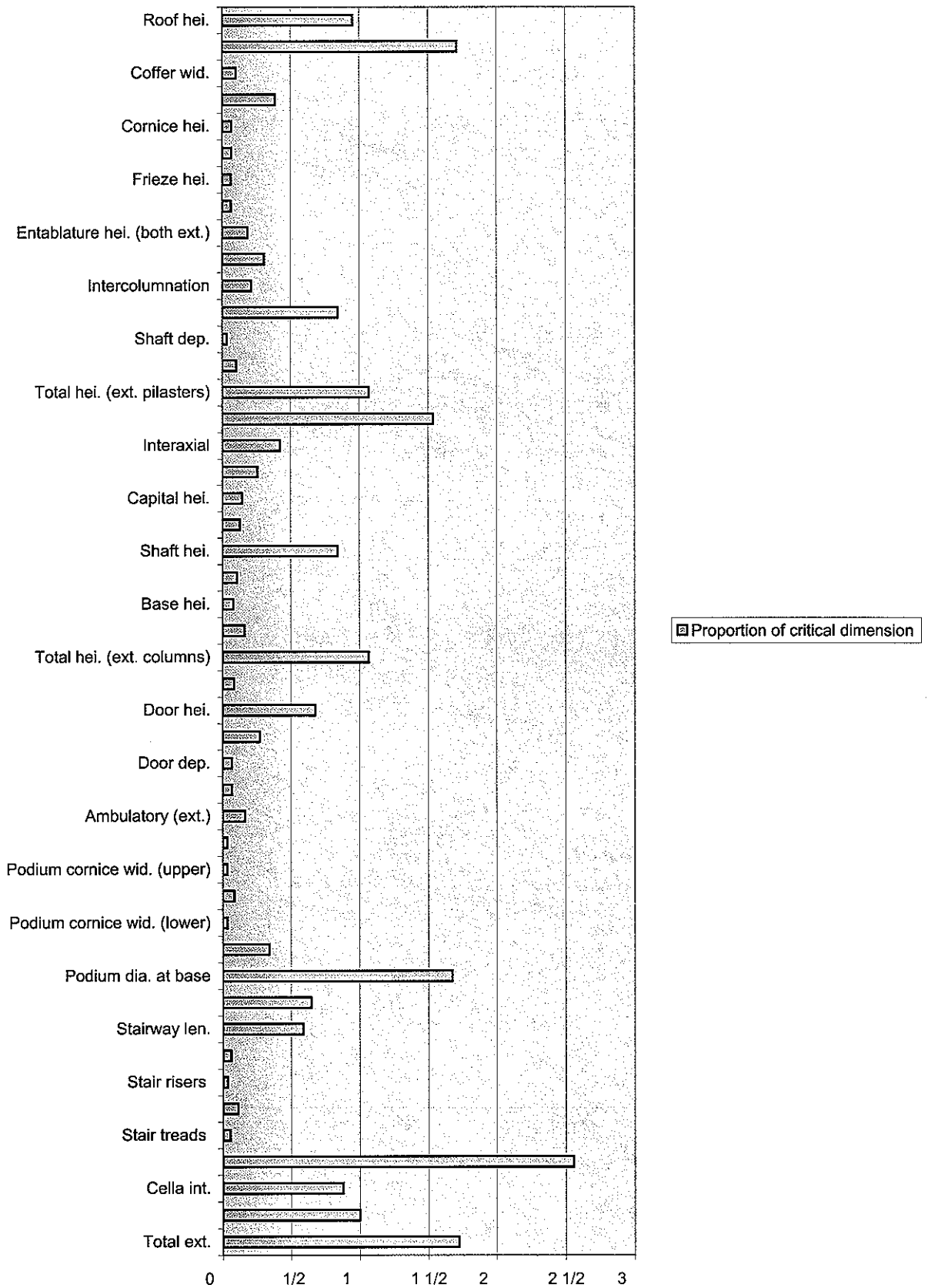
<i>actual measurements</i>	<i>ideal</i>				<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Total ext.	10.7	36.1			1 3/4	
Cella ext. *	6.2	20.9			1	
Cella int.	5.45	18.4			7/8	
Total hei.	15.8	53.4			2 5/9	
Stair treads	0.32	1.1			1/19	
Stair treads (lowest)	0.67	2.3			1/9	
Stair risers	0.2	0.7			1/30	
Stair risers (lowest)	0.35	1.2			1/17	
Stairway len.	3.65	12.3			3/5	
Stairway wid.	4	13.5	13.5	0.3%	2/3	
Podium dia. at base	10.37	35			1 2/3	
Podium hei.	2.1	7.1			1/3	
Podium cornice wid. (lower)	0.2	0.7			1/30	
Podium cornice hei.	0.5	1.7			1/12	
Podium cornice wid. (upper)	0.2	0.7			1/30	
Podium cornice hei.	0.2	0.7			1/30	
Ambulatory (ext.)	1	3.4			1/6	
Cella wall wid.	0.4	1.4			1/15	
Door dep.	0.4	1.4			1/15	
Door wid.	1.7	5.7			3/11	
Door hei.	4.2	14.2			2/3	
Door lintel	0.5	1.7			1/12	
Total hei. (ext. columns)	6.6	22.3			1 1/15	10 1/7
Base dia.	1	3.4			1/6	1 1/2
Base hei.	0.48	1.62			1/13	3/4
Lower column dia. **	0.66	2.2			2/19	1
Shaft hei.	5.2	17.6			5/6	8
Capital dia.	0.8	2.7	2.7	-1.9%	1/8	1 2/9
Capital hei.	0.9	3			1/7	1 1/3
Intercolumnation	1.6	5.4	5.4	-0.9%	1/4	2 1/2
Interaxial	2.6	8.8			3/7	4
Interaxial dia.	9.5	32.1			1 1/2	14 3/5
Total hei. (ext. pilasters)	6.6	22.3			1 1/15	
Base wid.	0.6	2	2.0	2.0%	1/10	
Shaft dep.	0.2	0.7			1/30	
Shaft hei.	5.2	17.6			5/6	
Intercolumnation	1.3	4.4			4/19	
Interaxial	1.9	6.4			4/13	
Entablature hei. (both ext.)	1.16	3.92			3/16	
Architrave hei.	0.38	1.28			1/16	
Frieze hei.	0.38	1.28			1/16	
Cornice wid.	0.4	1.4			1/15	
Cornice hei.	0.4	1.4			1/15	
Coffer len	2.4	8.1	8.1	0.5%	2/5	
Coffer wid.	0.63	2.1			1/10	
Roof dia.	10.6	35.8			1 5/7	
Roof hei.	5.9	19.9			20/21	
Floorspace (square measure)	23.3	265.9				
Volume (cubic measure)	453.5	16771.0				

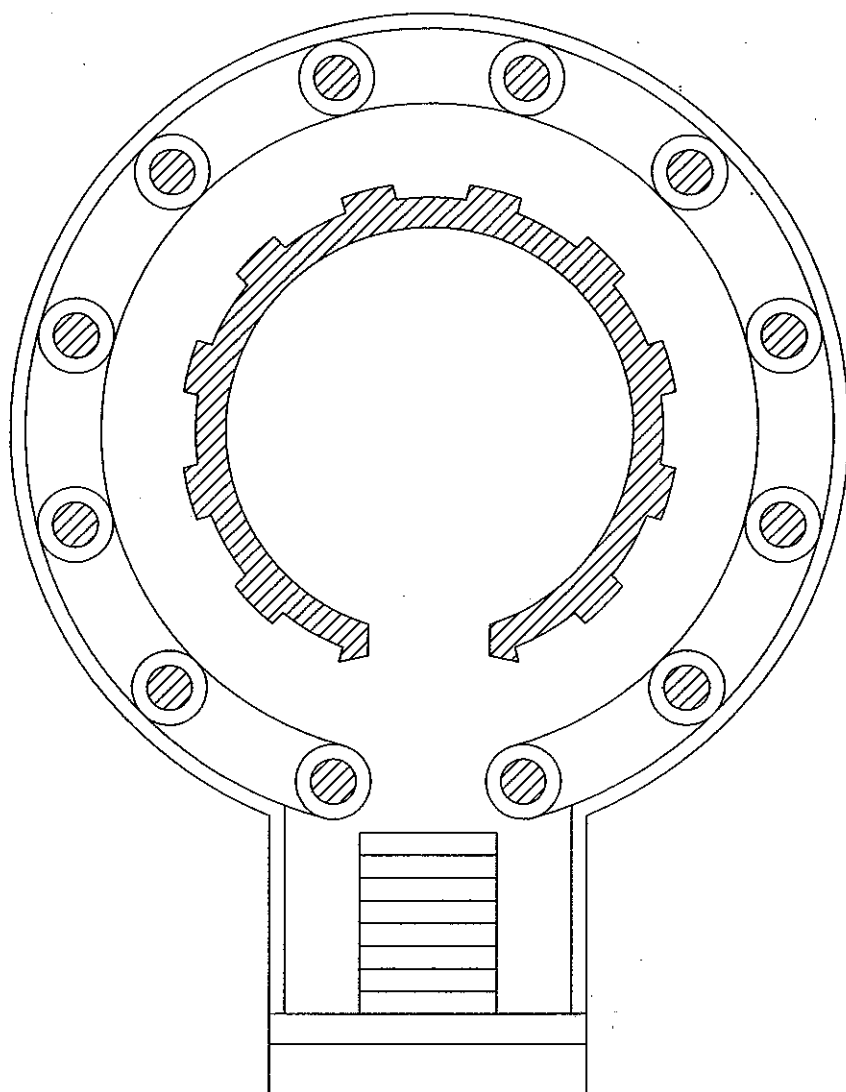
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: Mansel and Bean 1956, 31-7 figs. 31-8 and 47-8, and pls 37-8, 42 and 46.

Chart #59. SIDE: Tyche, temple





#59 SIDE:
Tyche, temple
Scale 1:100

#60 STABIAE AREA: Genius, Temple

Context: beside the border of Nocera or near the Madonna delle Grazie or by the Ponte S.

Marco; fronted by a rectangular altar (see Altmann 1906, 45)

Date: 2nd c. BC: prior to Sulla's destruction of the city in 89 BC (see Beloch 1890, 249)

Description: round peripteros with 14 columns

Remains: entablature? (see 'Literary and epigraphical sources: Attribution' below)

Literary and epigraphical sources:

Attribution: *IN 2173 Mus. Naz. = CIL X 772* (building inscription, entablature?). Vitr. 1.2;

Fest. p. 24.10 and 33.10 L (*aedes geni*).

Bibliography: Ruggiero 1881, 26. Beloch 1890, 249. Altmann 1906, 45.

Text: 62.

#61 STYMPHALOS: Artemis, Temple

Context: Sanctuary of Artemis, in the Agora below the Acropolis (4th c. BC); the Sanctuary (82 m. long by 35 m. wide) is limited by the Acropolis (N) and temenos walls on 3 sides; the Temple is oriented towards the open court (NE)

Date: 4th c. BC: terracotta finds, and building materials and techniques comparable to 4th c. BC fortifications (see Seiler 1986, 125-6)

Description: round (15.5 m. long by 5.60-7.50 m. wide; feldspar) with 2-column, 3-step pronaos, a rectangular adyton and a drum (7.5 m. in dia.)

Remains: most of the socle (irregular feldspar blocks) and some roof tiles (terracotta)

Literary and epigraphical sources:

Sanctuary of Artemis: Paus. 8.22.2 and 7 (worship linked to a natural spring).

Decorative program: Paus. 8.22.7 (cult statue).

Decoration: gilded wooden cult statue (see 'Literary and epigraphical sources: Decorative program' above)

Excavations: A. Orlandos in 1924-1927

Previous attributions: Robert (1939, 383) identified it as a chthonic heroon based on its similarity to prehellenic tholoi fronted by dromoi.

Bibliography: Orlandos 1924, 462; 1925a, 334; 1925b, 448; 1925c, 225; 1926, 419-20; and 1927, 478. Robert 1939, 381-3. Seiler 1986, 120-9.

Text: 34-8.

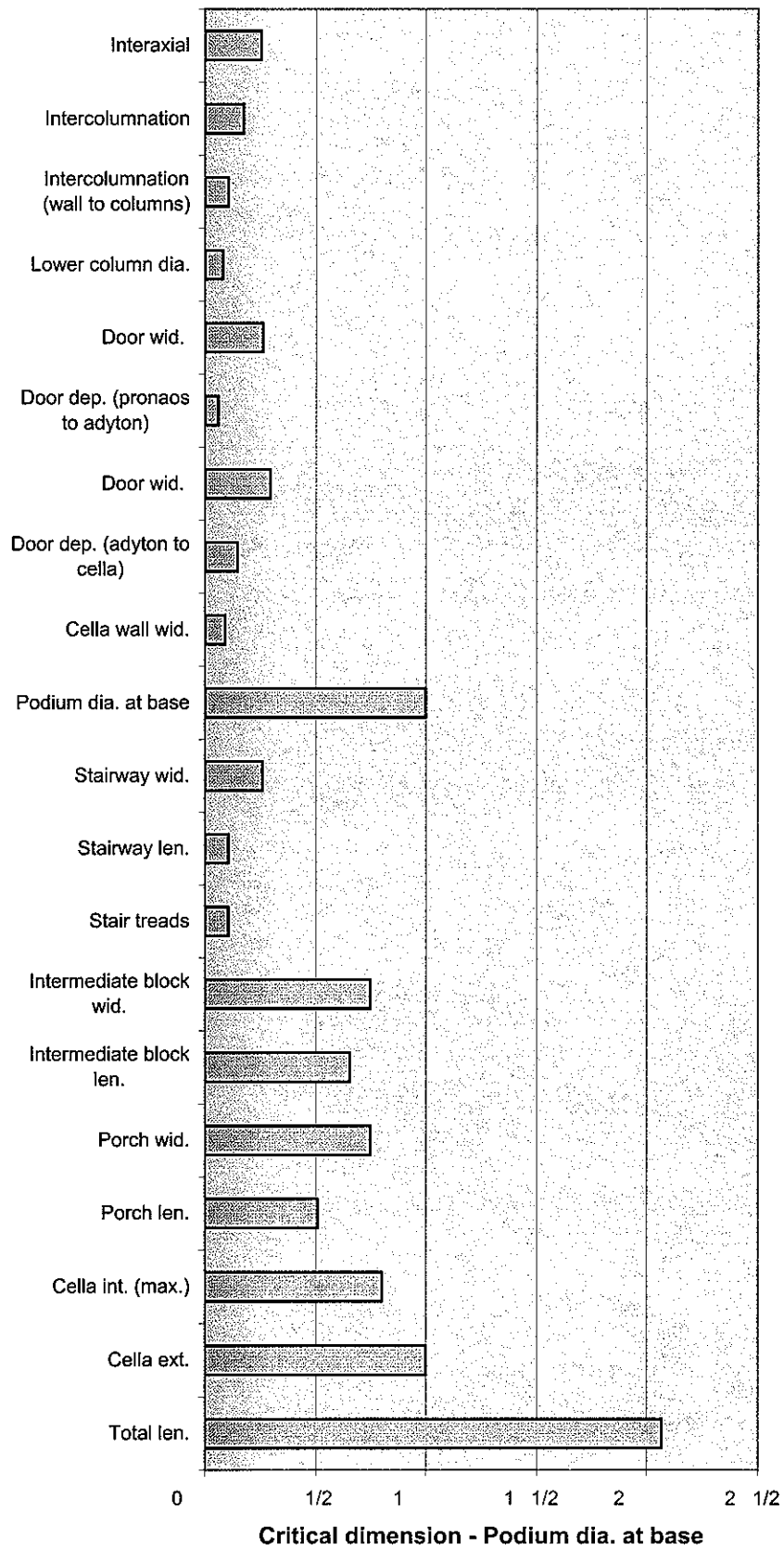
<i>STYMPHALOS: Artemis, temple</i>		<i>ideal proportional relationships</i>	
<i>actual measurements</i>		<i>to critical dimension *</i>	<i>within columnar order **</i>
	<i>meters</i>		
Total len.	15.5	2 1/15	
Cella ext.	7.5	1	
Cella int. (max.)	6	4/5	
Porch len.	3.8	1/2	
Porch wid.	5.6	3/4	
Intermediate block len.	4.9	2/3	
Intermediate block wid.	5.6	3/4	
Stair treads	0.78	2/19	
Stairway len.	0.78	2/19	
Stairway wid.	1.93	1/4	
Podium dia. at base *	7.5	1	
Cella wall wid.	0.7	1/11	
Door dep. (adyton to cella)	1.1	1/7	
Door wid.	2.2	2/7	
Door dep. (pronaos to adyton)	0.45	3/50	
Door wid.	1.95	13/50	
Lower column dia. **	0.6	2/25	1
Intercolumnation (wall to columns)	0.8	2/19	1 1/3
Intercolumnation	1.3	4/23	2 1/6
Interaxial	1.9	1/4	3 1/6
Floorspace (square meters)	28.3		

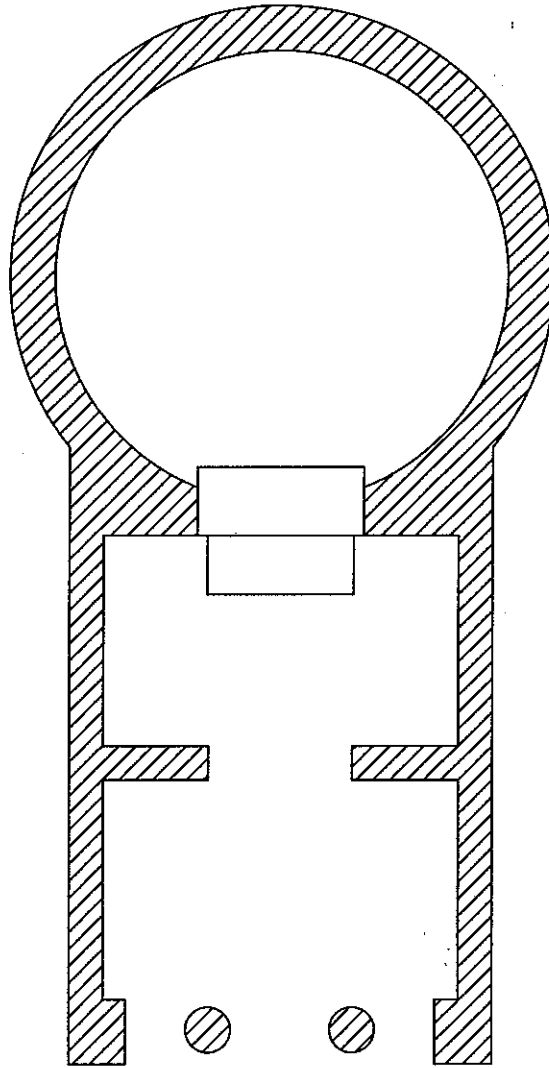
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: Seiler 1986, 120-9 figs. ??

Chart #61. STYMPHALOS: Artemis, temple





#61 STYMPHALOS:
Artemis, temple
Scale 1:100

#62 TERMESSOS: Rotunda

Context: Agora, to the E of the city's main temple complex

Date: late Hellenistic period: closest architectural comparanda (mainly the Monument of Lysicrates, Athens #3)

Description: drum (2.34 m. in dia., marble) on a high 3-step socle with 6 exterior pilasters (Attic bases and Corinthian capitals), an Ionic entablature, and a curved roof

Remains: most of the base (stone core with marble revetment), euthynteria, cella wall, pilasters, entablature, drop ceiling and curved roof (marble)

Decoration: ceiling depicting the head of Medusa in relief within a geometric border; 3-fascia architrave and frieze course with acanthus and ivy; roof with simulated scale-shaped tiles

Excavations: K. Lanckoronski in the 1880s

Previous attributions: identified as a commemorative monument (see Seiler 1986, 138-43)

Bibliography: Lanckoronski 1892, 46, 105-7 and pl. 17. Seiler 1986, 138-43.

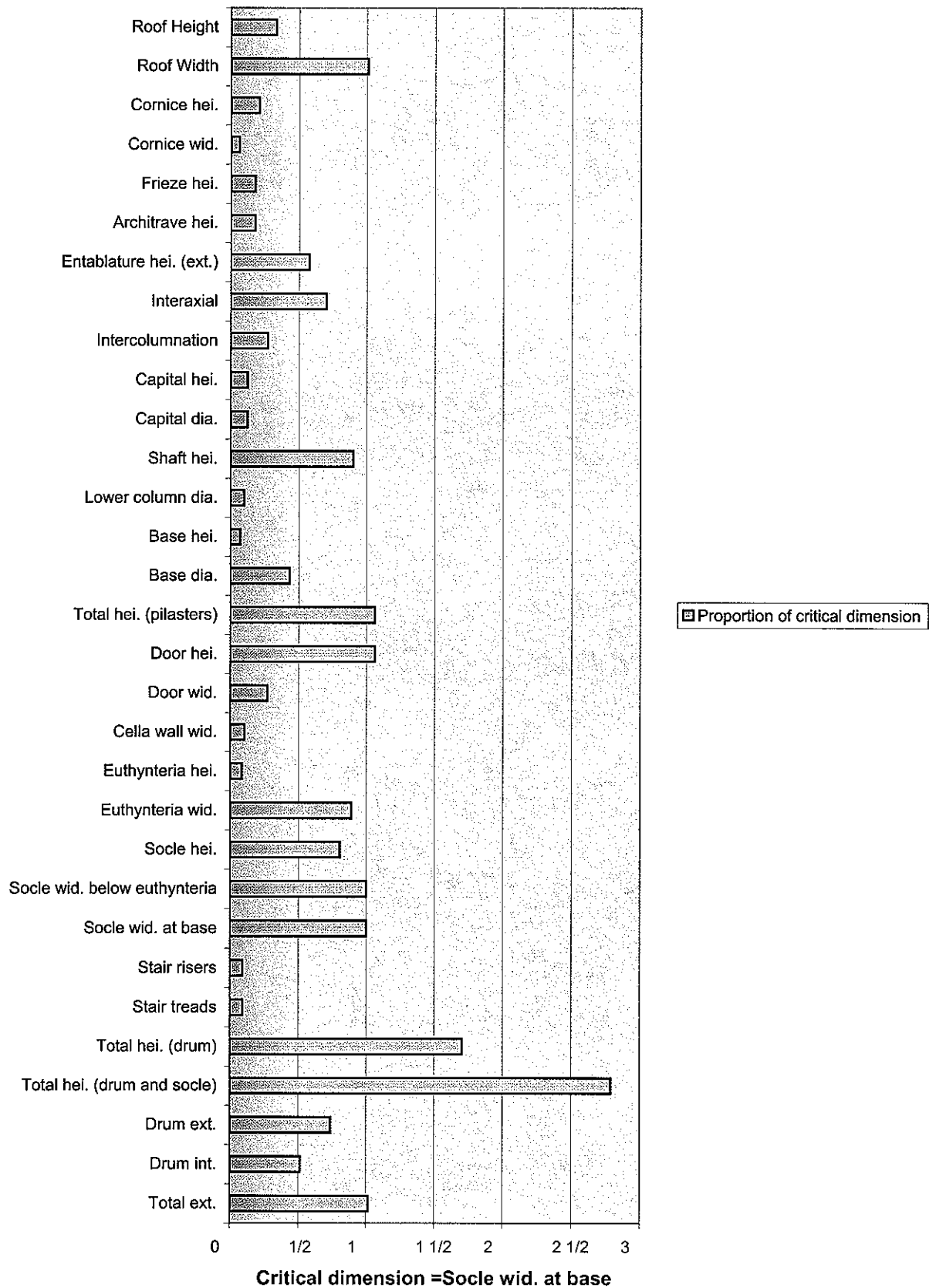
Text: 34-8.

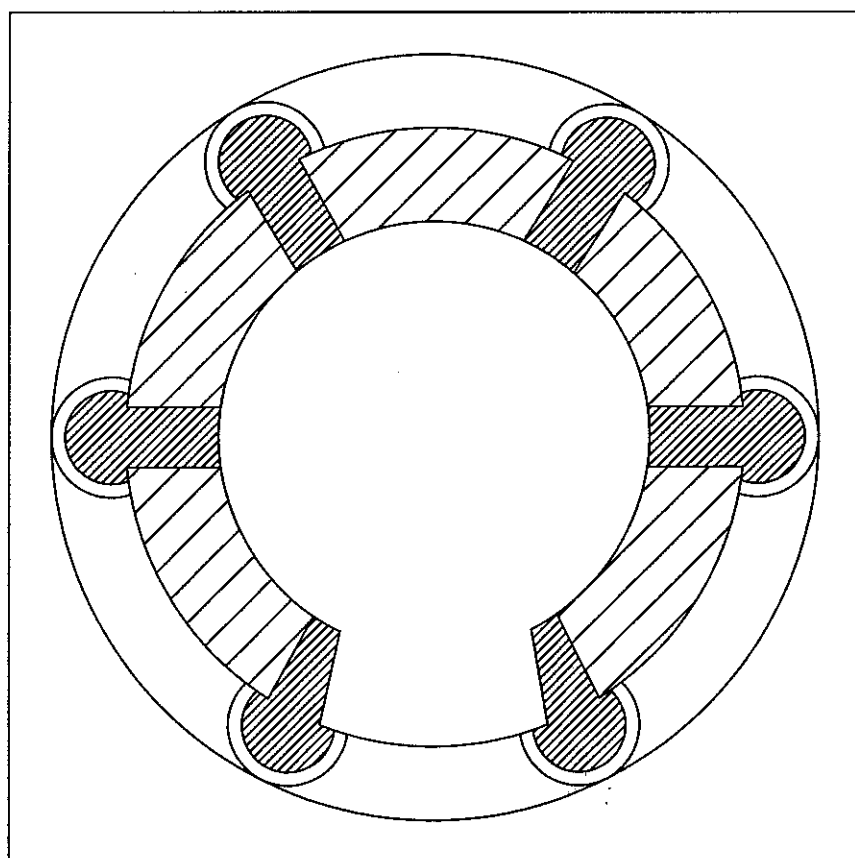
TERMESSOS: Rotunda		<i>ideal proportional relationships</i>		
<i>actual measurements</i>		<i>meters</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Total ext.		2.82	1	
Drum int.		1.43	1/2	
Drum ext.		2.05	3/4	
Total hei. (drum and socle)		7.75	2 4/5	
Total hei. (drum)		4.73	1 5/7	
Stair treads		0.26	3/32	
Stair risers		0.26	3/32	
Socle wid. at base *		2.78	1	
Socle wid. below euthynteria		2.78	1	
Socle hei.		2.24	4/5	
Euthynteria wid.		2.52	8/9	
Euthynteria hei.		0.24	2/23	
Cella wall wid.		0.29	2/19	
Door dep.		0.54		
Door wid.		0.75	3/11	
Door hei.		2.95	1 1/16	
Total hei. (pilasters)		2.95	1 1/16	10 1/2
Base dia.		1.2	3/7	4 2/7
Base hei.		0.2	1/14	5/7
Lower column dia. **		0.28	1/10	1
Shaft hei.		2.5	9/10	9
Capital dia.		0.35	1/8	1 1/4
Capital hei.		0.35	1/8	1 1/4
Intercolumnation		0.75	3/11	2 2/3
Interaxial		1.95	5/7	7
Entablature hei. (ext.)		1.6	4/7	
Architrave hei.		0.5	2/11	
Frieze hei.		0.5	2/11	
Cornice wid.		0.17	1/16	
Cornice hei.		0.6	4/19	
Roof Width		2.8	1	
Roof Height		0.92	1/3	
Floorspace (square measure)		1.6		
Volume (cubic measure)		3.2		

Note: * *critical dimension*
 ** *in relation to the lower column dia.*

Source: Lanckoronski 1892, 105 pl. ?
 Seiler 1986, 138-43.

Chart #62. TERMESSOS: Rotunda





#62 TERMESSOS:
Rotunda
Scale 1:25

#63 TIBUR: Aphrodite, Shrine

Context: Hadrian's Villa, on an artificial terrace above the Valle di Tempe; formed the centerpiece of a nymphaeum (known as the Ninfeo Fede) consisting of a hemicycle (ca. 57 m. in dia.) and 2 side apses (ca. 17 m. in dia. and 7 m. deep, see de Franceschini 1991, 140-2); oriented towards a major road (NW)

Date: Hadrianic period: location and a brick stamp from the nymphaeum (see 'Literary and epigraphical sources: Inscriptions from Remains' below)

Patron: Hadrian

Description: round monopteros? (16.5 m. in dia., marble, see text) with 20 columns (plinths, fluted shafts, Doric capitals), a Doric entablature, coffers, and a conical roof? (see text)

Remains: part of 5 columns, the entablature, and the coffers (marble); set inside a nymphaeum (marble-revetted *opus testaceum*), resting on a terrace (*opus caementicium*); a statue of Aphrodite (marble) was found nearby

Literary and epigraphical sources:

Inscriptions from 'Remains': P.SERVILI.FIRMI.OP.DE FGL / SEIAES.ISAVRICÆ (brick stamps, W wall of the nymphaeum, see Bloch 1937, 115 no. 1425).

Iconographic sources: plans of Piranesi (1781; for sources, see Love 1970, 154) and Rossini (1826; for sources, see Aurigemma 1996, 44)

Decoration: monopteros: statue of Aphrodite (see 'Remains' above and Corso 1988, 24, 37-8, 42-3, 91-2, 133-9, 187, 197, 221, and 223; 1990, 17-36, 151-3, and 169; and 1991, 147-56 and 196; cf. Calandra 1996, 250), nymphaeum: *opus sectile* pavement (various marbles; see de Franceschini 1991, 140-2 and 449-50)

Excavations: Conte Fede in the 1700s (nymphaeum), J. Martin and M. Boussois in 1913 (monopteros), and R. Vighi in 1958 (statue of Aphrodite); Vighi's restoration efforts continued into the early 1990s

Previous attributions: Piranesi (see Aurigemma 1996, 45) suggested that the Shrine was dedicated to the nymphs

Bibliography: Gusman 1904, 203-4. Martin and Boussois 1913, 261-5. Wirth 1929, esp. 142. Lugli 1932, esp. 112-4. Bloch 1937, 115 no. 1425. Lehmann 1953, 119-21 and n. 155. Schefold 1964, 56 fol. pl. 15. 2 and 4. Rakob 1968, 318. Love 1970, 149-55; and 1972, 61-76. Borbein 1973, 188-94. Love 1973, 413-24. Linfert 1981, 615. Gualandi 1982, 266. Raeder 1983, 51.236. Ridgway 1984, 80 n. 66. La Rocca 1986, esp. 20-2 and fig. 19. Corso 1988, 24, 37-8, 42-3, 91-2, 133-9, 187, 197, 221, and 223. von Hesberg 1988, 193 n. 56. Corso 1990, 17-36, 151-3, and 169. Weber 1990, 108 and 220 cat. M6. Corso 1991, 147-56 and 196. de Franceschini 1991, 140-2 and 446-50. Andrae and Ortega 1992, 69. Roux 1992, 196 fol. MacDonald and Pinto 1995, 58-60 and figs. 37 and 50. Aurigemma 1996, 44-7. Calandra 1996, 189-90, 193, 197-8, 207, 239, 249-51, 256, and 267. Coarelli 1999, 116-7.

Text: 174-8.

TIBUR: Aphrodite, temple

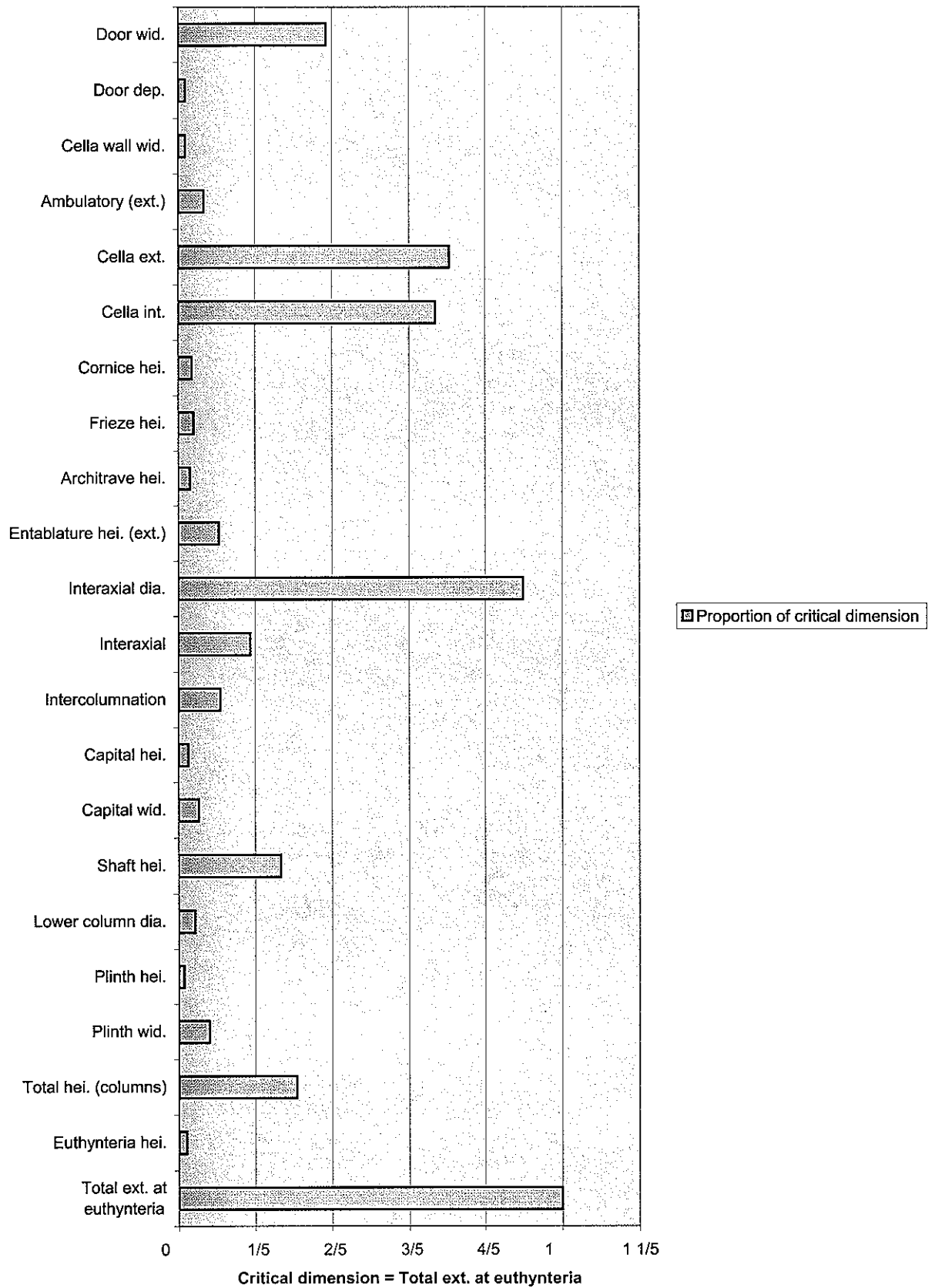
<i>actual measurements</i>						<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>		<i>to critical dimension *</i>	<i>within columnar order **</i>
Total ext. at euthynteria *	16.5	55.7	56	0.5%		1	
Euthynteria hei.	0.35	1.18				1/48	
Total hei. (columns)	5	16.9	17	0.6%		4/13	7
Plinth wid.	1.3	4.4				2/25	1 5/6
Plinth hei.	0.25	0.8				1/70	1/3
Lower column dia. **	0.7	2.4				3/70	1
Shaft hei.	4.35	14.7				4/15	6 1/8
Capital wid.	0.875	2.96				1/19	1 1/4
Capital hei.	0.4	1.4				1/40	3/5
Intercolumnation	1.8	6.1				1/9	2 1/2
Interaxial	3.1	10.5				3/16	4 3/8
Interaxial dia.	15.2	51.4				9/10	21 3/7
Entablature hei. (ext.)	1.75	5.9				2/19	
Architrave hei.	0.5	1.7				1/33	
Frieze hei.	0.65	2.2				1/25	
Cornice hei.	0.6	2				1/28	
Floorspace (square measure)	213.8	2436.7					
<i>reconstructed measurements</i>							
Cella int.	11.1	37.5				2/3	
Cella ext.	11.7	39.5				5/7	
Ambulatory (ext.)	1.1	3.7				1/15	
Cella wall wid.	0.3	1				1/56	
Door dep.	0.3	1				1/56	
Door wid.	6.4	21.6	22	1.9%		2/5	
Floorspace (square measure)	96.8	1104.5					

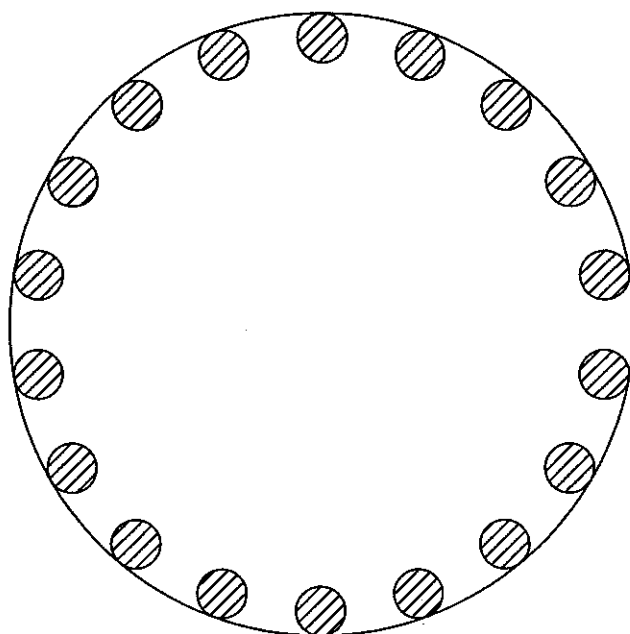
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: de Franceschini 1991, 140-2 and 446-50, figs. ??

Chart #63. TIBUR: Aphrodite, shrine





#63 TIBUR:
Aphrodite, shrine
Scale 1:200

#64 TIBUR: Round Temple

Context: Acropolis, on an artificial extension next to a rectangular temple (1st half of the 2nd c. BC, N)

Date:

- I. late 2nd c. BC: use of tufa *opus incertum* and details of the capitals, molding and coffers
- II. 83 BC (re-dedicated?, see text): the letter forms and content of the Temple's inscription (see 'Literary and epigraphical sources: Inscriptions from Remains' below and text)

Patron:

- I. a local magistrate or a priestly college
- II. L. Gellius Poplicola (see text)

Description:

- I. round peripteros (14.25 m. in dia., tufa and travertine) with a high podium accessed via an 11-step stairway, 18 Corinthian columns, an Ionic architrave, 2 windows, and a conical roof; a treasury is embedded in its walls
- II as I.

Remains:

- I. most of the foundations, podium, stairwell, and much of the cella wall (all of tufa *opus incertum* and travertine *opus quadratum*), columns, door and window frames, the entablature, and the treasury (travertine)
- II. building inscription (see 'Literary and epigraphical sources: Inscriptions from Remains' below)

Literary and epigraphical sources:

Inscription from 'Remains':

- II. *CIL* XIV 3573: [...]E L GELLIO LF[...]

Location and attribution:

- I. Dion. Hal. 4.62.5 (repository for the Sibylline books).

Decorative scheme: Lact. *inst.* 1.6.12 (cult image of Albunea *tenens in manu librum*).

Iconographic sources: drawings by G. da Sangallo, A. Dosio and an anonymous artist whose work is in the Wiener Hofbibliothek (see Delbrueck 1907-1912, 21-2, and Giuliani 1970, 132-3)

Decoration: statue of Albunea (see 'Literary and epigraphical sources: Decorative scheme' above); first style stucco work

Excavations: visible since antiquity

Previous attributions: attributed to Vesta, Tiberus, and Hercules Saxanus (see Giuliani 1970, 122-3)

Bibliography: Delbrueck 1907-1912, 21-7. Fagerlind 1932, 118-31. Tilly 1934, 25-30. Fasolo and Gullini 1953, 333-4 and 434-8. Lyngby 1965, 77-98. Shoe 1965, 173-7. Giuliani 1970, 119-43. Honroth 1971, 12. von Hesberg 1981, 201-45. Coarelli 1987, 103-10. Lauter-Bufe 1987, 53-4. Wilson Jones 1989a, 39-41, 63, and 69; and 1989b, 108-11, 114, 128, 131-2, and 146. Coarelli 1993a, 90-4.

Text: 55-7.

TIBUR: Rotunda

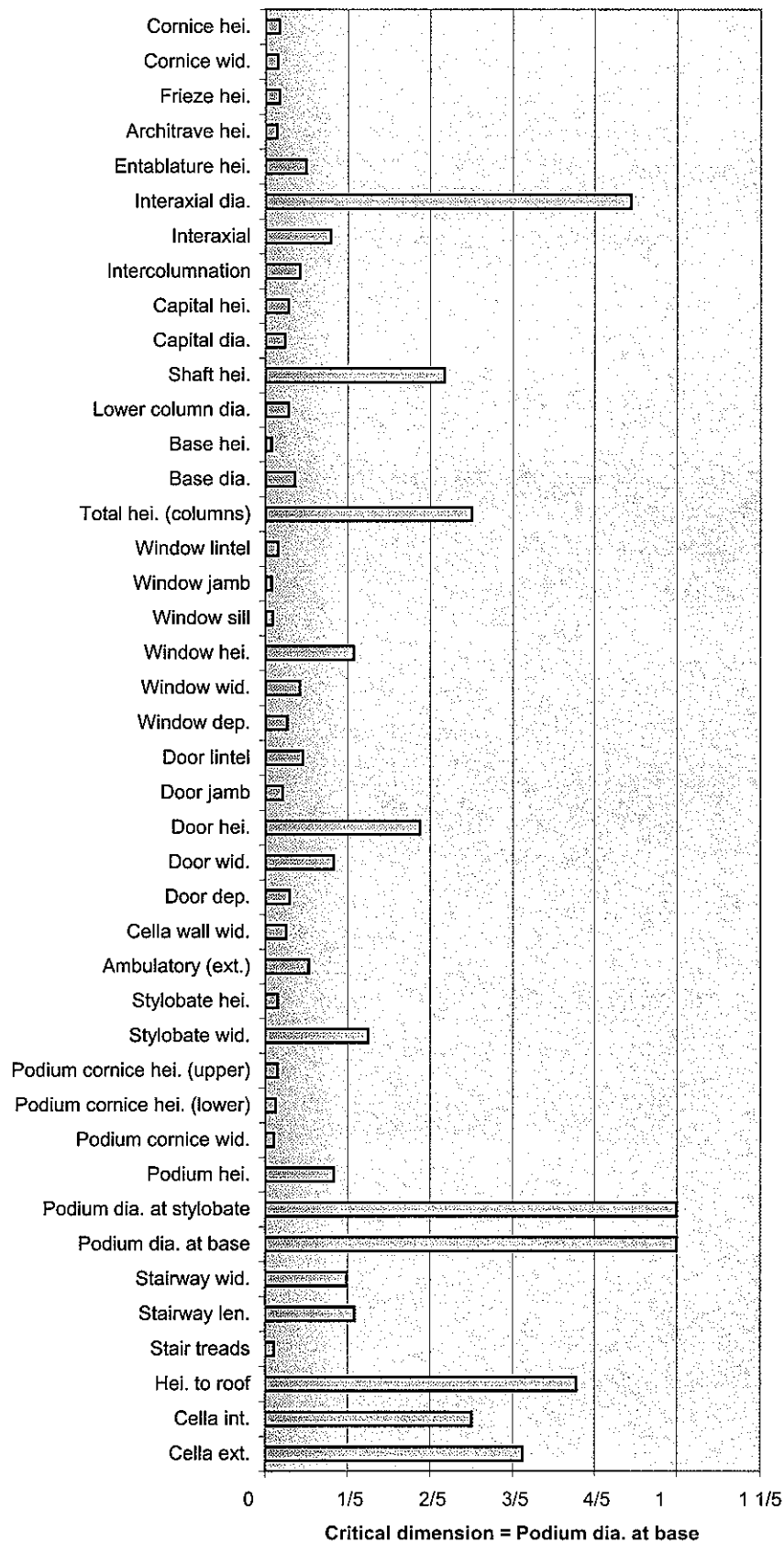
<i>actual measurements</i>	<i>ideal</i>				<i>ideal proportional relationships</i>	
	<i>meters</i>	<i>roman feet</i>	<i>roman feet</i>	<i>% difference</i>	<i>to critical dimension *</i>	<i>within columnar order **</i>
Cella ext.	8.71	29.42	30	2.0%	5/8	
Cella int.	7.25	24.49	24	-2.0%	1/2	
Hei. to roof	10.77	36.34	36	-0.9%	3/4	
Stair treads	0.28	0.95			1/51	
Stairway len.	3.08	10.41			2/9	
Stairway wid.	2.8	9.5			1/5	
Podium dia. at base *	14.25	48.14	48	-0.3%	1	
Podium dia. at stylobate	14.25	48.14	48	-0.3%	1	
Podium hei.	2.39	8.07	8	-0.9%	1/6	
Podium cornice wid.	0.3	1			1/48	
Podium cornice hei. (lower)	0.35	1.18			1/41	
Podium cornice hei. (upper)	0.4	1.4			1/34	
Stylobate wid.	3.52	11.89	12	0.9%	1/4	
Stylobate hei.	0.4	1.4			1/34	
Ambulatory (ext.)	1.51	5.1			2/19	
Cella wall wid.	0.72	2.43			1/20	
Door dep.	0.83	2.8			1/17	
Door wid.	2.375	8.02	8	-0.2%	1/6	
Door hei.	5.4	18.2	18	-1.1%	3/8	
Door jamb	0.6	2			1/24	
Door lintel	1.27	4.29			1/11	
Window dep.	0.75	2.53			1/19	
Window wid.	1.17	3.95	4	1.3%	1/12	
Window hei.	3	10.1			3/14	
Window sill	0.24	0.81			1/59	
Window jamb	0.2	0.7			1/69	
Window lintel	0.4	1.4			1/34	
Total hei. (columns)	7.1	23.98	24	0.1%	1/2	9 1/8
Base dia.	1	3.5			1/14	1 1/3
Base hei.	0.195	0.66			1/73	1/4
Lower column dia. **	0.78	2.63			1/18	1
Shaft hei.	6.168	20.84			3/7	8
Capital dia.	0.65	2.2			1/22	5/6
Capital hei.	0.78	2.63			1/18	1
Intercolumnation	1.2	4.1	4	-2.4%	1/12	1 1/2
Interaxial	2.2	7.5			3/19	2 6/7
Interaxial dia.	12.83	43.34			8/9	16 1/2
Entablature hei.	1.41	4.76			1/10	
Architrave hei.	0.38	1.29			1/37	
Frieze hei.	0.47	1.59			1/30	
Dentil hei.	0.1	0.3				
Cornice wid.	0.4	1.4			1/34	
Cornice hei.	0.46	1.55			1/31	
Floorspace (square measure)	41.3	471.1				

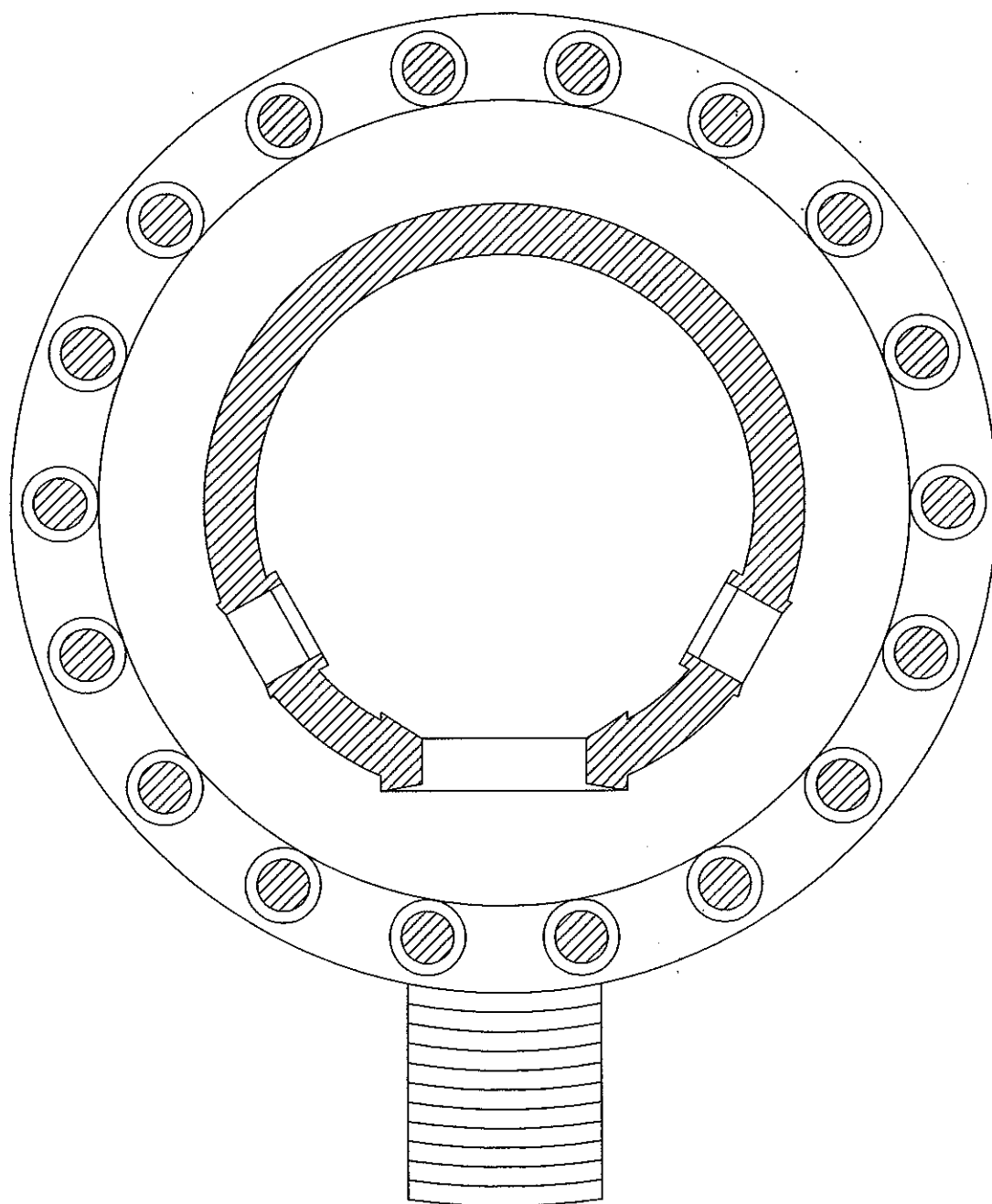
Note: * *critical dimension*

** *in relation to the lower column dia.*

Source: Delbrueck 1907, ??

Chart #64. TIBUR: Round temple





#64 TIBUR:
Round temple
Scale 1:100

#65 TIBUR: Theater Shrine

Context: the South Theater (max. dia. of 50 m.), Hadrian's Villa; set within a trapezoidal precinct near the summit of the cavea

Date: Hadrianic period: location

Patron: Hadrian

Description: drum (9.35 m. in dia., *opus reticulatum*) topped by a dome, possibly preceded by a pronaos with 4 columns (Attic-Ionic bases?, fluted shafts, Ionic capitals; see text and Ligorio in 'Decoration' below); may have contained a statue base

Remains: much of the drum (tufa? *opus reticulatum*); fragments of a statue of Hercules (marble)

Iconographic sources: drawings by Ligorio, Contini, Piranesi, Nibby, and Pannini (see text and Hanson 1959, 72-3, for sources; for Pannini, see MacDonald and Pinto 1995, figs. 157 and 159-60)

Decoration: pronaos: 3 statues incl. Hercules (see text), and a multi-colored pavement (red, yellow, white, and green marbles; for Ligorio's description, see Nibby 1848-1849, 700) MacDonald and Pinto (1995, 130) reconstruct a gray marble pavement for the precinct.

Excavations: visible since the Renaissance

Previous attributions: Wieseler (1851, 18; vs. MacDonald and Pinto 1995, 130) suggested that the platform served as an Imperial box.

Bibliography: Nibby 1848-1849, 700. Wieseler 1851, 18 pl. 2 no. 13. Winnefeld 1895, 123-5 fig. 40. Hanson 1959, 72-3 and 77 figs. 37-8. MacDonald and Pinto 1995, 125-30 figs. 155-7 and 159-60.

Text: 174-8.

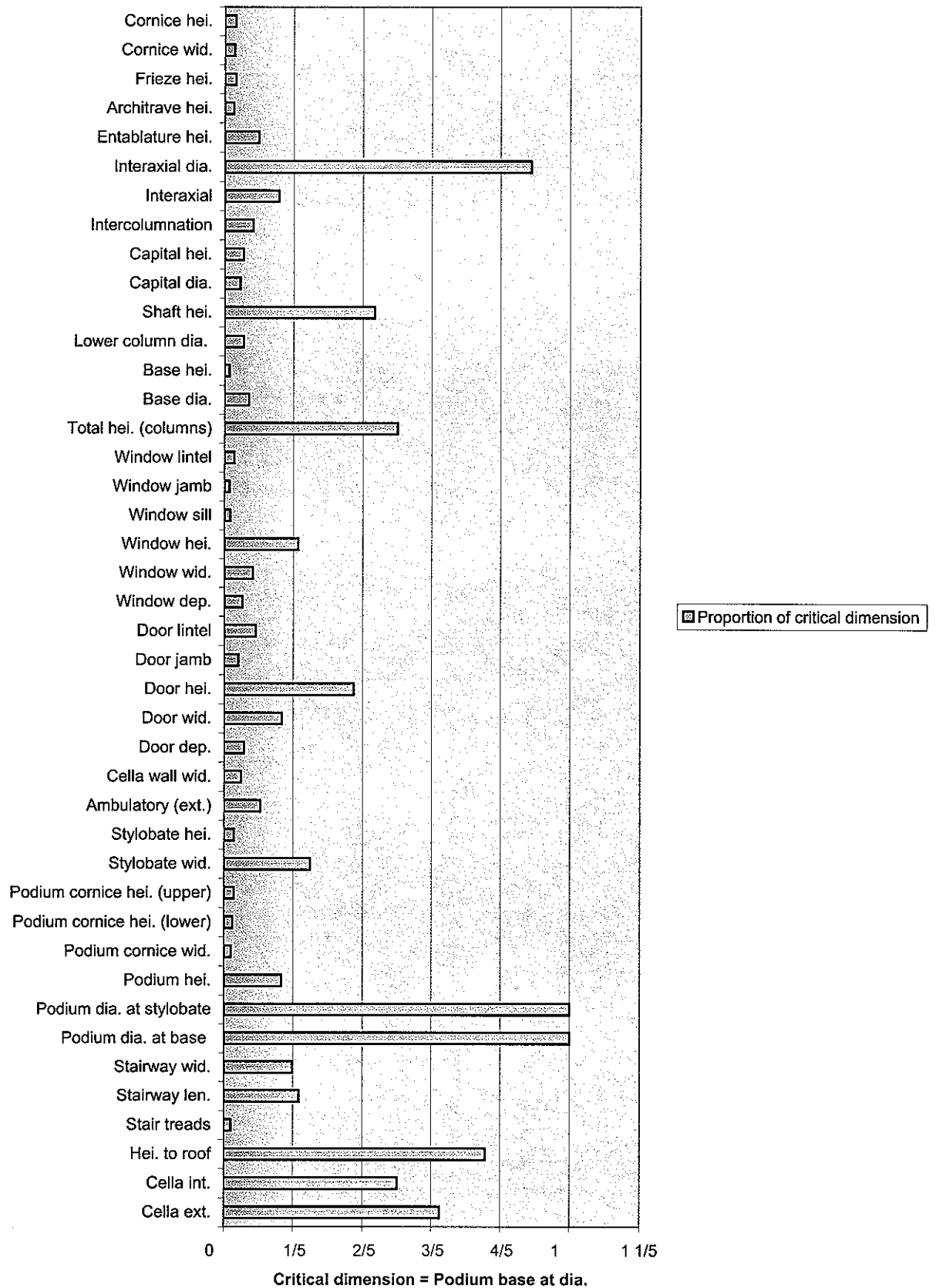
TIBUR: shrine

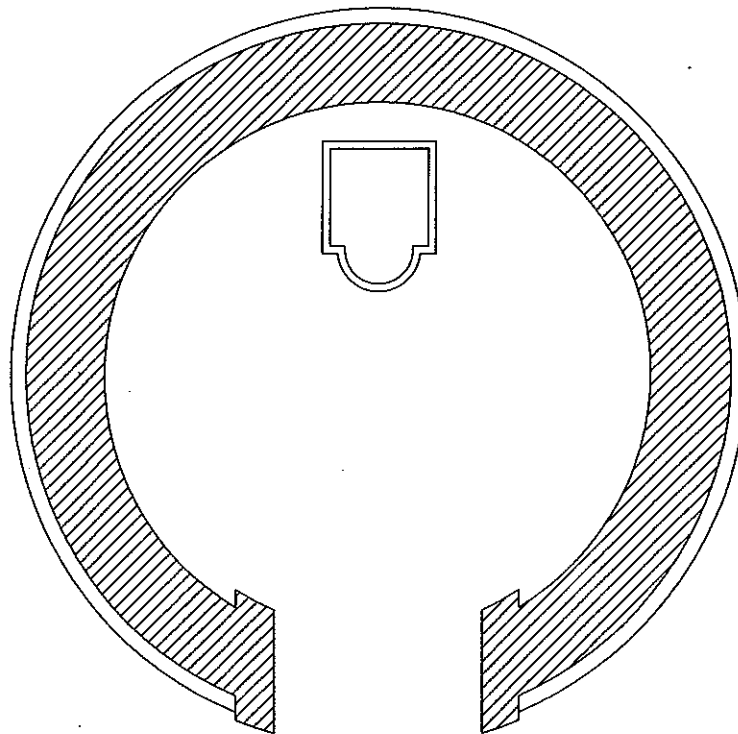
<i>actual measurements</i>	<i>meters</i>	<i>roman feet</i>	<i>ideal roman feet</i>	<i>% difference</i>	<i>ideal proportional relationships</i>
Cella ext. *	9.35	31.59	32	1.3%	1
Cella int.	7.25	24.49	24	-2.0%	3/4
Cella wall wid.	1.05	3.55			1/9
Cornice wid.	0.5	1.7			1/19
Door dep.	1	3.4			2/19
Door wid. (outside dim.)	2.9	9.8	10	2.0%	5/16
Door wid. (inside dim.)	2.6	8.8			3/11
Floorspace (square measure)	41.3	471.1			
<i>reconstructed measurements</i>					
Total hei.	13	43.9	44	0.2%	1 3/8
Door hei.	5.5	18.6			4/7
Door jamb	0.5	1.7			1/19
Door lintel	0.5	1.7			1/19
Total hei. (columns)	5.5	18.6			4/7
Base dia.	0.6	2			1/16
Cornice wid.	0.4	1.4			1/23
Cornice hei.	0.7	2.4			3/40
Roof dia.	9.35	31.59	32	1.3%	1
Roof hei.	4.7	15.9	16	0.6%	1/2
Volume (cubic measure)	258.7	8889.9			

Note: * *critical dimension*

Source: Pannini's drawing.

Chart #65. TIBUR: Theater Shrine





#65 TIBUR:
Theater shrine
Scale 1:100

NOTES ON THE TABLES AND CHARTS

THE TABLES

The Tables included in each Catalogue entry present all the dimensions that can be determined accurately based on building remains (under 'actual measurements') and those that have been reconstructed based on reliable iconographic evidence (under 'reconstructed measurements'). These dimensions appear in meters in the first column ('meters') and in Roman feet (calculated as 1 Roman foot = 0.296 m.) in the second column ('roman feet'). The third column ('ideal roman feet') represents the Roman foot measurements rounded to the nearest whole number or simple fraction, provided that the difference between the real and ideal Roman feet measurements is less than 3%. The percentage difference is listed in the fourth column ('% difference').

The fifth and sixth columns present fractional relationships based on firstly, the 'critical dimension' (defined in Chapter II 'Vitruvius on round temple design'), and secondly, the lower column diameter.

THE CHARTS

The Chart which follows the Table included in each Catalogue entry is a graphic representation of the fifth column.

The first set of Chapter-specific Charts reflects Vitruvius' guidelines for temple design as laid out in Chapter II. After these come Charts which illustrate the fractional relationships listed in columns five and six of the Tables. The last Chart per Chapter shows the relationship between the round temples' critical dimensions, floor space, and volumes, all of which appear as entries in the Tables. These Chapter Charts form the basis for the 'Proportional analysis' sections of Chapters IV-VII.

Chart IV.1. Greek tholoi: Vitruvius on monopteroi design

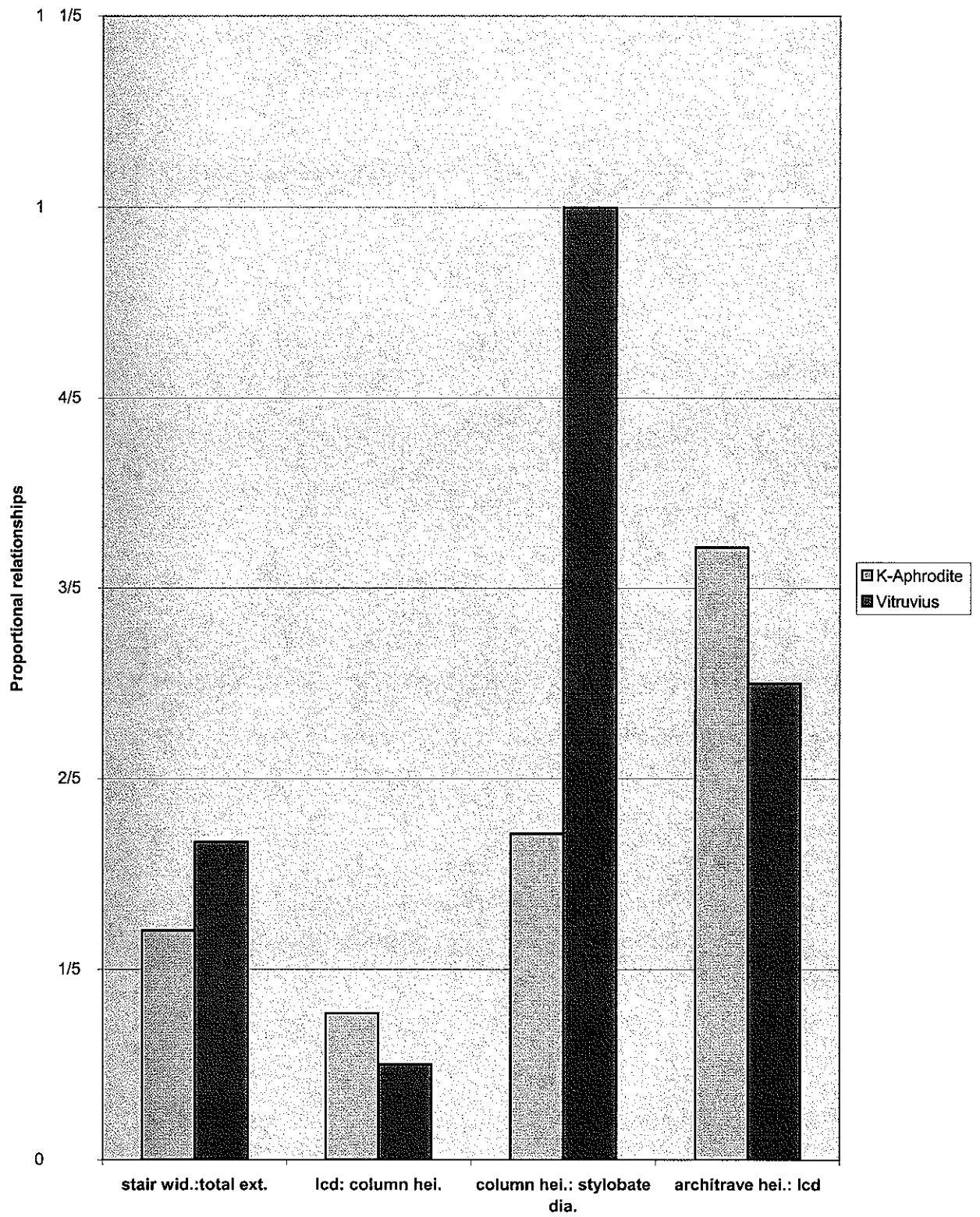


Chart IV.2. Roman round temples: Vitruvius on monopteroi design

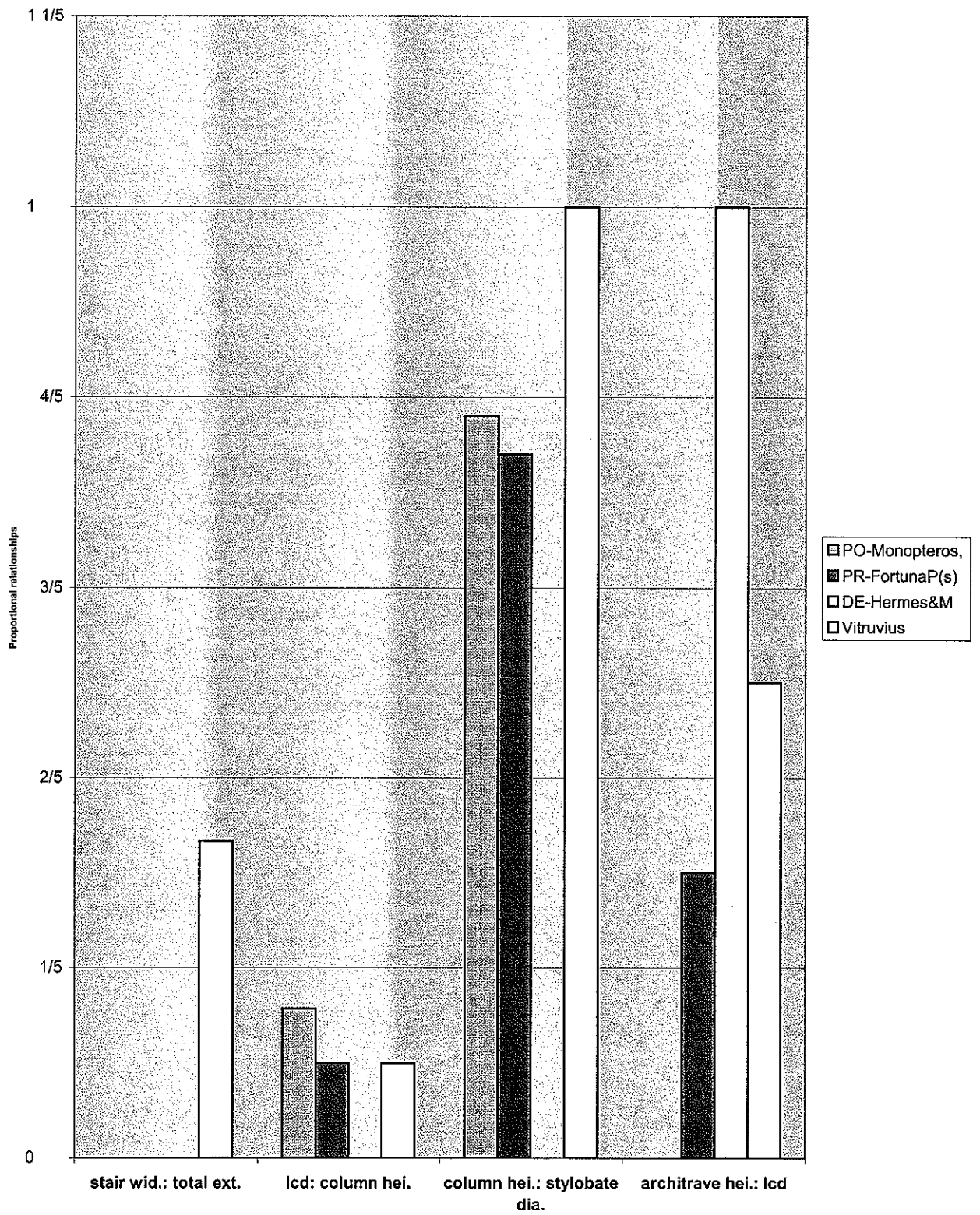


Chart IV.3. Greek tholos: Vitruvius on peripteral design

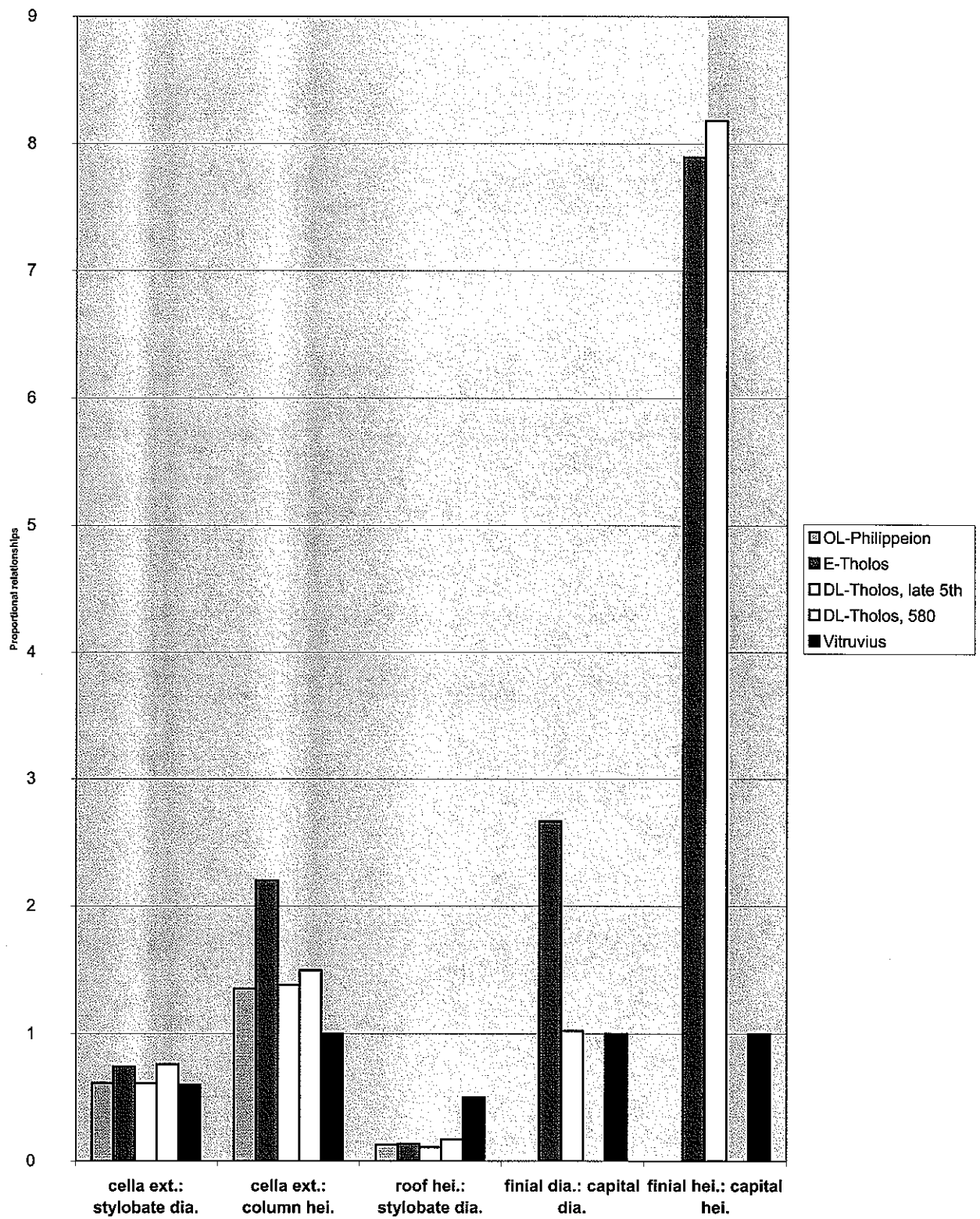


Chart IV.4. Roman round temples: Vitruvius on peripteroi design

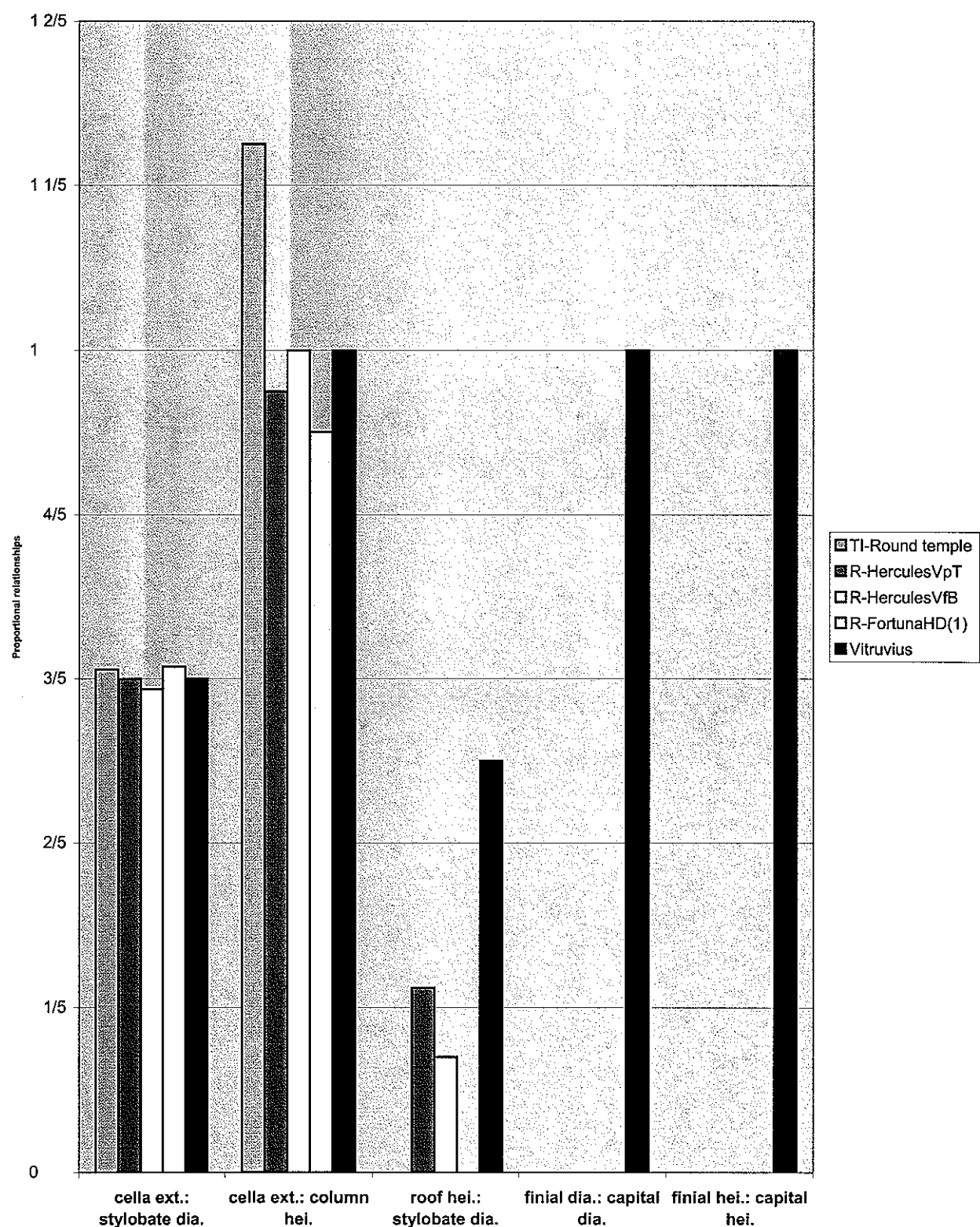


Chart IV.5. Greek tholoi: Vitruvius vs drum design

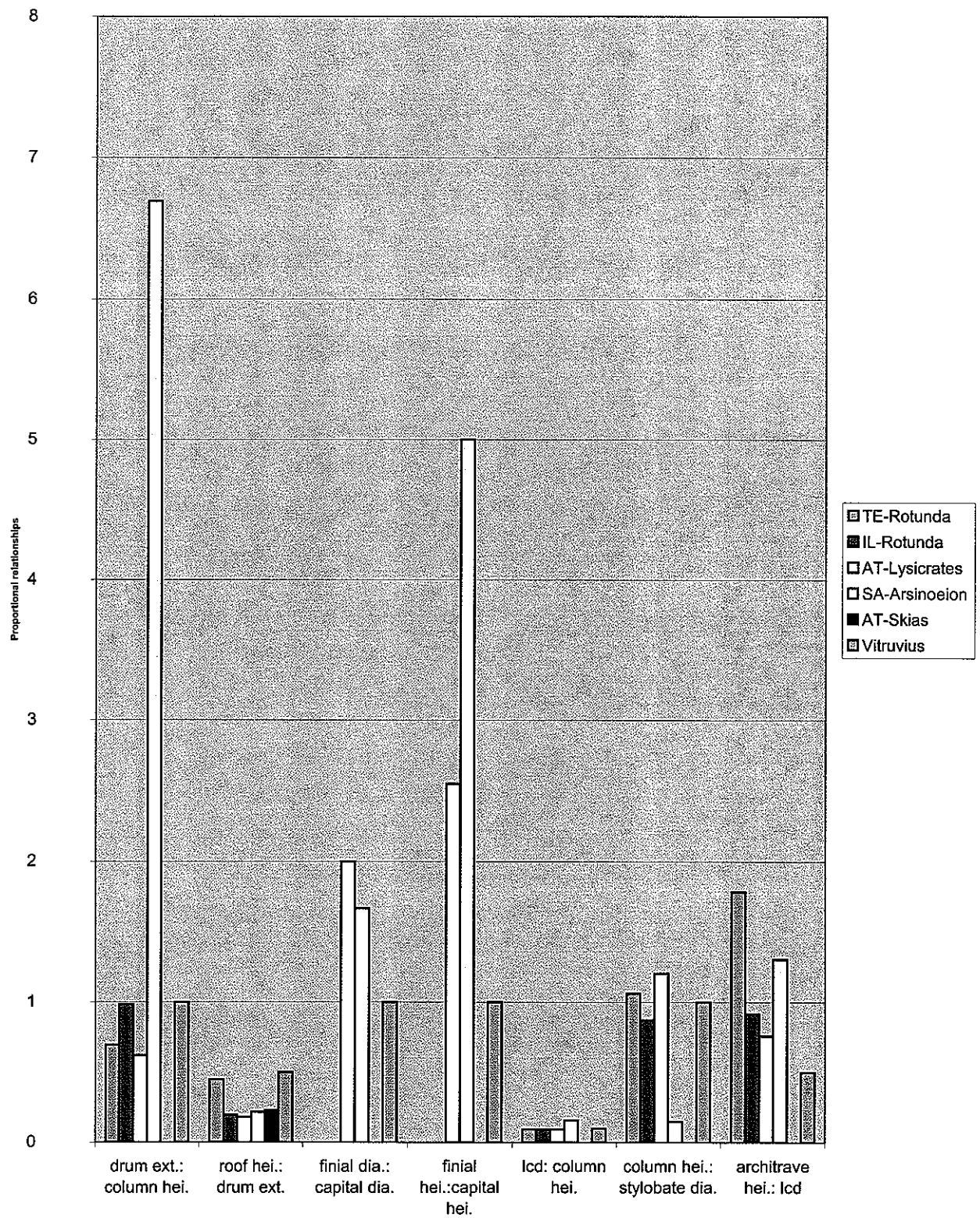


Chart IV.6. Greek tholoi: Vitruvius on columnar proportion

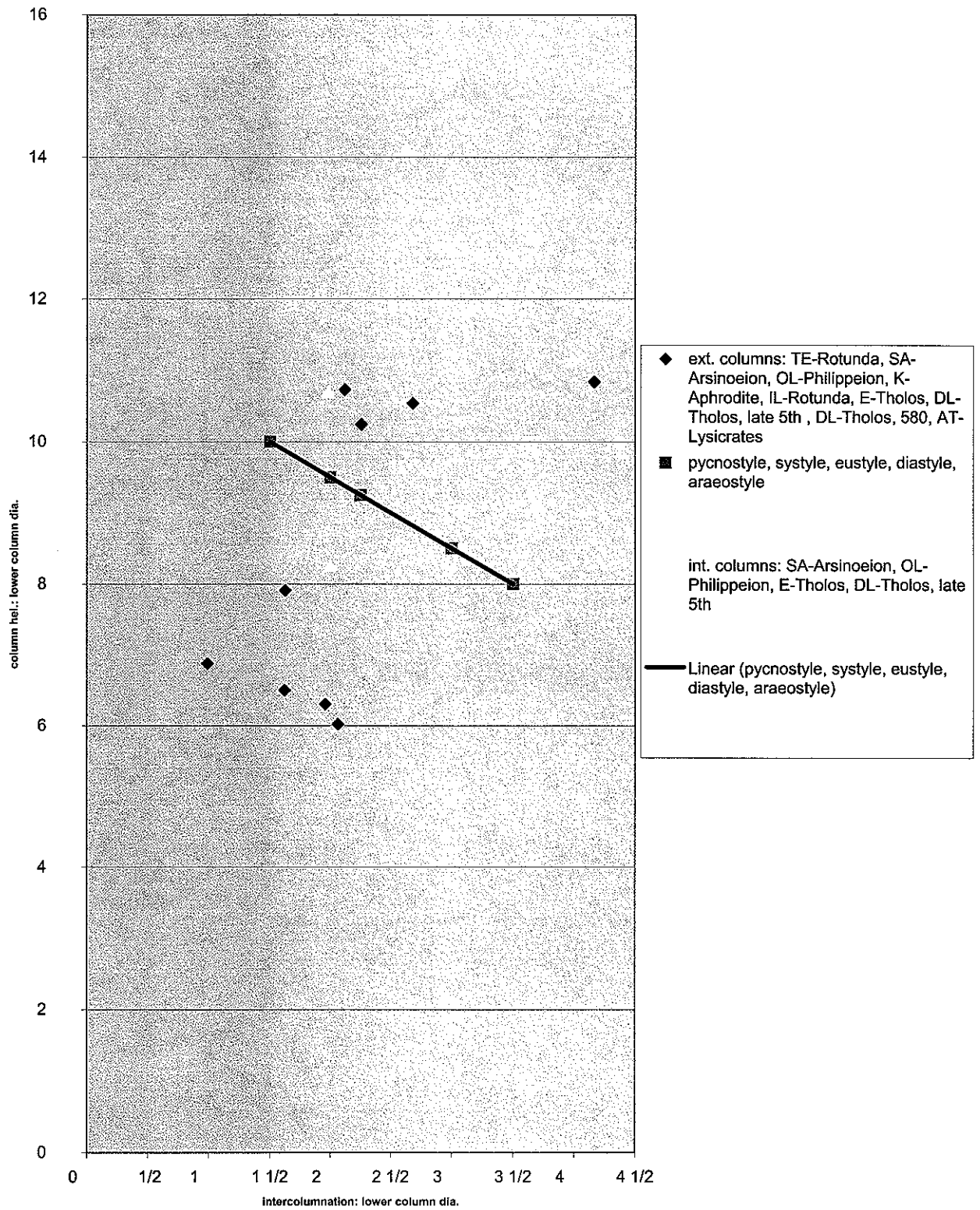


Chart IV.7. Roman round temples: Vitruvius on columnar proportion

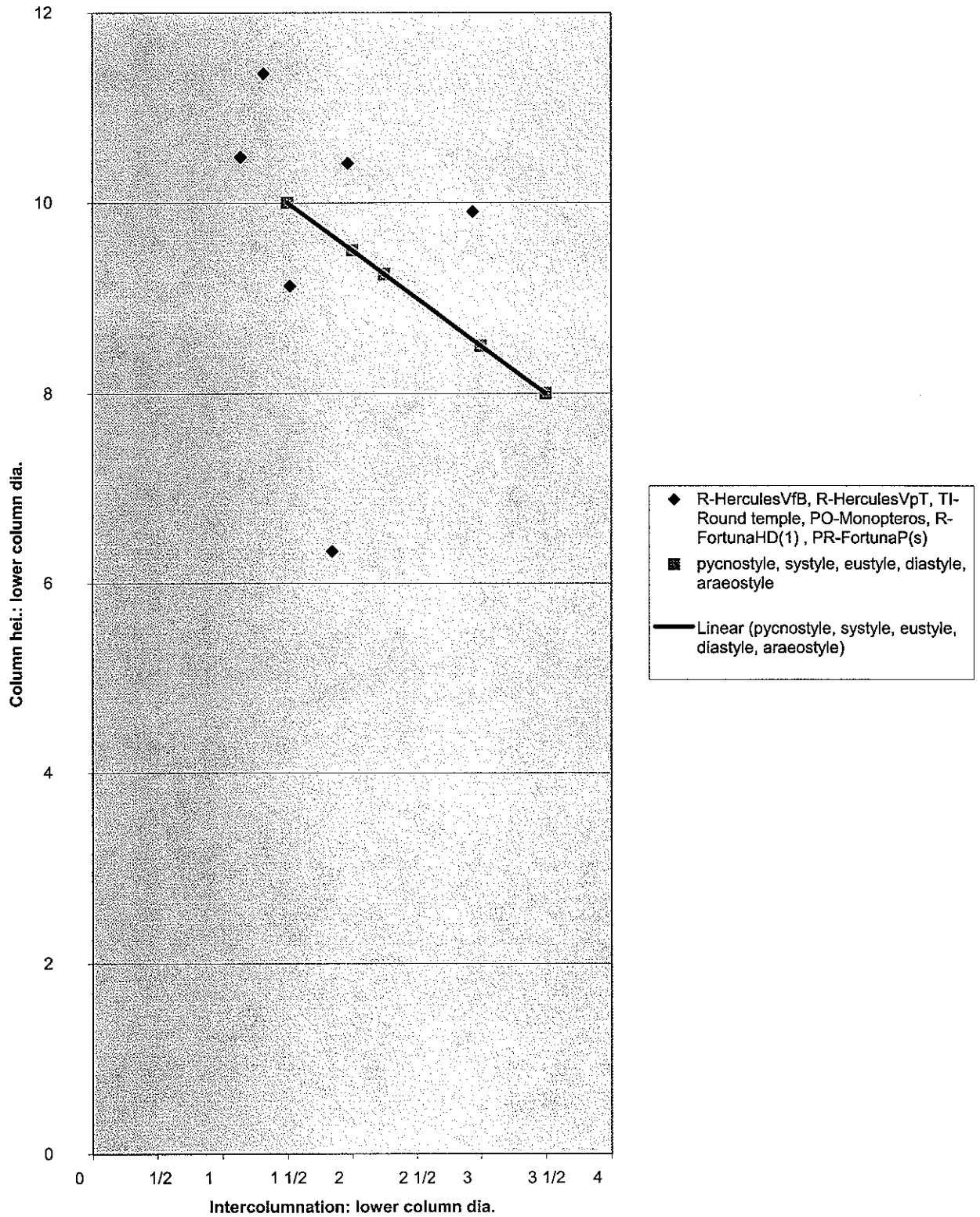


Chart IV.8. Greek tholoi: Vitruvius on Doric columnar order

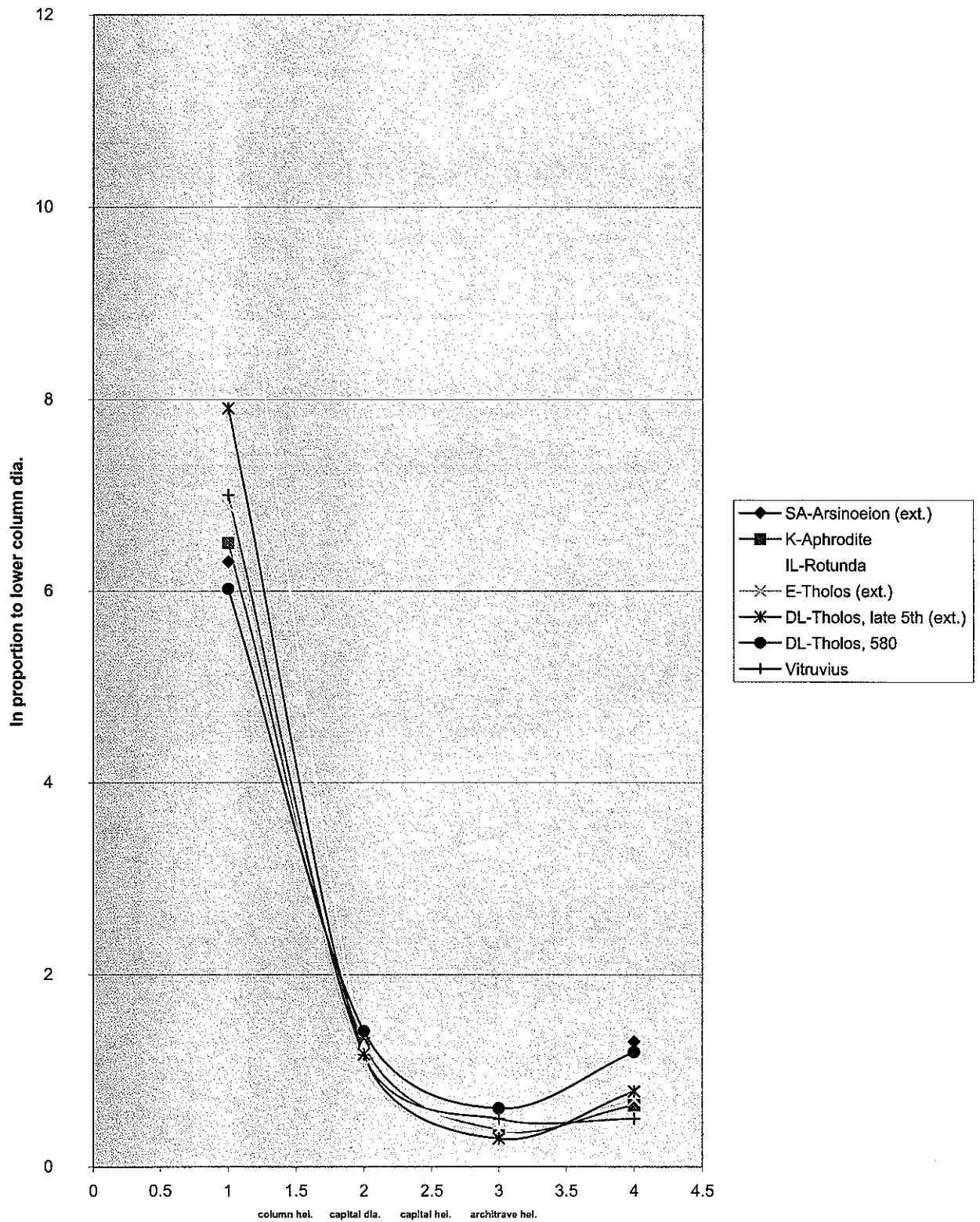


Chart IV.9. Roman round temples: Vitruvius on the Doric columnar order

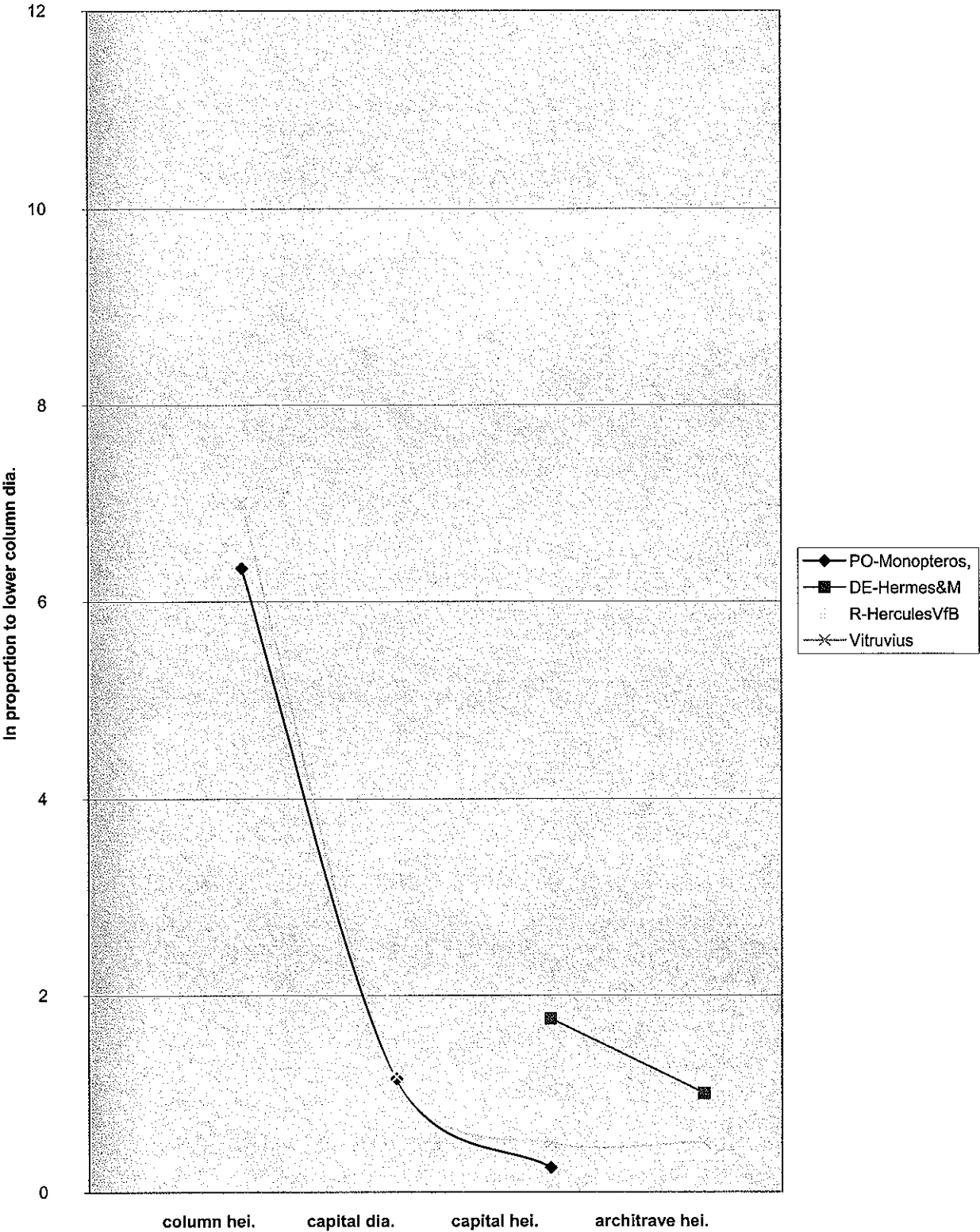


Chart IV.10. Greek tholos: Vitruvius on Ionic columnar order

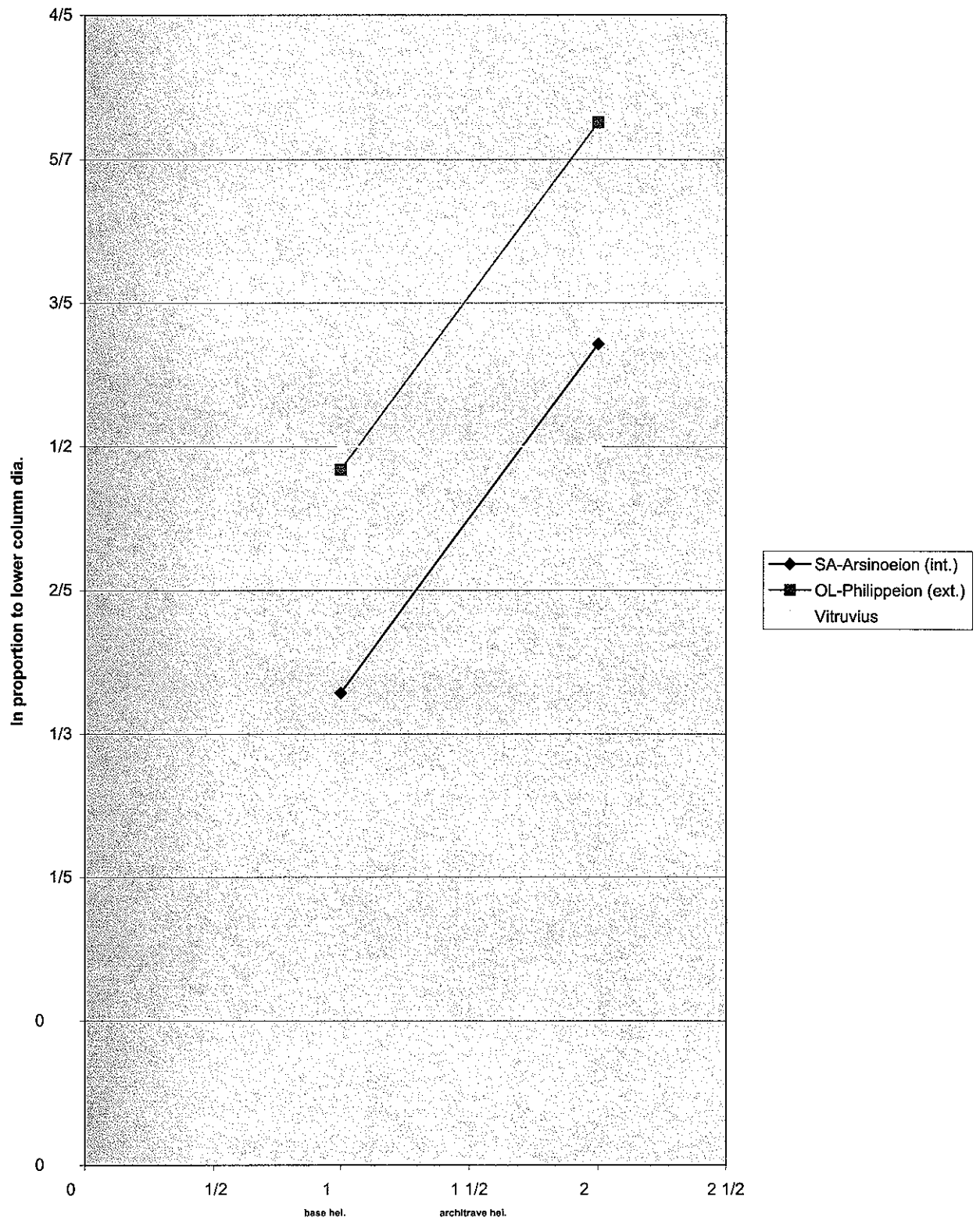


Chart IV.11. Greek tholoi: Columnar order

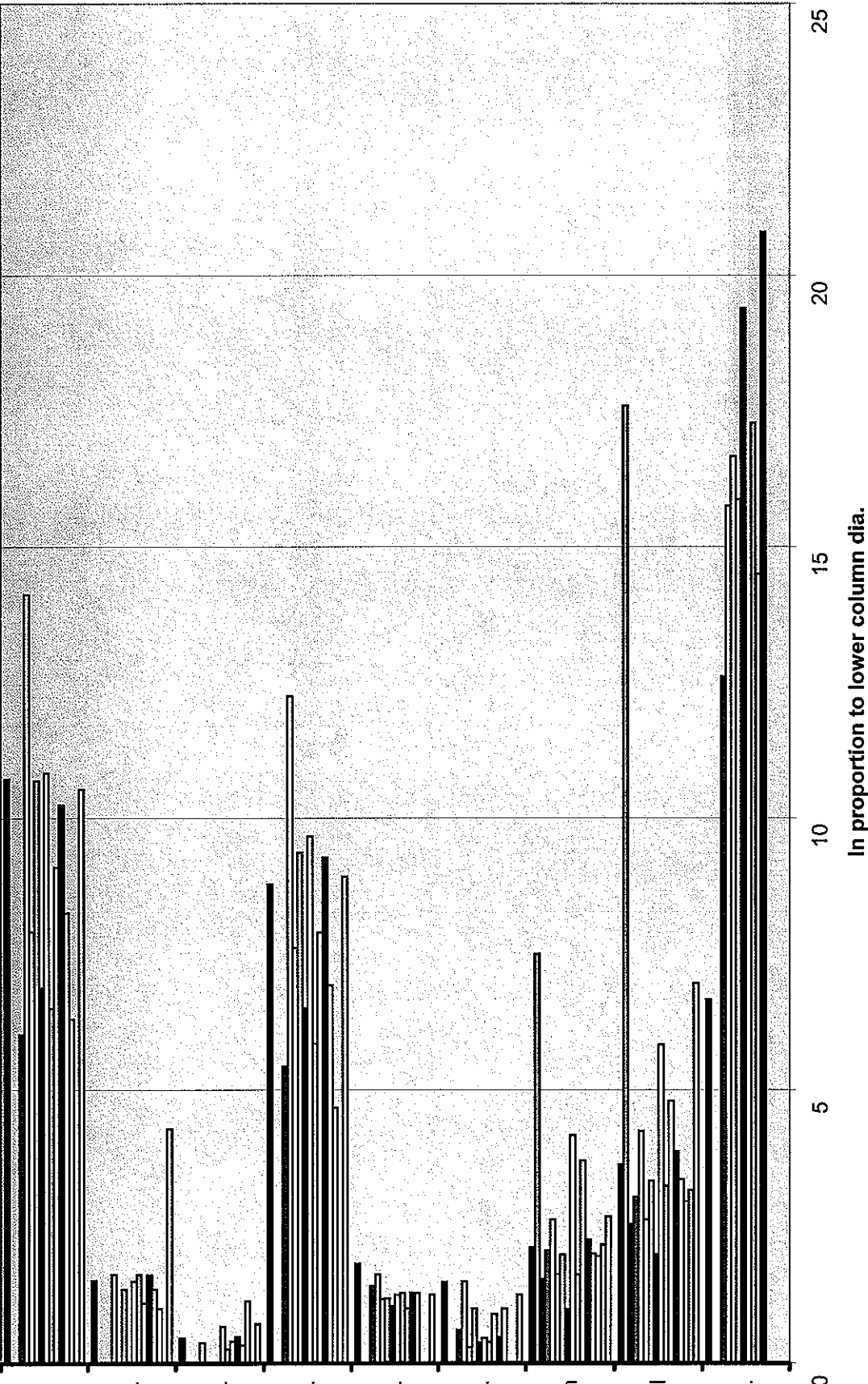


Chart IV.12. Roman round temples: Columnar order

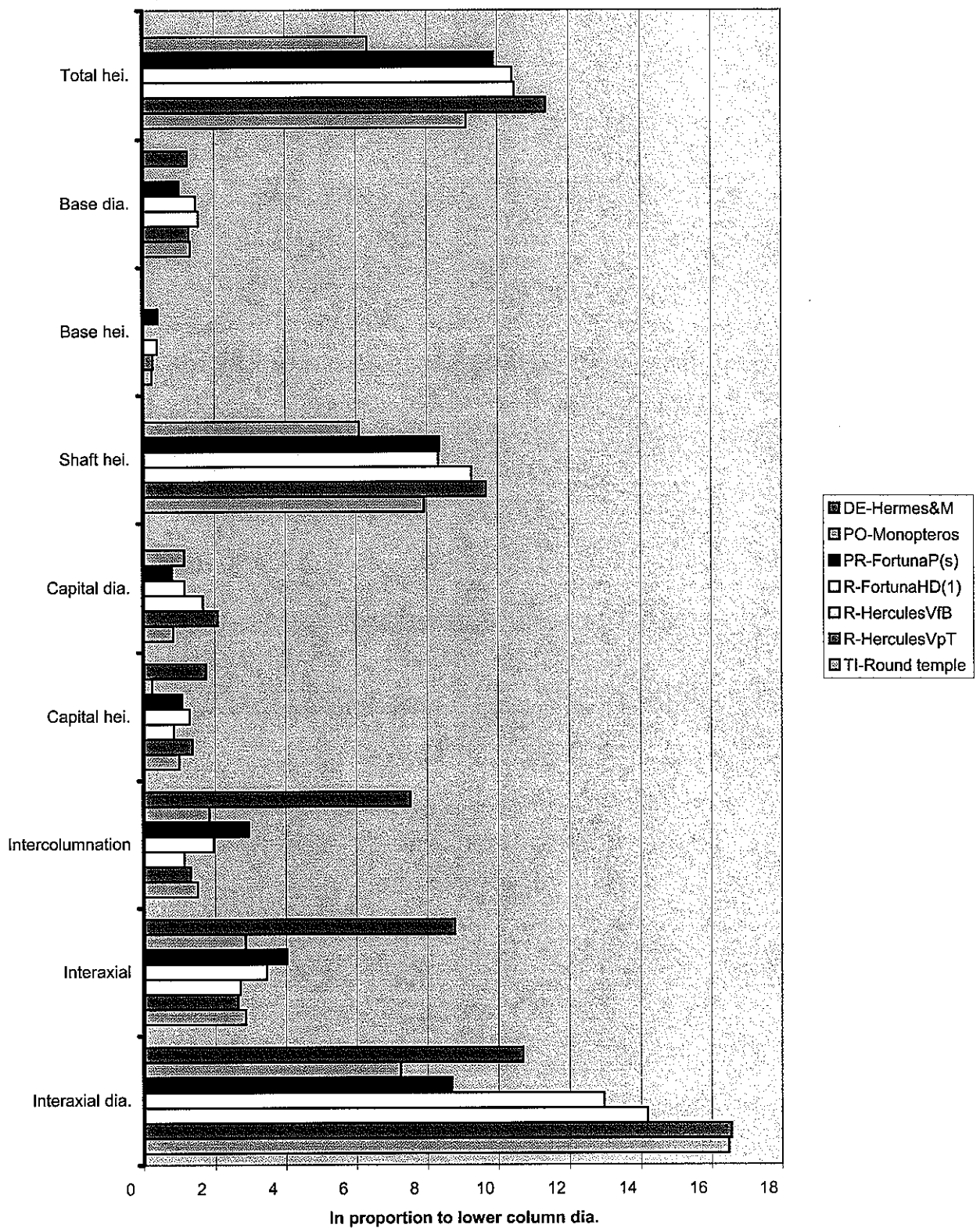


Chart IV.13. Greek tholos: Structural elements

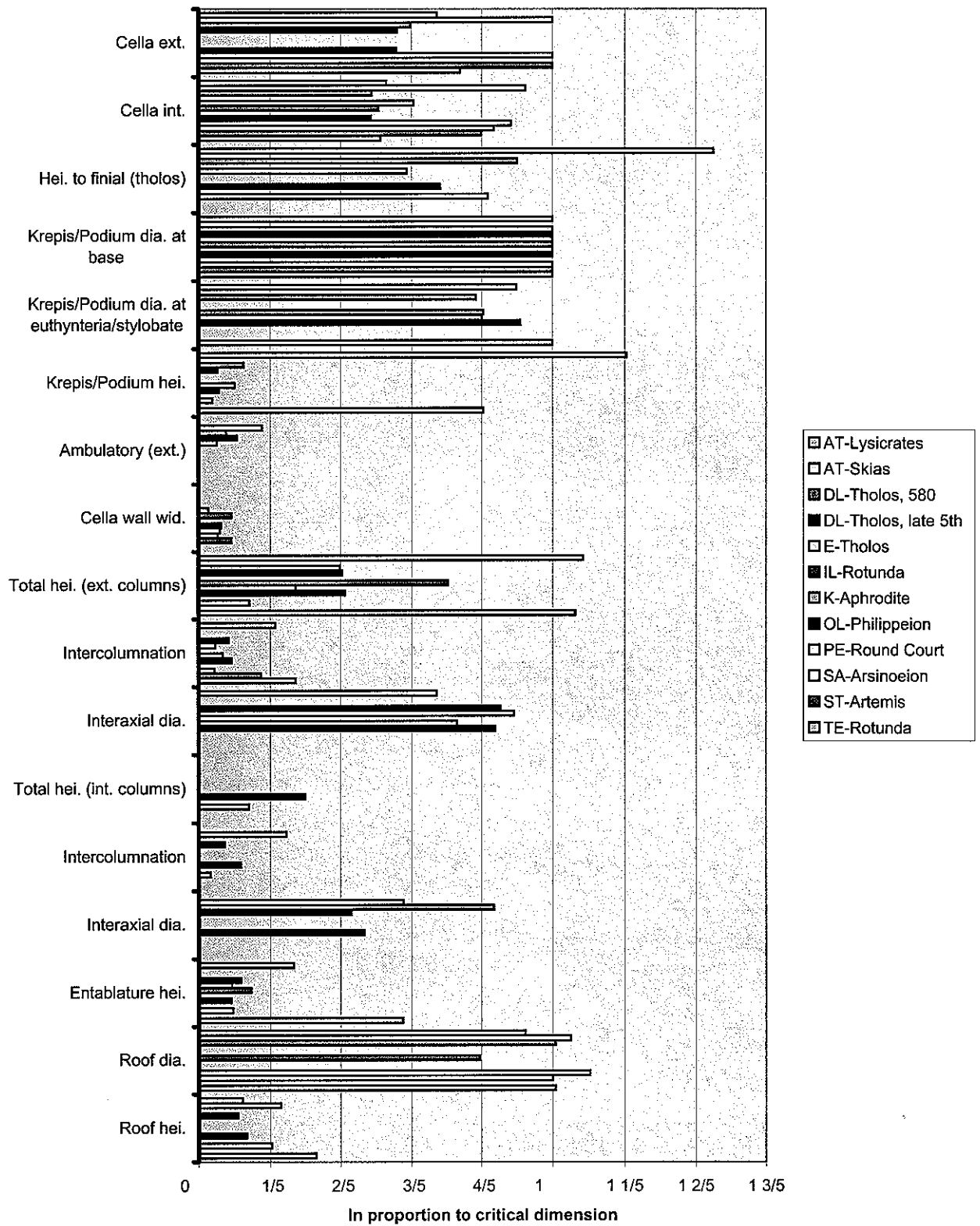


Chart IV.14. Roman round temples: Structural elements

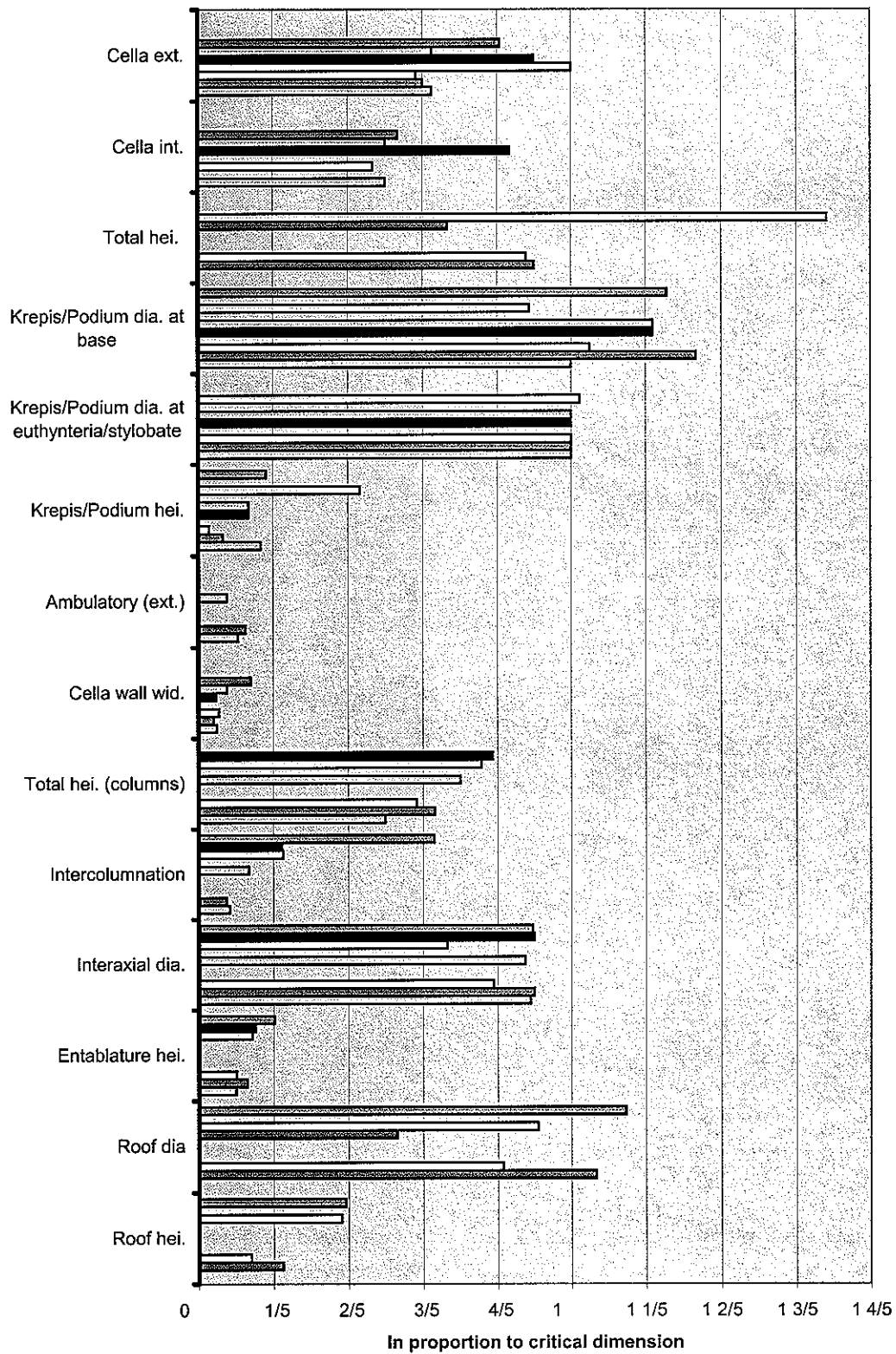


Chart IV.15. Greek tholoi: Floorspace and volume

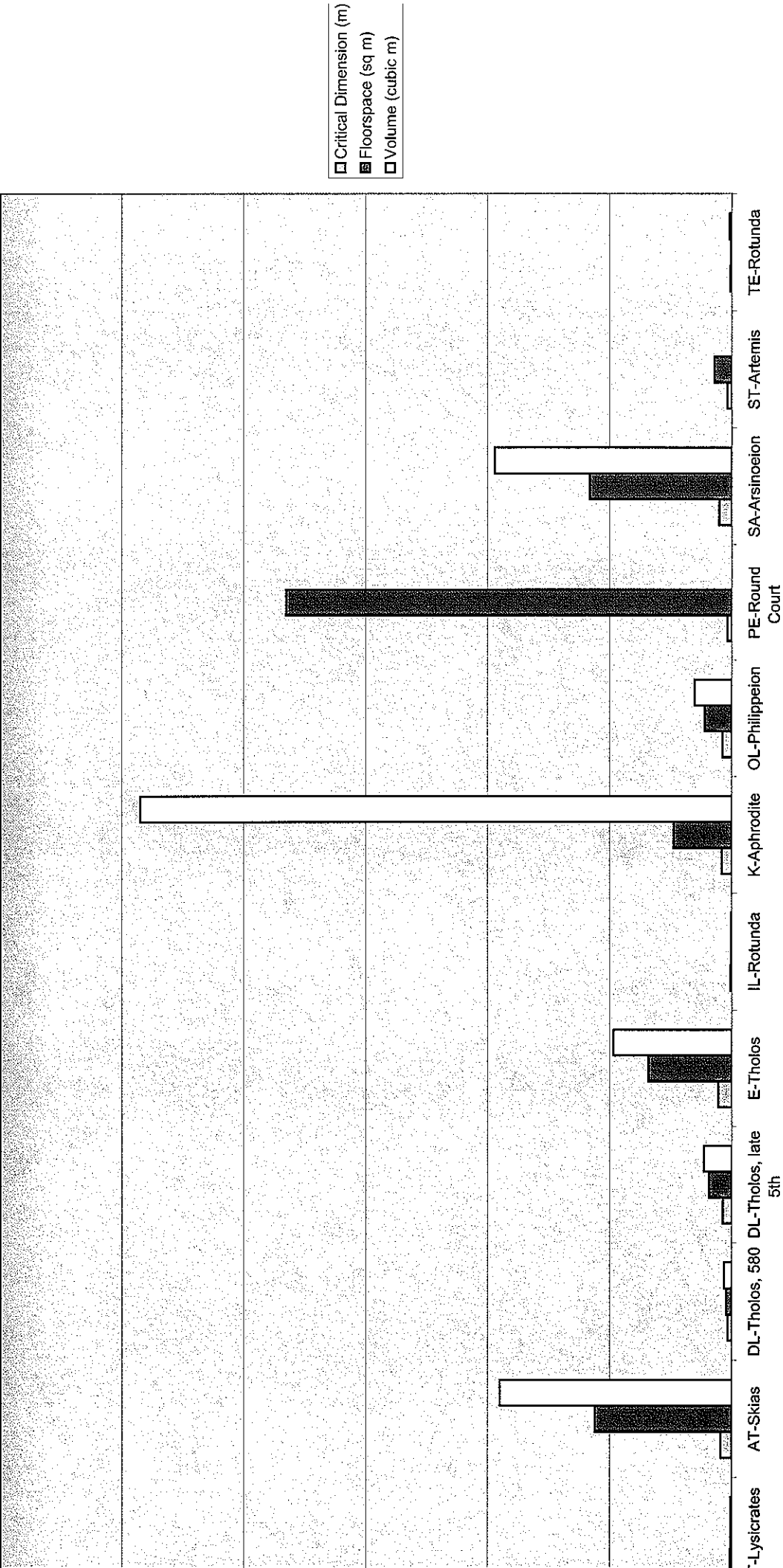


Chart IV.16. Roman round temples: Floorspace and volume

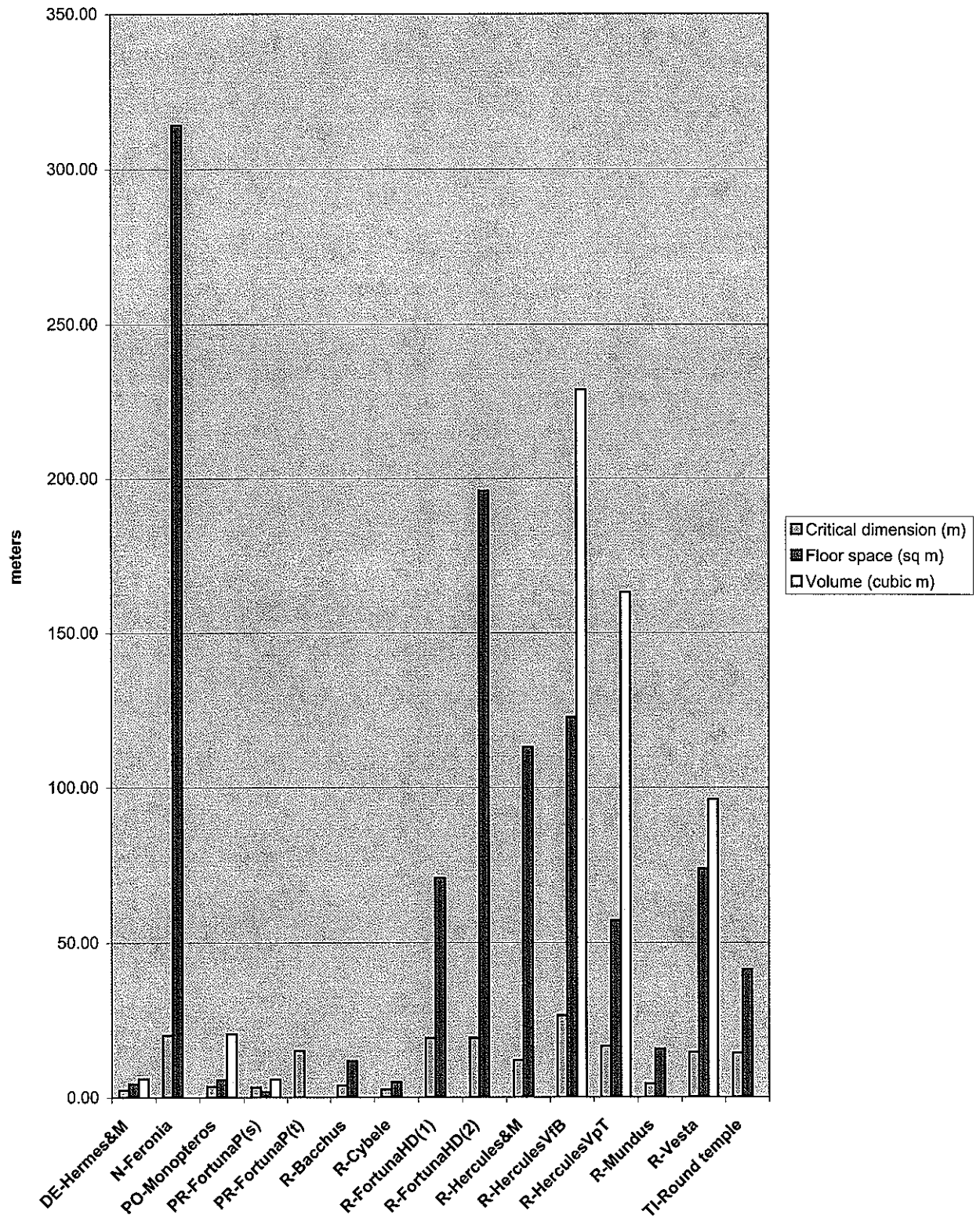


Chart V.1. Vitruvius on monopteroi design

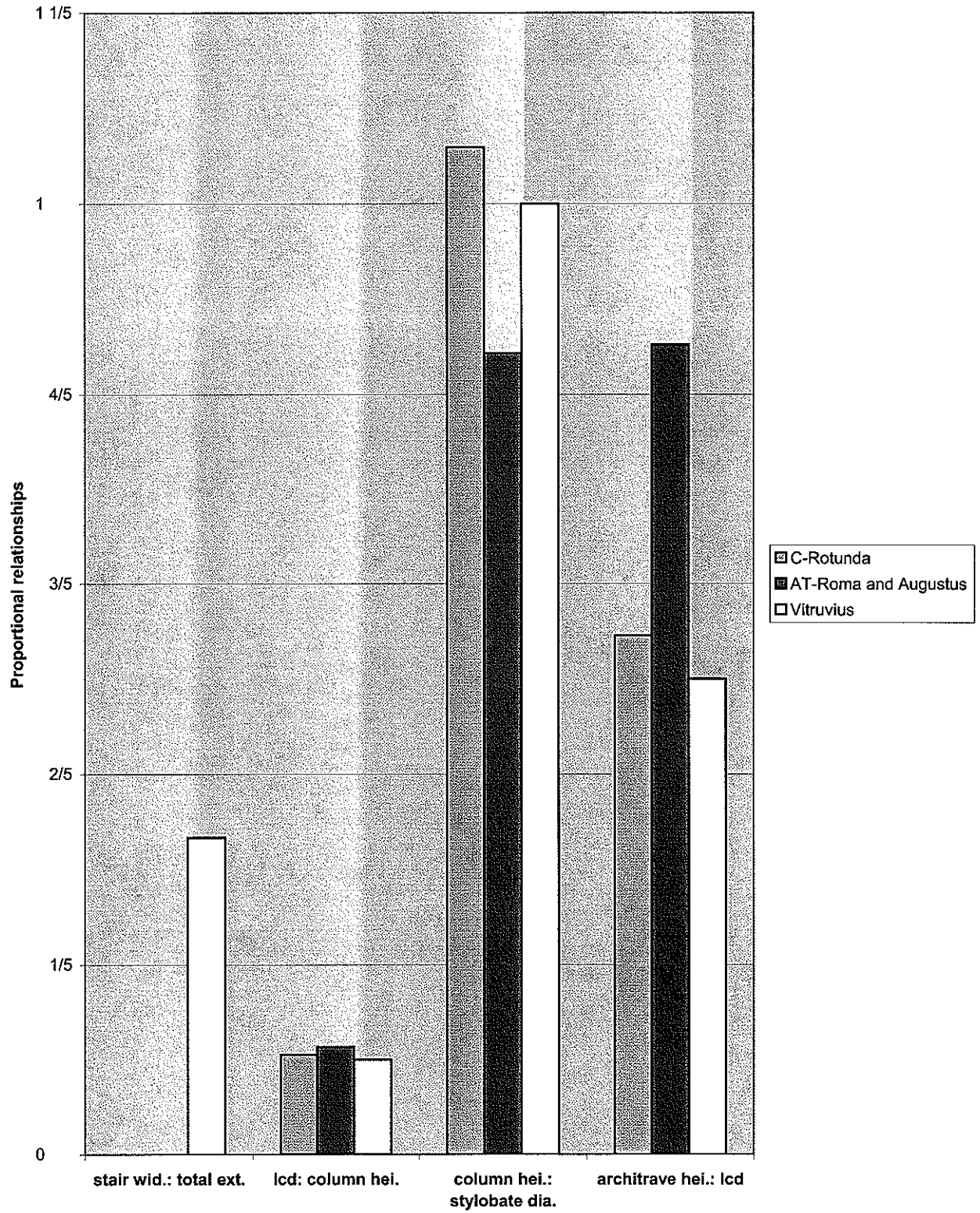


Chart V.2. Vitruvius on columnar proportion

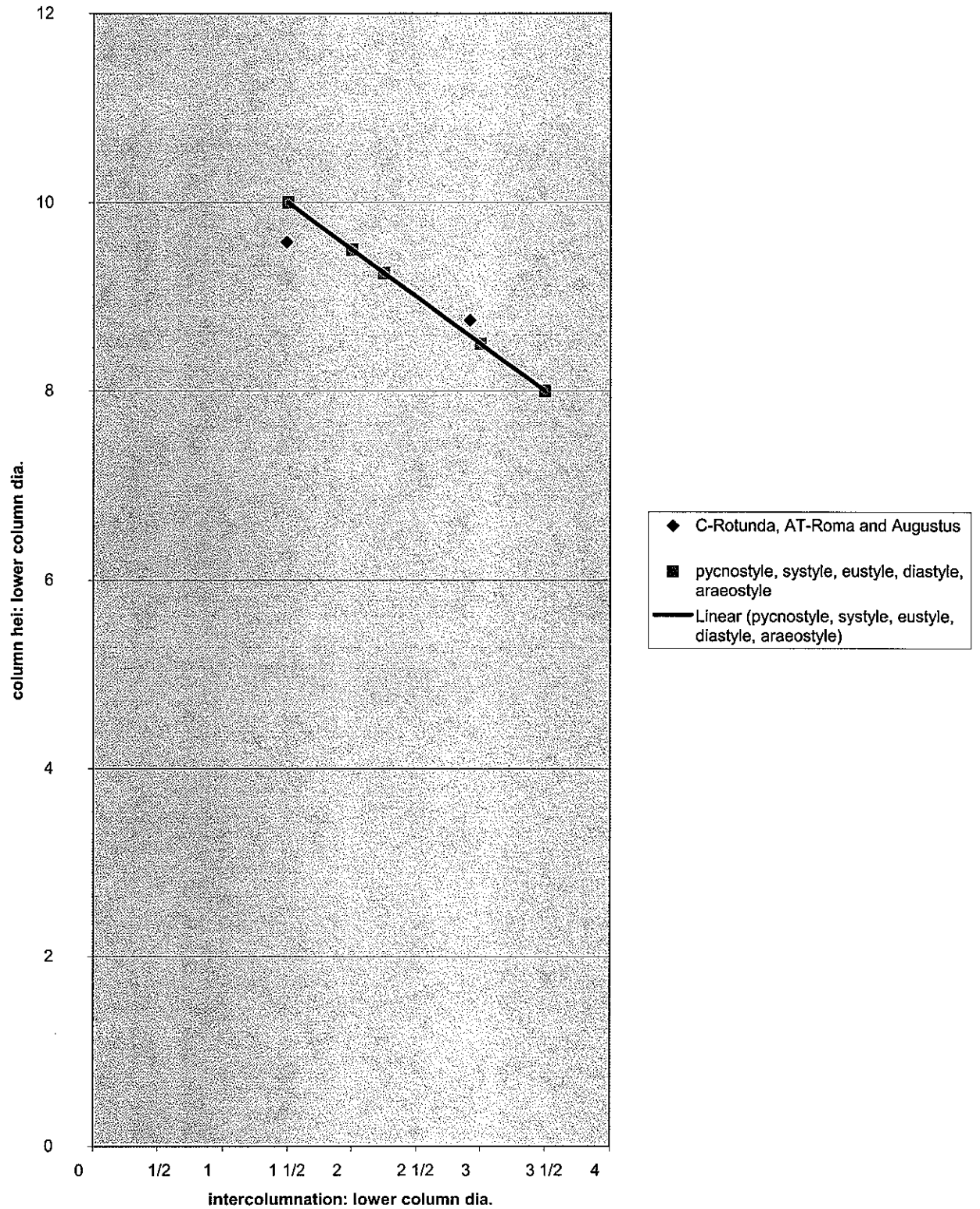


Chart V.3. Vitruvius on the Ionic order

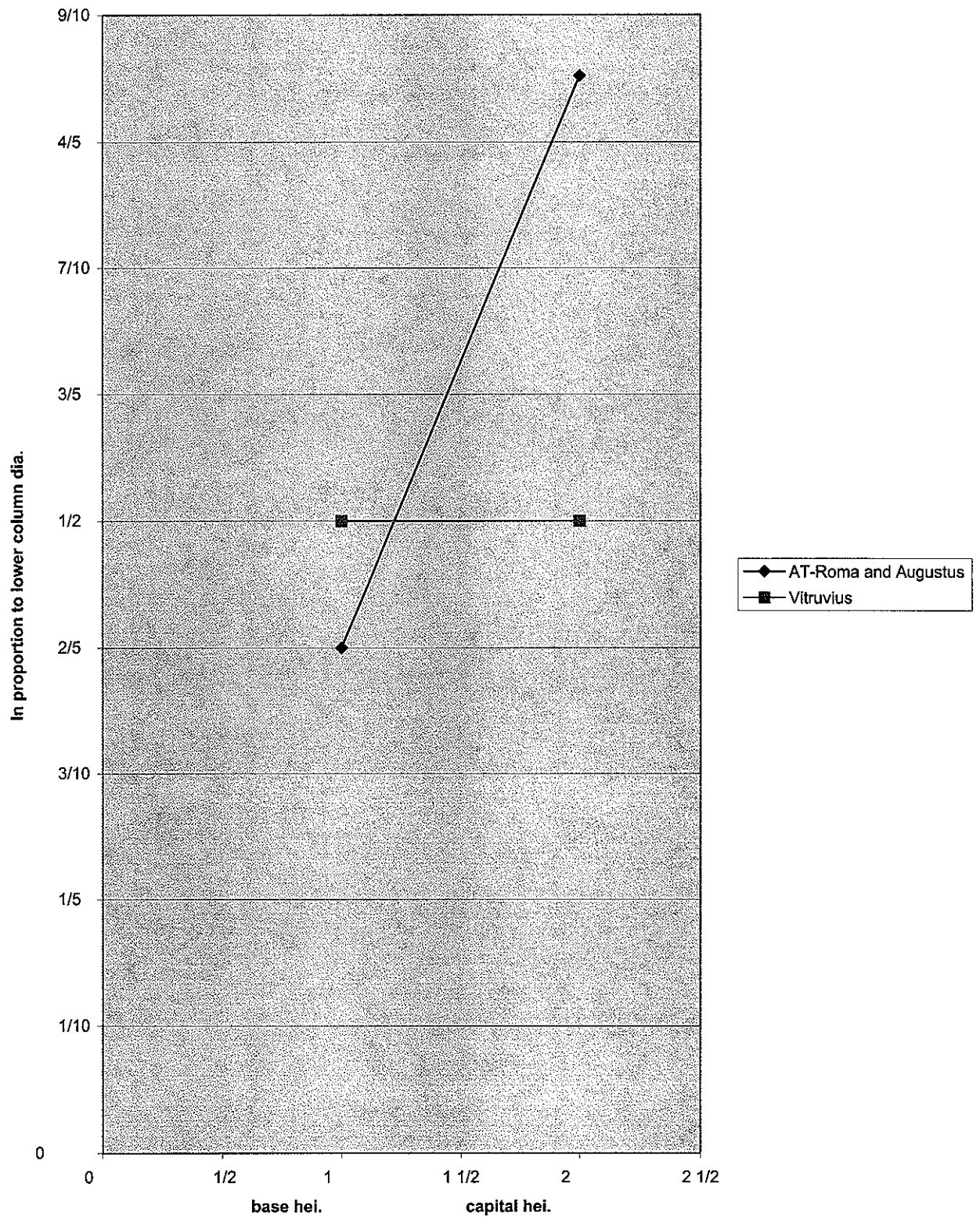


Chart V.4. Columnar order

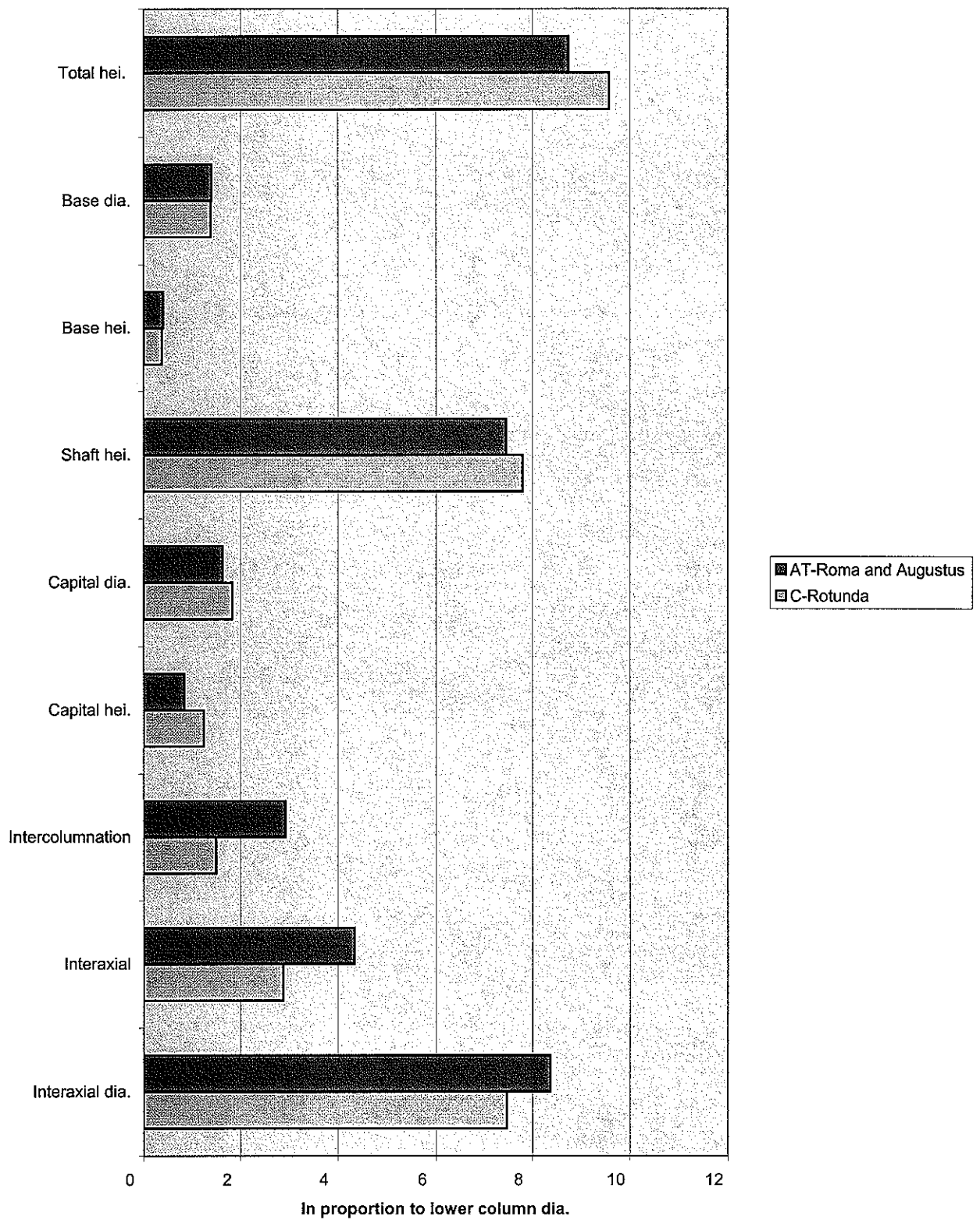


Chart V.5. Structural elements

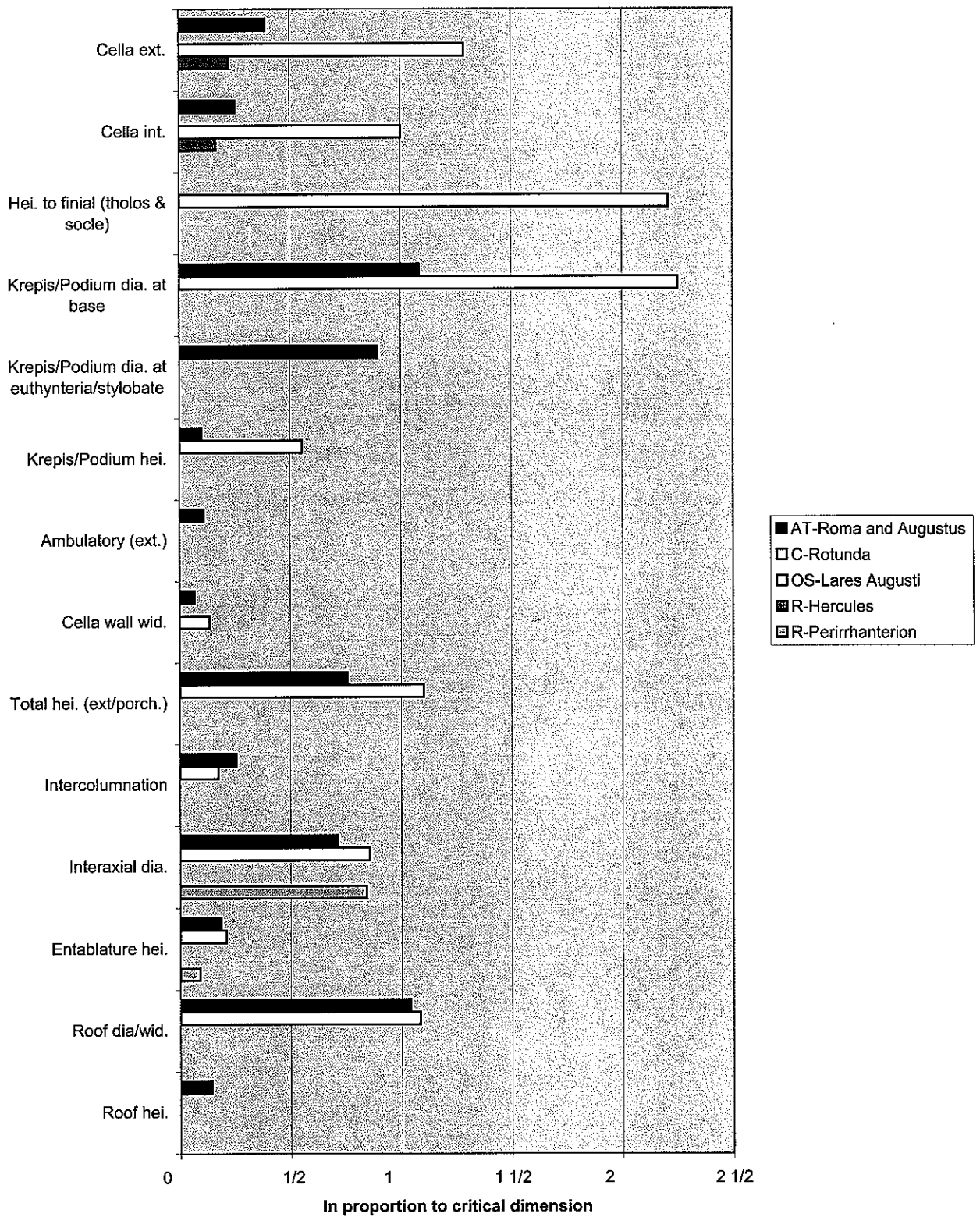


Chart V.6. Floor space and volume

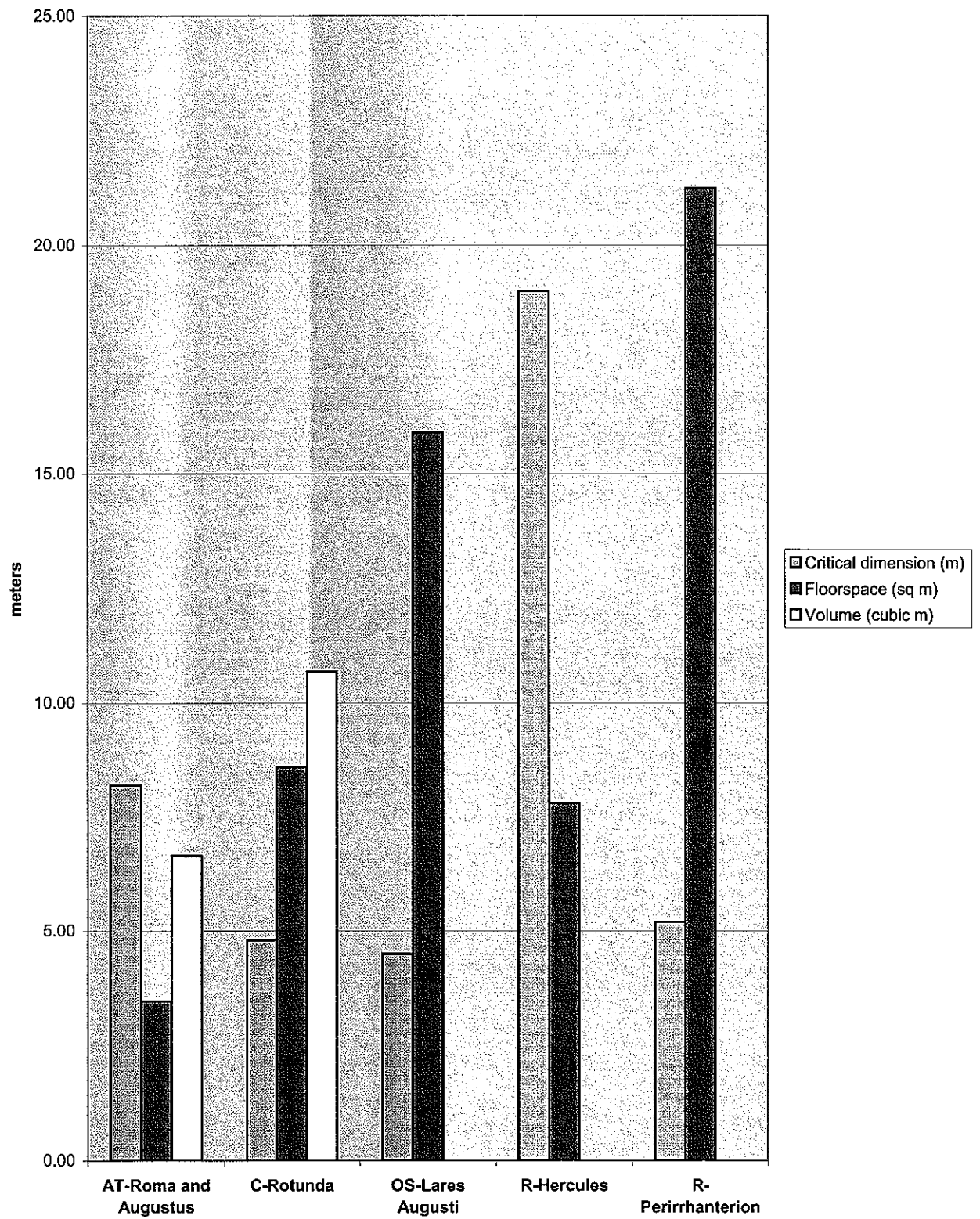


Chart VI.1. Vitruvius on monopteroi design

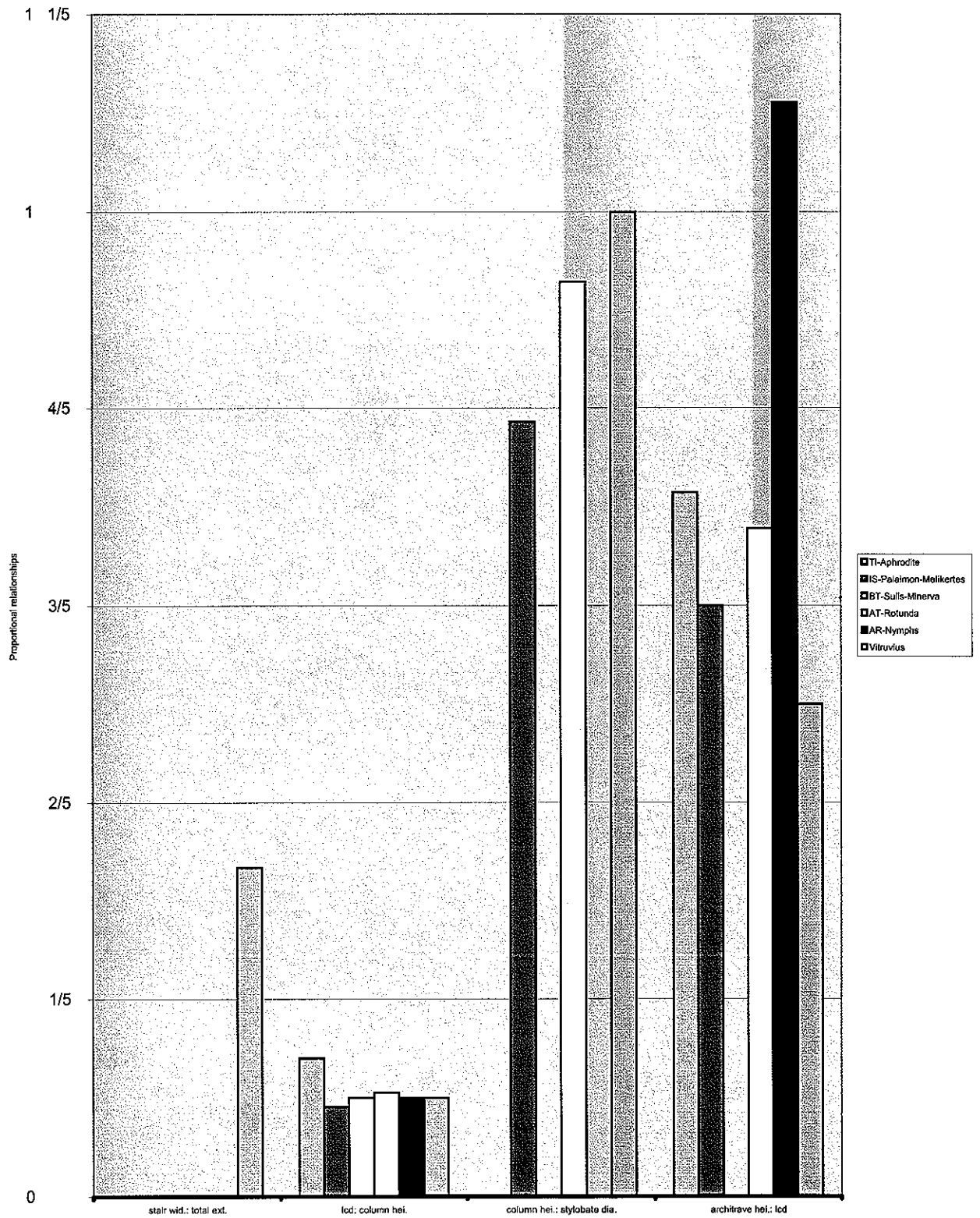


Chart VI.2. Vitruvius vs drum design

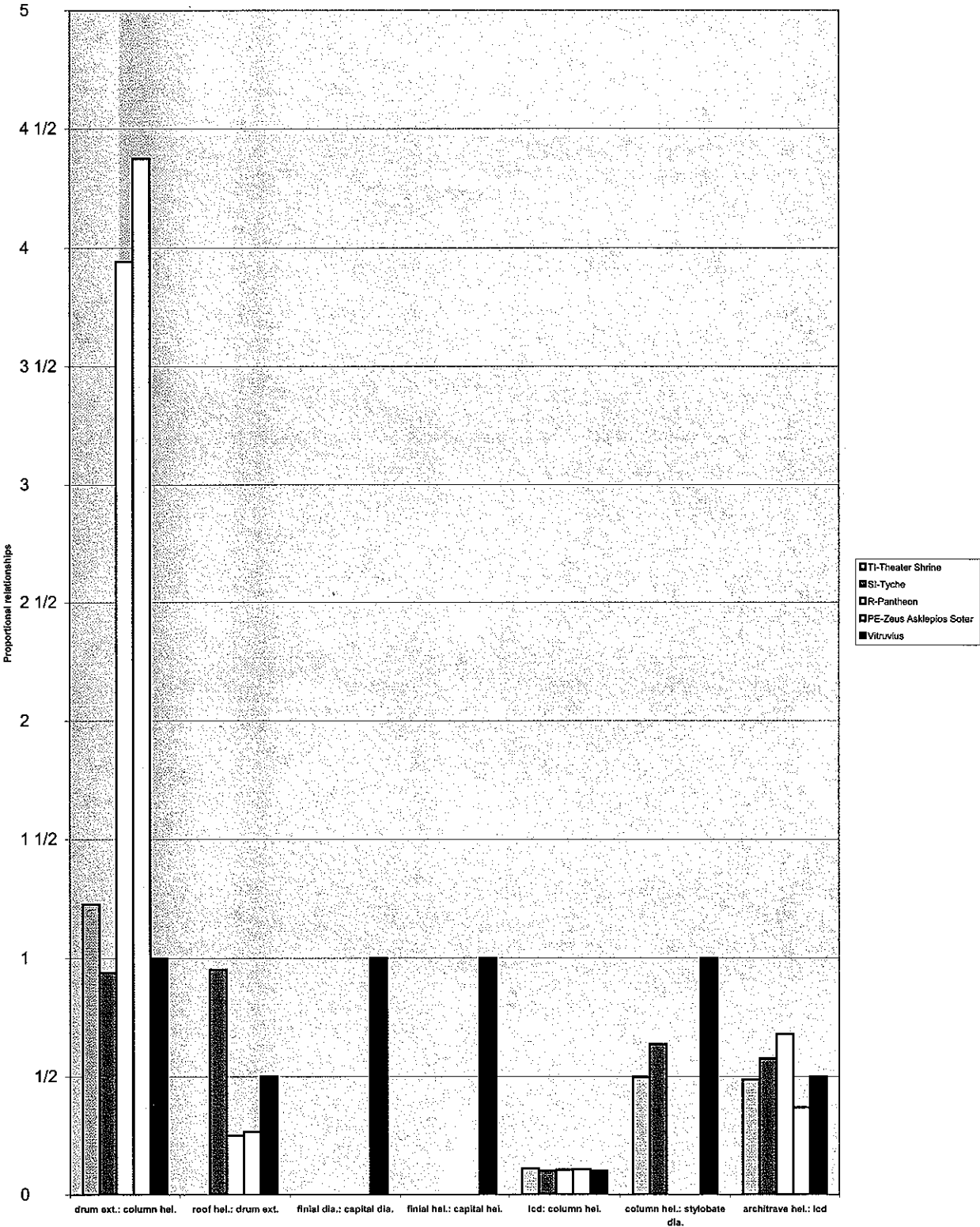


Chart VI.3. Vitruvius on columnar proportion

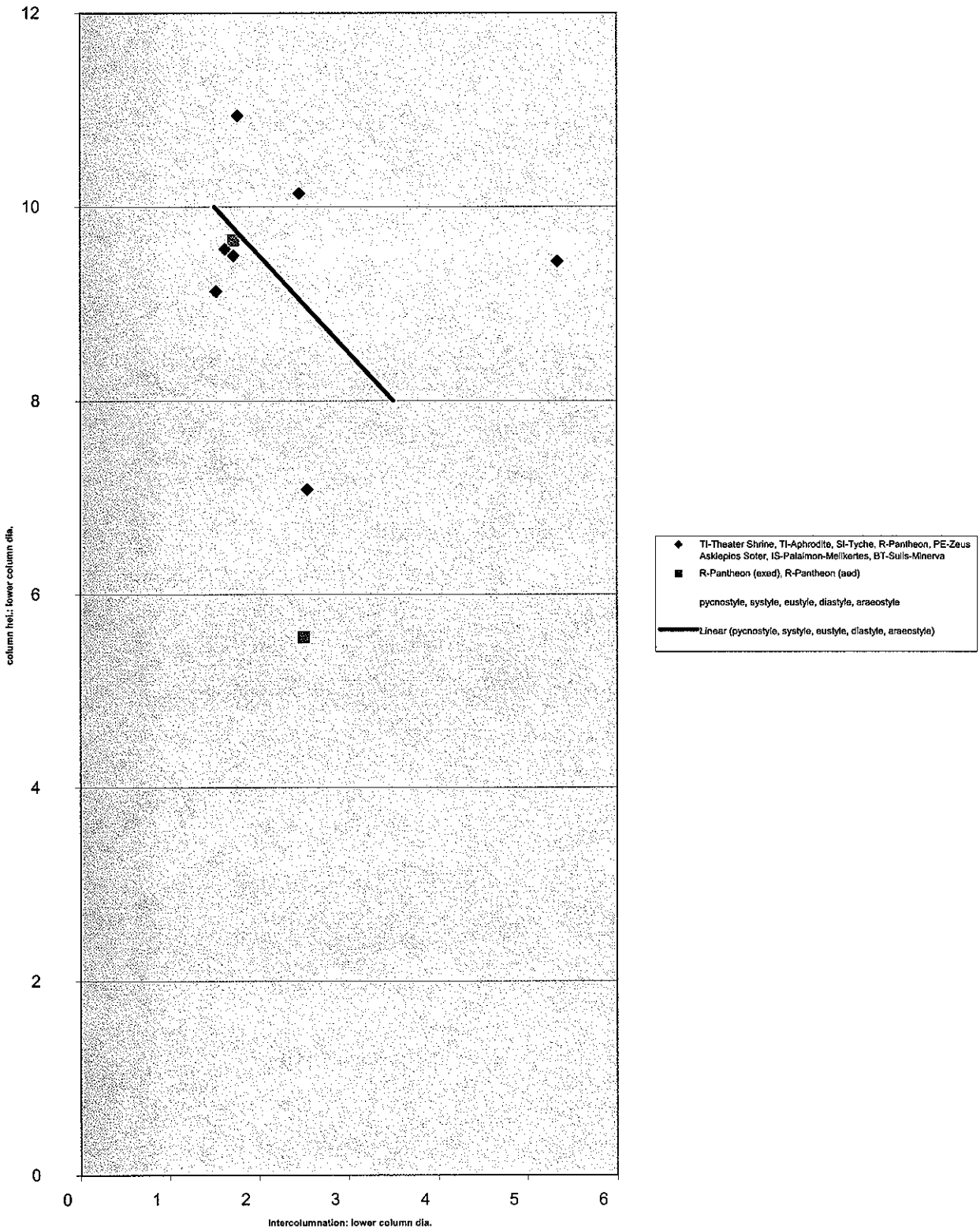


Chart VI.4. Vitruvius on Doric columnar order

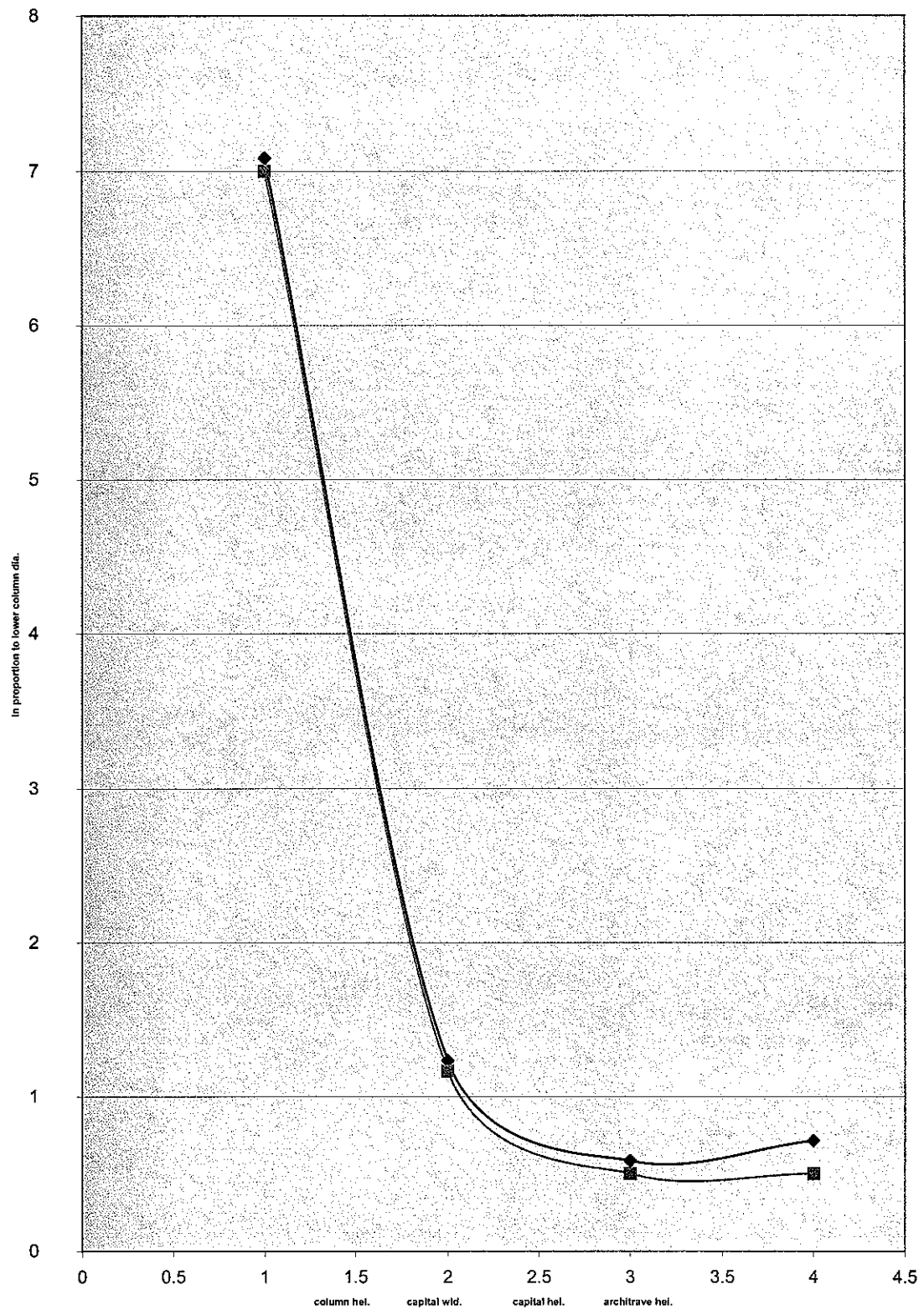


Chart VI.5. Vitruvius on Corinthian columnar order

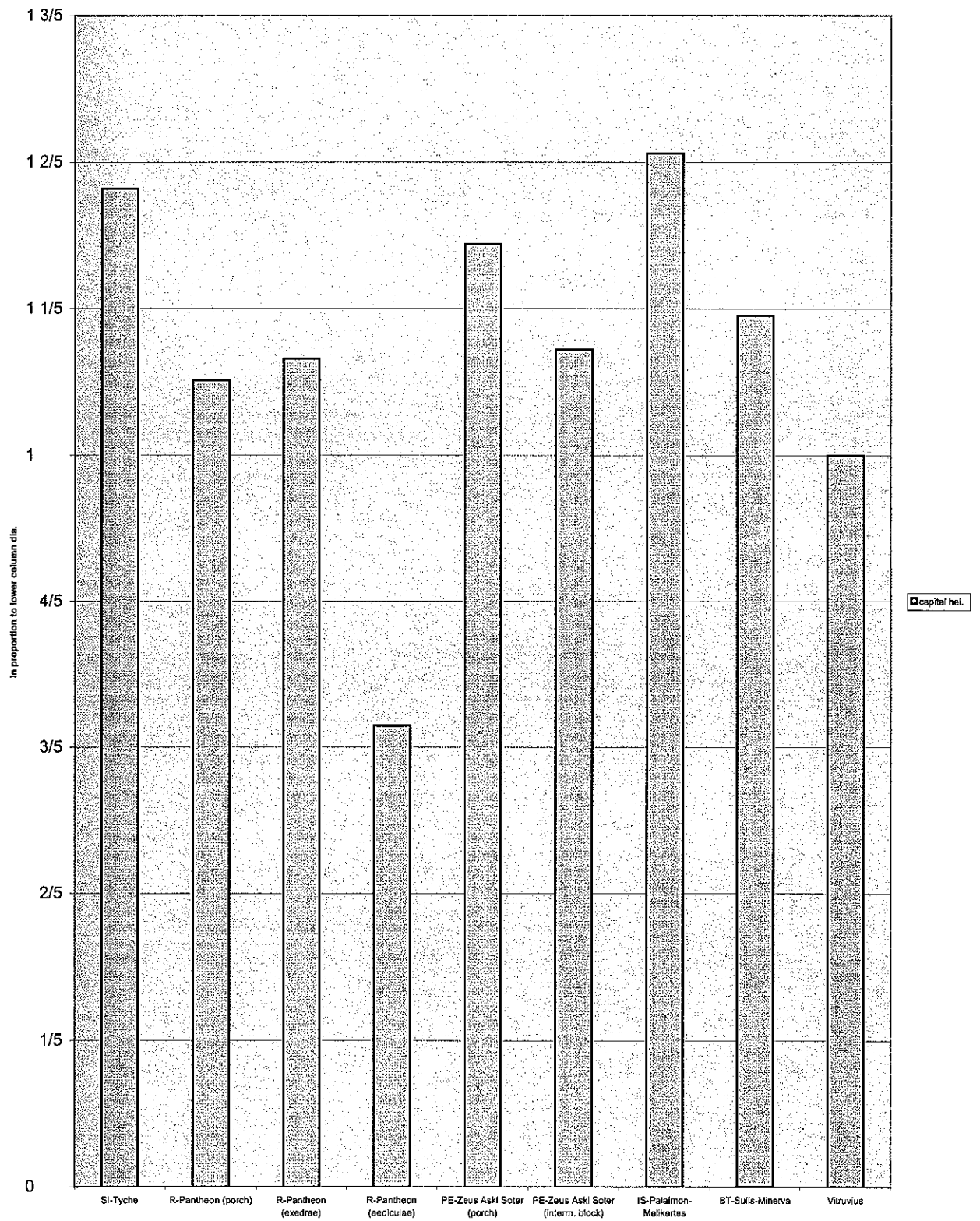


Chart VI.8. Columnar order

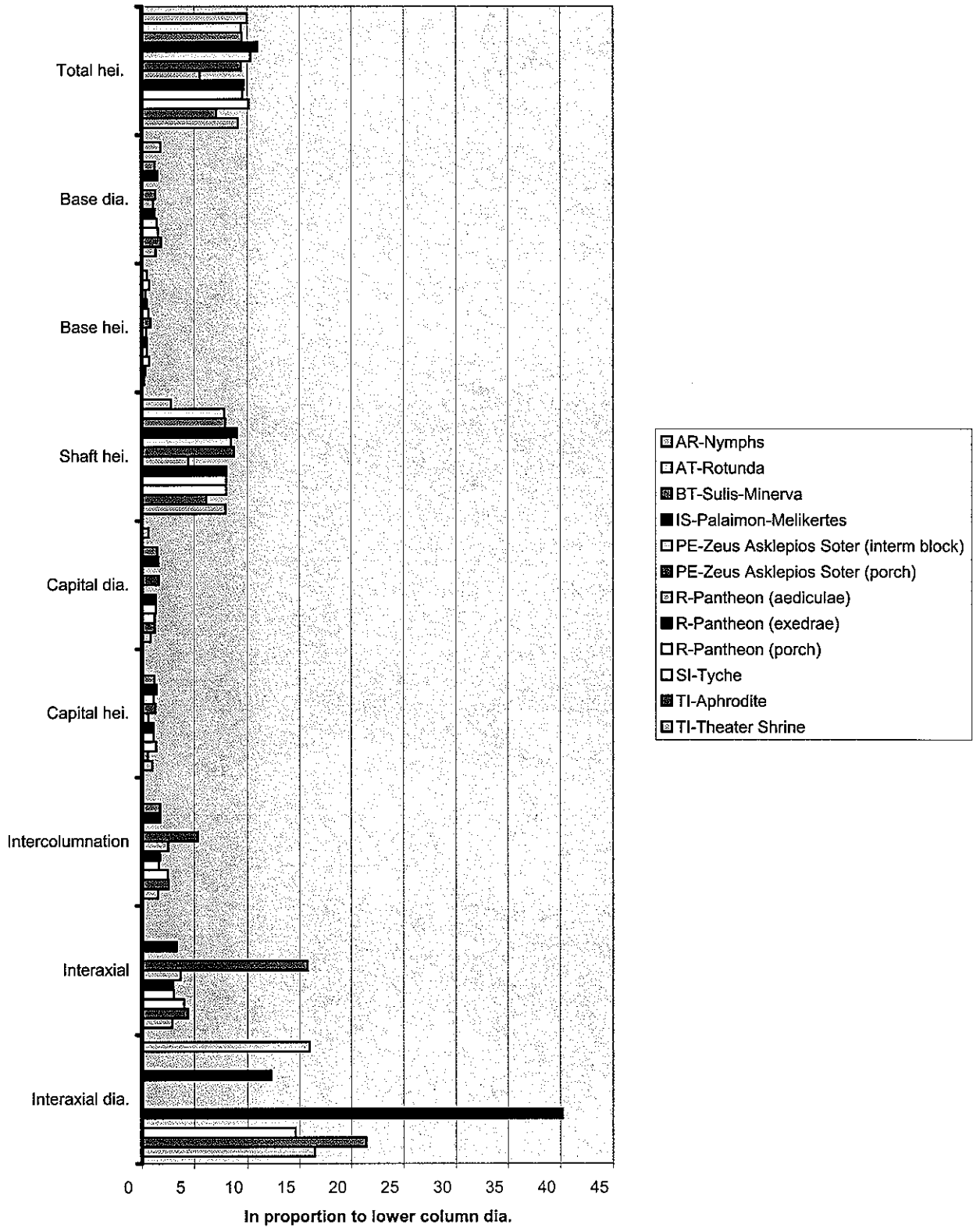


Chart VI.7. Structural elements

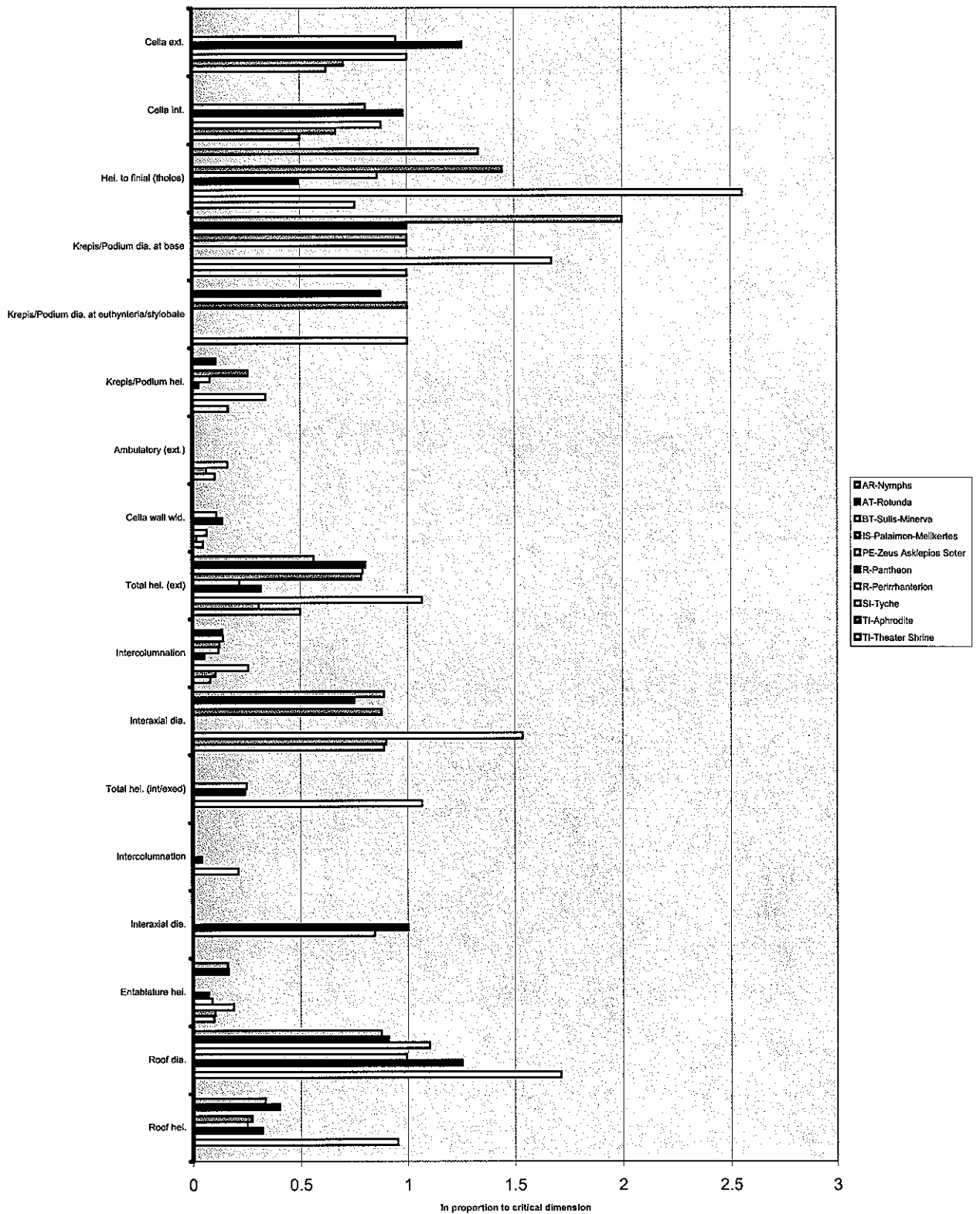


Chart VI.8. Floorspace and Volume

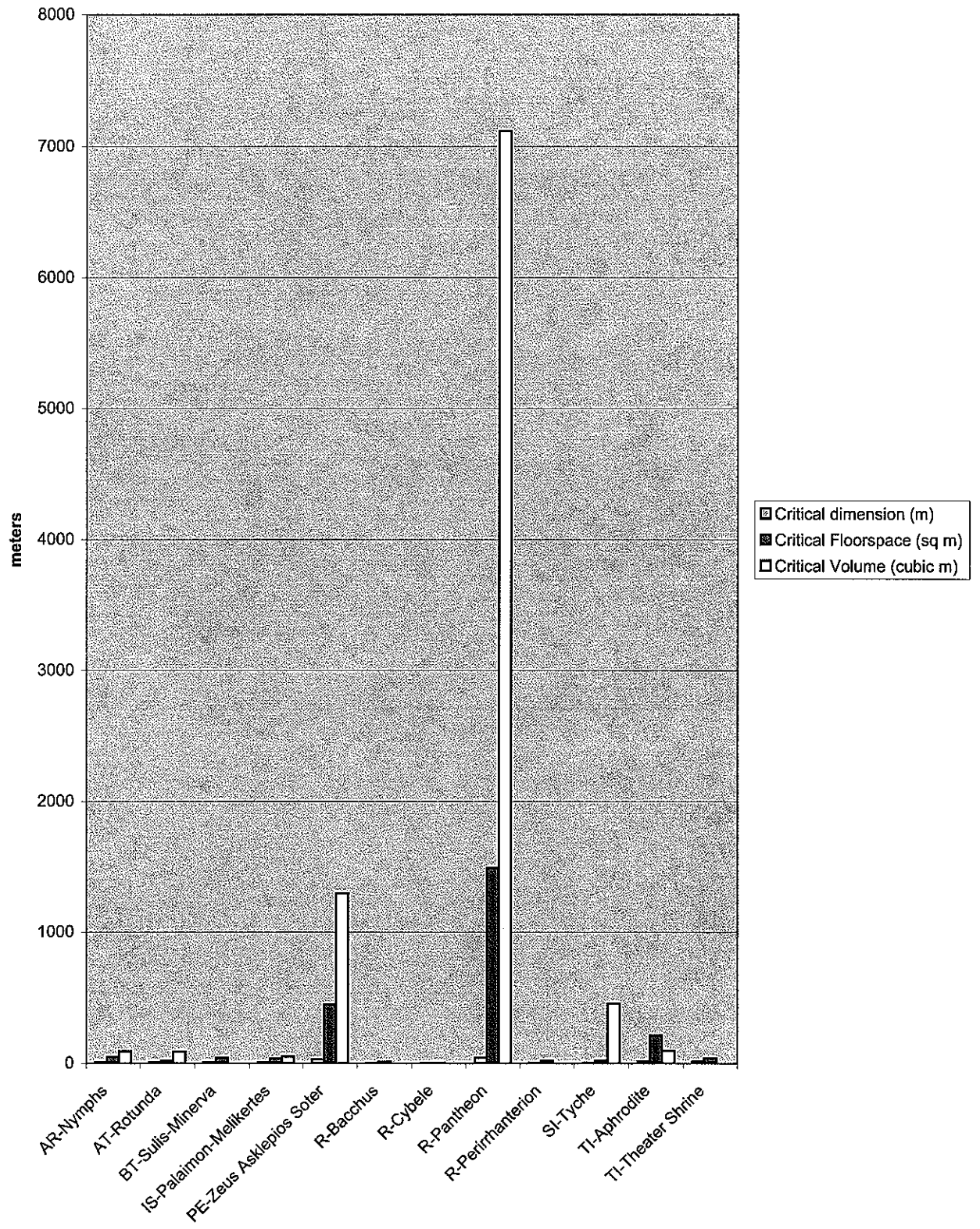


Chart VII.1. Vitruvius on monopteroi design

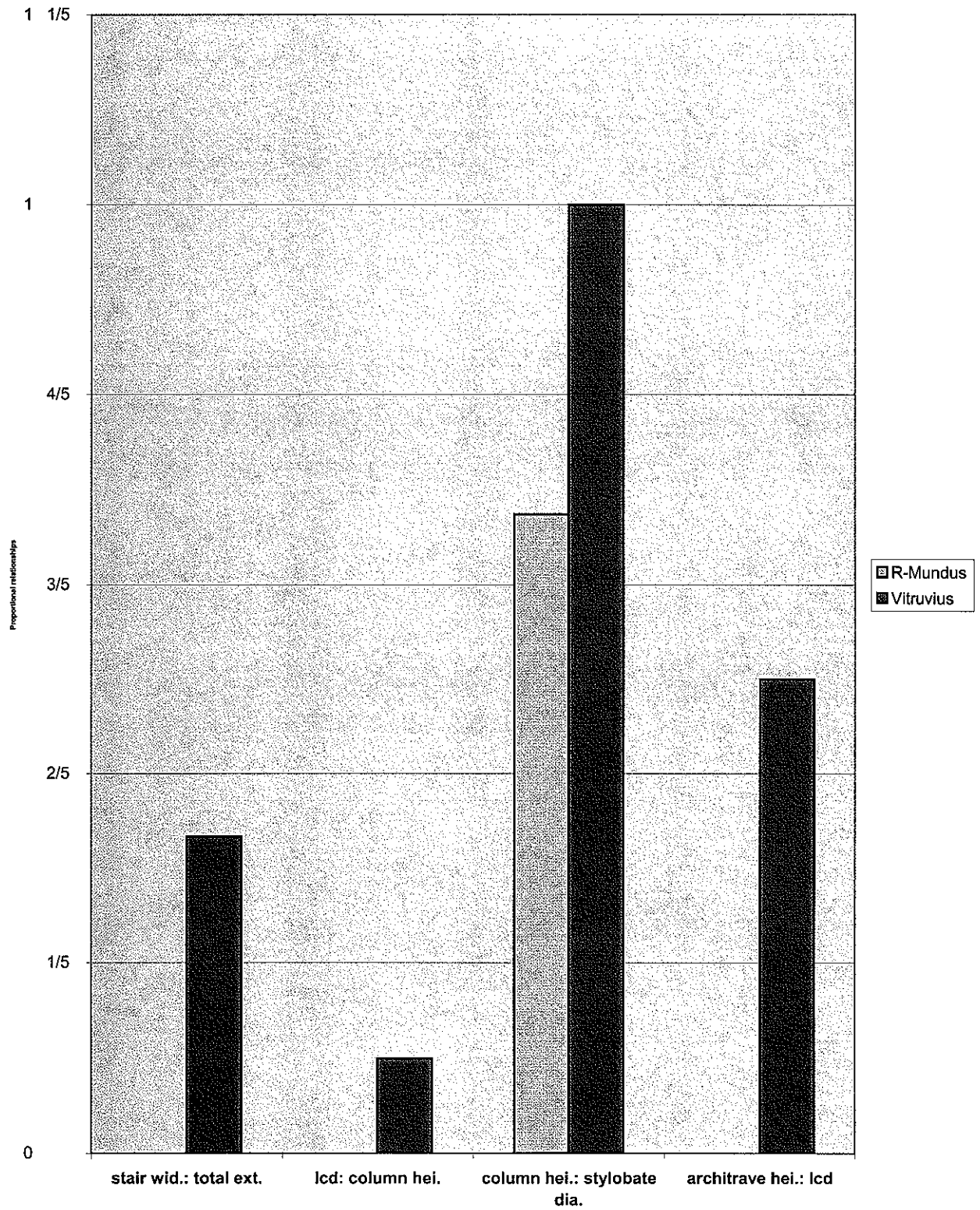


Chart VII.2. Vitruvius on peripteroi design

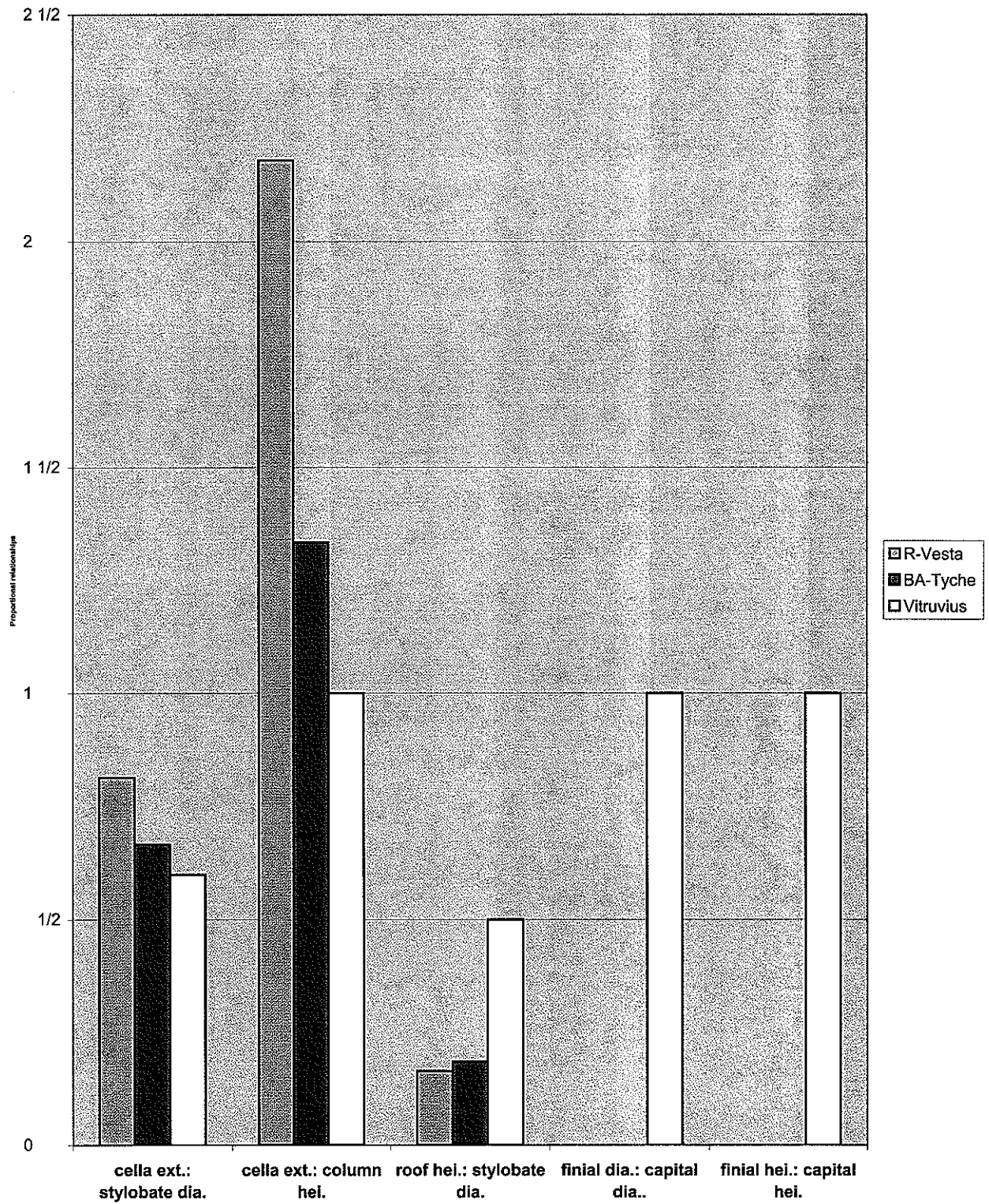


Chart VII.3. Vitruvius vs drum design

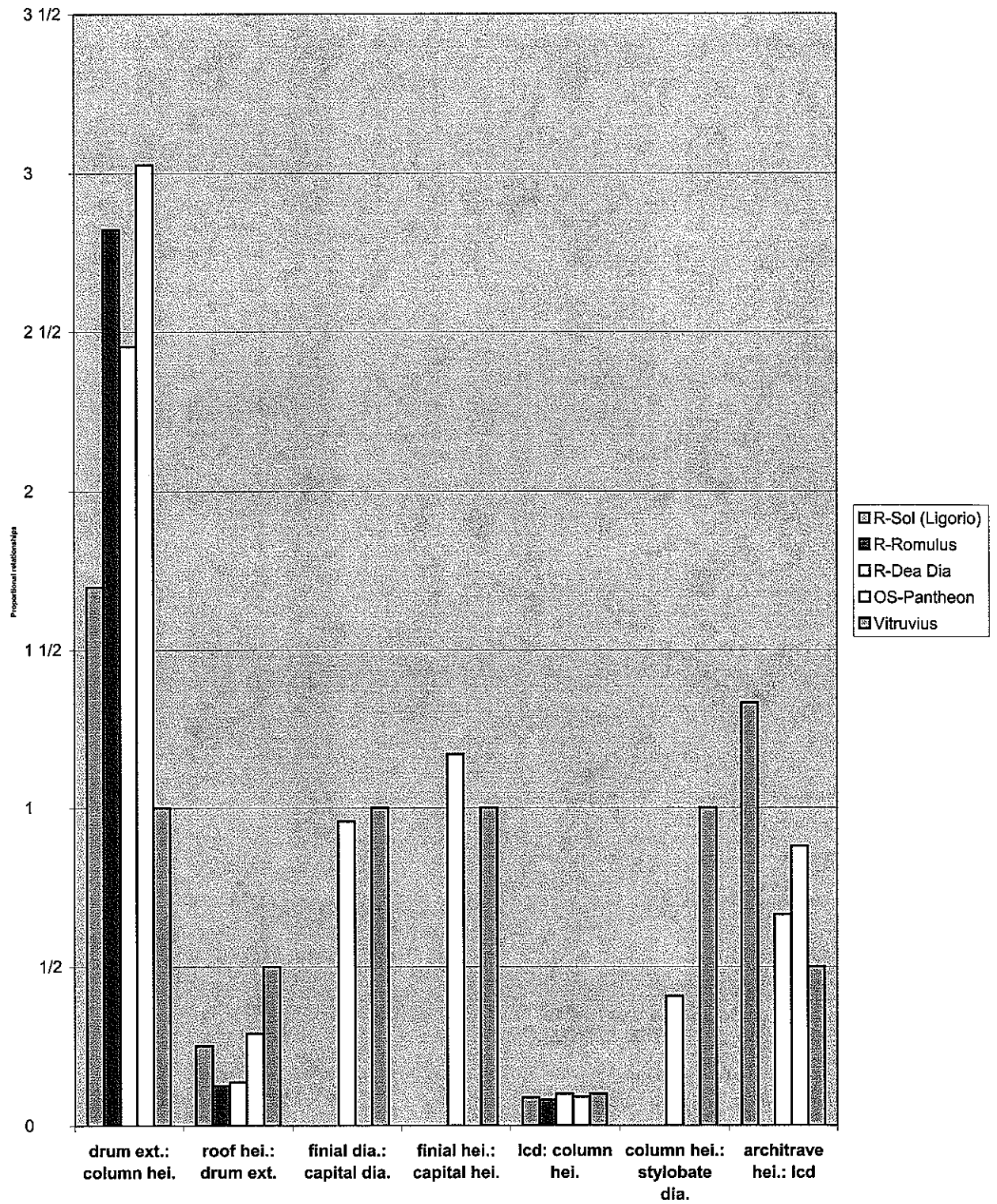


Chart VII.4. Vitruvius on columnar proportion

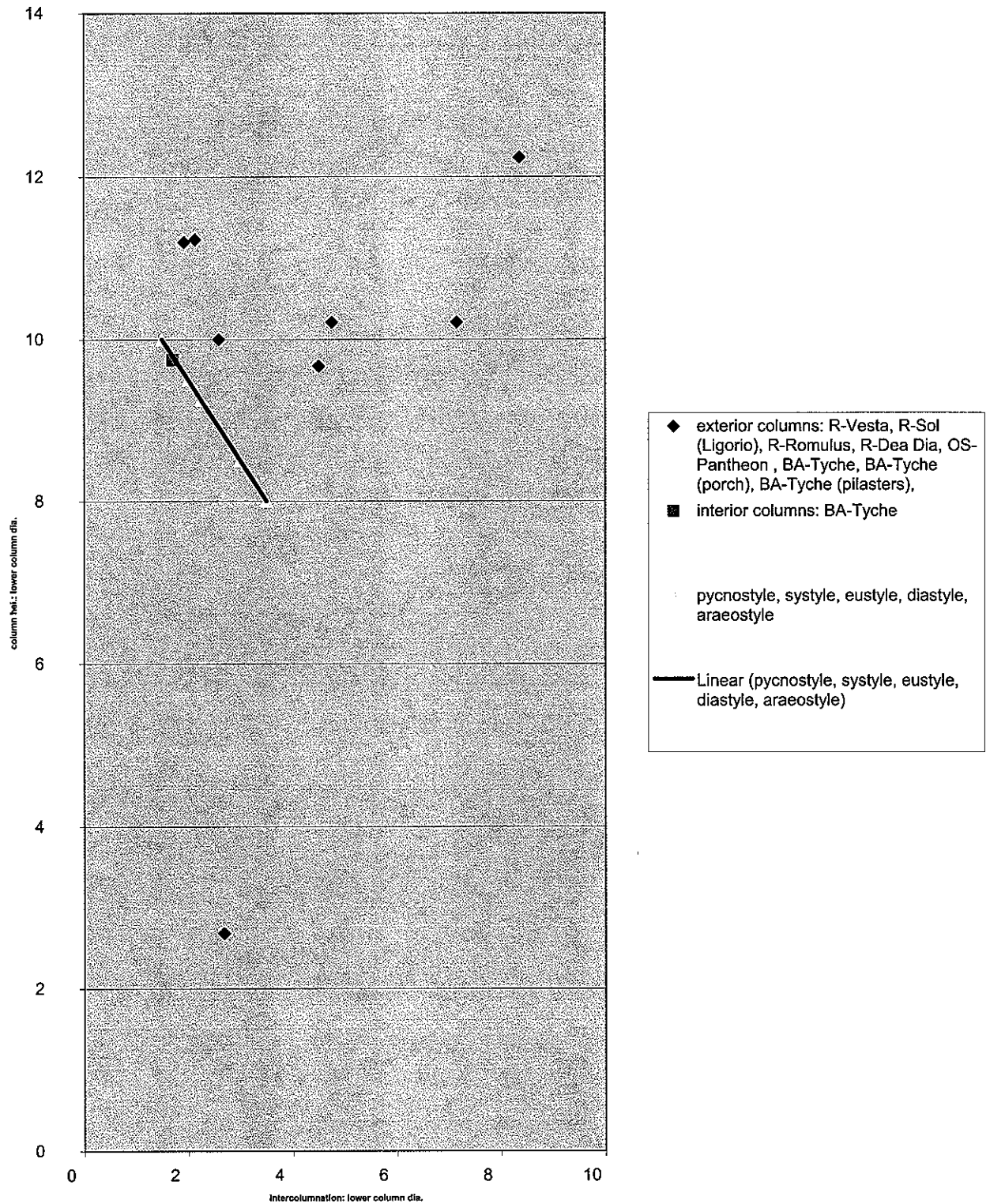


Chart VII.5. Vitruvius on the Corinthian order

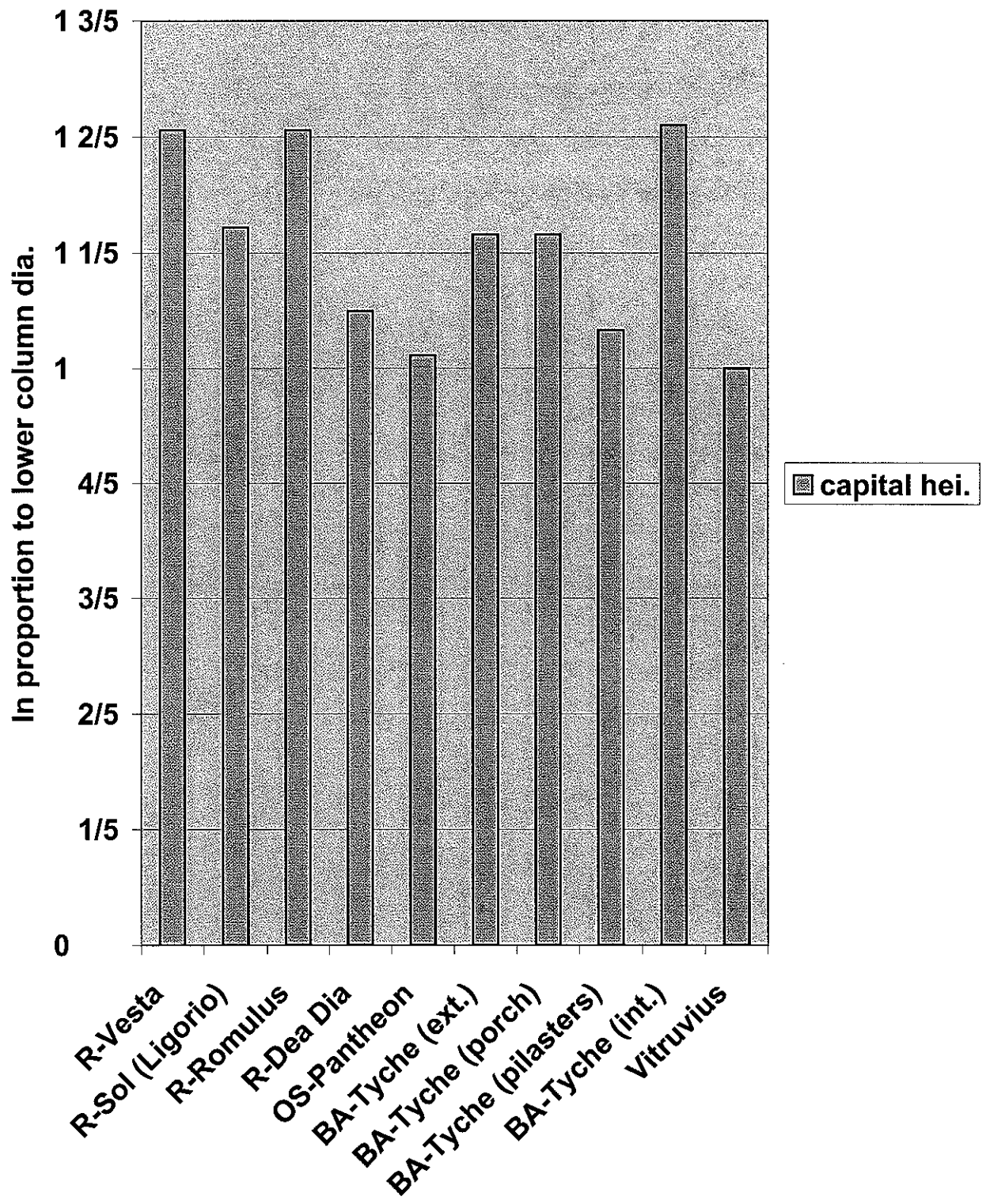


Chart VII.6. Columnar order

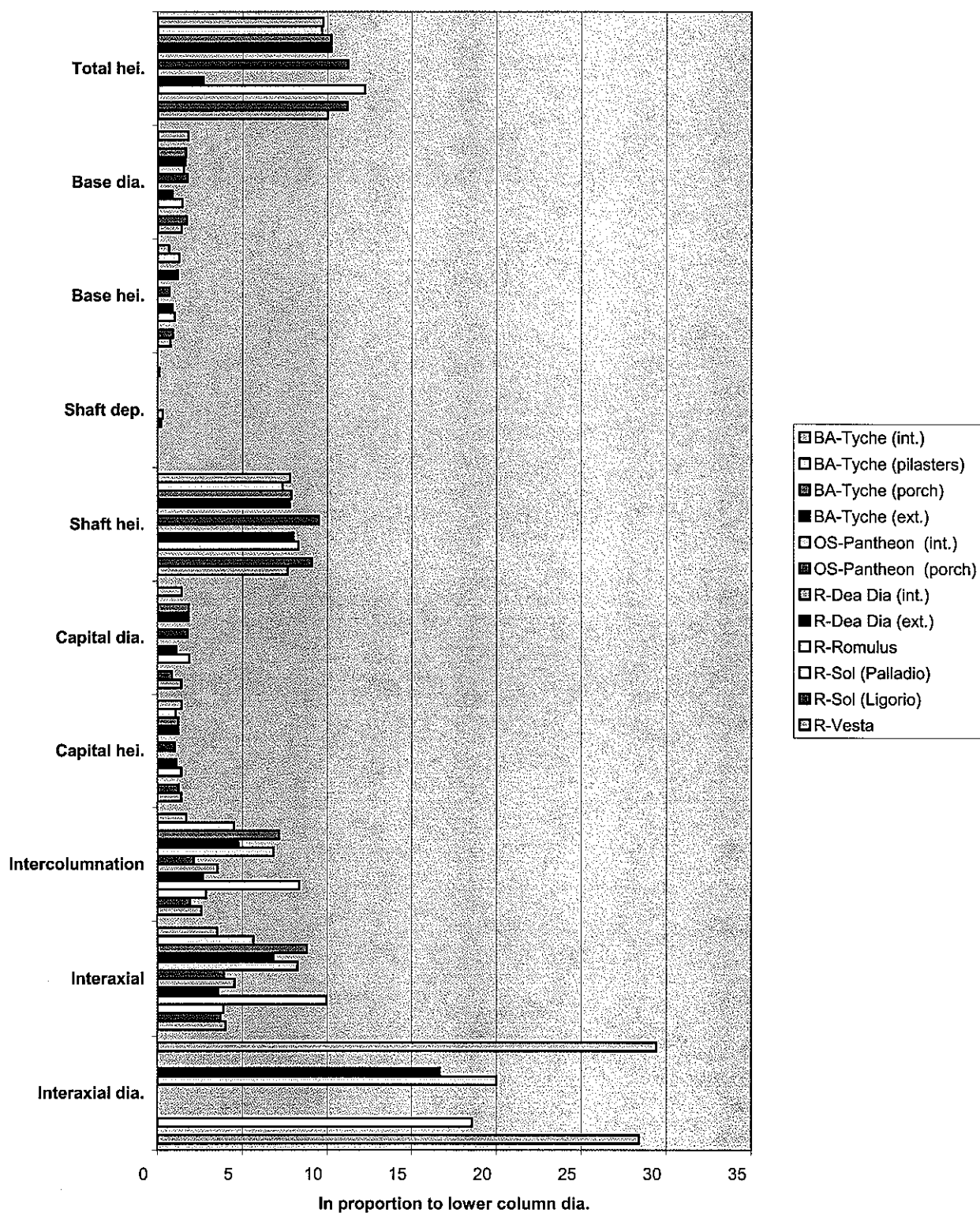


Chart VII.7. Structural elements

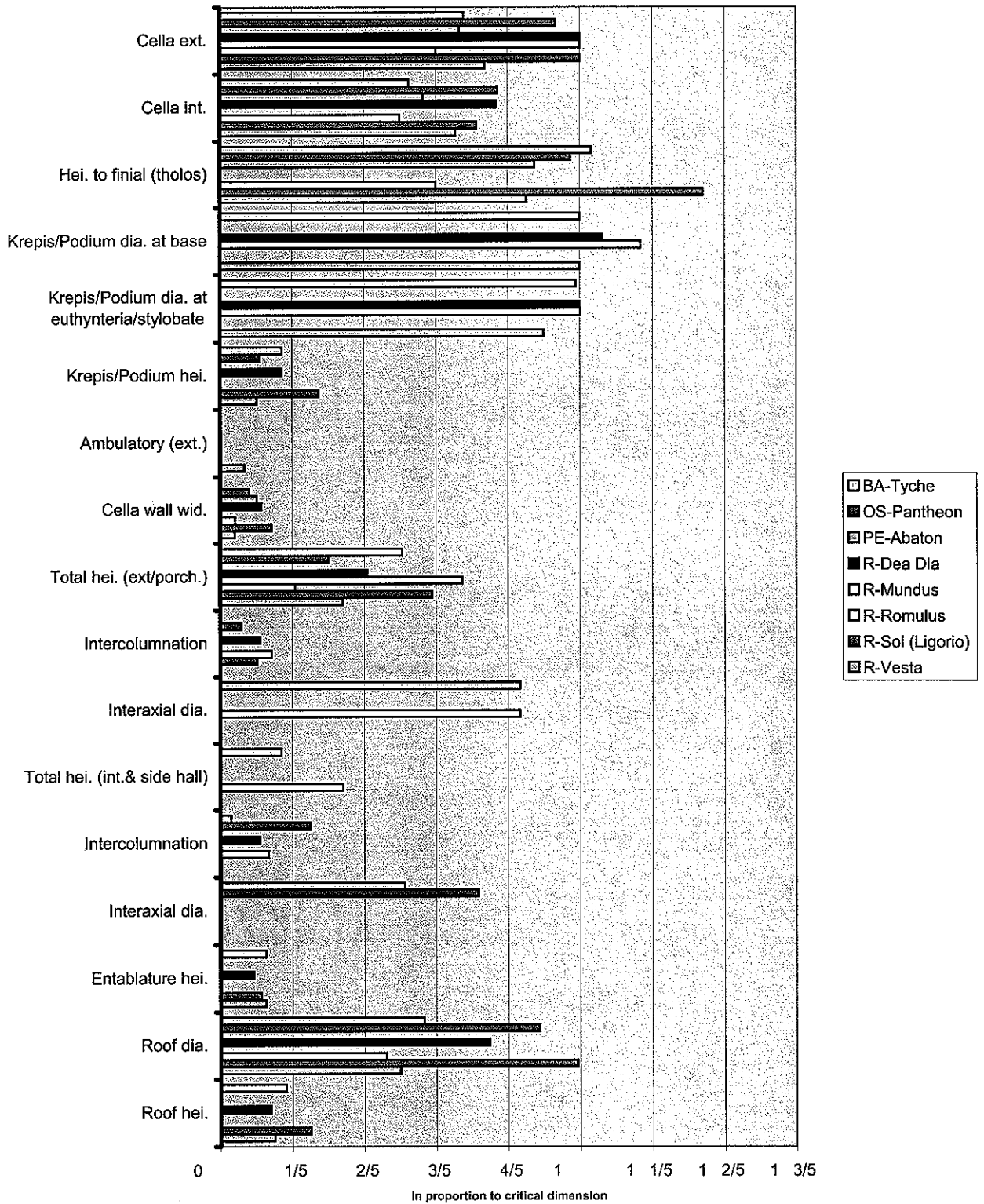


Chart VII.8. Floor space and volume

