

UNIVERSITA SAPIENZA – ROMA

# COURSE OF URBAN MORPHOLOGY

A.A. 2018/19

Professor Giuseppe Strappa

Architects Anna Rita Donatella Amato

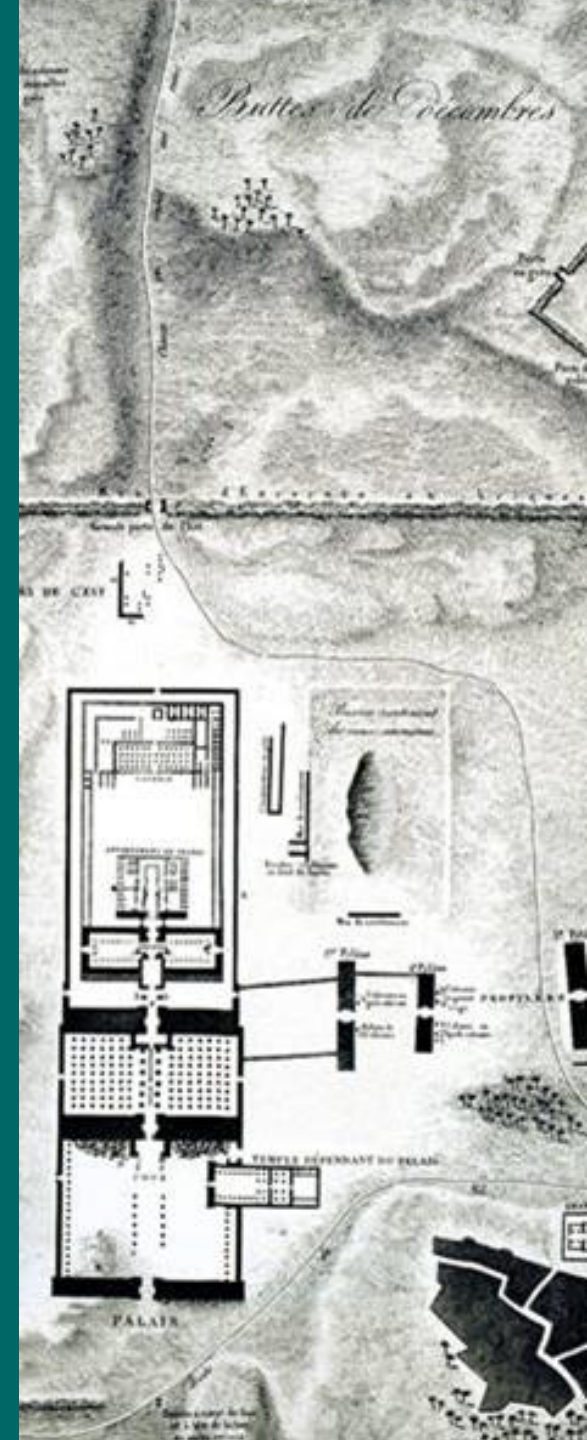
Vincenzo Bongiorno

Marta Crognale

Cristian Sammarco

LECT. 6

## SPECIAL NODAL BUILDING AND KNOTTING PROCESS



The **nodal special building** is the part of the urban fabric characterized by a central structure organically hierarchized in relation to the others

This central structures are, from the point of view:

**STATIC**

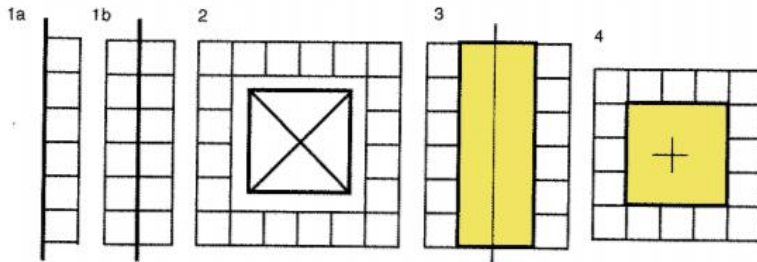
*brought*, compared to other load bearing (collaborating)

**DISTRIBUTIVE**

*served*, compared to other serving

**SPATIAL**

*nodal*, compared to other serial





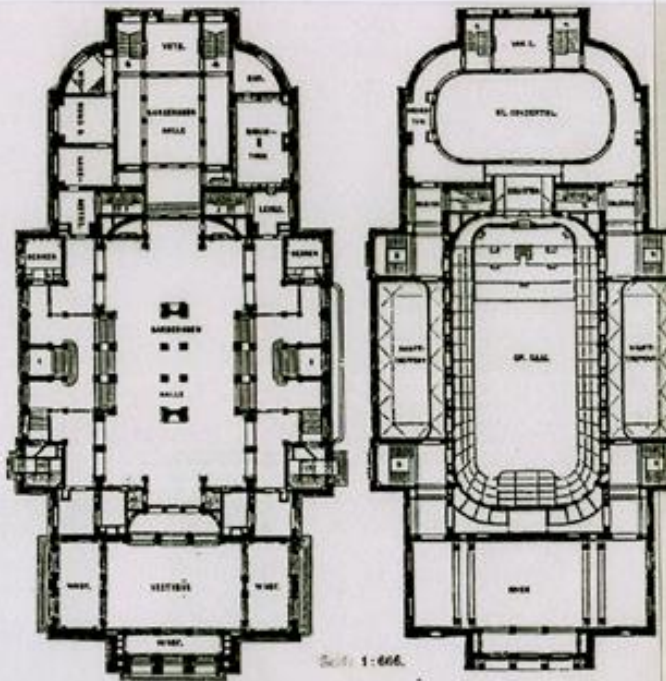
Leipzig 1931

## PERSISTENCE OF THE NOTION OF TYPE AND PROCESS INSIDE MODERNITY

“**Hallenbauten** are buildings that enclose vast spaces, characterized by the fact that the *Halle*, in the context of the entire architectural complex, is in a dominant position. All other spaces are subordinate.

.....

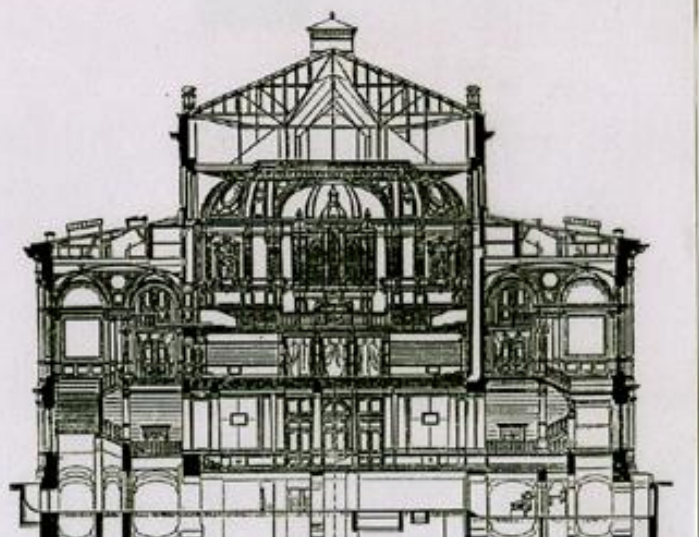
The spaces destined to become places of worship or those of a representative nature, **do not differ substantially** from those intended instead for assemblies, processes, trade, or large spa buildings.”



MARTIN GROPIUS, NUOVA SALA PER CONCERTI A LIPZIA.

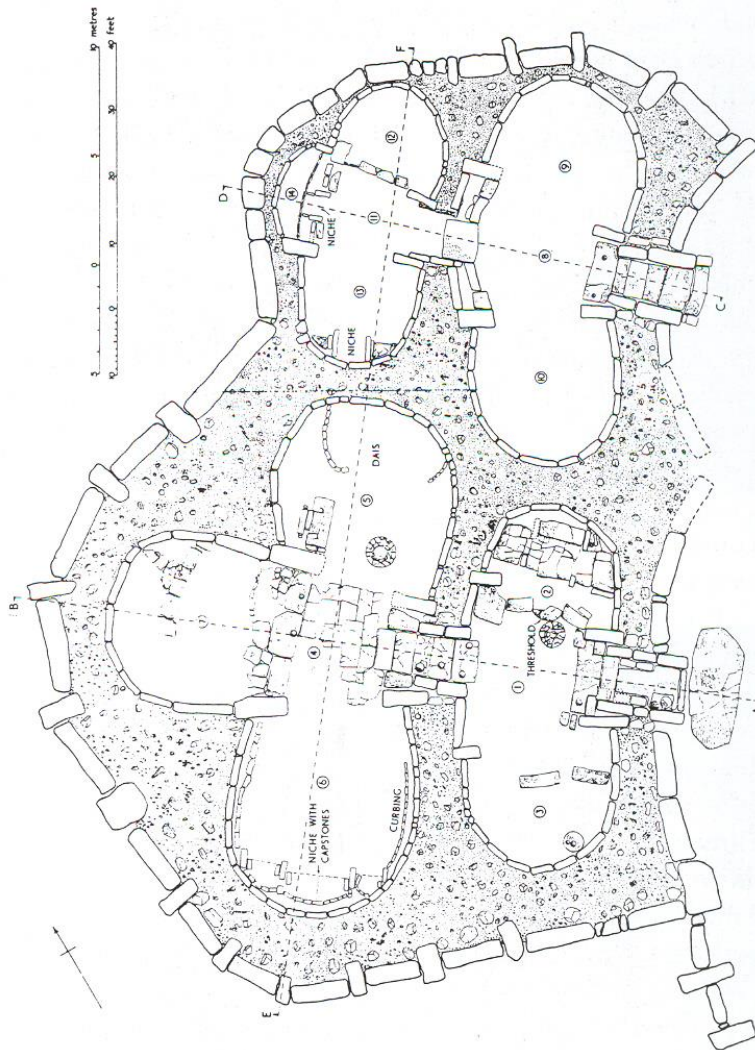


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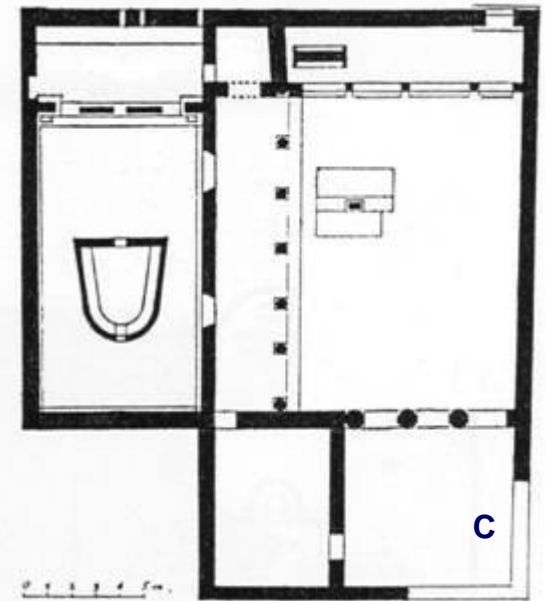
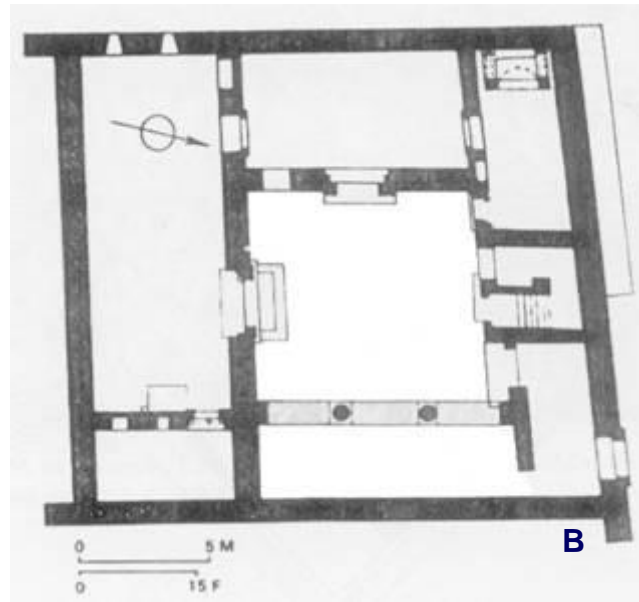
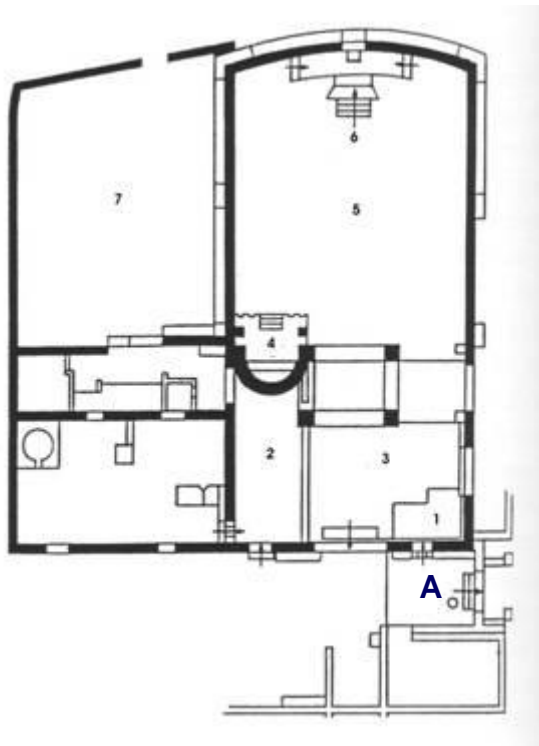
Nodal special building  
directly derived from the base building



## ĠGANTIJA TEMPLE, MALTA

In Malta there is another small structure with 3 lobes that probably was the house of the shaman (intermediate passage between the house and the temple)

Fig. 1. Plan of the Ġgantija temple complex. (Drawn by F.S. Mallia).



A. Ostia antica. Synagogue - I century A.D

B. Doura Europos (Mesopotamia). Domus ecclesiae - III century A.D

C. Siria. Church of Qirq-Biza – V century A.D

An exemplary case of the church deriving from the basic building is the church of Doura Europos (200 AD) in which the spaces reserved for worship were integrated into the domestic spaces.

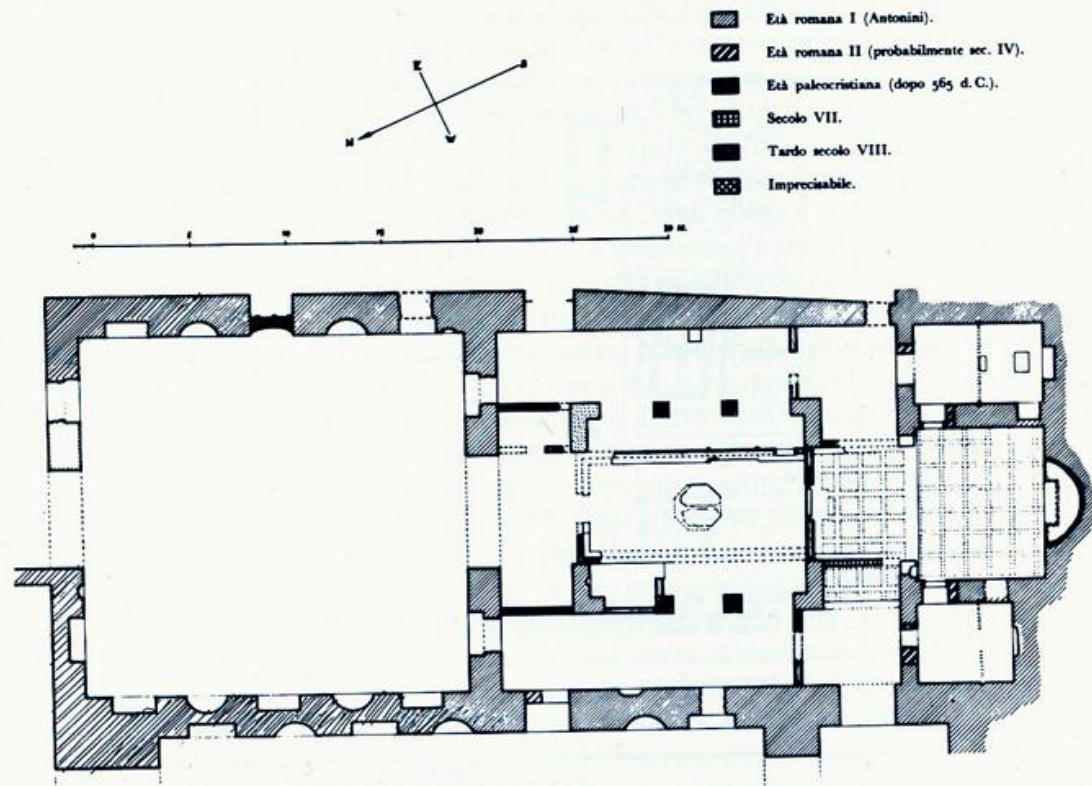
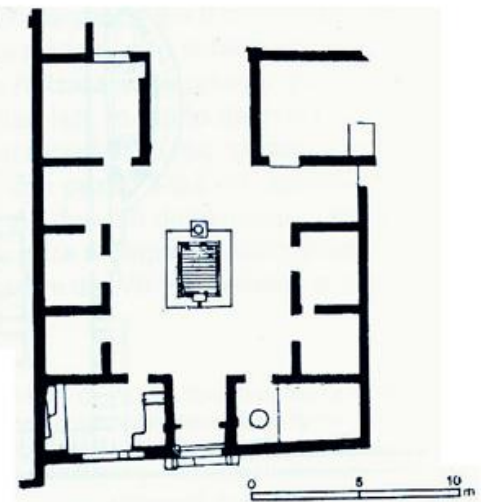
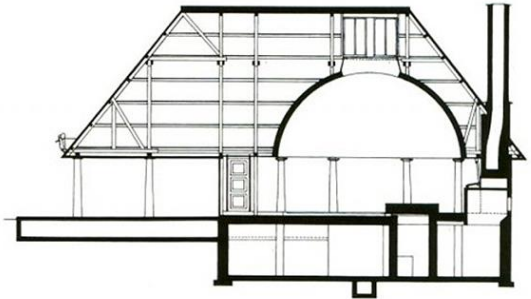
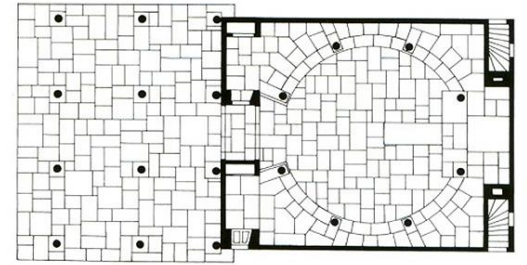


FIG. 1 - Roma, S. Maria Antiqua

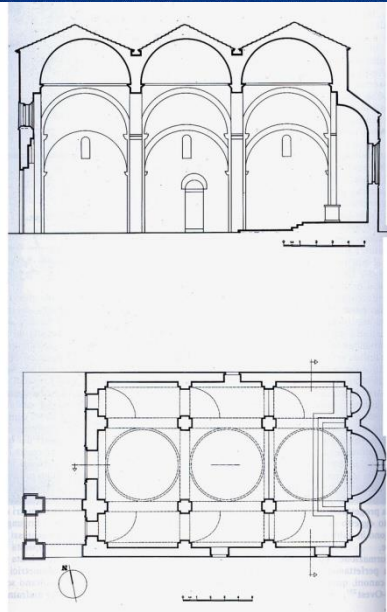




Erik Gunnar **Asplund** and Sigurd **Lewerentz**. Chapel in the Stockholm Cimitery 1920







The Church of Ognissanti in Valenzano (1070/78) is one of the most crystalline examples of formative process: from the way and times the church was built we understand how it is derived from the experience of *base building*. The construction took place with the complete construction of each single cell. This is confirmed by the construction phases: the building is started from the apse, proceeding for completing successive "cells", one at a time along the main axis, ending with the main façade.

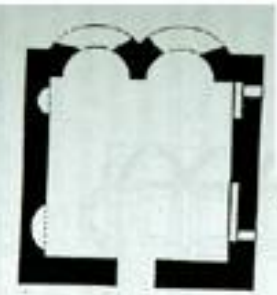




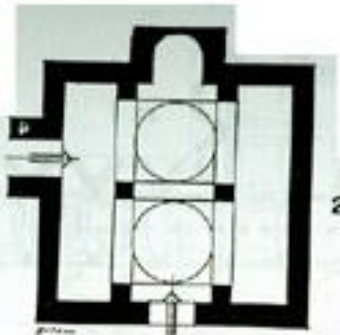
S.Bartolomeo di Padula

Seppannibale

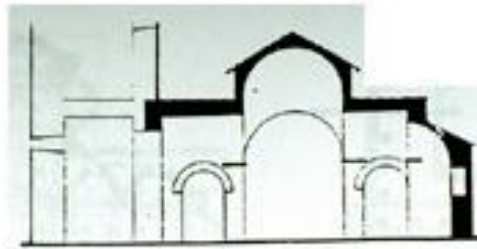
Bitonto



1



2



6



3

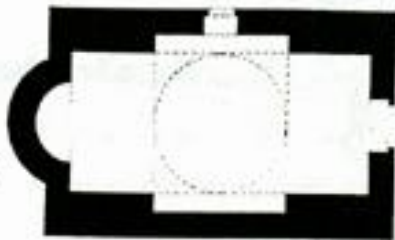


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S.Eustachi a Giovinazzo

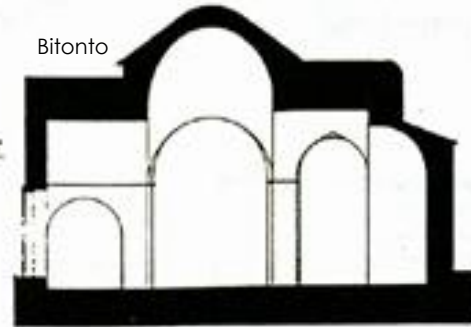


S.Apollinare a Rutigliano



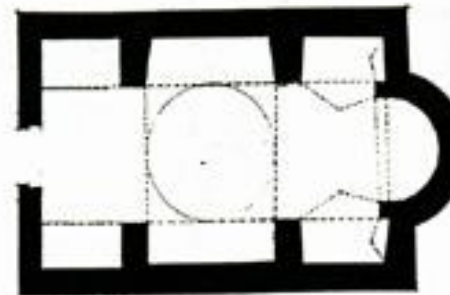
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S. Croce a Bitonto

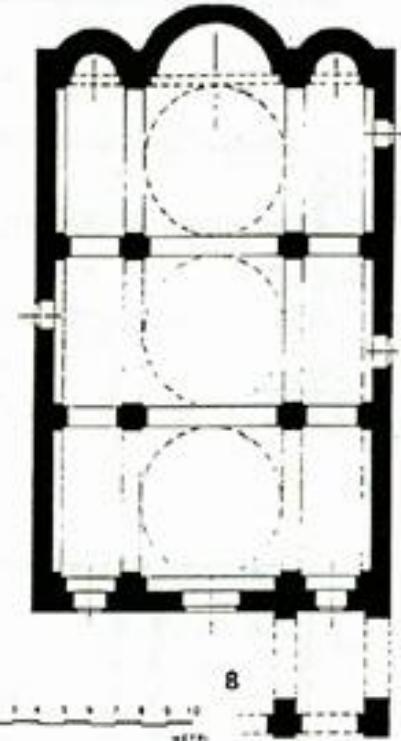


Bitonto

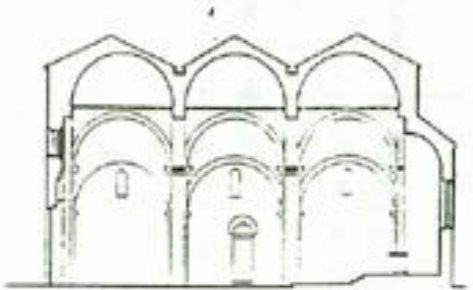
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Tipo a vani gerachizzati con cupla centrale (es. Bitonto)



8



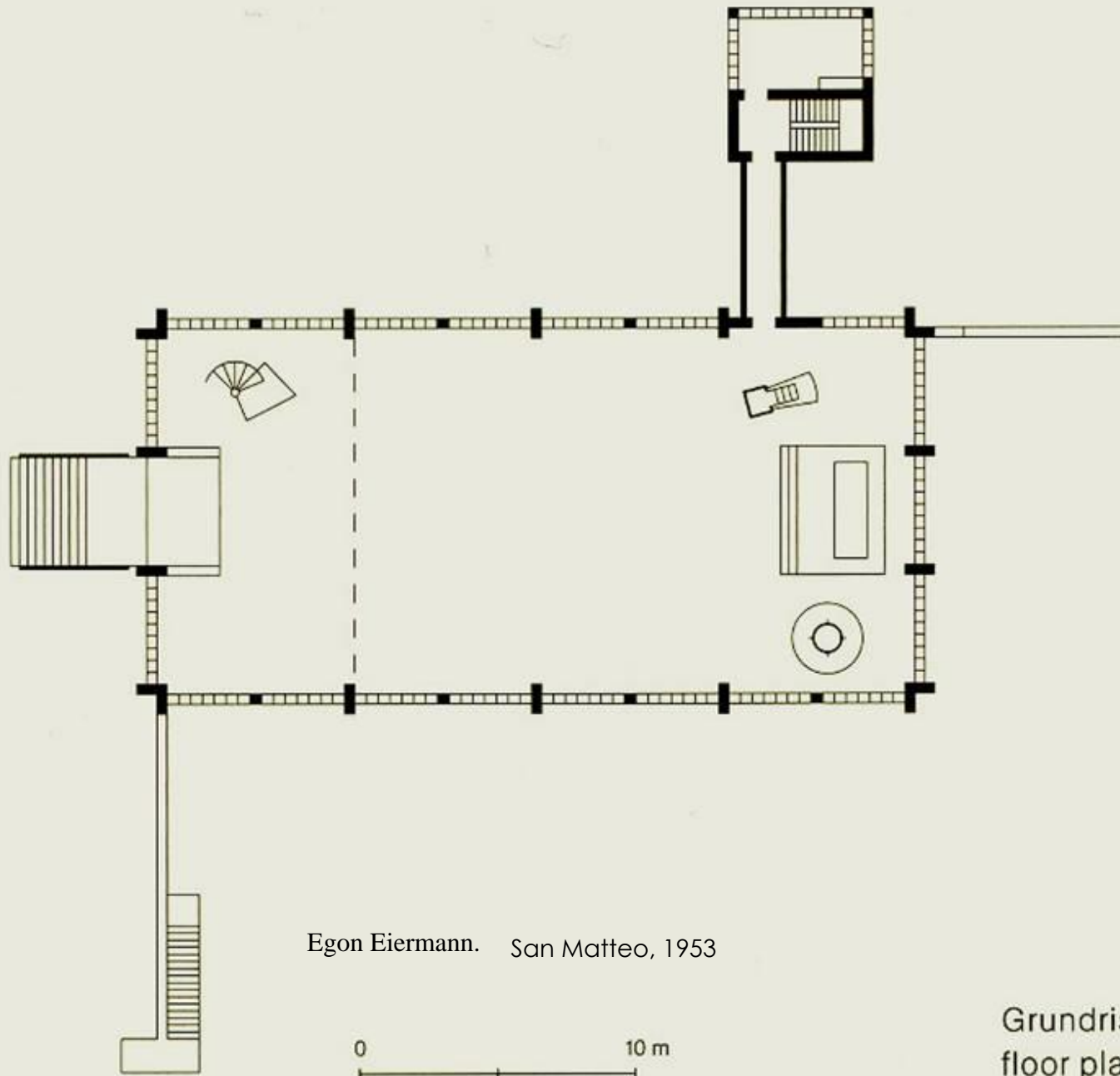
Ognissanti a Valenzano

Nodal special building  
indirectly derived from the base building





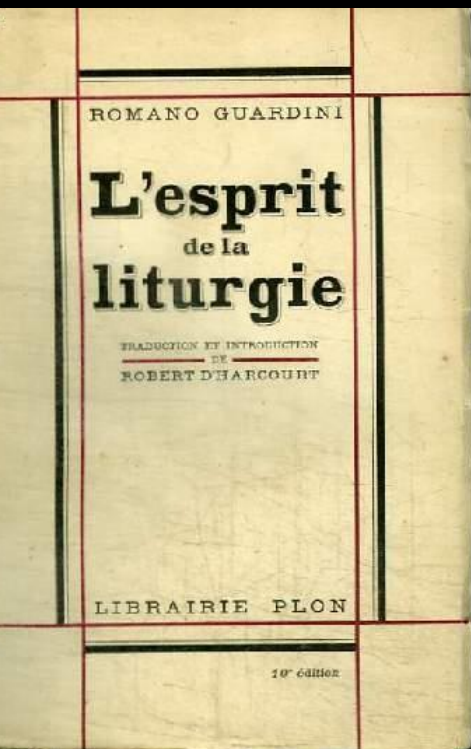
Rudolf Schwarz,  
Corpus Domini, Church, Aachen 1928



Egon Eiermann. San Matteo, 1953

Grundriss  
floor plan





"The natural space has directions: the three we know. They indicate that it is an orderly space, not chaos. Order of contiguous, superimposed, subordinate. This space allows our life to move in the fullness of meaning; that we can build houses, shape them, inhabit them.

Even the sacred space has an order.

..... How many can walk with dignity ? It is not in a hurry and running, but a dignified movement.

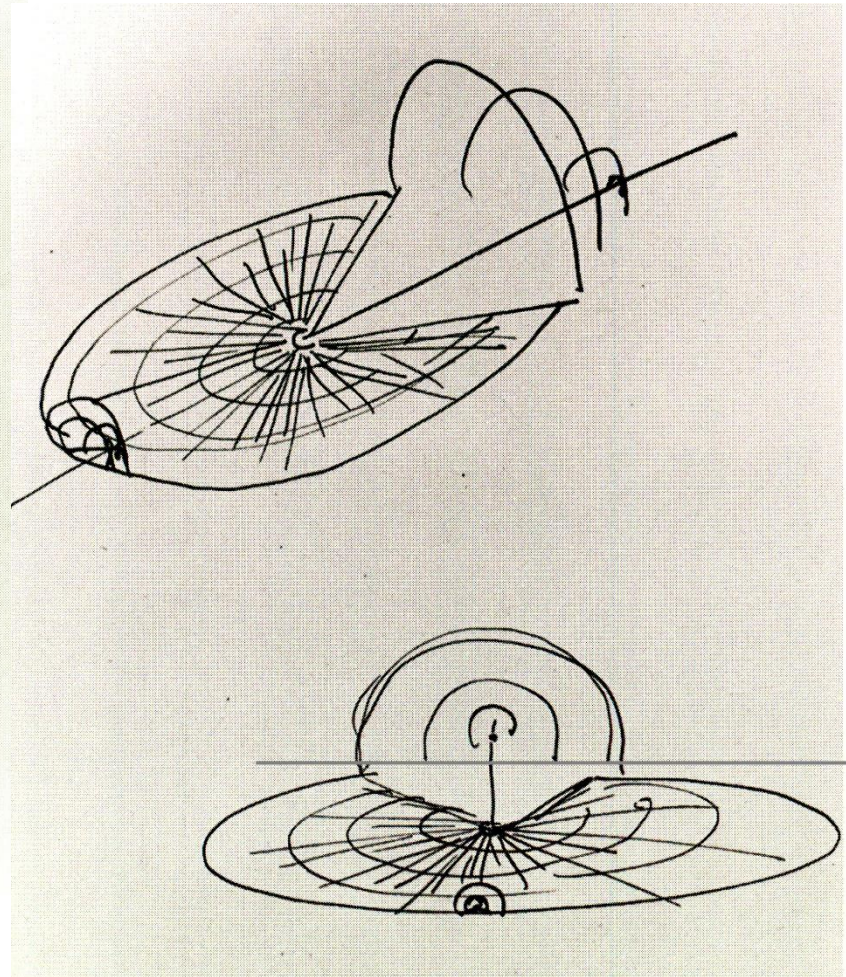
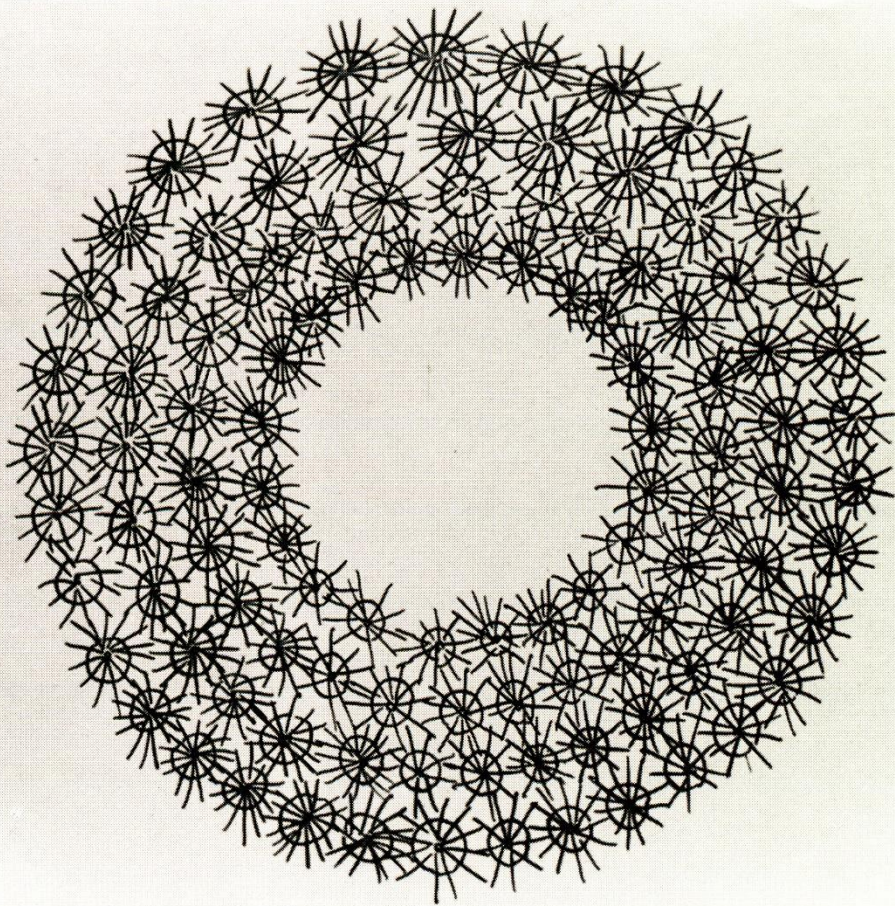
This approach, when it is devoted, can be called liturgy. "

Romano Guardini, *Vom Geist of the Liturgy*, Mainz, 1918

- *Lo spirito della liturgia*, (prima trad. 1927) Morcelliana, Brescia, 1980

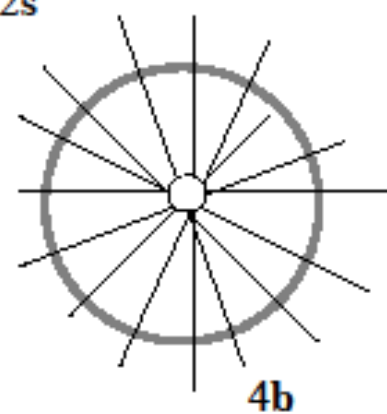
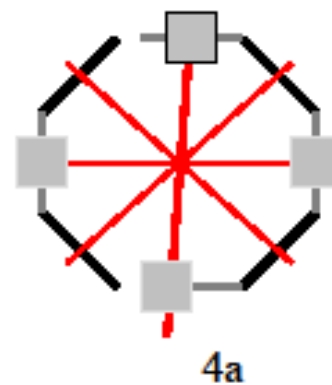
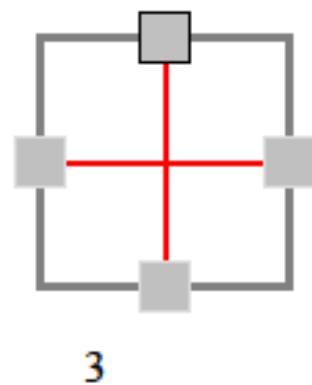
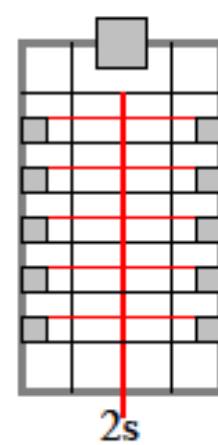
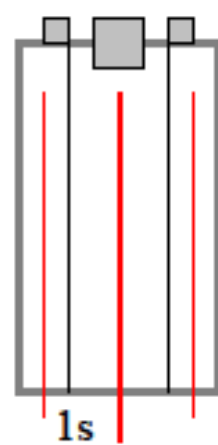
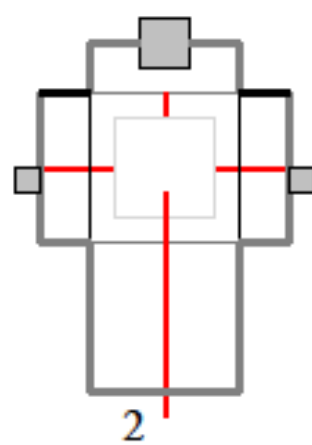
- *L'Esprit de la liturgie*, trad. par Robert d'Harcourt, Paris, Plon, 1930





départ sacré





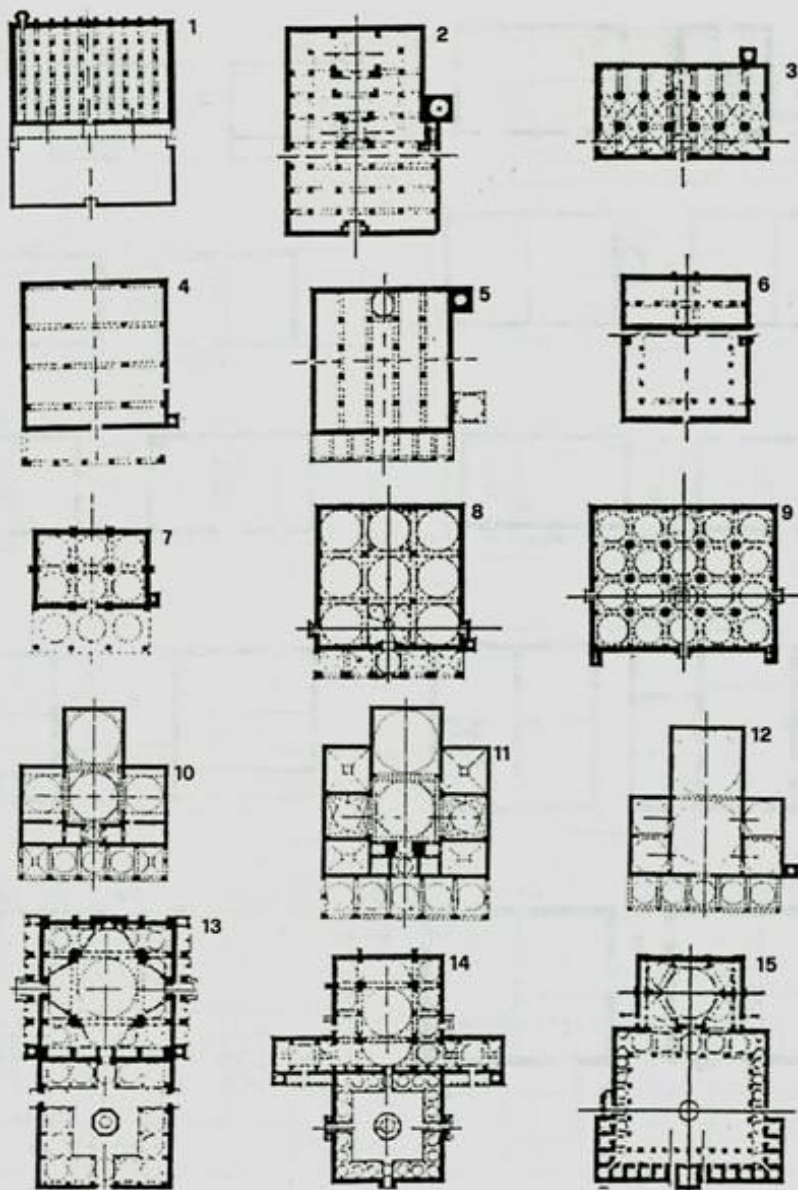
PROGETTARE  
METODI TECNICHE

# Edilizia per il culto

Chiese - Moschee - Sinagoghe  
Strutture cimiteriali

a cura di Giuseppe Strappa

**UTET**  
EDIZIONE ECONOMICA



Tav. 10 - Rapporto dialettico tra carattere seriale ed organico nelle mutazioni dei tipi specialistici. Processo di trasformazione delle moschee turche. Passaggi successivi, nel periodo seljukide, dall'impianto seriale gerarchizzato solo dall'ingresso e dal *mirhab*, ad impianti di maggiore organicità gerarchizzati dalla cupola e da controassi: 1. Grande Moschea di Sivas; 2. Grande Moschea di Kayseri; 3. Moschea di Iplikci a Konia. Tipi di transizione nel periodo *beylik* (principati) individuati dall'impianto seriale della Moschea di Akchisar a Karaman (4) gerarchizzato da un secondo asse e cupola nella Grande Moschea di

Birgi (5) con raddoppio della cupola in asse nella Isa Bek di Seljuk (6, cfr. anche tav. 7). Tipi seriali del primo periodo ottomano basati su strutture di elementi organici individuati da: 7. Zincirli Kuyu a Istanbul; 8. Eski ad Edirne; 9. Grande Moschea di Bursa. Tipi organici con vani nodali gerarchizzati e primo vano tendenzialmente polare: 10. Orhan a Bursa; 11. Yildirim a Bursa. Tipo a vani nodali equivalenti tendenzialmente monoassiale: 12. Murad a Istanbul. Tipi a grande livello di organicità del periodo ottomano classico e tardo individuati dalle moschee di Istanbul: 13. Shezade; 14. Beyazit; 15. Ahmet (v. cap. 4).

## Interpretation of turkish mosque transformation

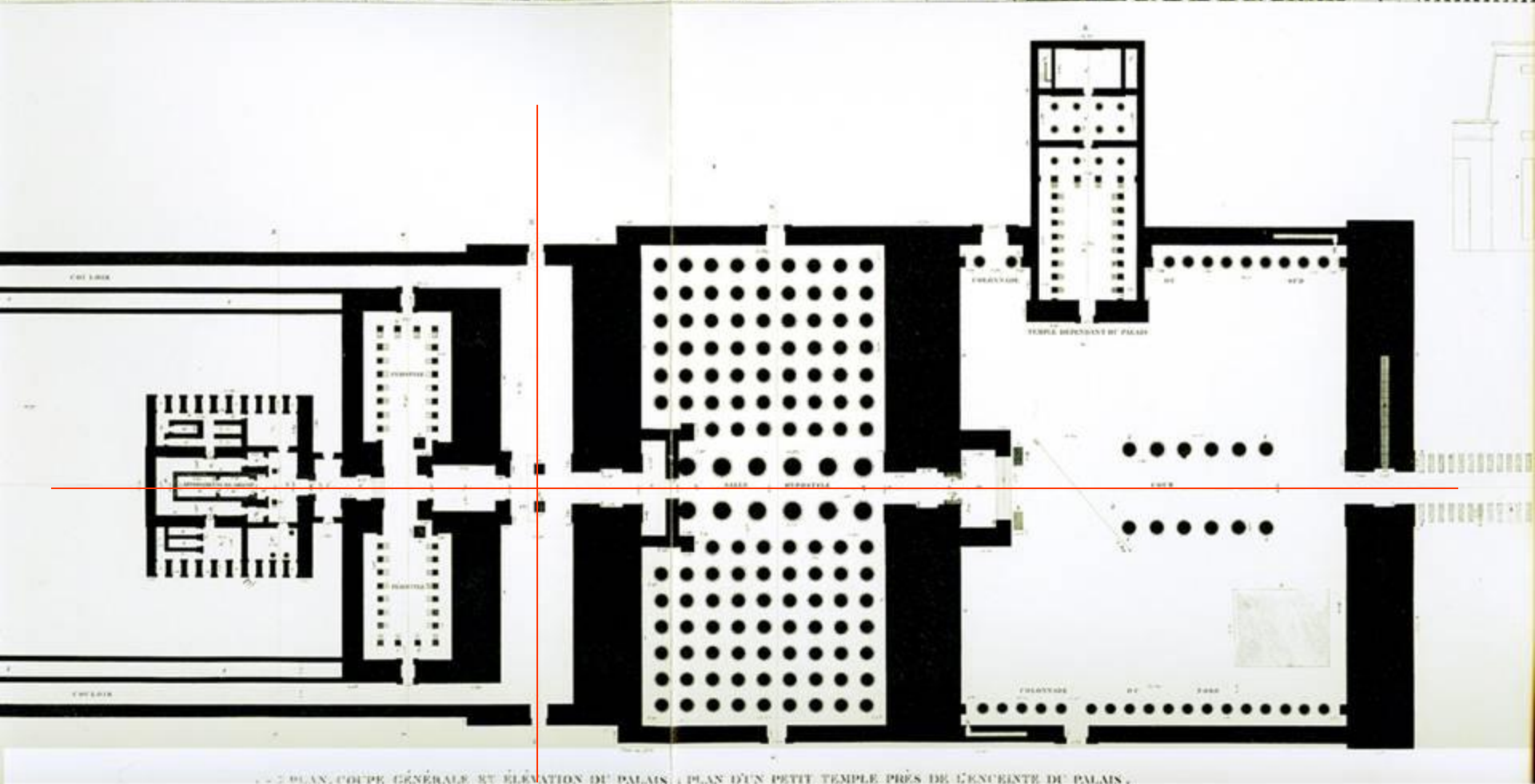
From G. Strappa, *Unità dell'organismo architettonico*, pag.225

<http://www.giuseppestappa.it/>

# Basilical Types

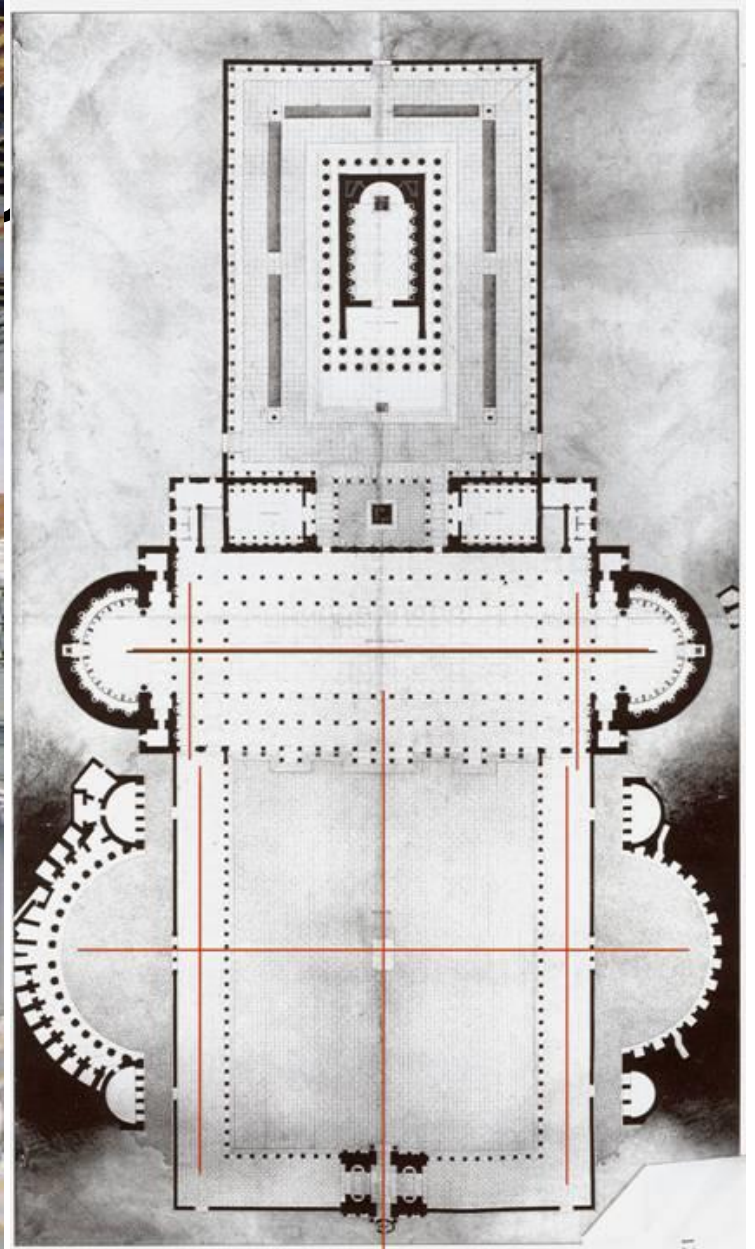


## THEBES . KARNAK .



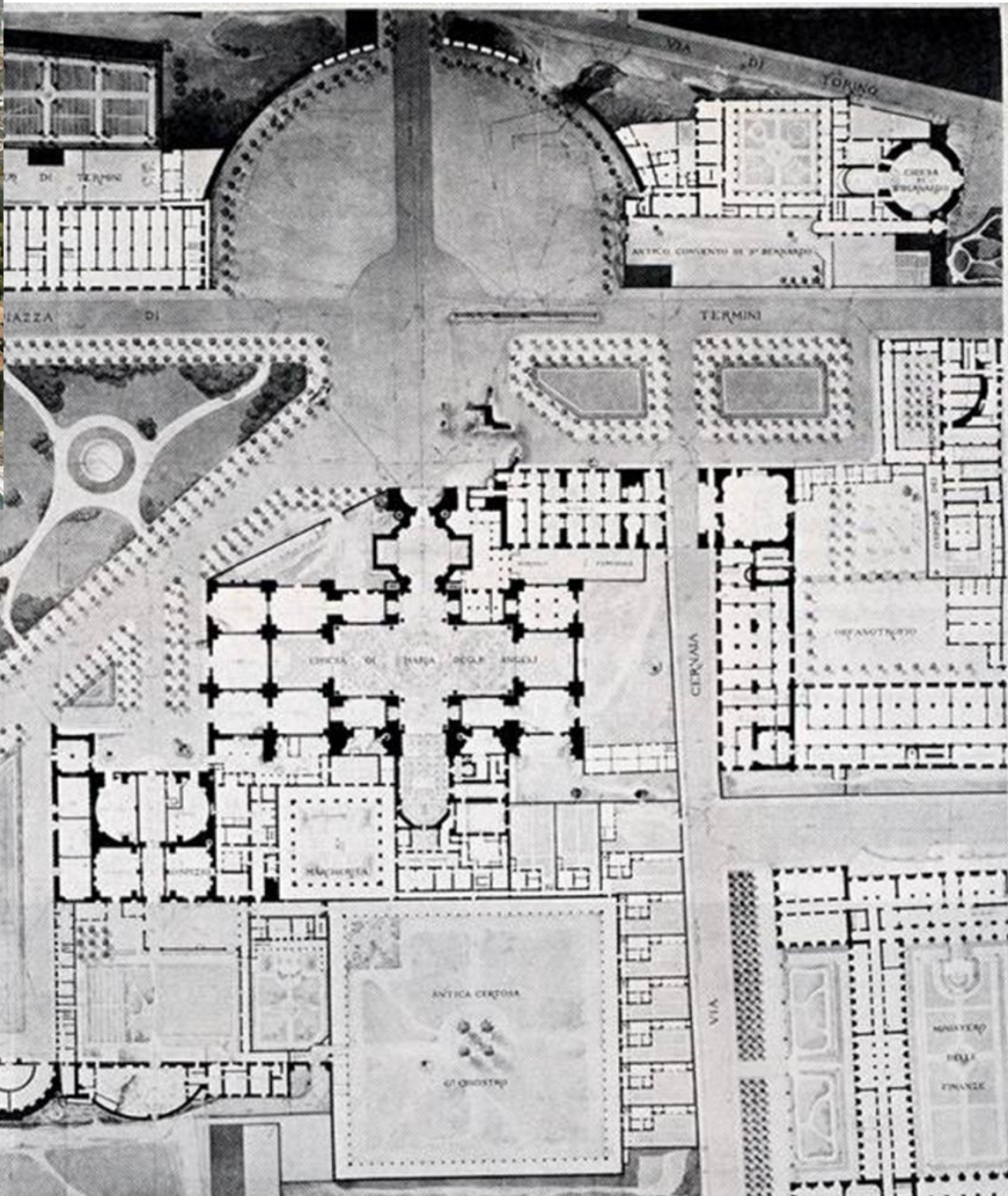
1. — 2. PLAN, COUPE GÉNÉRALE ET ÉLEVATION DU PALAIS : PLAN D'UN PETIT TEMPLE PRÈS DE L'ENCRINTE DU PALAIS.





Basilica Ulpia in Traianus Forum, 112 A.D.





Terme di Diocleziano e  
S. Maria degli Angeli







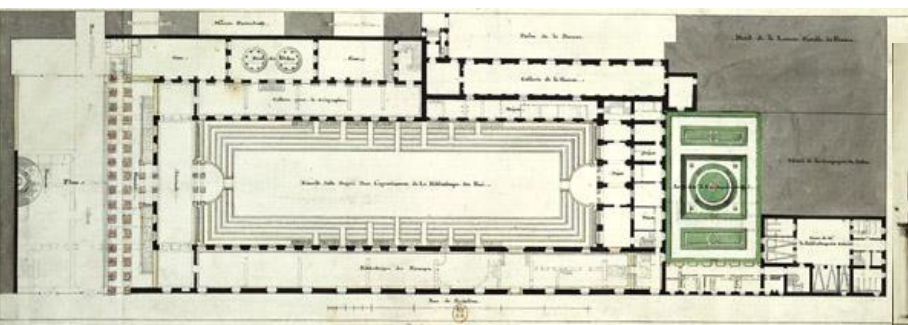


E. PAULIN, Terme di Diocleziano (1885):



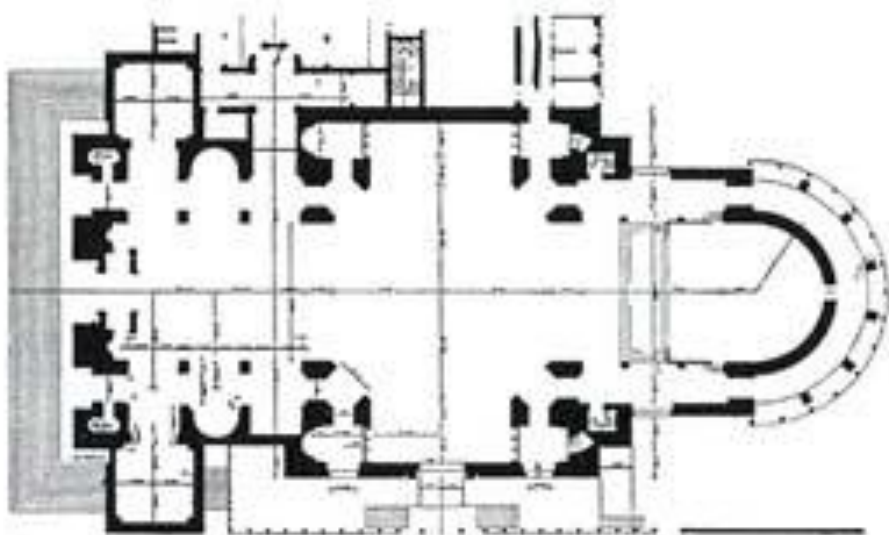


Biblioteca Nazionale di Parigi, Etienne Boullée 1785



# MODERN CHURCHES













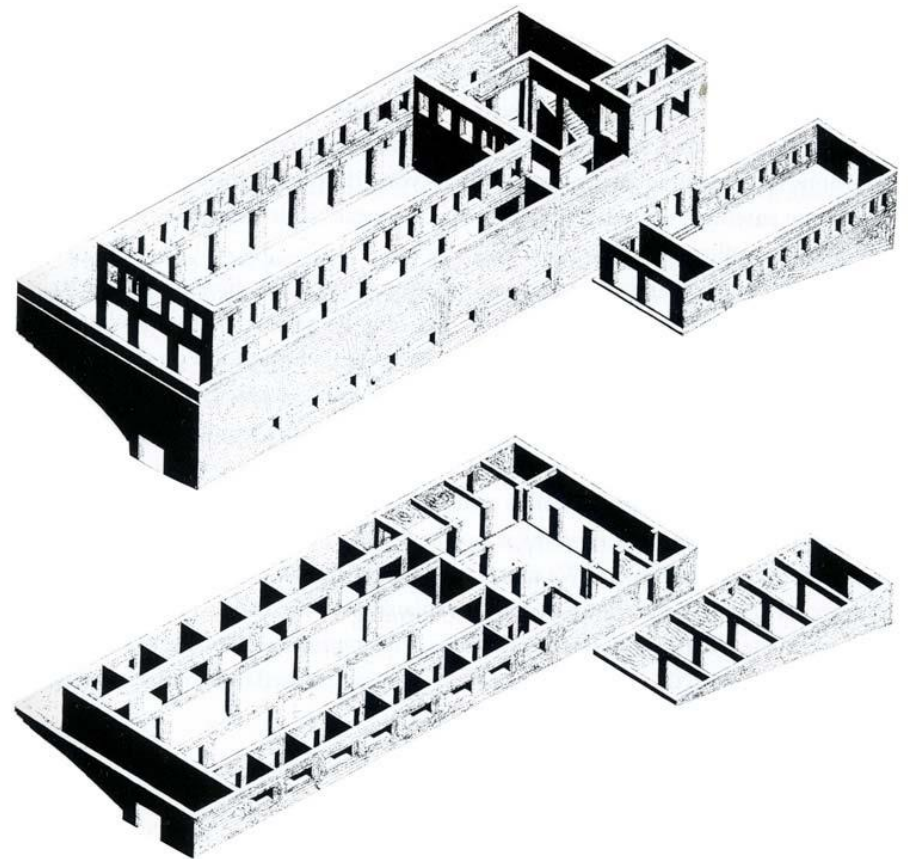
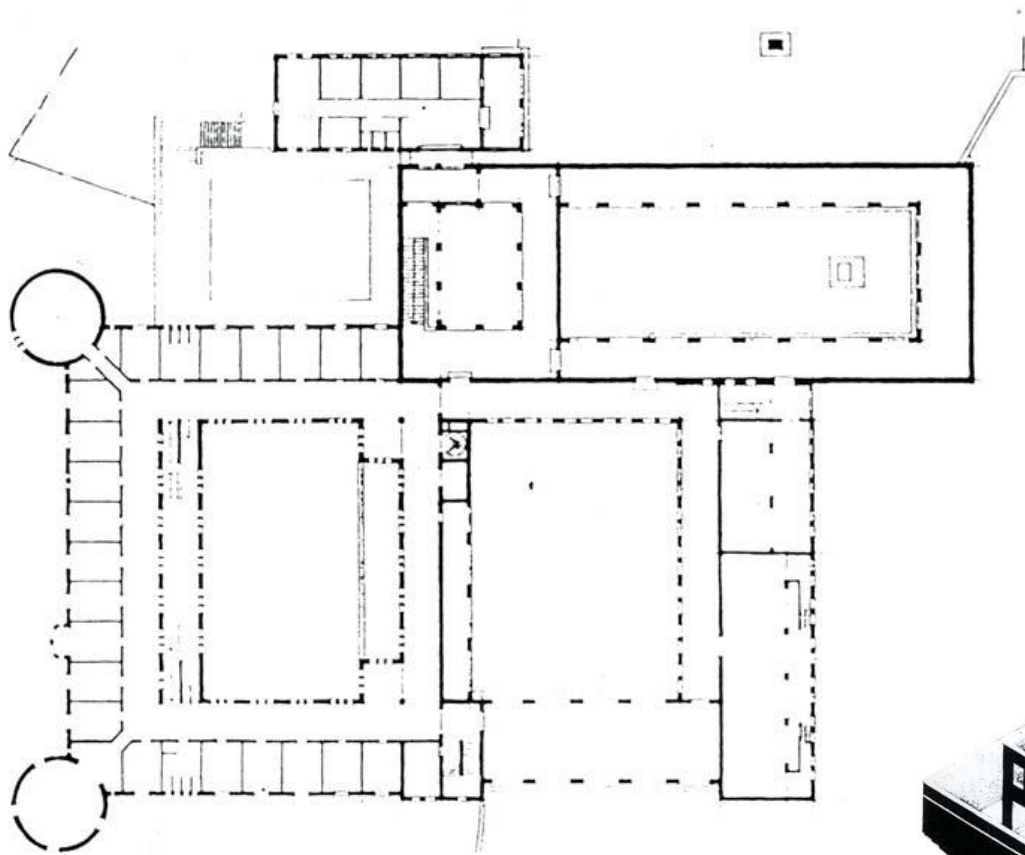










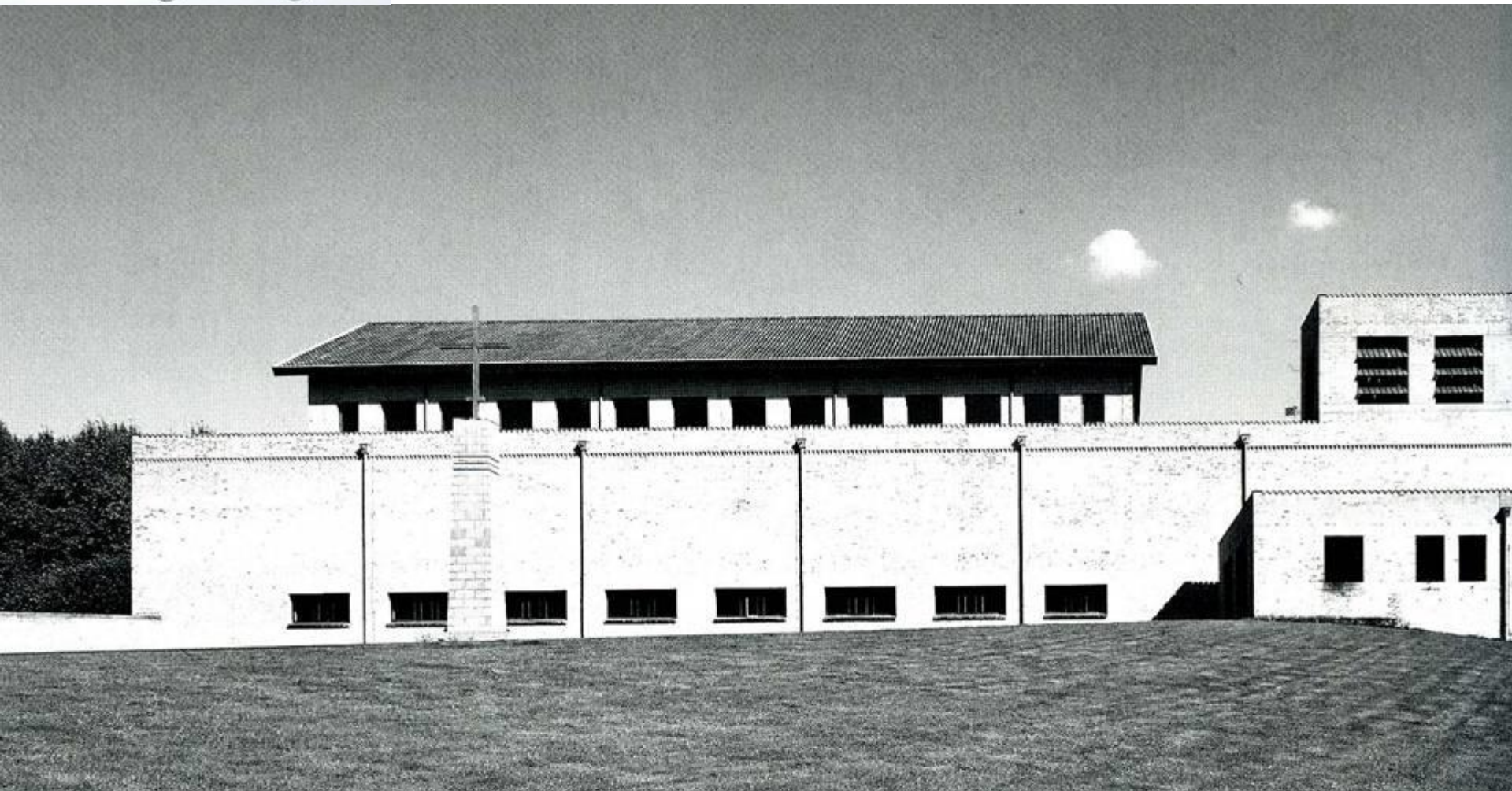


St.Benedictus Abbey at Vaals



## The **St. Benedictus Abbey at Vaals** (Netherlands)

Benedectin Abbey built starting in 1922 as a simple quadrilater with two towers marking the corners and left unfinished for several years. In 1968 the main church, a crypt and an atrium were added following a project by Dutch architect **Hans Van der Laan**, who also designed the library, a sacristy and an open arcade around a new cloister, completed in 1986.







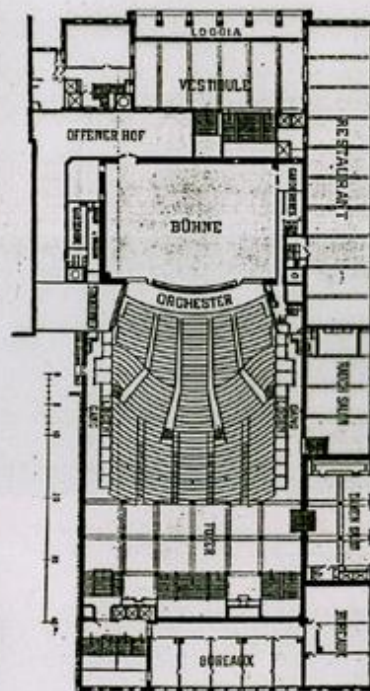
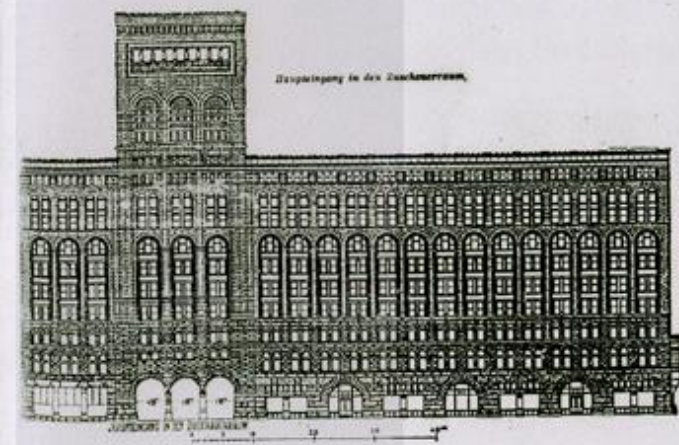
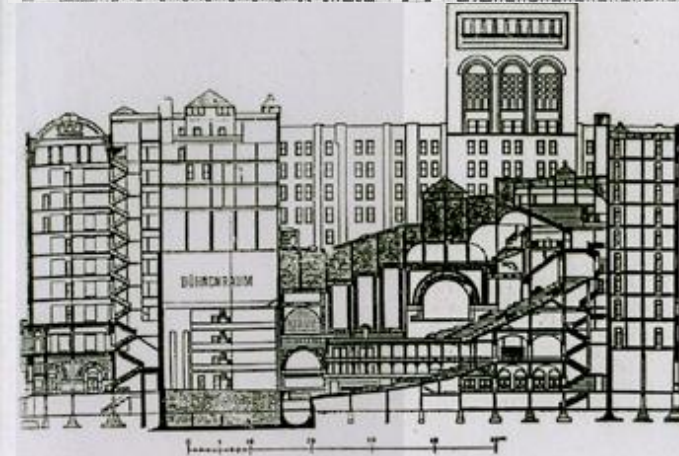
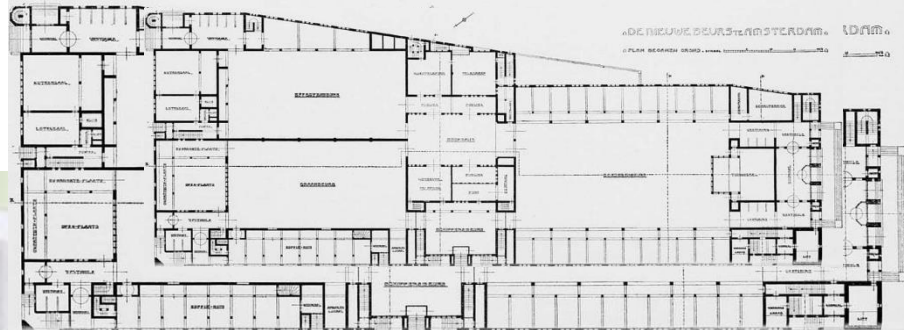




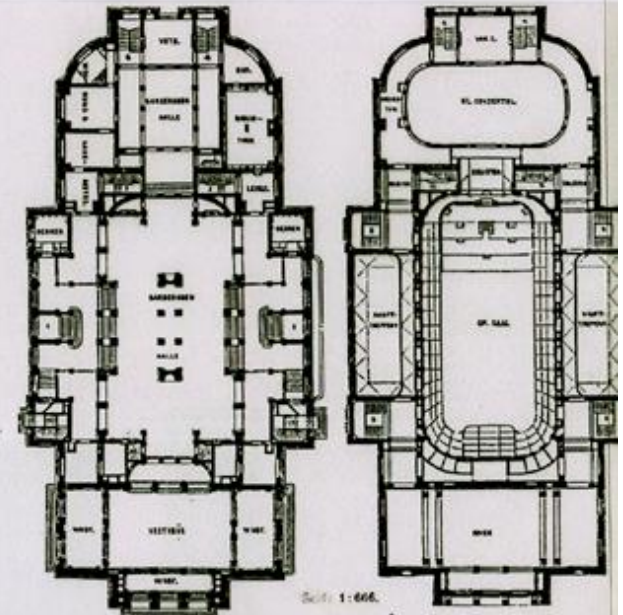
Nodal special building  
directly derived from a  
knotting process



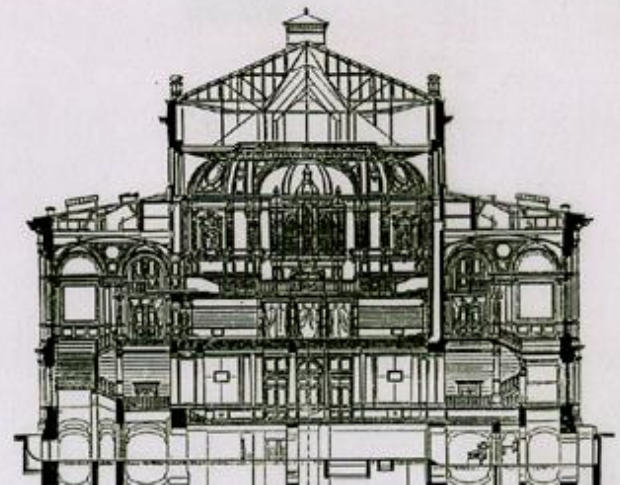




PIANTA AL PIANO DELLA PLATEA

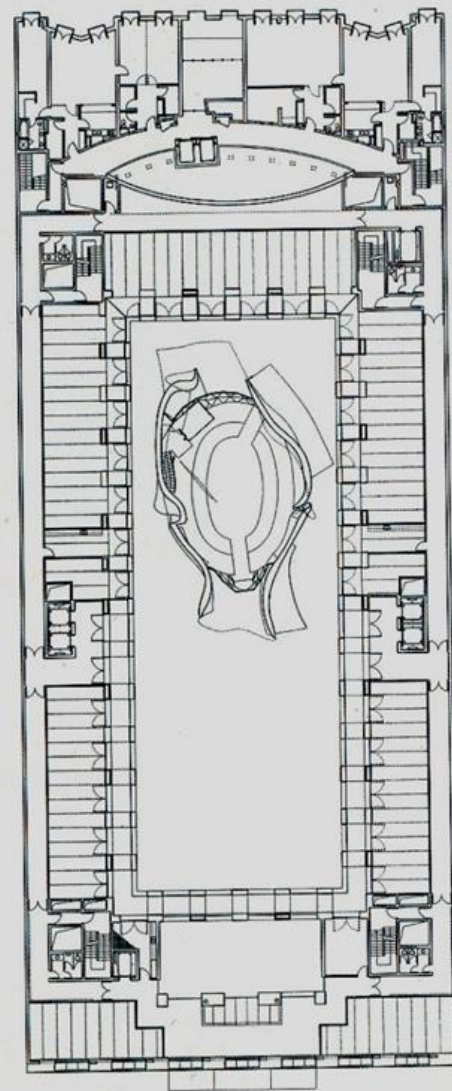
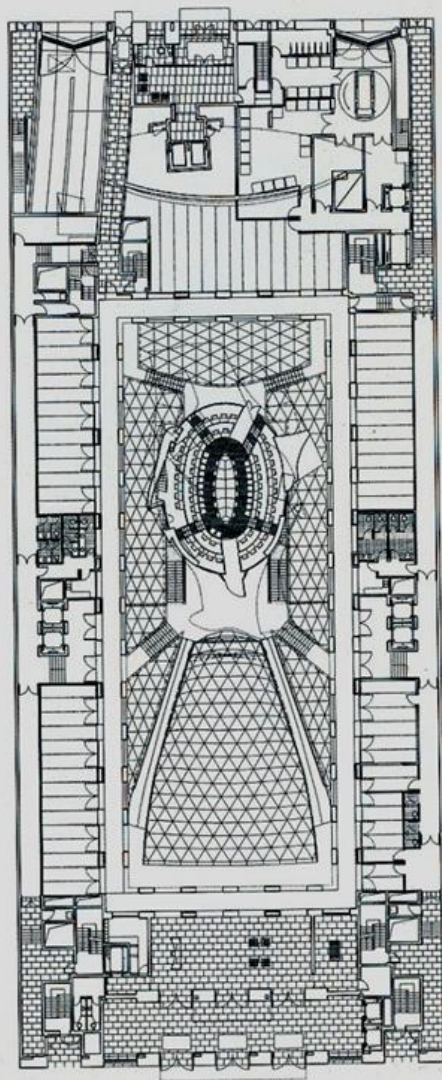
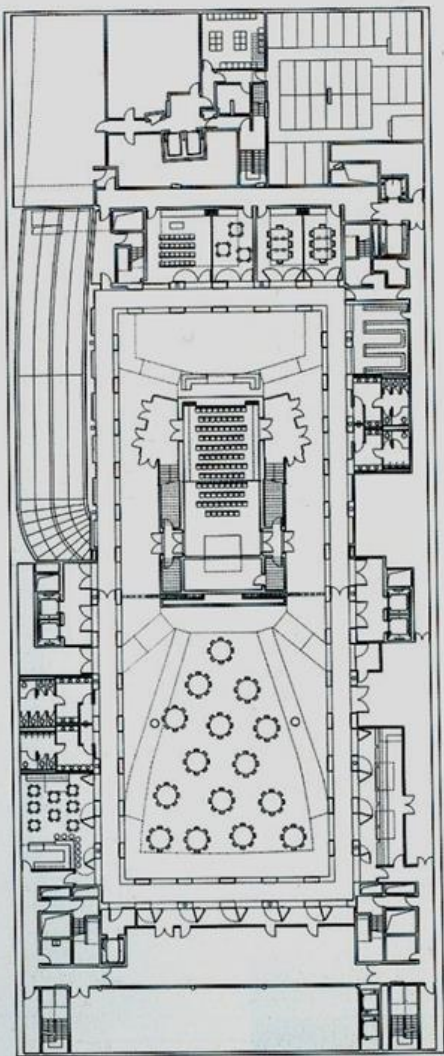


MARTIN GROPIUS, NUOVA SALA PER CONCERTI A LIPSIÀ.

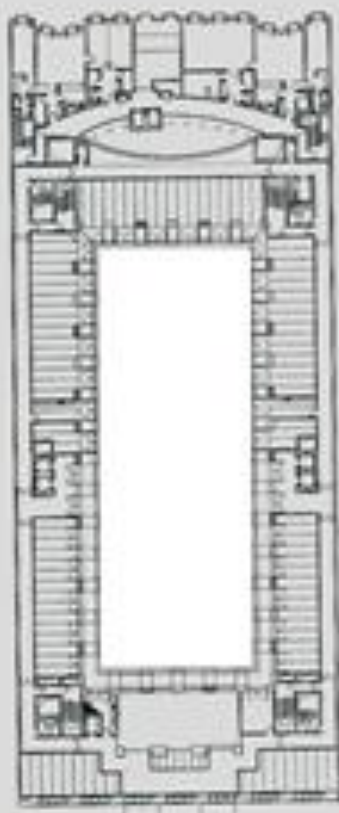
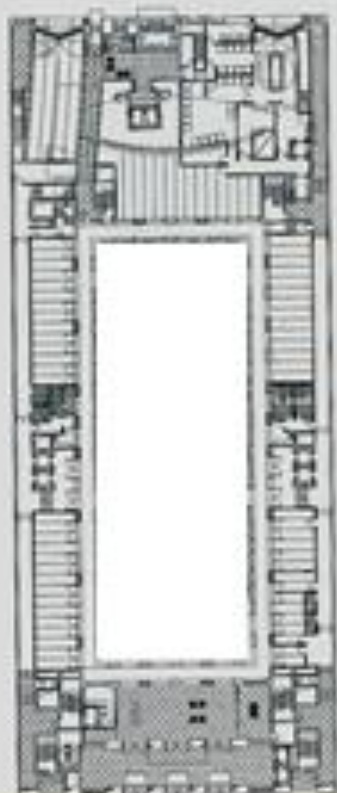
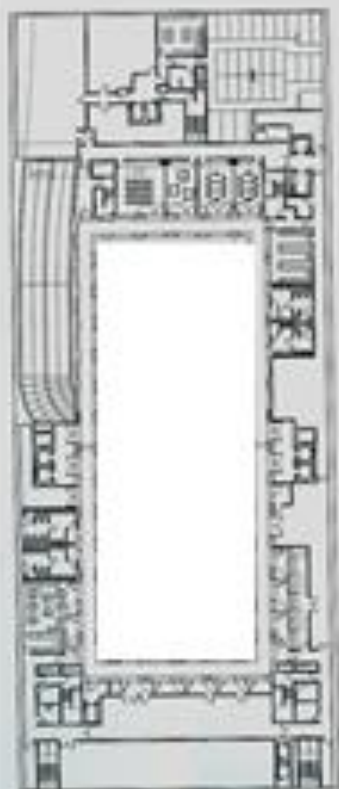


Louis Sullivan, Chichago Auditorium,  
1886 -90



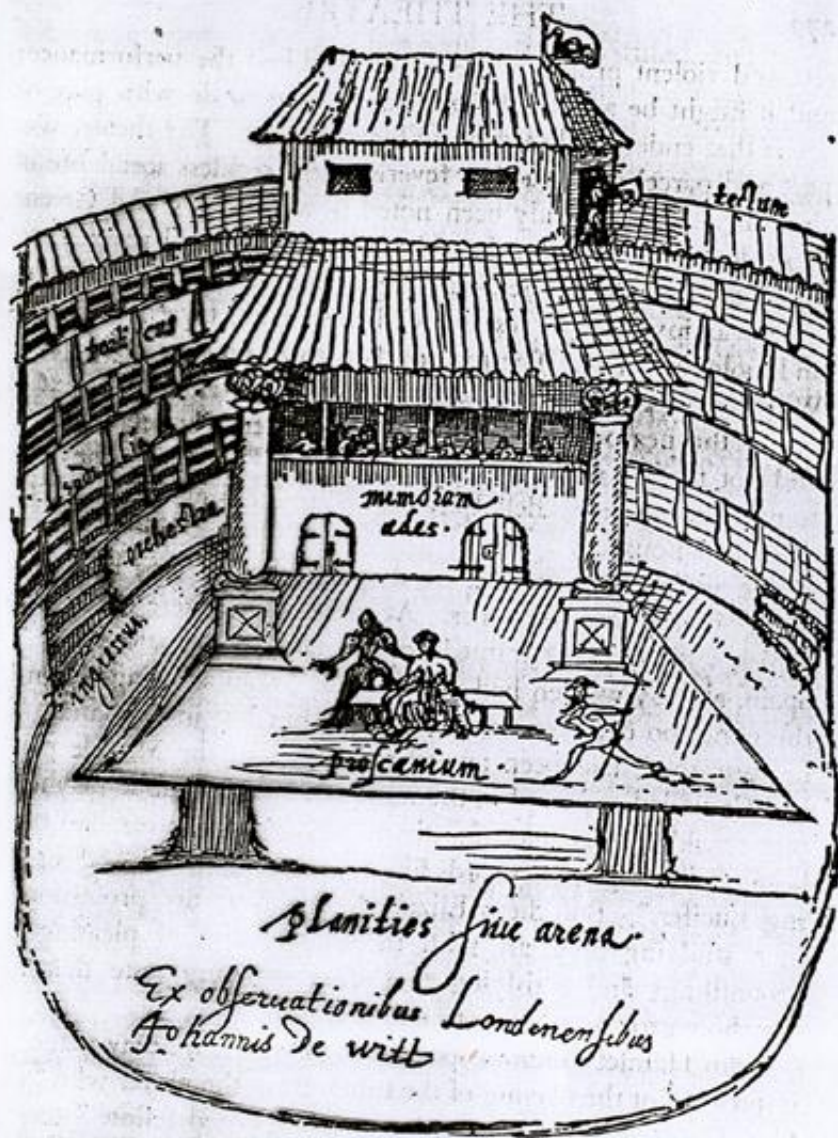




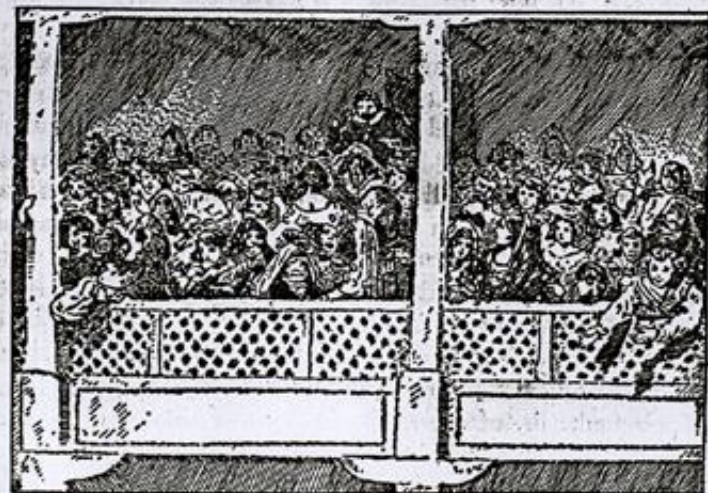
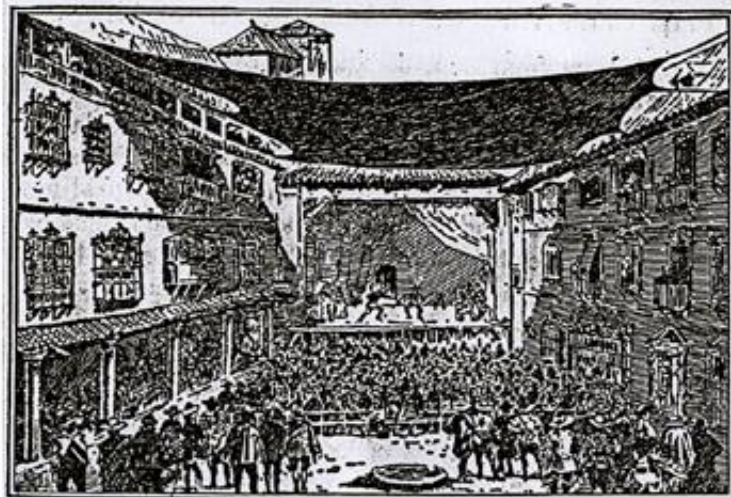


knotting process





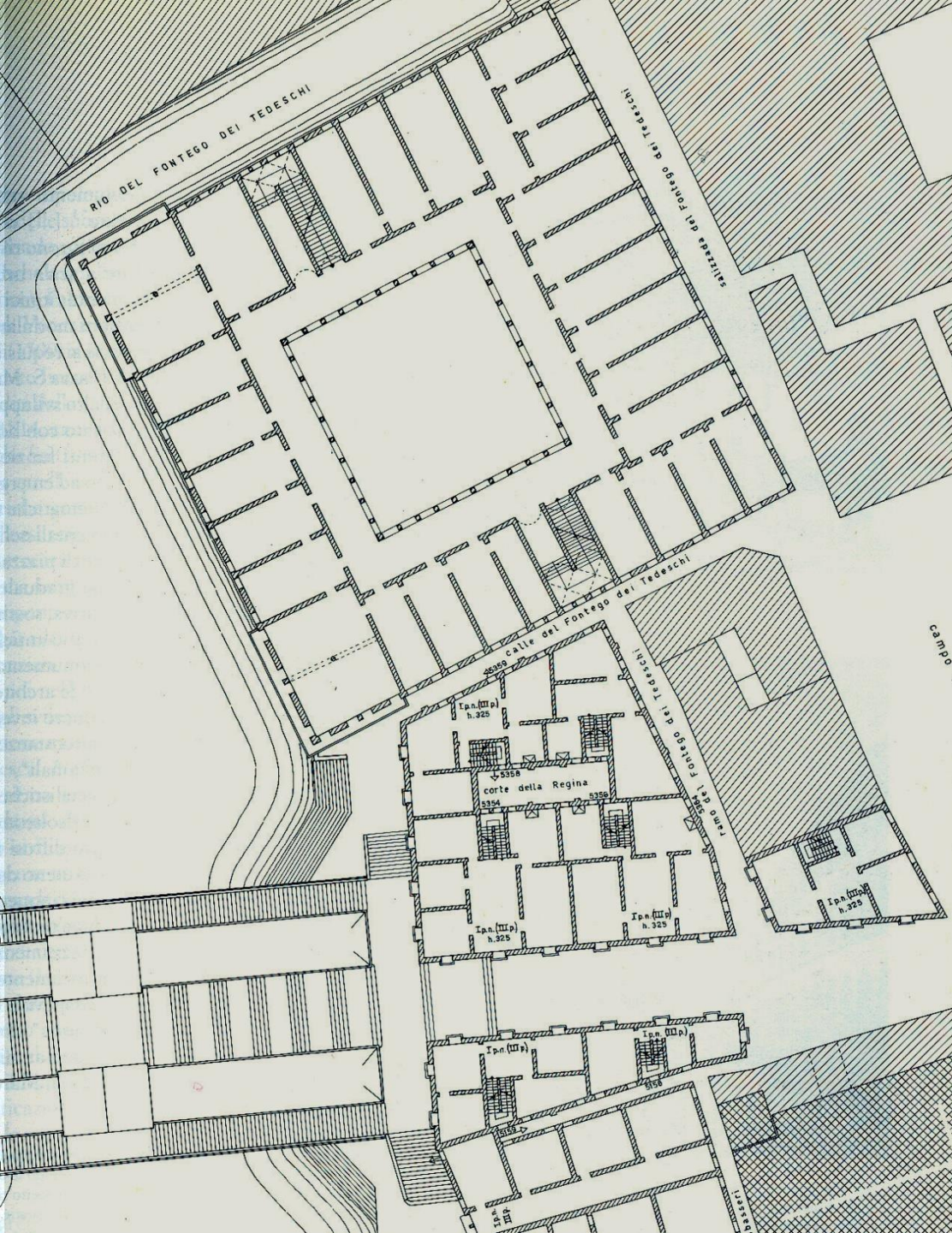
A drawing of the Swan Theatre in London about 1596, by Johann deWitt. One of the few uncontested bits of contemporary evidence regarding the form of the Elizabethan playhouse.



A conjectural restoration of a corral theatre in Madrid in 1660. There is here a notable likeness to the Elizabethan inn-yard playhouses, in the balconies and windows utilized for the spectators of quality, the mob audience on the ground, and the half-projecting, half-curtained stage. Note also the awning over the audience. Below is the notorious gallery for women, sometimes known as "the stews," which was for long a feature of the Spanish popular theatre.

[From *Ten Spanish Farces*, edited by George Tyler Northup.]



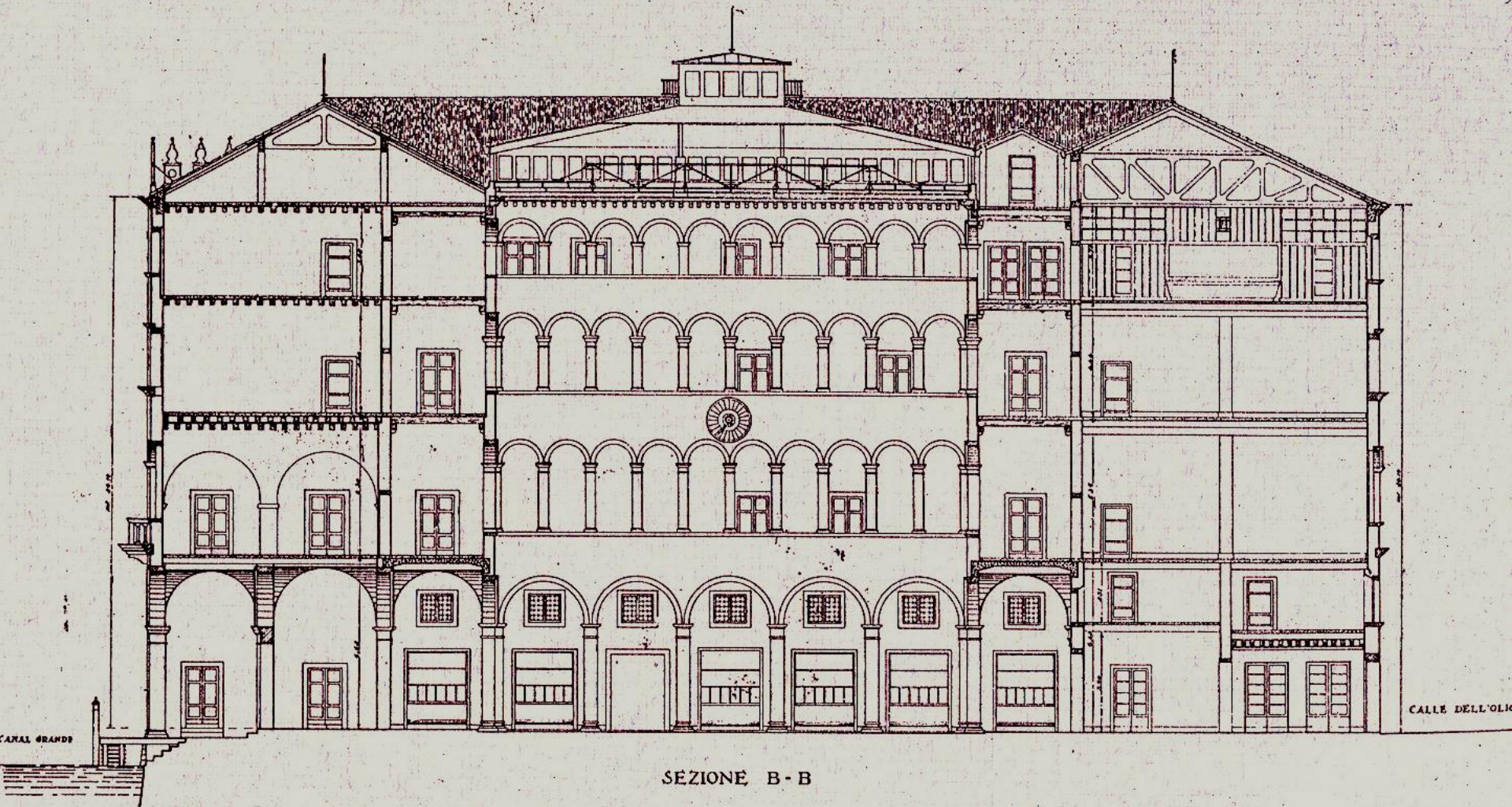


Fontego dei Tedeschi in Venice ( XVI Century).

The original building had the typical characters of the serial organism. Built in the sixteenth century mainly as a warehouse and home of merchants. Originally it consisted of a series of similar rooms distributed around a large central courtyard.



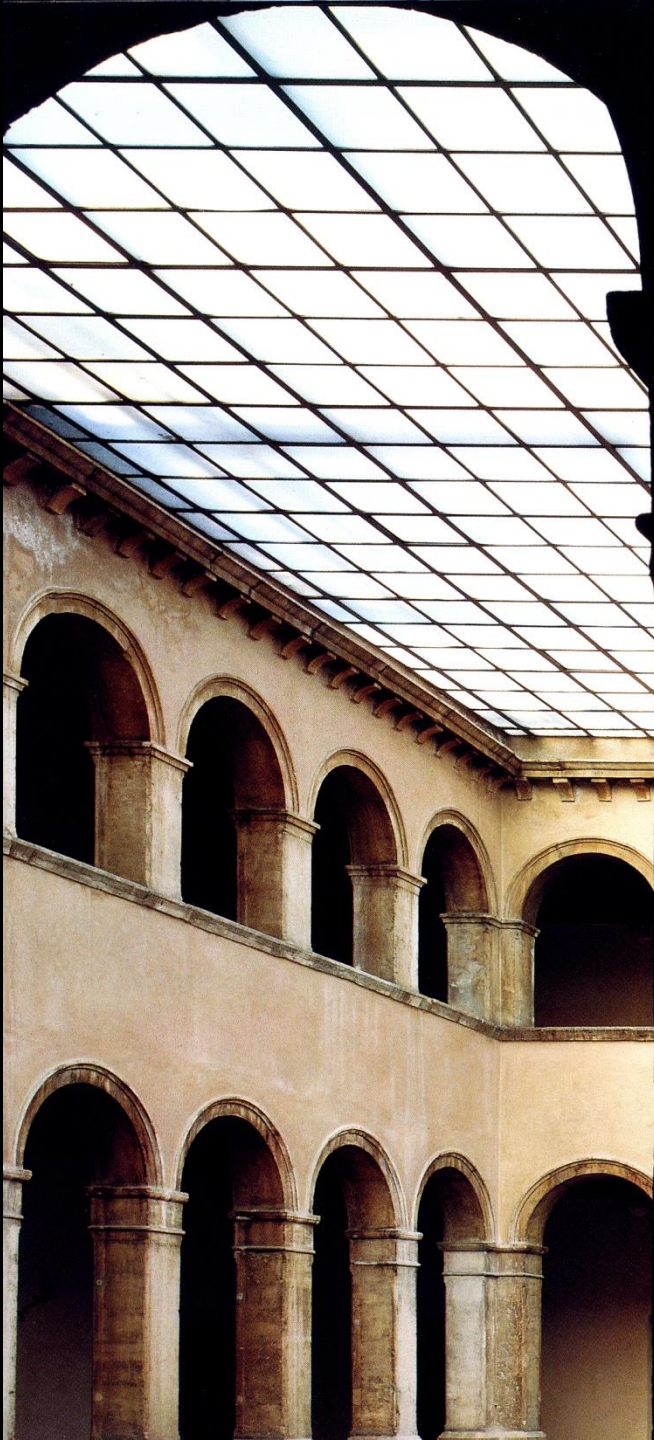
PALAZZO R.R. POSTE E TELEGRAFI "EX FONTEGO DEI TEDESCHI" IN VENEZIA



LVGLIO ~ 1939 ~ XVII

The covering of the courtyard with an iron and glass structure represented a distributive revolution, with the formation of a real nodal space (the hall for the public). At the same time, a distributive and static revolution that has involved extensive transformations of the structures.





As a result of the transformation process, a new building was obtained not only distributively but also structurally, the perimetral rooms (serving, serial and statically collaborating) are necessary for the distribution, space and stability of the new node.



1.2 Centrale principale per telegrafi e telefoni di Berlino, sezione trasversale e pianta del piano terra (tratto da D. Daghli, *Manuale dell'architetto*, vol. II, parte I, Torino 1925).

Central telegraph and telephone building in Berlin, transverse section and plan of the ground floor (taken from D. Daghli, *Manuale dell'architetto*, vol. II, part I, Turin 1925).

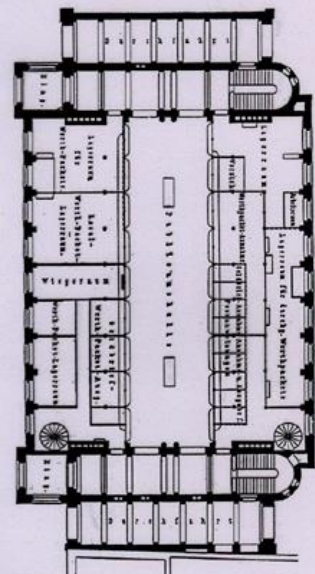
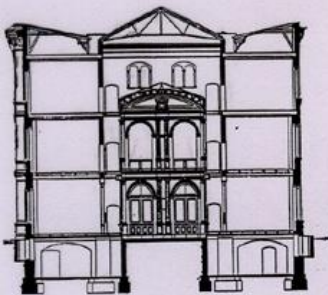
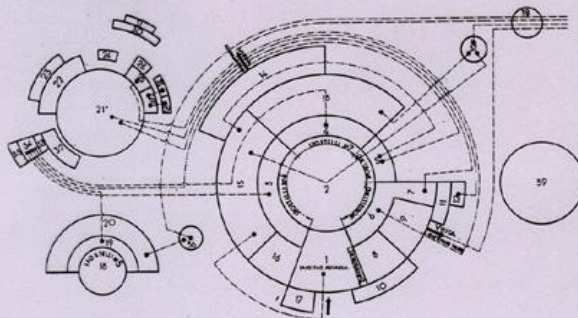


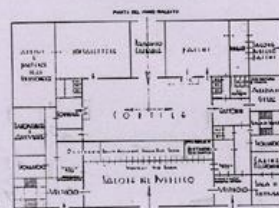
Fig.12 - Bando di concorso. Organigramma funzionale. Febbraio 1933

Fig.13 - Bando di concorso. Schema distributivo del piano rialzato. Febbraio 1933

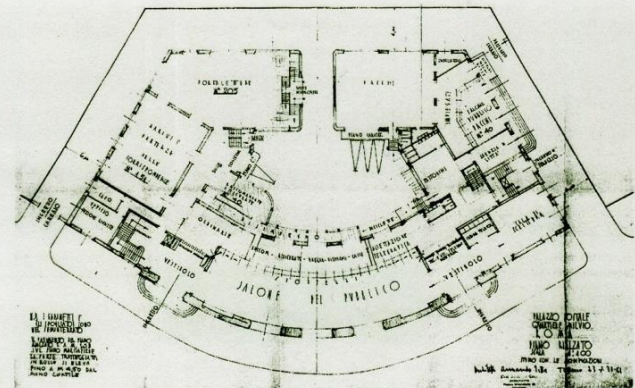
Fig.14 - Bando di concorso. Schema distributivo del primo piano. Febbraio 1933



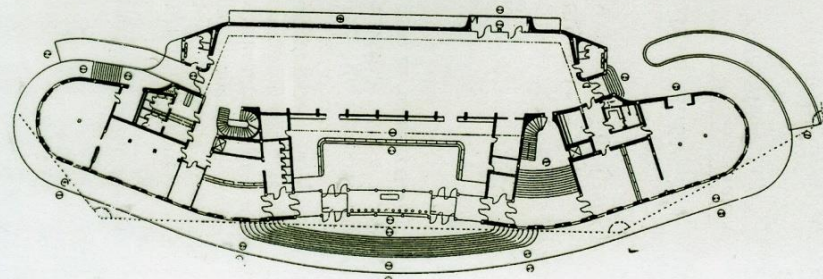
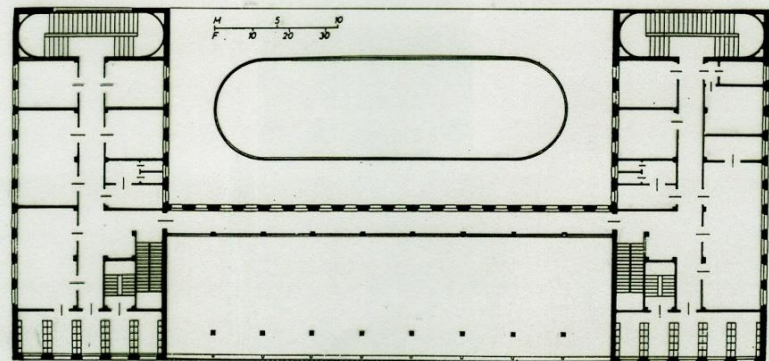
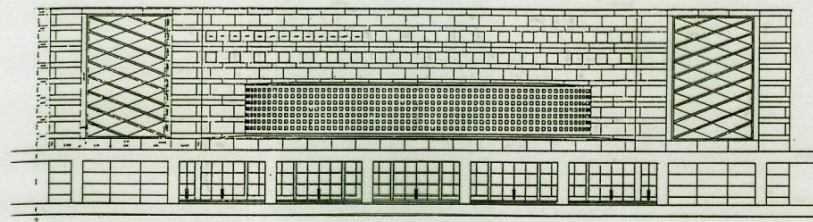
12



13



23



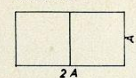


Quattro fronti tutti dissimetrici, con quattro messaggi radicalmente differenziati. Il meno convincente è forse quello principale, per l'angolo sinistro non risolto e per il setto pieno che, nei vari progetti, Terragni vuol animare con un ingresso, con un portico o con targhe in ferro smaltato di Nizzoli. La temperie razionalista è ovunque animata da scatti inventivi, dal gusto della materia scavata, da tensioni spasmodiche verso la perfezione formale. Questo ideale intransigente di perfezione ha un risvolto politico: è l'aperta antitesi della volgarità fascista, ne vuol significare il mitico riscatto o, meglio, l'istintiva, disperata negazione promulgata all'interno del sistema corrotto.

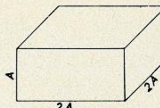


13

RETTANGOLO DELLA FACCIATA

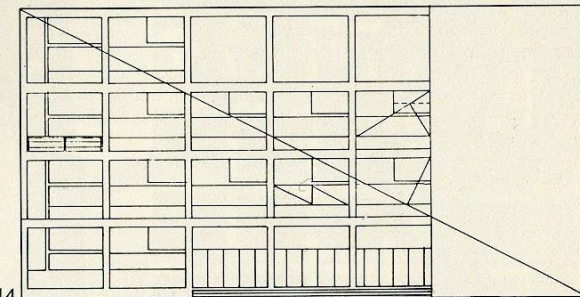


PARALLELEPIPEDO DELLA MASSA DEL FABBRICATO



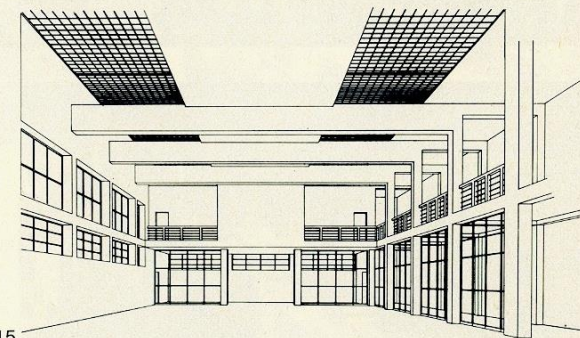
A=15,60 m.

Rapporti numerici e costruzioni geometriche facciate e scomparti

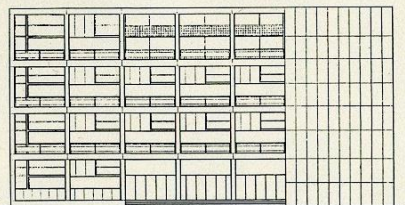


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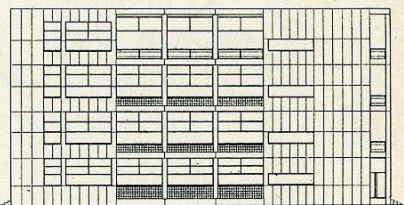
- 7 Prospetto su piazza dell'Impero.
- 8 Prospetto su via M. Bianchi.
- 9 Prospetto su via Pessina.
- 10 Prospetto posteriore.
- 11/12 Pianta piani terreno e primo.
- 13 Pannello celebrativo.
- 14 Rapporti numerici delle facciate.
- 15 Prospettiva del salone per le adunate.
- 16/17 Piante piani secondo e terzo.



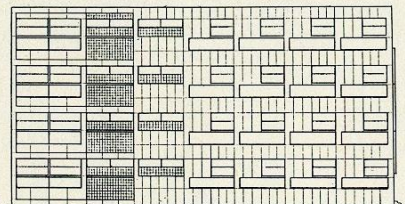
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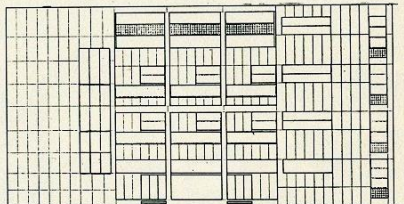
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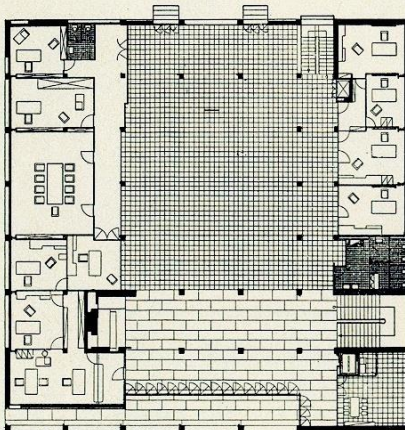
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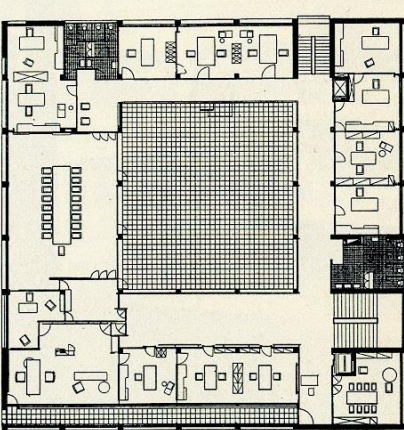
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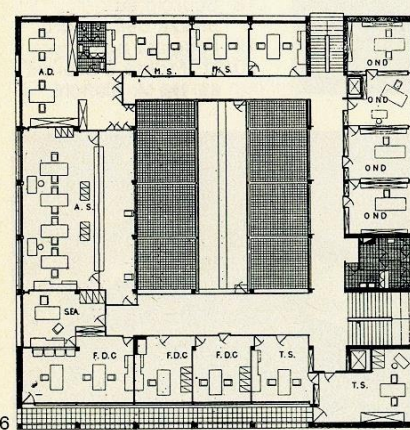
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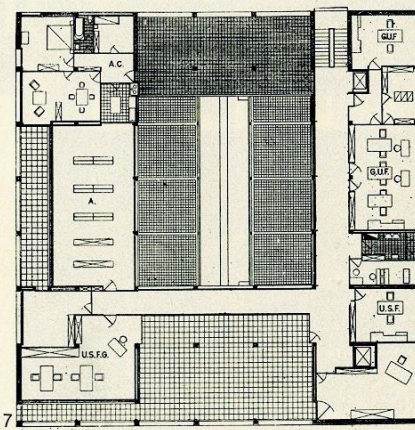
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12

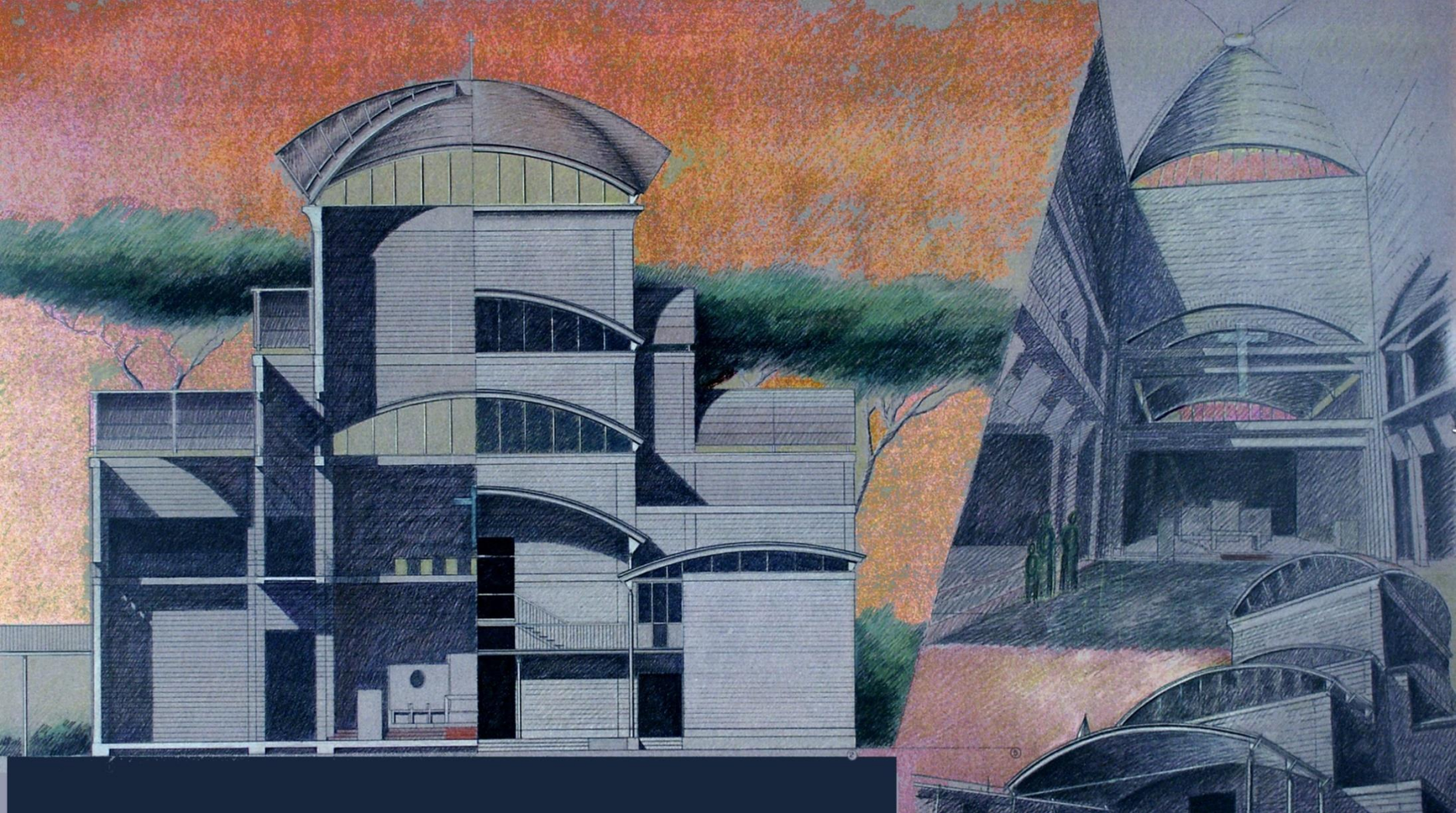


16



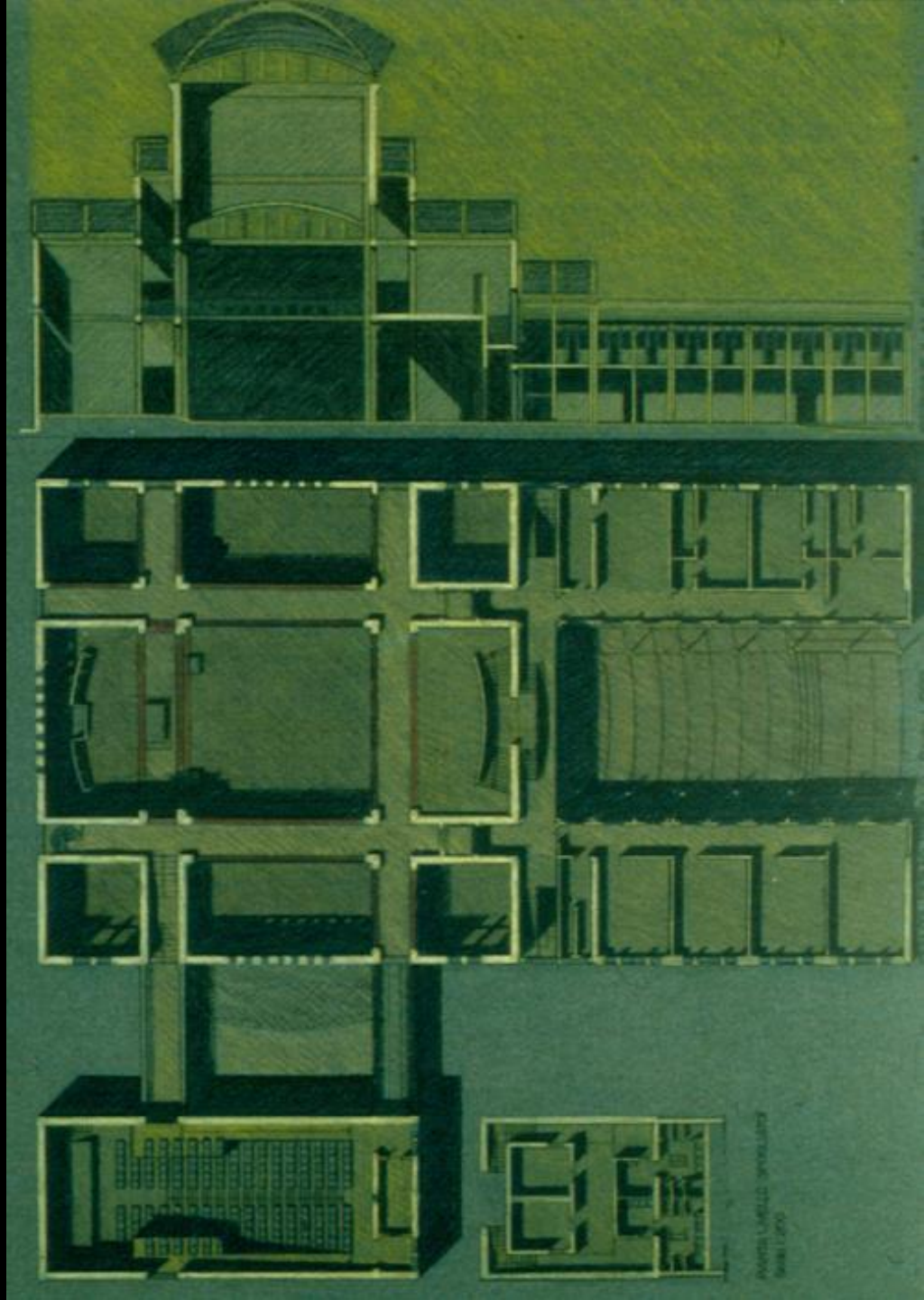
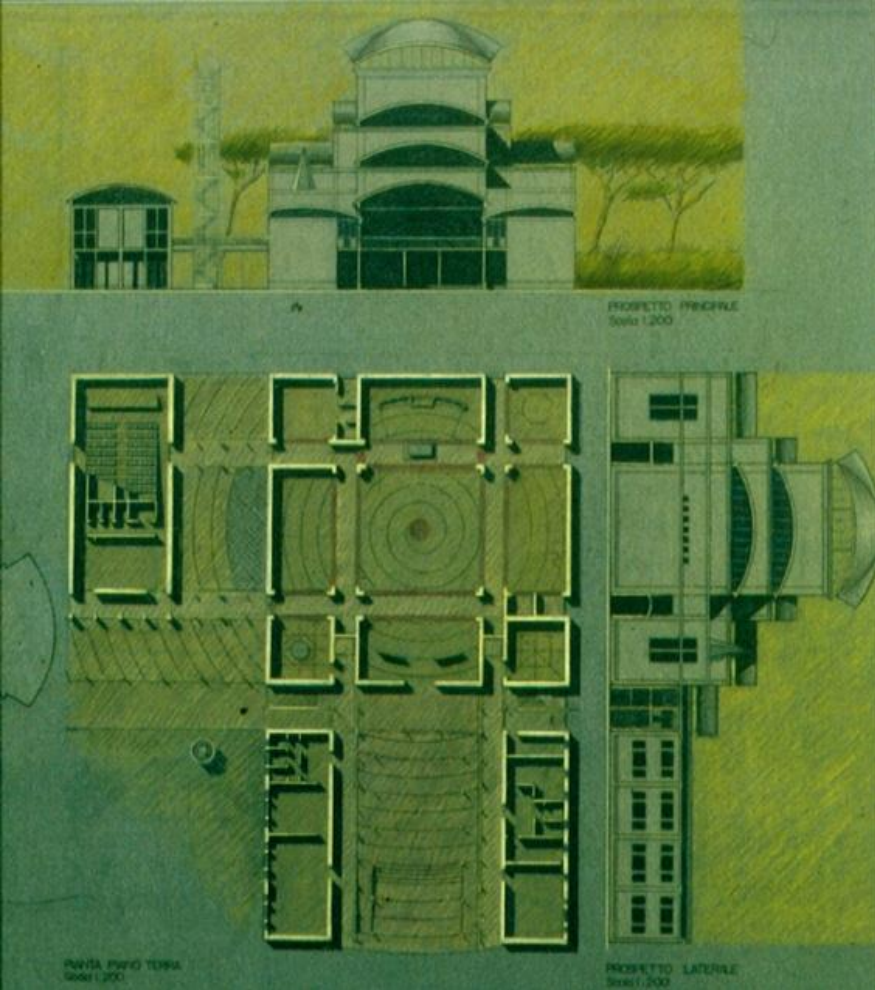
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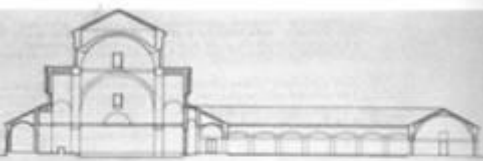
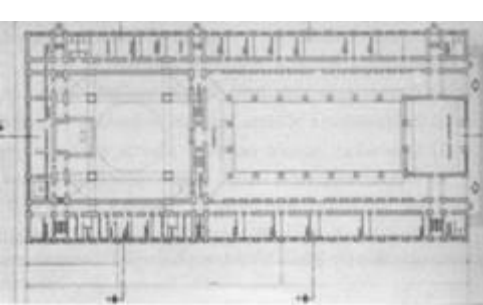
G.Strappa (capogruppo) G.L. Maffei, T. Casatelli, P. Di Giuliomaria, A. Trombetta  
1995 - CONCORSO PER NUOVE CHIESE A ROMA (area di Tor Tre Teste)



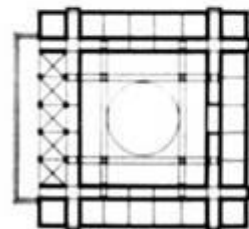
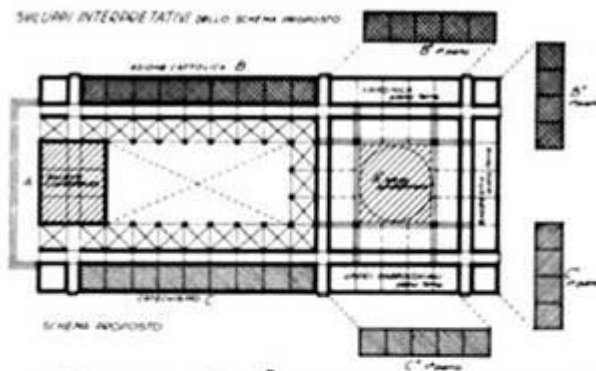


G.Strappa (capogruppo) G.L. Maffei, T. Casatelli, P. Di  
Giuliomaria, A. Trombetta  
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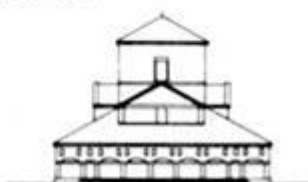


SEMPRE INTERPRETATIVE DELLO SCHEMA PROPOSTO

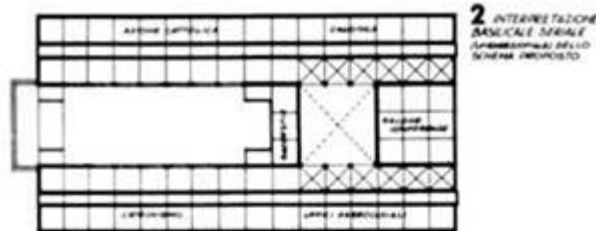


SCHEMA CENTRALE A DUE PIANI

1 CONDENSAZIONE DEI VANI ACCESSORI ATTORNO ALLA CHIESA CON SEMPLICE AVVOLGENTE SU DUE PIANI DELLO SCHEMA PROPOSTO

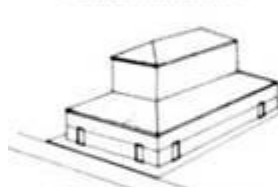


SCHEMA CENTRALE A DUE PIANI

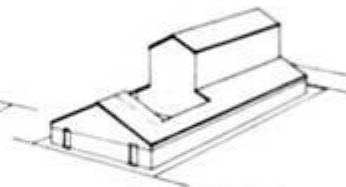


SCHEMA BASILICALE SERIALE

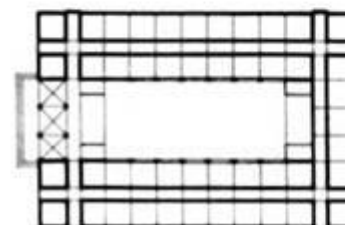
2 INTERPRETAZIONE BASILICALE SERIALE (L'INTERPRETAZIONE) DELLO SCHEMA PROPOSTO



SCHEMA BASILICALE A PARADIGMA



SCHEMA BASILICALE SERIALE



3 CONDENSAZIONE DEI VANI ACCESSORI ATTORNO ALLA CHIESA CON SEMPLICE AVVOLGENTE DELLO SCHEMA 2

R. Bollati, S. Bollati, G. Figus, E. Flamini, G. Marinucci.

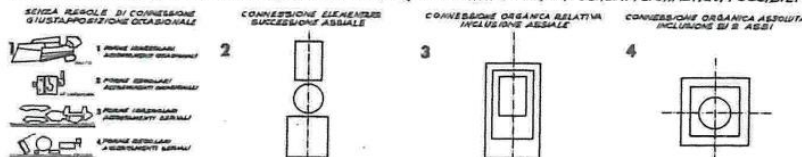
Progetto di concorso per la chiesa della zona Ostia Lido.

RELAZIONE - INTRODUZIONE GENERALE AL TEMA: ESIGENZE

IL TEMA DELLA NOSTRA EDILIZIA RELIGIOSA PARROCCHIALE RICHIEDE DUE PRINCIPI DI BASE

- 1° INSERZIONE ADEGUATA NEL SISTEMA URBANO CIVILE, OMOSSENDO CON IL TESSUTO STORICO AMBIENTALE DELLA CITA' E TERZIARIO
- 2° ATTEGGIAMENTO APERTO ALLA CONCRETEZZA - REALE QUANTO SPIRITUALE - DELL'UOMO CONFINO ALLO SPIRITO CRISTIANO E CATTOLICO, TUTELA SICURA CONTRO LE DUE QUINTESE ESIGENZE:
  - DUALISMO MATERIALISTICO (CONFLITTO MATERIA-SPIRITO) LIVELLANTE E DEGRADERANTE
  - MOVIMENTO ASTRATTO (INTELLETTUALISTICO O MATERIALISTICO) ARBITRARIO E ILLUSORIO

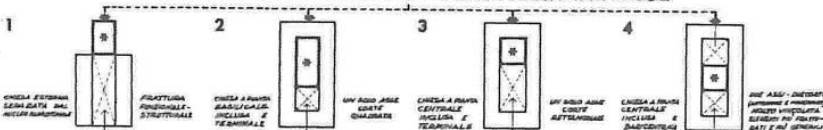
I SERIE DI ALTERNATIVE - CONNESSIONE DEGLI ELEMENTI (CHIESA-CANONICA-SEC.) - 4 SCHEMI PLANIMETRICI POSSIBILI



SOLUZIONI NEGATIVE  
O A RENDIMENTO SETTORIALE PRECARIO

GLI ULTERIORI SVILUPPI STRUTTURALI DIPENDONO DAL GRADO DI ORGANICITA' DELLO SCHEMA DISTRIBUTIVO SCELTO: (SUCCESIONE-INCLUSIONE-GRADUAZIONE-AGGIUNTAMENTO)  
CONSIDERIAMO SOLO GLI SCHEMI INTERMEDII 2 E 3

II SERIE DI ALTERNATIVE - PLANIMETRIA - 4 SCHEMI PLANIMETRICI POSSIBILI

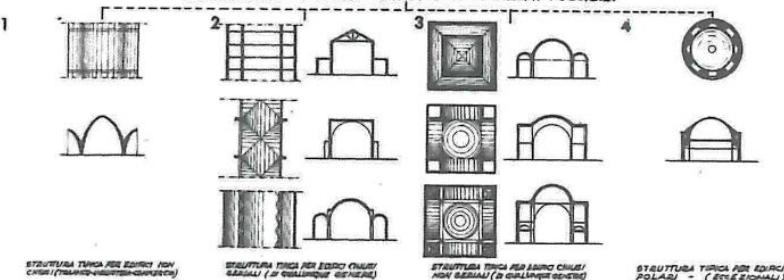


IL PRESENTE PROGETTO PRENDE IN ESAME LE 2 SOLUZIONI INTERMEDIE (2,3) DI PIU' LARGO IMPIEGO E DI PIU' FORTE RENDIMENTO: COSTRUTTIVO: INGERIRE LE STRUTTURE SECONDARIE PER ASSORBIRE LE SPINTE DELLE LUCI MAGGIORI

FUNZIONALE: APPIANCARE LE SPINTE ALLA CHIESA - ALLUNGANDO SUPERORDINATE (FINO) PIU' ALTI - SECONDARIO: RIDURRE IL PERIMETRO CONCENTRARE LE STRUTTURE DI FORMAZIONE - ALZATO - COPERTURA ESIBITIVA

RACIONALIZZARE SPINTE INTERNE - INSERIRE DA SOLIDA CETERA IN SOLIDA PLANTATA INTERMEDIA - CONSIDERIAMO SOLO LE STRUTTURE INTERMEDIE 2 E 3

III SERIE DI ALTERNATIVE - STRUTTURA - 4 SCHEMI POSSIBILI



STRUTTURA TIPICA PER EDIFICI NON CHIESA (PILASTRO-TRUSSO-CHIAVISTO)

STRUTTURA TIPICA PER EDIFICI CHIESA (PILASTRO-TRUSSO-CHIAVISTO)

STRUTTURA TIPICA PER EDIFICI CHIESA (PILASTRO-TRUSSO-CHIAVISTO)

STRUTTURA TIPICA PER EDIFICI POLARI - (ECCLESIALE)

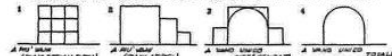
APPLICAZIONE

GLI ULTERIORI SVILUPPI ESPRESSIVI DIPENDONO DAL GRADO DI GERARCHIA PLASTICO-COSTRUTTIVO DELLO SCHEMA FORMALE SCELTO (GRADI DI SOLIDARIETA' MATERIALE) A SCALA EDILIZIA (UMANA)

L'INSIEME EDILIZIO IN ESAME COMPRENDE 4 GRADI DI STRUTTURE LUCI MAGGIORI (LUCI DOMINANTE)  
LUCI GRANDI (LUCI PRINCIPALI)  
LUCI MEDIE (LUCI MINORI)  
LUCI PICCOLE (CONSIGLIO - PORTE - SERVIZI)

IL GRADO DI SVILUPPO DELLA FORMA DIPENDE DAL GRADO DI OMOSSENDO (DIFFERENZIAZIONE - GERARCHIA - AUTONOMIA-UNITA', CREAZIONE-AGGIUNTAMENTO) TRA LE PARTI

CONSTATIAMO L'ESISTENZA DI 4 SCHEMI EDILIZI POSSIBILI

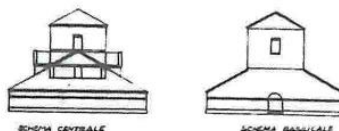
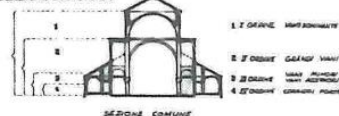


SONO STATE ATTUATE CHIESE PER CIASCUNO DI QUESTI TIRI - SOLO PERO' QUELLI INTERMEDII RISULTANO FUNZIONALMENTE ADEGUATI - INQUEL PARADIGMA IN FATTI SONO COSTITUITI DA VANI DI VARIETA' DIMENSIONE - AUTONOMIA - NA COORDINATI

IL PRESENTE PROGETTO CONSIDERA I DUE SCHEMI INTERMEDII 2 E 3 PREVEDENDO IN PRIMO LA MASSIMA CONNESSIONE DELL'INSIEME E NELLA MASSIMA AUTONOMIA FUNZIONALE DEI SUOI ELEMENTI  
LO SCHEMA RISULTANTE E' LO SCHEMA ASCENSIONALE PROPRIO DI GRAN PARTE DELL'EDILIZIA RELIGIOSA (BASILICALE) E LA RAIHA CENTRALE CHE TRADUCE IN CONCRETO IL MASSIMO DI ORGANICITA' AUTONOMIA

OGNI STRUTTURA ACQUISTA DETERMINAZIONE FORMALE NEL GRADO IN CUI POSSIODE ED ESPRIME LA SUA GRADUAZIONE GERARCHICA NEL GRADO FUNZIONALE E COSTRUTTIVO

GRADUAZIONE GERARCHICA



IL PRESENTE PROGETTO CONNETTE IN ORGANISMO SOLIDALE TUTTO IL COMPLESSO (ELEMENTI GRANDI E PICCOLI DELLA CHIESA E DEI SERVIZI) PROCURANDO IL MASSIMO DI DIFFERENZIAZIONE DELLE PARTI E DI VISIBILITA' TOTALE AL VANO DELLA CHIESA E ALL'INSIEME EDILIZIO

TALI CRITERI RISOLUTIVI DEI QUESTI GENERALI SI CONCRETANO NEGLI SVILUPPI DI PROGETTO INDIVIDUALI E IN PRIMO LUOGO NELLA LORO INSERZIONE STORICO-AMBIENTALE

QUANTO SOPRA E' ESEMPLIFICATO NEL PROGETTO PRESENTATO: PER I DATI E LE NOTE PARTICOLARI VEDI LE TAVOLE SECONDE

Giuseppe Strappa

# UNITÀ DELL'ORGANISMO ARCHITETTONICO

Note sulla formazione e trasformazione dei caratteri degli edifici



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## PALAZZI STORICI DELLE POSTE ITALIANE

