ABPL90267 Development of Western Architecture

double shells & Hagia Sophia
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planning developments
the palace compound of Antioch in Constantinople, after Naumann
new plan types

double shell
multifoil
tetraconch
inscribed
the double shell
a simple double-shell plan
Santa Costanza, Rome, c 365: views, section, plan

MUAS 15,445; Miles Lewis;
E H Swift, Roman Sources of Christian Art (New York 1951), p 40
Santa Costanza, interior
Lassus, *Early Christian and Byzantine World*, pl 16
multifoil plans
a multifoil plan
pavilion in the Licinian Gardens (Temple of Minerva Medica), Rome, early C4th
plan & section

MUAS 13,935
St Gereon, Cologne, c 380

section & plan

Jean Hubert, Jean Porcher, & W F Volbach, *Europe in the Dark Ages* (London 1969), pl 327
the tetraconch
a Roman tetraconch
the Piazza d'Oro of Hadrian's Villa, Tivoli, 124, reconstruction

MUAS 13,933
San Lorenzo, Milan, c 370
front colonnade plan

Miles Lewis
a tetraconch double shell
S Lorenzo, Milan
alternative reconstructions
plan
modern view

Paolo Verzone, *From Theodoric to Charlemagne* (London 1968 [1967]), p 35
MacDonald, *Early Christian and Byzantine Architecture*, pl. 37
Hubert, *Europe in the Dark Ages*, pl 8
S Lorenzo, Milan
interior as remodelled by Martino Bassi, 1574-88
view, ambulatory, plan

Lassus, *Early Christian and Byzantine World*, p 89
Miles Lewis
MacDonald, *Early Christian and Byzantine Architecture*, pl 37
more tetraconch double shell (or nearly) plans

church or audience hall in the library of Hadrian, Athens, early C5th

probable Martyrium at Seleucia-Pieria (Samandag), late C5th

MacDonald, *Early Christian and Byzantine Architecture*, pl 38
Krautheimer, *Early Christian and Byzantine Architecture*, p 105
Abu Mina, Egypt: tetraconch phase of East Church, 2nd quarter C6th

Resafe
Syria

Photo Horst Fiedler Sena Lobo
Resafe, from the north

Miles Lewis
Resafe: aerial view from the north-east

Krautheimer, *Early Christian and Byzantine Architecture*, pl 96
Resafe, north gate, c AD 500

reconstruction & detail view


Miles Lewis
Resafe

plan
view inside the north wall

Soubhi Saouaf, *Six Tours in the Vicinity of Aleppo* (Aleppo 1957), fig 93
Miles Lewis
Martyrium or tetraconch church, Resafe, before 553
view from the east & plan

Miles Lewis
Soubhi Saouaf, *Six Tours in the Vicinity of Aleppo* (Aleppo 1957), fig 93
martyrium church, Resafe

interior view of the apse with vestigial synthonon & cathedra

Miles Lewis
martyrium church, Resafe
nave seen through south conch

Miles Lewis
an inscribed tetraconch
Cathedral at Bosra, Syria, 512
nave, looking east

Miles Lewis
Cathedral at Bosra
plan & reconstruction view

Crowfoot, Churches at Bosra and Samaria- [?Seraste]

detail of the south wall
(marked orange on plan)

Miles Lewis
Cathedral at Bosra

existing plan
previous plan
possible original plan

Miles Lewis
St George, Ezraa, Syria, c 515

south-west view
apse
interior

Miles Lewis
St George, Ezraa

plan & section

HH Sergios & Bakchos
[Sergius & Bacchus]
Constantinople
HH Sergios & Bakchos, Constantinople, 527-36
front view
plan
south-east view

Miles Lewis
Mathews, *Early Churches of Constantinople*, p 44
MUAS 15,451
HH Sergios & Bakchos

plan

south flank

Mathews, *Early Churches of Constantinople*, p 44
Miles Lewis
HH Sergios & Bakchos

HH Sergios & Bakchos
cutaway isometric of the dome, longitudinal section
MUAS 12,749
Lassus, Early Christian and Byzantine World, p 75
the pumpkin or convoluted dome

HH Sergios & Bakchos

Nymphaeum in the Gardens of Sallust, Rome, AD 69-79

MUAS 12,748
HH Sergios & Bakchos: interior details


MUAS 15,592
Miles Lewis
the geometry of dome construction

the squinch
the pendentive
the simple dome
the compound dome
the drum
the convoluted or pumpkin dome
the term does not refer to any one shape, but to the idea of spanning the corner of a plan shape to bring it closer to a circle, eg a square to an octagon, or an octagon to a sixteen-sided figure

R A Stevens, *Building in History* (London 1965), p 45
squinches
Alahan Manastir, Turkey, C5th; SS Pietro e Paolo, Agro, Sicily, C12th

Miles Lewis; MUAS 12,577
West Baths at Jerash, Jordan, AD C2nd: the dome

Miles Lewis
the pendentive

Stewart, *Early Christian &c Architecture*, p 50
pendentive at the West Baths, Jerash
building a pendentive at Craterre, France

Miles Lewis; Jean Dethier et al, *Down to Earth* (New York 1983), p 61
simple & compound domes

Stewart, *Early Christian &c Architecture*, p 51
the dome & drum

Stewart, *Early Christian &c Architecture*, p 52
Hagia Sophia

Istanbul, AD 532-7

Miles Lewis
Hagia Sophia
by Anthemios of Tralles & Isodorus of Miletus, AD 532-7

Miles Lewis, Architectura, p 228
Hagia Sophia
nineteenth century lithograph & modern view
G.Fossati, Aya Sofia, Constantinople (1852)
Miles Lewis
Hagia Sophia, interior view: Miles Lewis, *Architectura*, p 229
Hagia Sophia cutaway view

Hagia Sophia: plan

Swift, *Roman Sources of Christian Art*, p 42
from HH Sergius & Bakchos to Hagia Sophia

Miles Lewis
the design

Hagia Sophia by Anthemios of Tralles & Isodorus of Miletus, AD 532-7

view from above

X B i Altet, The Early Middle Ages from Late Antiquity to A.D. 1000 (Köln 1997), p 23
Hagia Sophia
the arrangement of the domes

MUAS 12,209
Hagia Sophia, diagonal section of the original dome

Swift, Roman Sources of Christian Art, p 123
Hagia Sophia, dates of the present dome

Hagia Sophia, longitudinal section

Swift, *Roman Sources of Christian Art*, p 122
Hagia Sophia, transverse sections with the old and the new dome

after Mackenzie, *Alexandria*, p 848
Hagia Sophia, transverse section with buttresses

Swift, *Roman Sources of Christian Art*, p 82
Hagia Sophia, isometric diagram, with the dome removed
Auguste Choisy, Histoire de l’Architecture (2 vols, Paris 1890)
Basilica Nova of Maxentius, or Constantine, Rome, finished after 313

Swift, Roman Sources of Christian Art, p 14
Hagia Sophia from the south

Miles Lewis
Hagia Sophia

interior detail at ground level, with sloping shaft

Andrew Hutson
Hagia Sophia the underside of the dome

Miles Lewis
Hagia Sophia
details of the conches and aisle

Miles Lewis
MUAS 15,610, 4580
Hagia Sophia: the nave arcading
Miles Lewis
Hagia Sophia
details of the nave arcading

Miles Lewis
Hagia Sophia capitals, incorporating the monogram of Justinian & Theodora

Lassus, *The Early Christian and Byzantine World*, p 64
MUAS 15,609
Hagia Sophia

marble panelling of the north nave wall

Miles Lewis
Hagia Sophia
mosaic at the entrance
Photo © Helen Bettz, Sacred Destinations
Hagia Sophia
interior, from the gallery
Miles Lewis
Hagia Sophia compared with Brunelleschi’s Cappella Pazzi, Florence

Miles Lewis; Frederick Hartt, *History of Italian Renaissance Art: Painting, Sculpture, Architecture* (New York 1969), cp 14