Carlo Rainaldi and the Roman Architecture of the Full Baroque
Author(s): Rudolf Wittkower
Published by: College Art Association
Stable URL: http://www.jstor.org/stable/3045682
Accessed: 10/01/2015 14:23

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
http://www.jstor.org/page/info/about/policies/terms.jsp

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of
content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms
of scholarship. For more information about JSTOR, please contact support@jstor.org.
CARLO RAINALDI
AND THE ROMAN ARCHITECTURE
OF THE FULL BAROQUE

By RUDOLF WITTKOWER

There are three reasons why Carlo Rainaldi’s architecture ought to
command a more lasting interest than his actual talent might seem to
justify: (1) His works and projects are connected with the most important
architectural enterprises in Rome during the seventeenth century. (2) In his
process of working we can observe the modification of his own principles of design
through the influence of his greater contemporaries. (3) Those principles of design
which are distinctly his own can be defined as a carrying over of “mannerist architecture”
into the Full Baroque.

The last point is my chief topic in this paper, which is to be taken as a continuation
of my essay, published in this journal,1 on Michelangelo’s Biblioteca Laurenziana, the
most outstanding and epoch-making example of “mannerist” architecture.

It is evident that the historical significance of Rainaldi can be understood only in
the light of an exhaustive study of his principal works. As my purpose, however, is
not to write a monograph but to trace the evolution of a particular architectural
conception, it is not necessary to deal with all his works, nor to take them in strict
chronological order.2

My method of procedure will be this: I shall first demonstrate the interaction
between Rainaldi’s principles and those of the “true” Baroque (Maderno, Bernini, Bor-
romini, Fontana) in the history of the following three buildings: (a) the two parallel
churches in the Piazza del Popolo, (b) S. Agnese in the Piazza Navona, (c) S. Andrea
della Valle. I shall, in the second place, discuss Rainaldi’s contribution to the problem
of the centrally planned churches. This will offer an opportunity for discussing the
evolution of this scheme in the works of Bernini, Cortona, and Borromini and for
defining Rainaldi’s position in the development of the Baroque style as a whole. In the
third place I shall give a detailed analysis of his most important work: S. Maria in
Campitelli. And finally I shall present some material for adjudging Rainaldi’s artistic
development.

2. For a monographic treatment see E. Hempel,
Carlo Rainaldi. Ein Beitrag zur Geschichte des
romischen Barock. Diss. Munich, 1919. Also by the
same author: Carlo Rainaldi, in the Biblioteca d’Arte
Illustrata, Series I, Fasc. II. Compare also the
article by Mandl in Thieme-Becker, Kuenstler-Lexikon,
XXVII (1933), p. 578.
Fig. 1—Rome: Piazza del Popolo

Fig. 2—Engraving by Falda of Piazza del Popolo. 1665
FIG. 3—Rome: S. Maria di Montesanto. 1662-7, 1671-5

FIG. 4—Project by Carlo Rainaldi for the Churches on Piazza del Popolo. 1662
Santa Maria di Monte Santo and S. Maria de' Miracoli in the Piazza del Popolo

The history of the building of the two churches in the Piazza del Popolo (Fig. 1) as given by Hempel⁹ and other writers in his train,⁴ must be corrected and amplified in some points. On March 15, 1662, the foundation stones of the churches were laid and the building continued until the death of Alexander VII (May 22, 1667). Then came a pause of four years. From 1671 onwards the future Cardinal Giovanni Gastaldi had the work carried on at his own expense. S. Maria di Monte Santo (Fig. 3), the building to the left, was practically completed by the Holy Year 1675,⁵ but was consecrated only in 1678, and S. Maria de' Miracoli in 1679.⁶

The architect of the first period was Rainaldi (1662-1667), but the completion of the buildings after 1671 was carried out by Bernini. Since the researches of Hempel it has been taken as proved that when Bernini took over the work he modified the original plan in two directions, first as regards S. Maria di Monte Santo by substituting a ground plan based on an elongated oval, for the circular ground plan of the original design; and secondly by altering the exterior of both buildings, especially through the enlargement of the domes and the rejection of the high attic between the lower structure and the tambour. Hempel seeks to prove the first point by a reference to the Guida of the Abate Titi from 1686,⁷ which on the whole may be regarded as a reliable authority, and the second by a comparison of the completed building with the Falda engraving, made in 1665⁸ and therefore during the time when Rainaldi was still in charge of the work (Fig. 2).

Hempel does not raise the question of what can have caused Bernini to alter the ground plan of S. Maria di Monte Santo, nor indeed as to whether the church had not already been begun during the long five-year period under Rainaldi, so that any important alterations in the ground plan would have been impossible. Misgivings are indeed aroused by the fact that the first edition of Titi's work, published in 1674,⁹

---

5. Inscription above the inner door: ANNO JUBILEO MDCLXXV. See also Forcella, Ieriscizioni delle chiese... di Roma, IX, p. 385.
8. In Giov. Giac. Rossi, Il nuovo teatro... delle fabbriche... di Roma... sotto Alessandro VII, Rome, 1665, I, pl. 7.
9. Studio di pittrura, scultura e architettura nelle chiese di Roma.
contains a statement which directly contradicts that made in the second edition, to which Hempel refers. This can be shown by a comparison between the two texts:

Titi, lst ed., 1674, p. 427: ...."fà Ar-
chitetto il Cav. Rainaldi, e ne diede il
disegno bellissimo, che và in stampa.
Hora si finisce quella di Monte Santo
mediante la generosità dell'Eminen-
simo Castaldi della quale con la direttrione
del Bernino, e assistenza del Cav. Fontana
si è mutato il disegno fuori che del Cu-
polino, e Altar maggiore, che è del me-
demo Rainaldi."

Titi, 2nd ed., 1686, p. 355:

...."col pensiero del Bernino e assistenza
del Cav. Fontana si mutò il Cuppolino,
e ridusse in ovato la Chiesa che prima era
rotonda seguendo il disegno del Rai-
naldi."

In the first edition Titi attributes the "Cupolino" (by which he can merely mean the relatively small dome) and therefore the corresponding ground plan of the building to Rainaldi himself (Figs. 5, 6). That this is the correct view (which Titi, twelve years later, erroneously altered) is confirmed by an independent authority, the editor of Roma sacra antica e moderna in the edition of 1687; he states, apparently in refutation of the statement in Titi's second edition, that on March 15, 1662, the monks began to build a "riguaredevole Chiesa in forma ovata." And the text of the first edition of Titi is obviously followed by the critical editor of Descrizione di Roma moderna of 1697, who makes the characteristic change of term from "Cupolino" into "Cupola."

That there can be finally no doubt that the ground plan of S. Maria in Monte Santo derives from Rainaldi himself is proved by an engraving by Carlo Fontana dedicated to Cardinal Matteo Orlandi in 1674. For here (Fig. 10) Fontana actually proposes a partly true tradition. For the attribution of the details of the elevations see p. 268.

11. P. 467.
12. "Essendo stato Architetto della Cuppola e
dell'Altar maggiore l'istesso Rainaldi, e di tutto il
restante li Bernini e Fontana." For the documentary
value of this Guida see L. Schudt, Le Guide di Roma,
1930, p. 54. In Baldinucci's Vita of Rainaldi (Vite,...
ed. per cura di F. Ranalli, Florence, 1847, V, p. 331)
there is no special mention of a change of plan.
A later engraving by Falda of S. Maria di Monte
Santo in Giov. Giacomo de Rossi, Insignium Romae
Templorum prospectus, Rome, 1684, pl. 47, bears
the inscription: 'Graphia, et inventum Eq. D. Caroli
Rainaldi Architecti Romani.' The engraving does
not indeed correspond with the actual building (which
had already been long completed) and even represents
the church with the octagonal dome which had
originally been planned. The inscriptions on the
very fine engravings published by Domenico de
Rossi, Studio d'architettura civile, Rome, 1721, III,
pls. 29-32 (figs. 5-8) attributing S. Maria di Monte
Santo to Rainaldi, and S. Maria de' Miracoli to
Fontana are of course erroneous; they misrepresent
the significance of this plan is made clear by the
text and ground plan which can be seen respectively
left and right above. "Ragioni del Disegno. La
figura della Chiesa, è Ovale Misto e non Ellipse seg.to
A prodotto in dritta di pal. 100 di lon.a e larg.a
pal. 80 variando solo alla rotondità pal. 10 li per lato.
Dunque facile sarebbe stato l'esecuzione circolare
perche scemando la grossezza del tamburro sino a
pal. 5elli lati BB (i. e. longitudinal outer diameter
of the dome 110 P.) cresendo sino a pal. 12 nelli
lati CC (i. e. the transverse outer diameter of the
dome 104 P.) resta solo che pal. 3 (i. e. altogether 6
palms) di variante a circolo, alterando poi l'aggetti
in proiettura in CC e diminuendo in BB. Certo che
Ground Plan and Section of S. Maria di Monte Santo on Piazza del Popolo
FIG. 9—Foundation Medal of S. Maria di Monte Sanato and S. Maria de’ Miracoli (Carlo Rainaldi’s Project), 1662.

FIG. 10—Project by Carlo Fontana for Alteration of Dome of S. Maria di Monte Sanato, Engraving of 1674.

FIG. 11—Project by Carlo Rainaldi for the Churches on Piazza del Popolo, 1661.
to counteract the irregular aspect of the dodecagonal dome, a form of dome which was necessitated by the oval ground plan, by thickening the walls of the tambour latitudinally so that outwardly an appearance of regular quasi-circular form would be produced. By this means he was therefore proposing to correct the disparate dodecagonal design of Rainaldi, which from his classical standpoint he would feel compelled to condemn.

It may be asked, however, whether Rainaldi’s own plans are not at variance with the literary authorities and with Fontana’s engraving. Up to the present only the design by Rainaldi on the foundation medal of 1662 (Fig. 9) has been known, the design which was used by Falda in the above-mentioned engraving in the *Teatro Nuovo* of 1665 (Fig. 2). Here one certainly finds a completely symmetrical representation of both churches, and it has been regarded as Rainaldi’s last word. But though we have no later plan of his by which it is superseded it can be proved that building was never begun on the lines of the official plan.

What was actually the ground plan of the design shown on the medal? The answer is to be found in a large design which was made a short time before the foundation medal and which is now in the Roman State Archives (Fig. 11). On the left-hand side of the sheet is a papal *chirografo* dated November 16, 1661 (the text of which is not shown in the illustration) whereby the execution of the design was officially sanctioned. By comparing this drawing with the design on the medal, one can see that although Rainaldi seems to have intended the drawing to be the final and definitive design, and although as such it received the papal confirmation, by the time the medal design appeared some important modifications had been made in the elevation of both buildings, notably by replacing the attached columns by a portico of isolated columns and by substituting concave outer compartments for the convex. But as in both churches the proportions between the dome and the lower structure remained unchanged, it is evident that in neither case could the general lines of the ground plan have been altered. Because of this both churches as shown on the medal would have had to be based on the plan of a Greek cross.

For what reason then did Rainaldi, even after the foundation stone was laid, make...
extensive changes in the ground plans? One must seek for the explanation in the nature of Rainaldi’s task. In this matter the architect was first and foremost a town-builder (Fig. 12). It was a question of creating a worthy forecourt to receive the traveler entering Rome by the Porta del Popolo. From here, three main streets radiate through the city between the Pincio and Tiber. The decisive point in the planning of the square would be the front elevation of the two blocks of houses between the radiating streets. The idea was to correct the lines of the wide thoroughfare, where the aspect from the Porta del Popolo was of supreme importance. The effectiveness of this aspect would depend on two facts, first on an absolute symmetry, and secondly on the fact that the central features in the line of vision, i.e. the two domes, were as vast as possible. But these essential conditions were not easily attained, and it was a slow process to find the correct solution. Rainaldi had first to attack the problem of symmetry. Before he began his work, the blocks of houses stretched out into the square in varying length and breadth (Fig. 12). To bring the faqades into line on the square was not a matter of great difficulty, but the difference in breadth could not be altogether eliminated. The design in the State Archives shows very clearly not only the situation as it was, but in addition by what means Rainaldi sought to equalize the irregularities of the site. It also shows that the alterations to the square should not be confined to the south side alone, but that, as was inevitable in the Rome of the Seicento, the design of the whole square would have to be changed. The idea of correcting the irregular aspect of this important Piazza was no new one and dates doubtless from the time of the erection of the obelisk under Sixtus V.16

The plan by Rainaldi in the State Archives makes it clear that in two other sheets (Figs. 13, 14) we have his preliminary drafts for the re-designing of the church site and the square. The first of these, a large plan17 which to judge by the character of the work (pencil and heavy sepia lines) is by Rainaldi himself, consists of a drawing in ink of the existing situation, with pencil additions showing Rainaldi’s proposed alterations. The second sheet (Fig. 14), depicting the south side of the square only, is drawn to scale and has detailed inscriptions.18 It is an elaboration of the first sheet by Rainaldi’s own hand. From this sketch one can see very clearly how greatly the two blocks vary in width and that the further they extend from the front the greater this difference becomes. These facts are only shown exactly in the new material, which is here published.19

So much for the question of symmetry which, as one can see, was very essential and had to be solved before the planning of the churches could be started. When once the proportions of the two sites had been as far as possible assimilated, it was not difficult to build two symmetrical churches. A plan in the form of a Greek cross

16. In the Roman State Archives (Cart. 81, R. 278) there is a large pen-and-ink drawing to scale of the Piazza (815 x 430 mm.) before the erection of the obelisk, i.e. before 1589, which clearly depicts definite proposals for the re-organization of the site. The character of the drawing as well as that of the handwriting suggests that it was made at the end of the sixteenth century, and the idea itself indicates that period of re-organization under Sixtus V. It probably arose in connection with the transference of the obelisk.
17. Codex Vaticanus lat. 13442, f. 34r. 599 x 354 mm.
19. Nearly all the published town plans, both old and new, eliminate the relatively small differences in size, but in the Maggi plan (Fig. 12) they can be clearly seen.
Fig. 12 — Piazza del Popolo (Detail of Pianta di Roma of Maggi-Maudin-Losi, 1616-21)

Fig. 13 — Drawing by Carlo Rainaldi of Piazza del Popolo

Fig. 14 — Drawing by Carlo Rainaldi of South Side of Piazza del Popolo
FIG. 15—Project by Carlo Rainaldi for S. Agnese in Piazza Navona, 1652.

The simplest solution. The difference in the diameters of the two buildings could be equalized by transepts and chapels slightly unequal in depth, while the domes of both churches would be equal in size, which was essential for a symmetrical impression. This was still the position when the foundation medal was struck.

It was the desire to enlarge the domes to the greatest possible extent which made the subsequent alterations necessary. That enlargement could only be accomplished by abandoning the ground plan of a Greek cross in favour of that of a circle, where the dome would extend to the full width of the available space. But such a solution would have meant that the diameter of the dome of S. Maria di Monte Santo, the church erected on the narrower site, would be considerably smaller than that of S. Maria de'Miracoli. As this would have been inconsistent with the idea of complete symmetry in the exterior aspect, there was no other solution but to erect S. Maria di Monte Santo over the plan of an elongated oval. Only by thus placing the diameter of the dome further back, at a wider point in the wedge-shaped site, could the aspect of the domes from the square give the impression of identity of size and form. It is clear therefore that the circular ground plan which was finally adopted in the case of S. Maria de'Miracoli—the plan for which alone Rainaldi is usually held to be responsible—inevitably necessitated the adoption of an oval ground plan in the case of S. Maria di Monte Santo: they are the complimentary halves of one idea.

But although it must be assumed that both ground plans in their actual form belong to the first building period under Rainaldi (a fact which is in agreement with the written documents), yet at the same time we have to admit that the idea which inspired this solution was very akin to Bernini. The illusion produced upon the spectator, who, viewing the churches from the square (where alone both domes can be seen simultaneously), sees the round and the oval dome as equal, can be traced back to that subjective principle which maintains that reality is to be found not so much in the fact as in the impression produced on the spectator. This is a characteristic feature of Bernini's psychological approach to architecture, which led him, even at the inception of a plan to work always with a view to the situation and onlooker.

Rainaldi did not, however, adopt this attitude of Bernini spontaneously, but he was influenced here by his assistant, Carlo Fontana. Up to the present the position of the young Fontana in Rainaldi's studio has attracted very little attention. But many facts illustrate it, and it may even be shown that Rainaldi was, though in a constantly varying degree, dependent on his youthful assistant. This was due

20. The towers were erected only in the eighteenth century, but their existence is in harmony with Rainaldi's conception. They block the view of the domes from the Corso and give a clear indication from which point of view the churches should be seen.

21. Rainaldi's original solution (the foundation medal project) was the result of an objective consideration: the domes can only appear equally large if they are really identical in size. Another delibera optical illusion can be found in the façades. Owing to the exigencies of the site the façade of S. Maria di Monte Santo had to be 90 cm. less than that of the other church. But the fact that the façade appears to terminate with the outer orders on each side and that by an unnoticeable extension of the wall beyond the outer orders the measurement between these orders was in both cases identical made it possible to conceal the actual disparity in size.

22. See Brauer-Wittkower, Die Handzeichnungen des Gianlorenzo Bernini, 1931, pp. 102, 159. Also Kritische Berichte, 1931/2, p. 144.

not so much to Fontana's artistic capacity as to his intimate knowledge of Bernini's style and principles.

The collaboration of Rainaldi with Fontana during these years will be proved later from documents. Meanwhile one must notice a plan (Fig. 4) which is even earlier than that in the State Archives (Fig. 11) and which could never have been made without Fontana's influence. This distinct and detailed drawing of the two churches, in style almost a picture, was undoubtedly meant to give Alexander VII a clear representation of the new buildings. It concludes therefore a long series of preliminary drafts and sketches. The serene semicircular domes rise above a flatly modeled tambour with a strongly emphasized unbroken cornice dividing tambour and dome into two separate structures. Behind this rather unimaginative design lies a feeling for stability and harmonious proportion quite foreign to Rainaldi but typical of Fontana.5

The design of the façades in the sketch is certainly more authentically Rainaldi's than that of the domes. For the inner coupled pilasters fulfill a dual function: the triangular pediment links them together as the frame of the middle unit, and the eye therefore demands that the outer units be similarly enframed, which is not the case; they have only an outer and no inner boundary. If one could disregard the pediment, the inner pilasters would fall into line with the outer pilasters, and the façade would become a simple alternation of order and wall. But the pediment at once reasserts itself and produces a constantly shifting emphasis. By this simple device an impression of fluctuation and of a flowing unstable movement is produced, very characteristic of Rainaldi's individual architectural conceptions, which differ fundamentally from Fontana's principles.

In the second stage, the plan in the State Archives (Fig. 11), the Fontana element in the design of the dome has largely disappeared. Instead of the serene circular form one finds an octagonal dome with massive ribs. Large decorative scrolls unite the base of the dome with the attic below, with the result that through the diminishing of the functional significance of the tambour, the weight of the dome seems to bear directly on the lower structure—another example of the functional ambiguity characteristic of Rainaldi's style. The alterations of the lower structure—the replacement of the pilasters by columns and the fact that the outer divisions are convex and slope backwards—serve to emphasize the town-planning intention of the first project (Fig. 4). This intention is made clear by the fact that in the drawing of that project the perspective of the streets extends to the horizon. The idea of the artist was to preserve the impression of cubic mass in the two blocks of buildings, a tendency which in the second project becomes even more emphasized by the greater plasticity and the shieldlike bending of the outer units of the two façades. By this means the wedges of buildings seem to advance into the square with compelling force. On the


25. For other domes by Fontana see, for instance, the design for the decoration of the Colosseum, and the Jesuit Church in Loyola in Spain. See reproductions in Coudenhove-Erthal, _op. cit._, pls. 6-8.

26. For the conception and significance of dual function, see _Art Bulletin, loc. cit._, pp. 208 ff.
traveler entering through the Porta del Popolo it would have made almost an ag-
gressive impression. The façades, on the other hand, of the design on the medals
(Fig. 9), with which the final construction in the main corresponds, reflect quite
another disposition. Here the concave wall divisions and the tetra-prostyle express
welcome and invitation. While in the two earlier plans the lines of houses seem to
converge on the massive structure, in the final plan everything is conceived with a
view to the potential spectator and all is designed to draw him into the spell of the
long receding streets. From what has been already said one can easily guess to whose
influence this new orientation is due. As to the tetra-prostyle, its model can of course
be found in the forecourt of the Pantheon and in the prostyle which Michelangelo
planned for St. Peter’s. But, and this is a point of decisive importance, there is a
plan of Bernini’s in 1659, to erect a portico consisting of four columns in front of the
Maderno façade of St. Peter’s.27 Carlo Fontana was Bernini’s assistant for many years
in the planning of St. Peter's Square, and the fact that the type of classical temple
façade, which was never put into execution in the case of St. Peter’s, was realized in
the construction of the churches in the Piazza del Popolo, must be attributed to him.
The pure lines of this classical portico are as far removed as possible from Rainaldi’s
architectural conceptions. It is this motive which gives to the two façades an ap-
pearance very characteristic of Bernini.28

When Bernini actually took over the construction of the churches in 1671 the
only thing that remained to be done was to abolish the high attic of Rainaldi’s
design so that the pediment regained its plasticity, and so attained its full classical
value.29

The various stages in the development of the plans can be summarized as follows:
(I) The plan in the Chigiana (Fig. 4) with a dome on classical lines, characteristic
of Fontana. (2) The plan in the State Archives (Fig. 11). Here Rainaldi’s conception
of functional ambiguity which was expressed previously only in the façade, was applied
to the zone of the dome. At both stages the conception as regards town planning is
essentially the same: the focus is objective, i. e. on the lines of houses and street
perspective. (3) The project of the medals (Fig. 9). A new orientation appears in town
planning. The stand-point is subjective, i. e. that of the spectator. The tetra-prostyle
is in the style of Bernini but the tambour and dome express Rainaldi’s architectural
principles of the second stage. (4) A further alteration in the design, between the
laying of the foundation stone and the commencement of the work. In order to
enhance their effect in the city landscape, the volume of the two domes is increased,
which entails a re-forming of the ground plans on a pseudo-symmetrical basis, a
second concession to the subjectivism of Bernini. (5) The abolition of the attic behind
the pediment during the completion of the work by Bernini in accordance with his

27. In the Maderno ground plan of St. Peter’s
shown in the engraving by de Greuter in 1613,
Bernini with hasty pencil strokes has added the four
isolated columns. The engraving is in cod. Chig.
P VII 9, f. 30. Further material relating to this
matter in Brauer-Wittkower, op. cit., pp. 83-4, pl. 61,
164b.
28. From its appearance Dagobert Frey, Archi-
itetture Barocca (Rome-Milan, Societk Editrice d’Arte
Illustrata), p. 47, even concluded that the portico
was erected by Bernini himself when he took over
the construction.
29. For the divergent functions of the pediment
as conceived by Bernini and Rainaldi see below,
note 38.
three-dimensional conceptions. This defines approximately the main lines in the
history of the building of the churches and their significance in the œuvre of Rainaldi.
In order to follow the above analysis one must be aware of the conflict between two
different architectural conceptions and of their extraordinary intermingling, crossing,
and overlapping. Before, however, we examine the interior of both churches more
closely, it is advisable to approach the problems before us from another side.

S. AGNESE IN PIAZZA NAVONA

A large plan for the building of S. Agnese (Fig. 15) was first by Egger,
attributed to Girolamo, the father of Carlo Rainaldi, but it reveals
without any doubt the authorship of Carlo Rainaldi himself. It can be dated 1652
and is closely related to the design made ten years later for the churches on the
Piazza del Popolo (Fig. 4). The treatment of the large order corresponds exactly
with the design in the Chigiana: the division into double columns or double
pilasters surmounted by a broken entablature, and a pediment over the central
orders. In the design for S. Agnese the columns, in superseding the pilasters, naturally
produce a concentration towards the center, but this increase in quantitative value,
as between pilaster and column, is largely neutralized by the fact that the wall to
which they are attached does not participate in this movement but remains in one
plane only so that pilaster and column appear as co-ordinated values. Because
of this arrangement the impression of ambiguity is still greater in the design of
S. Agnese than in the two later churches.

It has been observed that Rainaldi was inspired here by the design of St. Peter's
(Fig. 79), but in every respect his design shows alterations pointing in a new direc-
tion. In St. Peter's the graduation of the orders is emphasized by corresponding
protrusions of the wall behind, while in S. Agnese the wall remains neutral. The
attic, which in the case of St. Peter's is already too high for an impression of harmo-
nious classical proportion, is in Rainaldi's design carried to a still more disproport-
ionate height. Rainaldi also entirely omits the tambour of the dome; it is true that
in St. Peter's, after the later construction of the nave, the tambour became practically
invisible at a short distance from the church, but the structural incongruity which in
the case of St. Peter's is merely apparent, would have been in S. Agnese an objective
reality.

Rainaldi's plan was never carried out. A year after the commencement of the
building he was superseded by Borromini (August 7, 1653), who completely revised
the designs. When Rainaldi ten years later had to erect S. Maria in Campitelli, he
reasserted the principles of his plan for St. Agnese, although the foundation medal
of S. Maria in Campitelli (Fig. 45) shows several modifications inspired by contem-

30. Architektonische Handzeichnungen......, Vienna
1910, pl. 28. After the war this sheet was transferred
from the Hofbibliothek to the Albertina in Vienna.
31. Rainaldi......, p. 34, and also by the same,
Borromini, Vienna, 1924, pl. 88,2.
32. For Rainaldi's equalization in value of pilaster
and column, see below p. 258.
33. Hempel, Borromini, op. cit., p. 141.
34. For the system of articulation in the façade
of St. Peter's see below p. 258.
35. All details of the history of the construction
are published by Hempel, Borromini, pp. 138 ff.
porary ideas. In the actually existing façade of S. Maria we can still see the original combination of small and colossal orders. The circumstances in which Rainaldi in the year 1657 again succeeded Borromini have been fully described by Hempel. The façade (Fig. 16) had by then reached the crowning cornice and it was from this point onwards that Rainaldi set out to rectify Borromini’s design. In a project of Borromini’s which can be only slightly earlier than his final and unknown design, the attic and pediment are represented other than they actually are in the existing building. In this sketch a low balustrade runs along the top cornice, and over the center appear pentimenti which show that Borromini’s conceptions were still indefinite. But their realization would obviously have implied an exaggerated heightening of the center, such as indeed he had already planned in his first design (Fig. 18). The high attic of the present building which imperfectly, because of the horizontal panels, continues the vertical lines of the façade is as little expressive of Borromini’s architectural style as is its unsubstantial, cardboardlike appearance and its proportional relation to the top story of the façade. These are features essentially typical of Rainaldi. Also the unbroken triangular pediment, with its classical aspect, would have been an unparalleled feature in Borromini’s work and would have seemed to him uncongenial. To be sure, this classical formula certainly does not correspond either to Rainaldi’s treatment of detail. But considering that the work on the campanili of the building did not begin until about 1666 and that in consequence the attic and pediment were probably erected not earlier than the sixties, the classicism of the pediment may well be derived from the same source as the idea of the tetra-prostyle of the churches on the Piazza del Popolo.

Thus, three quite distinct artistic tendencies can be traced in the façade of S. Agnese. The fantastic and dynamic accentuation of the center originally planned by Borromini, who designed the curving lines of the ground story, is transformed into the Berninesque classicism of the pediment which, being placed flat before Rainaldi’s attic wall, loses the solid sculptural value of Bernini’s own compositions.

In view of this situation one cannot simply speak of the influence of “Borromini’s” façade of S. Agnese on the design for the churches on the Piazza del Popolo—an observation which ignores the complications of the St. Agnese design. But one can certainly say that the alteration of the outer sections to a concave form in the case of these churches was directly inspired by the design which Borromini contributed to S. Agnese.

36. Sheet in the Albertina. Published by Hempel, op. cit., pl. 90.
37. Design for the foundation medal in the Albertina. Published by Hempel, op. cit., p. 138.
38. With Rainaldi the pediment, standing as it always does in front of a flat wall surface, is merely a linear expression of emphasis and concentration, while with Bernini it forms the apex of the building and has therefore a sculptural character. As to this, compare Bernini’s whole work from his S. Andrea al Quirinale and the churches in Castel Gandolfo and Ariccia up to the pediments of the colonnades of St. Peter’s. It is also most informative to compare Bernini’s design for the apse of S. Maria Maggiore with the building as actually executed by Rainaldi. Rainaldi’s apse stands against the plain decorative wall of the attic whereas in Bernini’s project the entire structure is one dynamic entity of utmost sculptural value. For both projects see Bernini Zeichnungen, loc. cit., pp. 163/5. Hempel, op. cit., pp. 143 ff., already pointed out modifications of Borromini’s plan in the region of the pediment; on pp. 150 ff. he deals further with modifications of the design in the towers and lantern. The author of a so far unpublished drawing in cod. Chig. P VII g. f. 83—probably Giovanni Maria Baratta, who designed the towers—in his design of the region of the pediment, makes a clumsy attempt to mediate between Rainaldi and Borromini (Fig. 19).
In our first example, the churches on the Piazza del Popolo, we found a structure designed by Rainaldi but profoundly affected by Bernini’s architectural ideas; in our second example, S. Agnese, a façade by Borromini transfigured by Rainaldi during his Berninesque period. We now come to a still more complicated case, the façade of S. Andrea, the history of which gives a definite idea of Fontana’s position in Rainaldi’s studio.

Carlo Maderno, the first builder of S. Andrea, published an engraving of his design for the façade in 1624 (Fig. 22). The consistency with which the orders are graded to correspond to the wall protrusions distinguishes his façade for S. Susanna, but does not recur in the works that followed. Already in the façade of St. Peter’s (Fig. 79) a few years later, the breaking of the entablature above the pilasters which enclose the outer compartments with the niches is an inconsistency. The design for S. Andrea, which followed that for S. Susanna by almost a generation, represents another important step in the same direction, i.e. the rejection of a composition developed consistently on several planes. In the ground story indeed the artist has made the wall units project clearly on three planes, though he has abandoned the finely differentiated gradation of orders and decoration of S. Susanna; but the arrangement of the upper story follows quite a different system. The four coupled columns with their respective entablatures are attached to a wall in one plane only and are equal in value; Maderno’s principle here is simply one of serial sequence. The two stories are therefore not based on a homogeneous conception. Instead of the unity of S. Susanna, we have in this late work the incongruity of a hybrid composition.

When Carlo Rainaldi took over the construction of the building he had no longer a free hand. The socle of the ground story had already been erected in accordance with Maderno’s design. Rainaldi’s intentions can be inferred from a design by his hand (Fig. 20). His alterations of the Maderno design were in two directions. He had first of all to satisfy an imperative demand of contemporary taste. In the second half of the seventeenth century a vertical unification of the two stories was always aimed at and to this end the entablature above each order is broken, thus forcing the eye to connect the pedestals of the upper order with the cornices of the order below. As a result, the top pediment, together with the outer columns by which it is borne, appears as enframing the middle motive, graded and verticalized in its turn. The vertical movement of the two motives one within the other, is further accentuated by the


41. Cod. Chig. P VII 9, f. 91v/92r (58), 745 X 519 mm. Colored pen and ink. Below on the right-hand margin the original signature: “Rainaldi.” Fig. 20 does not include the signature. This drawing already published by Caflisch, _op. cit.,_ fig. 27.
Fig. 17—Foundation Medal of S. Andrea alla Valle (Carlo Rainaldi’s Project). 1662-3

Fig. 18—Project by Borromini for S. Agnese in Piazza Navona

Fig. 19—Plan by Giovanni Maria Baratta (?) for S. Agnese in Piazza Navona

Fig. 20—Project by Carlo Rainaldi for Façade of S. Andrea della Valle. 1662

Fig. 21—Rome: Façade of S. Andrea della Valle, by Maderno, C. Rainaldi, and Fontana. 1624-9, 1662-5
FIG. 22—Project by Maderno for S. Andrea della Valle, 1624.

FIG. 23—Project by Fontana for S. Andrea della Valle.
broken entablature above the outer pilasters in the lower story, whereby the vertical lines are carried up on each side to the crowning figure. But on the basis of this Full-Baroque conception of unity and verticality, Rainaldi was able to develop his own principle of ambiguity. Every sequence of divisions demands to be taken also in a horizontal sense. But because of the breaking of the entablature, the outer pilaster is no longer the symmetrical counterpart of the inner half pilaster, as is the case in Maderno's design, but is equivalent to the column which follows. This qualitative co-ordination of pilaster and column we found to be a typical expression of the principle of ambiguity.\textsuperscript{42} In the upper story the entablature above the third column on either side continues the entablature of the central pediment and does not balance the entablature above the second column on either side, though both columns serve as parallel boundaries to the unit between them. In other words: the apparent inclusion of the inner columns in the central motive contradicts their function of delimiting the adjacent outer panel.

Rainaldi's suggested alterations of the Maderna design were not carried out according to this plan. The ambiguous elements which he introduced in his drawing, were eliminated in the actual building (Fig. 21). The outer pilasters of the ground story have no broken entablature and the entablature over the third column of the upper story is no longer a continuation of the cornice of the pediment.

The other modifications of Rainaldi's design point also in the same direction and affect every part of the building. (1) A greater severity in the treatment of detail: the illusionistic effect of the central window and the broken segmental gables over the side niches of the upper story as well as over the door are rejected and the massive scrolls are replaced by a logical restatement in the upper story of the half-pilasters below. (2) A simplification of framework and mouldings: the attic is placed at a right angle on the cornice of the lower story and rectangular plinths are substituted in both stories for the concave form which softened the transitions. (3) A separation of the ornamental dressings from the architectural composition: incongruous combinations, such as that of the niches with the Chigi arms (on the outer panels of the ground story) are discarded, and the gables have their full architectural value; over the central door, the broken segmental gable intersecting with the enframed cartouche is likewise replaced by the large and plain pediment motive. (4) A complete freedom in the decorative sculpture: the putti bearing palms and medallions are now to be seen flying freely in mid-air. (5) Harmonious proportions and a rhythmical alteration: the upper story is now made almost equivalent to the lower, both by increasing the height of the columns and by placing the balustrade of the middle window not above but within the attic, so that it is quite clear that the attic forms part of the upper story.\textsuperscript{43}

In Rainaldi's design, the gables in the three middle compartments in each story

\textsuperscript{42} The inconsistency is still more accentuated here by the existence of the half-pilasters, which must have been inherited from the Maderno design.

\textsuperscript{43} Rainaldi in his design simply included the existing window of Maderno. The executed window appears to have no connection with the Maderno window although in reality this has not been altered. The window opens above the "attic" and the balcony is placed in front of a blank wall so that it cannot be reached. Close observation however reveals the semicircular window of Maderno behind the present rectangular window frame. Here again one can see the exact point at which the subjective, psychological principle, which we noticed in the churches on the Piazza del Popolo, supersedes the "objective" conception, characteristic of Rainaldi.
were developed from the circular form, and the triangular form was reserved solely for the outermost compartments of the ground story—a further indication of the manner in which Rainaldi intended his design to be interpreted. In the actual building, on the other hand, we find the classical conception of a rhythmical alternation of segment and triangle, so that every tabernacle falls into place in a compact design of logical correspondences. A diagram will show clearly how the draft and the completed façade differ:

\[
\begin{array}{c|c}
\text{Design} & \text{Façade} \\
\hline
a & a \\
\hline
b & b \\
\hline
\end{array}
\]

From our previous experiment, we may guess that this purposeful alteration of Rainaldi’s design was the work of Carlo Fontana. The conjecture here becomes a certainty because a design signed “Carlo Fontana” exists (Fig. 23) which shows the alterations of Rainaldi’s design almost exactly as we have described them and which therefore must have been the model for the design of the foundation medal of 1662 (Fig. 17) and for the actual construction.

Here we have documentary proof that Fontana although only an assistant actually corrected a design by his master. Fontana had Rainaldi’s design before him, but in some respects altered its physiognomy in a diametrically opposite sense. The tendency of these changes is away from Rainaldi’s ambiguous forms towards the Berninesque classicism of Fontana, which—in the final construction of the building—was almost invariably accepted by Rainaldi. The present façade of S. Andrea therefore embodies

44. Bibl. Vaticana, cod. Chig. P VII 9, f. 90 (57). Signature in Fontana’s own writing: “Carlo Fontana f.” The same technique of colored pen and ink can be seen in a great number of Fontana’s drawings. We reproduce only a detail of the much larger sheet on the left side of which is represented an extensive ground plan of the site. Coudenhove-Erthal, op. cit., p. 27, was acquainted with this sheet and held therefore the clue to the Rainaldi-Fontana problem.

45. The foundation medal was struck during the eighth year of Alexander’s pontificate, i.e. between April 7, 1662, and April 6, 1663. Rainaldi’s project (Fig. 20) bears in the frieze the date 1662. If then the recommencement of the work may be dated that year, it was finally completed, according to the inscription of the façade, in 1665.

Small but significant divergences between the Fontana project, the medal design, and the completed structure must here be mentioned. In Fontana’s project (Fig. 23) the tabernacles in the outer compartments of the chief story are shown with “ears” instead of with the actually existing triglyphs. There is, further, in Fontana’s project—still in accordance with both Maderno and Rainaldi—a pillar in the center of the balustrade of the balcony in the upper story, while in the completed building there is no central motive in the balustrade. Finally—again in accordance with Maderno and Rainaldi—the large center window is made to terminate in a semicircle, while it actually terminates in a straight lintel. The last two features are logical developments of a movement away from the original Maderna design. The details of the executed tabernacle frames, on the other hand, are definitely characteristic of Rainaldi’s treatment of details. The fact that Rainaldi wished to assert his ideas as against those of Fontana is also shown by the broken cornice above the outer pilaster of the medal design (Fig. 17), implying hereby a return to the earlier Rainaldi project (Fig. 20). Otherwise the medal design follows that of Fontana slavishly, except that it already represents the central window with straight lintel. It is evident therefore that in spite of the victory of Fontana, Rainaldi was not disposed to give way in all details. The engraving of Falda (in G. G. Rossi, Il Nuovo Teatro..., 1665, Libro 1) reproduces the plan of the medal, but shows at the same time a staircase before the façade in Rainaldi’s style, which was not executed, but which was undoubtedly planned by Rainaldi himself.
the form, purified by Carlo Fontana, of a design by Carlo Rainaldi which is itself a modification of a Maderno design.

The historical significance of Fontana as Rainaldi’s assistant during the years 1661/2 having now been established, we may ask if the irruption of classicism into Rainaldi’s work is really just a sporadic element, due to a transitory outside influence. In other words: are Rainaldi’s principles of design so clearly marked over long stretches of time? The answer to this question will be supplied in the chapter on the development of Rainaldi’s style. We must now turn to the problems presented by the interior of the churches on the Piazza del Popolo, and to this end we must inquire still further.

THE PROBLEM OF ORIENTATION IN CENTRALLY PLANNED BUILDINGS

The main problem in all Christian church architecture is the formation of the interior. Christianity inherited from antiquity two fundamentally different types: the hall and the central type of building crowned by a dome. Both forms were adopted but employed for separate ends: the hall as the assembling place for the congregation, therefore in reality as the church, the domed form as baptistry and burial chapel.

It is well known that the architects of the Renaissance set out systematically to adapt the circular form of structure to the purposes of an assembling place. Brunelleschi was the initiator with S. Maria degli Angeli (begun in 1434 and never completed). From that time onwards the problem was tackled ever anew. The connection of such a geometric form with such a purpose contained from the outset the elements of conflict.

In the centrally planned building of the Renaissance all parts are equally grouped around one point. The essential character of such a building consists therefore in a perfect balance between all parts; in other words, it is a building without particular orientation. This is true without exception of all central structures. Up to the second half of the sixteenth century the apparent multiplicity of forms can be resolved into two fundamental types: the simple circular form (or a form developed from the polygonal shape) and the Greek cross, which is a centralized building with four equal arms.47

The lack of orientation in both these shapes conflicts irreconcilably with the liturgical requirements of the church.48 The altar is the spiritual center of the church and must therefore stand in the most prominent place; in a central structure this is naturally the center, but to place the altar in the center is unusual because of liturgical reasons. For, to take only the most obvious objections, how, with this arrangement is it possible to separate clergy from laity and to secure enough space in front of the altar in which to assemble a large congregation?49 An accentuated wall altar is the

46. We are speaking here of central structures up till about 1550. For the new possibilities of expression to be found in Baroque see below pp. 271 ff.

47. The essential differences between these types can be best appreciated in the elevation. The simple circular form (or forms developed from it) carries the dome directly, as in the Pantheon. In buildings of the Greek-cross type, between the lower and the upper structures there is the transitional zone of the pendentives.

48. The most exhaustive treatment, as far as I know, of the whole problem is that by Frankl, Die Entwicklungsphasen der neueren Baukunst, 1914, pp. 148 ff. See also Dehio-Bezold, Kirchliche Baukunst des Abendlandes, and Gurlitt, Geschichte des Barockstils in Italien, 1886, pp. 58 ff.

49. An attempt was sometimes made to separate clergy from laity by placing a barrier round the altar under the dome. But such an arrangement was only adopted in conjunction with a nave (compare Florence: Cathedral, SS. Annunziata, S. Spirito).
only solution, but such an altar gives an axial direction to the interior which does not accord with the aesthetic laws of a circle. The architects of the Renaissance attempted to solve the problem by not accentuating the wall altars, thus giving full value to the circular form. And we may here mention that although this form of building was not dictated by a liturgical purpose, it was nevertheless an outcome of religious considerations, for the circle was felt to be in itself the most perfect form and therefore the most suitable for the worship of God.

These essential difficulties explain the failure of the central type of building during the Renaissance. Not only did the most important plans never get executed and most of the designs remain fantasies on paper, but nearly all the buildings constructed in this form were felt later to be inadequate.  

From the Counter-Reformation onwards liturgical considerations were to the fore. But that did not mean in any sense a general return to the nave structure. One attempted by new architectural means to adapt the central form to liturgical requirements. Before, however, going deeper into the matter, we must review briefly the history of the oval building. It is significant that about the middle of the sixteenth century there was added to the two fundamental types of centralized buildings which have already been mentioned, this third type, a pseudo-circular shape in which there is to a certain extent a line of orientation. Here it is possible to combine a circular and a directional conception without conflict. In the oval structure the line of orientation is merely implied, and the actual lines of the interior still converge on the center of the dome. It is possible for the architect, through the articulation of the wall and the structure of cupola and chapels, to elaborate either one or the other of these two tendencies, and the question which arises is which of them he will develop and which he will suppress.

The evolution of the oval ground plan. The first tentative introduction of the oval form was that of Vignola in S. Andrea in Via Flaminia in about 1552, where an oval dome is erected over an oblong ground plan. The decisive step, however, towards an oval structure was not taken till twenty years later in S. Anna dei Palafrenieri, the last work of Vignola, who died (1573) a year after the completion of the design (Figs. 24, 25). In modern literature one finds a curiously confused account of the construction of this exceedingly important building. All that one need mention here is that the plan of the structure up to the level of the cornice over the columns is based on Vignola's design, but that the attic, cupola, choir, and façade were completed only much later and with considerable alterations. In the original part of the structure, however, his intentions are clearly to be seen. The columns in the recesses articulate the wall surface in an alternating rhythm of a, b, a, b, a, b, a, b, while the large compartments at each end of the two principal axes are made to correspond to each other by four identical arches between the columns. One is here sensible of an intersection of the two lines of orientation as it were embedded in the oval form; but that in this

50. It is no exaggeration to say that all the Renaissance centralized buildings received accentuated high altars at the time of the Restoration. In many cases long choirs had even been added to the building (such as S. Maria di Loreto and S. Anna de' Palafrenieri in Rome, S. Stefano in Milan).

51. For this building see Willich, Giacomo Barozzi da Vignola, 1906, pp. 64 ff., with the elevation and view of the interior.

52. With the help of town plans, old engravings, and guide books the history of the building can be completely reconstructed.
Fig. 24—Rome: S. Anna dei Palafrenieri, by Vignola. After 1572

Fig. 25—Ground Plan of S. Anna dei Palafrenieri, by Vignola

Fig. 26—Ground Plan of S. Giacomo degli Incurabili, by Francesco Volterra. 1592
Fig. 27—Rome: S. Giacomo degli Incurabili (North Side of Oval), by Francesco Volterrano

Fig. 28—Rome: S. Giacomo degli Incurabili (toward Main Altar), by Francesco Volterrano

Fig. 29—Rome: S. Maria de’ Miracoli (toward Choir), by Carlo Rainaldi
conception the intersecting lines are still subordinate to the circle is made clear by the top cornice, which is carried unbroken right round the oval interior.

The next important step in the same direction was the construction of S. Giacomo degli Incurabili (Figs. 26-28) by the now almost unknown Francesco Volterrano from 1592 onwards. The latent tendencies in S. Anna dei Palafrrenieri are here clearly developed. By a completely new variation in the design predominance is given to the cross-lines of orientation. The cornice round the interior breaks through the oval at each end of the long axis and is carried round the walls of the choir and entrance bay respectively, thereby uniting heterogeneous forms of building, so that the whole church must now be seen as one structure with a very definite line of orientation (Fig. 28). But the transverse axis is also accentuated, though in a completely different way to the long axis, by the convergence of lines to the center of each side of the oval (Fig. 27). Each longitudinal half of the oval now forms an enclosed unit of five compartments, articulated in the rhythm usual in a façade design a, b, c, b, a. The zone of the dome too in its design makes it especially clear that in the articulation of the walls opposite one must see a corresponding symmetry and not a rhythmical continuity round an oval, for above each of the two compartments on the transverse axis is an important lunette with a window, corresponding in size to the wall unit and flanked on each side by a smaller lunette. On the long axis, on the other hand, there are no lunettes; on this axis, the vaulted ceiling of the entrance hall, at one end and that of the choir at the other, intrude into the dome. The longitudinal division of the structure into two independent concave parts, is thereby made absolutely clear.

Francesco Volterrano accentuated therefore in the oval structure the line from entrance to altar, but did not carry through this line without a break, for half-way down it is interrupted by the accentuated line of the transverse axis. So here the conflict arising from the crossing of axial lines in a centralized oval form is distinctly evident, with the result that the tension between aim and form (liturgical requirements and spatial law) finds for the first time conscious and visible expression.

The three solutions. In the course of these analyses we have indicated the possible solutions of the conflict latent in the central type of church as such. Before passing on to further investigation, one may say in conclusion that there are two ways of evading the conflict. One is to retain the completely enclosed central form, the other, to subordinate the circle so entirely to the axial direction that the impression given

53. His life in Baglione, *Vite de' Pittori*, ed. 1733, p. 45. The building was completed by Carlo Maderno. Caflisch, *Maderna*, 1934, p. 9, dates, on the basis of the documents, the laying of the foundation stone of the façade April 11, 1592, and names as architect Francesco Volterrano. Giovannoni, *Chiese della seconda metà dei Cinquecento in Roma* (at first in L'Arte, 1912/3; reprinted in Saggi..., 1931, pp. 226 ff.), considers Francesco Volterrano a typical reactionary artist of the Renaissance and does not even believe that he was responsible for the ground plan of S. Giacomo, quite clearly against the evidence of the documents. Engravings of the church in G. G. de Rossi, *Insignium Romae Templorum prospectus*, 1684, pl. 59: longitudinal section; pl. 60: ground plan (Fig. 26). Photographs of the interior of this important church have never been published before.

54. In doing this the artist could refer to the Pantheon, where the vaulting of the entrance and choir intrudes into the high attic of the cylinder. Above, the actual cornice of the dome forms indeed one unbroken circle.

55. This complexity of structure is combined with a conception of detail which is very clear, definite, and restrained. It is just this combination of a complicated, structural conception with a classical conception of detail which is a general characteristic of Roman art about 1590.
by the interior is that of an inflation of the nave. But it is also possible to attack
the problem from the opposite side, and instead of suppressing the conflict, to
intensify it and make it conscious. This can be achieved by counteracting one axial
line by the other, so that the central form which is disintegrated by the accentuation
of the long axial line is reconstituted by an emphasis on the transverse line. In the
construction of a centrally planned building every architect must, in principle, adopt
one of these three solutions.

The Churches on the Piazza del Popolo. If after these observations we turn again to
these churches we can see at the first glance—even from the illustrations—that we
are dealing with two attempts to solve the problem which are fundamentally different
in character. In S. Maria di Monte Santo (Figs. 5, 6) we see the predominance of the
long axis. The design is influenced by that of S. Giacomo only in so far as the
cornice is likewise carried round the whole building, but there is no distinguishing
here of the transverse axis. S. Maria de' Miracoli, on the other hand, follows closely
the design of S. Giacomo with its complications. We need not here say much about
S. Maria di Monte Santo. Through the design of the elevation which does not at all
represent Rainaldi's architectural conceptions we can infer that when Bernini took
over the construction the building was not so far advanced that every feature had
already been determined. But although the rest of the building is attributed to
Bernini, he cannot be held responsible for the details. It seems probable that these
were worked out by Mattia de Rossi, Bernini's intimate though not very gifted pupil.66

The design of S. Maria de' Miracoli is essentially more complicated than that
of S. Maria di Monte Santo.67 We find here as in S. Giacomo the breaking of the
cornice on the long axis (Fig. 29) and the convergence of the lines of the side walls
onto the chapels on the transverse axis (Fig. 30). But the internal conflict is more
intensified than in S. Giacomo. The very form of the ground plan—a circle and
very long choir (Fig. 7) instead of an oval and short choir as in S. Giacomo—
implies conflicting elements. The two chapels also on the transverse axis are made
still more prominent even in size. The sharp accentuation of the transverse axis is
however due primarily to the aedicula formed by carrying up the line of the pilasters
through the projecting entablature to the pediment. Rainaldi was not content to
preserve the idea of centralization by the mere accentuation of the transverse axis
but he wished also to have the circular form actually sensed. Pilasters with a
broken entablature, similar to those on the transverse axis, are placed on the long
axis also, where they carry the entrance arch and the arch of the choir respectively.

56. In the guide literature (see above p. 246) the
name of Mattia de Rossi does not appear. But in
a collection of engravings of 1713 (Gio. Giacomo de
Rossi, Disegni di vari altari e cappelle nelle chiese
di Roma, pls. 30, 31) a longitudinal and transverse
section of the choir is represented with the inscription
below: "Archit. Mattia de Rossi." But it seems
probable that de Rossi's participation is not confined
only to the choir and that Fontana's contribution,
which is emphasized by the guides, is in reality very
small.

In this connection I would recall the fact that
Mattia de Rossi created an oval church, S. Galla in
Via Bocca della Verità, which has since been destroyed.
In this plan, however, Mattia followed in principle
the plan of S. Maria de' Miracoli, i.e. he emphasized
the transverse axis. This can be seen from the large
plan of Rome by Nolli (ed. Card. F. Ehrle, 1932,
No. 1040).

57. The collaboration of Fontana can be clearly
recognized. It is the choir which is most markedly
stamped with his style (for this see Coudenhove-
Erthal, op. cit., pp. 40 ff.), but it is also unmistakable
in the tambour and dome. The style of the lower
structure indicates that Rainaldi himself erected the
building as far as the tambour.
Figs. 30-31
Rome: S. Maria de' Miracoli (East Wall, and West Wall and Choir), by Carlo Rainaldi
Fig. 32—Project by Bernini for S. Andrea al Quirinale

Fig. 33—Rome: S. Andrea al Quirinale, by Bernini
By this arrangement the sequence of the orders represents a regular rhythm, a, b, a, b, a, b, a, b. But this intention is again opposed by another tendency, for the pilasters of the choir in contradistinction to those of the main structure are fluted (Fig. 31), and correspond in this particular to those attached to the walls of the choir. Through the color scheme too they are sharply differentiated from the main structure and related, with their respective entablature and arch, to the choir; so that these pilasters appear as two arms, which, projecting from the choir into the central building, break the continuity of the circular articulation and accentuate the long axis.

Rainaldi therefore is not here satisfied with a simple conflict of axial lines. Although the entablature is broken in the long axis he attempts to express through the wall formation the totality of the circle but counteracts this intention again by the dual function of the pilasters before the choir, so that there is not only a discord due to the intersecting of axial lines but also an inextricable confusion of circular hall and rectangular choir at the points where their walls meet.

A more detailed analysis would elucidate the problem still further, but the present investigations suffice to show in what line of architectural development Rainaldi’s design for the plan and elevation of S. Maria de’ Miracoli stands. It is impossible to doubt that the interior of the building is determined by the same ambiguous principles which are visible in the façade, where they are more obvious and can be more easily analyzed.

At this point it may be asked if so much importance can be assigned to a structure so insignificant in size, where the external appearance was the primary consideration. Two things may be said in reply: first that Rainaldi expressed the same conceptions in the interior of his other structures, although it may be only in S. Maria in Campitelli that they can be seen so distinctly; and secondly, that it is an error to think that in Baroque architecture the largest buildings are the most important. On the contrary, all the Italian buildings of the seventeenth century which can be regarded as most decisive not only in the history of architectural development but also as examples of individual styles, are of medium size and centrally planned. The rich possibilities of the central structure stimulate new and individual conceptions in a way that the nave type of structure could never do. One can even say that it was the experience gathered from the attempts to build in a central form which stimulated new ventures in the design of longitudinal buildings.

But before further discussion of Rainaldi’s work we must compare his particular interpretation of the central type of building with other important contemporary churches in Rome of a central structure. Only thus can Rainaldi’s originality and his place in the history of architecture be shown.

**Centrally Planned Buildings of Bernini, Cortona, and Borromini**

Bernini: *S. Andrea al Quirinale*. Bernini constructed three centrally planned churches, all three extremely small in size but considerable in their subsequent effect. In each case he uses one of the three possible shapes in its purest form: the pure circle for the Chiesa della Assunta in Ariccia near Rome, the pure Greek cross for
The most important and most ornate of the three churches is the last, and it is here therefore that Bernini's conception of a central structure can best be studied (Figs. 32-34, 36).

It has often been noticed that in the structure of S. Andrea Bernini employed for the first time a latitudinal oval. He was impelled to do so by a lack of space, for the site at his disposal was wide but shallow. He turned such difficulties as these, however, to artistic account. This is indeed one of the most striking characteristics of his work: material constraints become in themselves the origin of new and purely aesthetic conceptions. In this design the important point is that the line of the transverse axis (in reality the long axis) instead of leading on each side to a chapel is now terminated by two pilasters. The long axis of the oval, therefore, which would naturally represent the line of orientation, is blocked at each end, so that the enclosure of the oval space is evident even in the design of the ground plan. This enclosure is further emphasized by the elevation. The cornice supported by the pilasters forms a complete ring (no breaking of the entablature), the chapels are dimly lit and thereby stand completely apart from the brightly illuminated central space; the choir also forms an independent entity not only because of the columns which divide it from the rest of the building but also because of its bright illumination. But although the centralized shape is most strongly emphasized, the effect is not centripetal, in accordance with the static principles of the Renaissance; that is, there is no convergence toward an ideal center. We find, on the contrary, a very marked concentration of lines upon the aedicula in front of the choir, so that the altar, although standing in another world and completely isolated, is at once felt to be the spiritual center. The eye sweeps round the ring of the cornice to the aedicula of columns, to an apotheosis to which every worshipper can testify: here in an alcove of the pediment we behold St. Andrew soaring to heaven.

Corresponding to the centrifugal pressure of the interior, there is encircling the exterior a powerful ring held together by the aedicula of the façade. Just as, in the interior, the semicircular choir lies outside the closed ring of the oval, so in the exterior also, the loggia, born by columns, stands outside the encircling ring. Exterior and interior are two parts of one whole, but the emphasis lies in a reversed direction: outwardly, the structure is bound together by the aedicula of the façade, inwardly by the altar aedicula; the overflowing vitality creates outwardly the loggia, inwardly the choir. The outer concave walls which form as it were an inviting courtyard, seem to be clamped into the building at the crucial joint and to be riveting the structure together against a hypothetical explosion of the inner force. Bernini's structure is therefore throughout an organic unity, a dynamic creation based on a forcible manipulation and control of the material.

By distinguishing between the component parts of the building and by defining clearly and unequivocally the form and function of every architectural unit, Bernini belongs definitely to the classical school. But he interprets those two fundamental elements—the shape of the ground plan and the articulation of the structure—in

Fig. 34—Ground Plan of S. Andrea al Quirinale, by Bernini

Fig. 35—Ground Plan of SS. Luca e Martina, by Pietro da Cortona

Fig. 36—Cross-Section of S. Andrea al Quirinale, by Bernini

Fig. 37—Cross-Section of SS. Luca e Martina, by Pietro da Cortona
Fig. 38—Rome: S. Ivo della Sapienza, by Borromini

Fig. 39—Rome: S. Ivo della Sapienza, by Borromini

Fig. 40—S. Maria in Campitelli: Ground Plan of the Nave of 1642-8; on Attached Flap, Project for Choir Enlargement, 1658; under Flap, but here invisible, Rectangular Choir of 1619
a sense unknown to the Renaissance. His conceptions are based on a dynamic principle of controlled and directed forces instead of on an aggregate of independent units.

This was of great significance inasmuch as it paved the way for the real solution of the central structure, which the architects of the fifteenth and sixteenth centuries were necessarily unable to find. Only by distributing the emphasis around the outer circle, was it possible, without provoking a conflict of axial lines, to retain the effect of the closed circular interior, and at the same time to accentuate the altar (which stands outside the dynamic ring) in accordance with liturgical demands.

At this point one must consider the part which the sculpture plays in S. Andrea. We have seen how all the significant lines of the interior lead up to the sculptured figure that is borne by clouds to heaven. Whoever enters this church will find himself involved in a particular event, fixed in time and space, and he will participate in the glorification of the saint who is seen flying upwards towards the golden dome and towards the Holy Dove surrounded by putti. But it is at the altar that the mystery itself is consummated; here angels bear aloft the image of the martyred saint and human suffering is transformed into divine reward. Thereafter, the deliverance is complete and if our eyes turn back to the church they rest again upon the soaring figure of the saint.

Until now churches had been a neutral space, as it were a vast shrine, where the mediation between man and the Divine were accomplished. In Bernini’s church of S. Andrea the entire space is dominated by one particular event and the whole interior is the stage of a drama. Because of the event which it exhibits—the ascension of the saint—the objective form of the architecture has more than a mere architectural significance. The architecture, so to express it, disappears behind a soul-moving story which takes up the whole space. In this space the sculpture serves to bring into play the subjective values in the contemplating mind, and in that way to psychologize or dramatize the actual objective contours of the architecture, so that the whole structure is permeated by one imaginative conception and forms one artistic entity.

From what has been said, it must be clear that the architecture and sculpture do not here represent two conflicting principles, but that the architecture leads up to the sculpture and to all it represents, as is shown by the fact that the lines of the architecture converge upon the figure of the ascending saint, and also by the color scheme of the interior: rather dark marble below, gold and white above. Architecture and sculpture are here the two sides of one conception, unmistakable in significance; they are both made to convey to us one single, clear, and definite experience.

**Pietro da Cortona: SS. Luca e Martina.** Cortona sets out to solve the problem of the central type of building by completely other means than did Rainaldi and Bernini. SS. Luca e Martina (Figs. 35, 37) is designed on the form of a Greek cross

---

59. The rest of the plastic decoration, adorning the base of the dome, depicts the world of St. Andrew, the fisherman: we see representations of fishermen with oars and nets, of fish, shells, and water plants.

60. For Bernini’s psychological conception of architecture see above p. 253, etc.
with a slight accentuation of the long axis. Entrance and choir have at each side, between the crossing arches and the termination of the apse, a wide bay containing a door and surmounted by a balcony, while on the transverse axis, at the corresponding place, are only small niches for statues. But this unimportant accentuation of the line of orientation is nearly completely neutralized by those other features which give to the building its specific character. Here again it is on the surrounding wall that interest is concentrated, but the means employed are very different from those of Bernini. Even in the ground plan one is struck by the complication and breaking-up of the wall surface, in contrast to the clarity and strength of Bernini. This animation of the plastic wall structure is based on a systematic pattern, the principle of which at least can here be described. The boundaries of the interior are conceived on three planes lying one behind the other, which are visible at alternate and corresponding points. The inner boundary can be seen at the termination of the four apses, the outer lies behind the columns of the compartments in the circle of the apse, the intermediate is represented by the bays between the crossing and the apses. To the eye accustomed to the Renaissance buildings this three-plane boundary may appear violently agitated and indiscriminately broken up, but it represents in reality a regular rhythm of undulating movement. If this is realized one can easily recognize the different planes and the corresponding articulations as a unity.

The animation of a boundary wall conceived on different planes is probably the basic principle of Cortona's architecture. This principle of plane differentiation implies again a dynamic, centrifugal movement and it is therefore another means of solving the old problem of orientation in the central structure.

\[\text{Borromini: S. Ivo della Sapienza.}\]

If one wishes to become acquainted with Borromini's final conception of the central building one must turn to the church of S. Ivo (Figs. 38, 39), the construction of which was begun about ten years after that of S. Carlo alle Quattro Fontane. Those tendencies which in S. Carlo were only partly developed may be seen here in their full significance. The plan of the building from the geometrical point of view is always and correctly described as an intersection of two equal-sided triangles. The points of one triangle are made concave, while the points of the other are "cut off" by convex walls. Concave and convex boundaries therefore alternate. On entering the church it is not possible to perceive the geometric pattern of the ground plan; as one's eye follows along the walls one has instead the impression of a star-shaped unity. This primary impression is due to, and indeed only made possible by, the design of the elevation and the articulation of the walls. In order to demonstrate the unity and indivisibility of the wall articulation the moldings, color scheme, and general decoration are identical throughout, the
pilasters are made to articulate the wall surface in a simple rhythmical sequence along which the eye moves smoothly, and finally the clear-cut crowning cornice runs round the whole interior in one unbroken and quite definite line.

As to the dome it is obvious that, although it is clearly differentiated from the body of the building by the wide unbroken entablature and the color scheme of the structure below, it is nevertheless included in the vertical movement of the walls, in so far as the lines of the pilasters articulating the wall surface are prolonged in the dome. But the infillings of the dome, which at the base are alternately convex and concave, corresponding to the lower structure, as they ascend lose progressively their spherically contrasted form and finally unite under the lantern in a homogeneous circle of twelve stars. In this reduction of multiplicity to unity, of differentiation and complication to the pure form of the circle, consists the fascinating richness of the interior. If one traces the movement in the opposite direction, one can follow the lines downwards from the simplicity of the apex in the heavenly zone to the increasing complexity in the earthly zone.

In this church one is then, as it were, compelled by the dynamic power of the walls constraining the interior space, to see this star-shaped space as a unit where the whole emphasis is directed centrifugally upon the walls. This impression cannot in any way be disturbed by the accentuated wall altar because in such a building, where wall contours of a different shape are brought into antithesis, there can be no question of a definite axial direction.\footnote{It could easily be shown that in the case of S. Carlo alle Quattro Fontane the rhythmical succession of columns was meant to express and emphasize the lines of the indivisible and dynamic structure. There are still, however, here traces of the manierist dual function conception, which were in his later buildings eliminated. Nor is there any relation between the dynamic lines of the lower structure and the pure oval form of the dome, in accordance with the idea of horizontal articulation which was typical of the first half of the century.}

The Significance of Rainaldi's Central Type of Building

The central buildings of Bernini, Cortona, and Borromini which have just been mentioned are all highly individual solutions of the problem, widely apart in conception and attained by completely different means. Yet the three architects had the same object in view—the complete reconciliation of liturgical purpose with spatial structure. They all three pursue the only line by which this can be attained, namely, by creating a wall surface of such an active and compelling nature that we can feel it as a living entity. In all three cases the architecture presents the clearest indication of how it should be regarded and one is, at it were, compelled to follow these spatial indications in a temporal sequence. Here then we have a solution of the original problem: the spectator is aware of the unity of the central form and yet at the same time his eyes are led to the predominant altar. Bernini attains this end by the dynamic articulation of the whole structure, Cortona by the effect of a wall broken up by the active intrusion of space, Borromini by the enclosure of the interior space in a convoluted wall boundary.
In Rainaldi too, the solution is a centrifugal one. But, as we have seen, it is confused by the simultaneous accentuation of the two axial lines. This inconsistency, and wavering between two possibilities, is very different from the conceptions of the great masters of Roman Full Baroque. Rainaldi is the only one who by applying his ambiguous principles to the construction of the central building carried over into Full Baroque ideas inherited from the late sixteenth century. At the same time, the examination we have made of these other three buildings enables one to realize how conventional in comparison are the elements of Rainaldi’s composition.

But although Rainaldi may in this connection be regarded as an inheritor of the Roman manneristic tradition, further analysis will show how strongly his work was also influenced by the North Italian school of architecture. In his most important building, S. Maria in Campitelli, he attacks the problem of orientation in the nave type of church, a problem which arose not on Roman but on North Italian soil.

S. MARIA IN CAMPITELLI: HISTORY OF THE BUILDING

Although a work on S. Maria in Campitelli has lately been published, one must here attempt, in the light of new material and new arguments to establish the different stages by which Rainaldi’s most important building and one of the most significant examples of Roman Baroque architecture took shape.

The original building. In 1619 Paul V caused a church to be erected on the site of the present building; and it was altered during 1642 and the following years with a view to making it larger and more ornate. The consecration by Cardinal Marcantonio Franciotti took place on May 3, 1648. According to Marracci’s description, this church consisted of a nave with two chapels on each side and a transept in front of the choir which was still the original building of 1619. Two sheets in the codex Chigianus P VII io have preserved the plan and elevation of this church which correspond exactly with Marracci’s description. Especially the conjunction of the older choir of 1619 with the wider, higher and much more ornate nave of 1642/3 is clearly to be seen.

The proposed enlargement of the original building. As a protection against the plague which had been raging in Rome since 1656, the Roman senate decided to erect a new church in honor of the miracle-working picture of the Madonna which was then in S. Maria in Portico. On November 29, 1656, the papal consent was

---


66. L. Marracci, *Memorie di S. Maria in Portico di Roma*, 2nd. ed., 1675, pp. 117 ff. Paul V caused two medals of the church to be struck in 1619, one with his own portrait and one with a portrait of Cardinal Garzia Mellini, who laid the foundation stone. Marracci (*op. cit.*, pp. 121 ff.) speaks as follows of the structure of 1642: “[La Chiesa] fu ridotta in forma pitt ampia e vaga e tutta coperta di soffita dorata con quattro altari dentro cappelle adorate di marmi e di stucchi nel corpo della chiesa e due nei bracci della medesima, restando l’Altare maggiore con la tribuna à volta come era prima.” — Ferraironi, *op. cit.*, p. io, wrongly described this building as consisting of three naves, an opinion which is disproved by Marracci’s text and by the plans of the building which are here reproduced.

67. Drawing of the ground plan: f. 104 (555 x 382 mm.). The inscription: “Pianta della Chiesa di Sta. Maria in Campitelli!” does not appear in the illustration. Drawing of the longitudinal section: f. 107/8. For the arrangement of flaps on this sheet see further below, pp. 283, 284, and note 70.
Fig. 41 — Ground Plan of S. Maria in Campitelli with Choir of 1619 and Nave of 1642-8

Fig. 42 — C. Rainaldi's Enlargement Project for S. Maria in Campitelli, 1658

Fig. 43 — Elevation of S. Maria in Campitelli before Rainaldi: Nave of 1642-8; Choir of 1619 on Flap placed over Rainaldi's Enlargement Project

Fig. 44 — C. Rainaldi's Project for Enlargement of Choir of S. Maria in Campitelli, with Nave of 1642-8
Fig. 45—Foundation Medal of S. Maria in Campitelli (C. Rainaldi’s Project), Sept. 29, 1662

Fig. 46—Second Medal of S. Maria in Campitelli (C. Rainaldi’s Project), 1662-3

Fig. 47—Choir Enlargement Project for S. Maria in Campitelli, 1658
Project by Gregorio Tomassini for S. Salvatore. Elevation and Section
Fig. 50

Fig. 51

Drawings by Carlo Rainaldi for Façade and Section of S. Maria in Campitelli
obtained, but on January 21, 1657, the pope made a personal visit to S. Maria in Portico and declared that such a site, in the dirty and crowded district of Rione Ripa, was unsuitable for the new building.

In the course of the year 1657 it was decided to erect the new church for the holy picture on the site of S. Maria in Campitelli on Piazza Campizucchi, and on March 13, 1658, the conservators and priors laid before Alexander VII plans for a building on this site. These plans probably included a scheme for the enlargement of the already existing building, which is illustrated by the plans contained in the codex Chigianus (Figs. 40, 42, 44, 47). By this scheme the "modern" nave of 1642/8 was to be preserved, but the small old-fashioned choir of 1619 was to be replaced.

A flap which is pasted onto the ground plan so as to hide the old rectangular choir (cf. Fig. 41) depicts an imposing domed interior, with isolated columns supporting the crossing, apsidal termination on each side, and an extended rectangular altar space. In the section of the proposed alterations on sheet 107v/8r (Fig. 44) a feature has been introduced which is not yet to be seen in the ground plan. The third great bay forming the transept is here covered by a flap on which the whole width of the transept is shown as divided into two parts, one of which consists of a chapel corresponding in size to the other two chapels, and the other of a small compartment (with an entrance door) which fills the remaining width. By this elimination of the transept and the introduction of a dome, the plan becomes similar to that type whose classical example is the Gesù in Rome.

In other respects the design of the section agrees with that of the plan as shown on f. 104v (Fig. 40). The proposed domed sanctuary is not only very distinctly separated from the nave by the triumphal arch which the isolated and projecting columns support, but is also markedly different in style. The new design entailed quite new proportions. Mighty columns of over 20 palmi high (as is stated in the inscriptions on the plan) give a monumental character to the domed interior; the serried, sculptural group of isolated columns, the ornateness of the high crowning cornice, the richly articulated moldings of the arches of the crossing—all these features contrast strongly with the flat pilaster strips of the walls of the nave and the studied simplicity of the crowning entablature.

The proportions of the domed sanctuary itself are very unusual. The arches of the crossing are extremely elongated and have especially wide moldings so that the zone of the arches is exceptionally high; the tambour, on the other hand, is so compressed that it is reduced to a small rudimentary strip, in which are four small oblong windows, placed on the two main axes of the building.

A number of small flaps attached to the elevation over the side apse and the choir depict an alternative treatment of various details. At the altar of the side apse the undermost flap represents the sculpture of a cardinal turning in an attitude of prayer towards the high altar, over that is pasted a small flap with four noblemen in the same praying attitude (Fig. 42), and finally above there is a larger flap which depicts

the altar without any kind of sculptural decoration, and thus left empty to take a picture. On the side wall near the high altar are three superimposed designs, the lowest representing the group of four praying noblemen, the next the same figure of the cardinal, and the topmost design consisting only of a simple door.

From another sheet in the same volume of the Chigiana (f. 109r) (Fig. 47) the intentions of the artist become quite evident. Here in the transverse section of the domed sanctuary we have the same groups of figures in the side apses which we saw depicted on the flaps: on one side the cardinal, and on the other side the group of four figures turned in prayer towards the picture of the Madonna, which is born aloft by angels and adored by two other praying figures. Beneath the design for the group of figures on the high altar is a second design which shows the altar unadorned by any figures.

The artist has thereby proposed three alternative solutions: (1) to place figures on the side apses and on the high altar, (2) to place the same figures against the walls left and right of the high altar, (3) to leave the architecture bare of sculptural decoration. The praying figures of the side apses are intimately related to the high altar so that there is a spiritual connection across the intervening space, the same space in which living figures also gather. This fusion of art and reality, this transcending of the boundaries of art—which was foreshadowed already in the late Cinquecento and which, as a typical feature of Italian Full Baroque, was first given “classical” expression in Bernini’s Cappella Cornaro in S. Maria della Vittoria—is here extended so as to include the whole of the sanctuary.

Who is then the author of this plan? On two of the sheets that we have mentioned can be seen the signature of the architect Gregorio Tomassini. We know practically nothing about this artist. An example of his style can be seen in the so far unpublished plan in the same codex of the Chigiana, P VII 10 (Figs. 48, 49). It represents a design by Tomassini for S. Salvatore at the end of the Via Giulia, whereby a spacious central building was to replace an older church. This design is decidedly more conventional than the plan for the enlargement of S. Maria in Campitelli, and in the individual features of the building the prototypes can easily be seen. The façade is composed under the influence of Rainaldi’s S. Maria in Campitelli and S. Andrea della Valle, while the dome is inspired by the church of S. Agnese in Piazza Navona. Even in his draughtsmanship and conception of detail Tomassini follows Rainaldi very closely.

This proof of the mediocrity of Tomassini’s talent entitles us to attribute those remarkable features in the plan for S. Maria in Campitelli to a more distinguished
mind, namely to Carlo Rainaldi. Tomassini must have been working during these years in Rainaldi's studio, and some details of the plan suggest that in minor matters he was allowed a free hand. His position there must have been that of a fairly independent pupil, similar to that of the more noteworthy Carlo Fontana. The design for S. Salvatore in Via Giulia although it was still made during the pontificate of Alexander VII, must be therefore regarded as an independent work of Tomassini after he had left Rainaldi's studio.

To return to S. Maria in Campitelli, the fact that the existing domed sanctuary of today (Figs. 72, 74) was constructed substantially in accordance with the plan of enlargement, points most clearly to Rainaldi's authorship of the plan. The complete identification—through the particular disposition of the sculpture—of the aesthetic function of space with the practical purpose of the interior (i.e. identification of "Gebet- und Kunstraum") is also characteristic of Rainaldi. The life-size praying figures, kneeling and looking towards the altar across wide-intervening space—an adoption of Bernini's ideas—are used here in the same way as later in his church of Gesù e Maria.

The plan with the large dome. Apparently the pope was not satisfied with the plan for enlargement. But it was not till the beginning of 1660 that the decision was reached to erect a completely new building and a large sum of money was allocated to that purpose. On March 9, 1662, a commencement was made in pulling down the neighboring houses and in laying the foundations of the new church, but it was not till six months later, September 29, 1662, that the solemn laying of the foundation stone took place. On this occasion the pope himself buried medals in the foundations on which was depicted Rainaldi's proposed design (Fig. 45). What then exactly was this design, in accordance with which they had most probably been working since March, 1662?

The reverse of this medal has nothing in common with the present building. Behind a one-story concave façade, articulated by colossal orders, rises a commanding dome. The similarity of this design and that of the design in the State Archives for the churches on the Piazza del Popolo, of November, 1661 (Fig. 11), is so obvious that it need not be elaborated. But one must notice that in S. Maria in Campitelli the design becomes more complex by the introduction of a new and important feature; following Pietro da Cortona's front of SS. Luca e Martina, the concave middle part of the façade is here enframed between two extremely projecting pylons.

Though the connection with the design in the State Archives is clear it does not throw any light on the form of the ground plan of the medal design for S. Maria in Campitelli. An exact reconstruction of the ground plan is impossible and even the general features of the design can only be inferred. But if we assume that we have

75. Marracci, op. cit., p. 117.
76. Bonanni, Numismata Pontificum, Rome, 1706, II, p. 692. The erroneous date 1660, given by Marracci (pp. 119/20) was first disproved by Incisa della Rocchetta in the Messaggero of February 18, 1938. Nevertheless we find it again in the inadequate article by Mandl in Thiem-Becker, XXVII, p. 578.
in the medal a reliable representation also of the lesser details—and the particular quality of the medal entitles us to do so—we may reconstruct a dome with sixteen ribs and infillings of varying breadth. This means that the dome was to have been erected over an oval ground plan. From the great circumference of the dome we must conclude that the intended oval interior was to be wider than the present nave.

After the laying of the foundation stone, Alexander VII gave orders that the construction of the apse and of the façade should be begun, so that the imposing dimensions of the building should be once for all established. From the commencement of the work onwards therefore the longitudinal measurement of the church was that of the present building. As this measurement exceeds by far even that of the proposed great oval dome, we must infer that the domed sanctuary, such as we found it on the plan for the enlargement and as it actually exists, was also projected at this phase. We can therefore reconstruct the design as a sequence of two domed interiors, one of superior and dominating dimensions and one decidedly smaller which would form the actual shrine of the holy picture.

I am glad to find this reconstruction confirmed through two original drawings by Rainaldi from the Archivio di S. Maria in Campitelli, which were kindly sent to me by Dr. Kurt Cassirer when this article had already gone to press. The façade (Fig. 50) is here still curved, but has already two stories. The section (Fig. 51) shows a sequence of a very large oblong central room with a dome, and a small circular one; but the dome of the main room, without a tambour, formed by alternating large and small lunettes, is very low. This plan shows a reduction in the size of the dome as compared with the design on the medal. It proves that a cutting-down of the ambitious medal design was discussed—still without the intention of giving up the dome completely. The second story of the façade now became a necessity, because this low type of dome has to be hidden. It is not without interest to note that in this façade the important influence of Pietro da Cortona was still more emphasized. It is a combination of the curved façade of SS. Martina e Luca with the loggias in two stories, supported by double columns, of S. Maria in Via.

The plan of the execution. A few months after the foundation medal had been buried, a new medal was struck which represented a fundamental change of design.

78. The windows in the tambour have alternately circular and rectangular lintels, as can be clearly seen on the original medal. In depicting the infillings of the dome, the outer ones are shown as almost equal in width to those preceding them. If the infillings had been in reality equal in width, they could not present such an appearance because of perspective foreshortening; in other words, the infillings over the rectangular windows of the tambour were planned to be narrower than those over the semicircular windows.


80. C. A. Erra makes a vague and confused reference to this project in Storia dell'immagine e chiesa di S. Maria in Portico di Campitelli, Rome, 1750, pp. 55/6. Churches showing a sequence of two domed buildings, a larger and a smaller one, are rather rare. Examples in Strack, Central und Kuppelkirchen der Renaissance, 1882 (e. g. pl. 4, S. Maria Coronata near Pavia).

81. The drawings preserved in the archive of S. Maria in Campitelli were referred to first by P. Fr. Ferraiironi (op. cit., p. 14). Albrecht Rosenthal, who made researches for me on the spot, found in all seven drawings with the following representations: 1, " disegno dello Spaccato di dentro del Tempio (non eseguito) " (Fig. 51); 2, " disegno della Facciata (non eseguita)," without dome (Fig. 50); 3, " Facciata eseguita; " longitudinal section (illust. by Ferraiironi p. 35); 5, ground plan of the existing building; 6 & 7, " Planta del Piano Nobile e superiore dell'Habitazione."

This content downloaded from 132.66.11.212 on Sat, 10 Jan 2015 14:23:04 PM
All use subject to JSTOR Terms and Conditions
Fig. 52—Project by Carlo Rainaldi for S. Maria in Campitelli

Fig. 53—Engraving by Falda, Showing S. Maria in Campitelli, 1665
Fig. 54—Rome: Facade of S. Maria in Campitelli, by Carlo Rainaldi, 1662-3-1667

Fig. 55—Rome: Apse of S. Maria in Campitelli.
The façade has two stories and the fact that it is no longer curved points to the abandonment of the domed oval interior. The actual construction of the building was carried out in accordance with this plan and the façade as completed agrees largely with the design on this medal (Fig. 54). A corresponding representation of the whole side of the square can be seen in a drawing by Rainaldi himself, preserved in the codex Chigiianus P VII 10 (Fig. 52). On such a drawing the medal design and later the engraving by Falda in 1665 must have been based (Fig. 53).  

This change of plan, which took place very shortly after the laying of the foundation stone, meant that the original project was very much reduced. We do not know why the idea of a vast dome was given up, but it can probably be attributed to a fear of the immense cost. It appears that the new façade on the second medal was projected at the same time as the present ground plan (Fig. 57); one has at least very striking documentary evidence for it in a drawing (Fig. 56) which one may reasonably assume to have been made during the period between the laying of the foundation stone and the issue of the second medal. This drawing shows only the bare outlines of the architectural block, but from these outlines one can see that the final conception of the plan had already been reached.

The main body of the church, thus designed early in 1663, was not constructed till much later. Work was first carried ahead on the façade and on the sanctuary in which the picture of the Madonna was to be enshrined, and between these two blocks of building the old church still continued for a long time to remain intact. Shortly after the death of Alexander VII the work on the façade and sanctuary was completed.  

83. Obverse: "Alexander. VII. Pont. Max. An. VIII." (the small letters "G. M." on the cutting of the arm stand for Gaspare Meolo, the artist). Reverse: "Immaculatae Virginis. Vot.—Romae." According to the inscription therefore the medal was struck in the eighth year of Alexander's pontificate, i.e. between April 7, 1662, and April 6, 1663. So the alteration of plan must have been made during those months between the laying of the foundation stone September 29, 1662, and April 6, 1663.  

84. The drawing in P VII 10, f. 105v/105r is signed in Rainaldi's own handwriting: "Eq.s Carolus Rainaldus Inv." (504×750 mm.). The inscription in the frieze gives the supposed date of completion, not that on which the work was begun. It runs: "S. P. Q. R. Vot. Sol. Alexan. VII. P. M. MDCLXVI." In the original the date 1666 is clearly preserved in the handwriting incontestably shows. Such a drawing of the façade completed "circa la metà del presente anno 1667."
On October 24, 1667, i.e. about five years after the commencement of the building, the wall between the old church and the sanctuary was pulled down, and the picture of the Madonna was transferred to the new apse. Then followed a complete pause. It was not until 1673 that work was taken up again with feverish activity because of the proposed consecration of the whole building in the Holy Year of 1675. This actually took place on December 8, 1675, although the church was still largely lacking in decoration. The subsequent work of completion lasted till 1728.

The Façade of S. Maria in Campitelli

It is with reason that the façade of this church (Figs. 52-54) has time and again been described as reminiscent of classical antiquity in its latter phase and classical ruins. Undoubtedly the inspiration of this work is partly to be found in a very profound feeling for the later Roman architecture. The façade strikes one as an artistic re-creation of the wall in a Roman bath. This impression is due to a conglomerate of columns arranged on different planes and in different groupings.

It is well known that in Rome from the beginning of the seventeenth century onwards the column was an element of ever-increasing importance, till in edifices of the Full Baroque such as Lunghi’s façade of SS. Vincenzo ed Anastasio, Cortona’s S. Maria in Via Lata, Bernini’s colonnade on the square of St. Peter’s, etc., its full plastic value was developed. S. Maria in Campitelli is in this respect only a link in the general line of development. But every artist had his own special way of employing the column in the structural scheme. To anyone who has followed the analysis of S. Andrea della Valle it will be at once evident that the structural frame of S. Maria in Campitelli is identical with that of S. Andrea. Here again an aedicula extending through the two stories is enclosed in a still larger aedicula and onto this closed system the two outer compartments of the lower story are as it were hung.

On the other hand, just as in S. Andrea, the outermost compartments must also be regarded as an integral part of the whole façade, especially as they are organically related by the small orders and window gables to the central compartment. If they

86. Marracci, op. cit., pp. 124 ff. For the later history of the completion of the building see: Marracci, ii. ed., 1675, pp. 140 ff. and Erra, Storia dell’immagine e chiesa di S. Maria in Portico, Rome, 1750, pp. 53 ff. Also Ferrairola, op. cit., p. 17. A chirografo of Innocent XI of September 3, 1679, directs that the fountain which till then had stood before the church (Fig. 53) should be transferred to its present position at the east end of the piazza. For this there is a drawing in the Archivio di Stato, Cartella 81, R. 304.

87. See especially Hempel, Rainaldi, p. 46.

88. The gable motive over the window in the outer division is repeated in the gable of the window of the upper story. The “Capitol motive” of the outer divisions is not repeated in the central division. The two columns of the main entrance are placed here not in recesses but in front of the wall, so that they seem to emphasize the dynamic concentration of the façade towards the center. Yet the eye is bound to relate the outer and central columns, not only because of their equal height, but more especially because of the complete similarity in the details.

The side divisions are derived directly from Michelangelo’s Capitol Palaces and not from the façade of St. Peter’s. In this connection we may recall the fact that Rainaldi had special associations with the Capitol. It was his father Girolamo who was in charge of the rebuilding of the Palace of Senators and who later began the construction of the palace on the left, the Capitoline Museum, which was only completed by Carlo under Alexander VII. Carlo Rainaldi even planned to alter the aspect of the square so as to make it correspond with the taste of the Secento. In a design by his own hand (cod. Chig. P VII 13, f. 5v/6r) the most important feature is the removal of the fountain before the Palace of Senators far out into the square. This idea opens interesting vistas in regard to the problem of a conflict of directions, for thereby a strongly accentuated longitudinal line of orientation would have been introduced into Michelangelo’s very definitely centralized square.
Fig. 56—Plan by Carlo Rainaldi showing Situation of S. Maria in Campitelli

Fig. 57—Ground Plan of S. Maria in Campitelli, by Carlo Rainaldi

Fig. 58—Project by Girolamo Rainaldi for S. Lucia in Bologna, 1623
Fig. 59 — Bologna: S. Lucia, by Girolamo Rainaldi. 1623

Fig. 60 — Rough Sketch of Plan of S. Lucia, by Girolamo Rainaldi (left half)

Fig. 61 — Ascoli-Piceno: Chiesa del Carmine, by Carlo Rainaldi. 1651

Fig. 62 — Ascoli-Piceno: S. Angelo Custode, by Carlo Rainaldi. 1679
are so regarded they are seen to be bounded on one side by a pilaster and on the other by a half-column. Although these two orders lack equivalence in quality, the fact that they are placed on the same level gives them equivalence of function. If, however, these two differing members, column and pilaster, are to be regarded as equal, it runs counter not only to the connection of the half-column with the aedicula, but to the fact that, according to the original design (Fig 52), the pilaster on either side of the church is also regarded as part of the adjoining palace. The façades of these palaces were terminated at the furthermost side by pilasters crowned by the Chigimonti, and these pilasters call most definitely for a corresponding boundary of the palace façades on the side of the church. This dual function of the pilasters—each of them being connected with both palace and church—leads us back again to that principle of ambiguity, the very essence of which is in-determinable, fluctuating movement.

The half-column, in the lower as well as the upper story, corresponds to the complete column forming the boundary of the inner compartment, so that we have here a gradation from pilaster, through half-column to column. But instead of the clarity of a design such as that of S. Susanna where each enclosed compartment is framed on both sides by an identical order, the ambiguity is here accentuated because the principle of the dual function of the orders is added to that of gradation. In this façade we can see not only the early Baroque conception of a graded concentration but simultaneously a fluctuating movement blurring the clear divisions of the architecture, such as is characteristic of mannerism. It is this combination of two principles so totally different which gives to this façade its unique character—its peculiar fascination as well as the repulsion which it sometimes inspires.

Rainaldi’s conception was only possible in a façade composed on the lines of the aediculae. His task was to combine the aedicula structure with the principle of articulated mass concentration as found in early Roman Baroque. In order therefore to appreciate clearly the place of the work in a more general setting we must turn to the genesis of the aedicula façade.

GIROLAMO RAINALDI AND THE AEDICULA FAÇADE

The type of façade with two aediculae enclosed one in the other, is very definitely not Roman, as will be confirmed by anyone acquainted with the development of church façades in Rome. A long and logical process of evolution, representing a
progressive plasticity of wall order and decoration, is brought to a conclusion in S. Susanna.\textsuperscript{96} Subsequently, as could be also seen even in the later works of Maderno himself, a disintegration of that fully developed conception set in. But at no time during this development, any more than in the works of the great masters of the Full Baroque, was the aedicula articulation employed. If in some cases there is an approximation to an aedicula, as in the façade of S. Ignazio, it was an unusual phenomenon on Roman soil, as has indeed been already observed. In S. Ignazio the North Italian derivation has been proved.\textsuperscript{97} It is in North Italy too that one finds first the fully developed aedicula façade.

The basic elements of architecture—wall and order—are altogether differently conceived in the aedicula than in a structure based on the logical grouping of masses. According to the aedicula principle the building is coherent in its vertical dimension and is articulated in a few strong accents, but it allows the artist a much greater freedom than the principle of mass combination which affects and determines every detail of the structure. In the aedicula type of building the orders are the decisive element; apart from this, in the wall and decoration, the artist has free scope. This liberty, as contrasted to the compulsive laws of mass grouping, is as characteristic of North Italian architecture as is the great value given to the column, which there continues to be a vital feature throughout the whole of the Cinquecento.

It is not possible to trace the evolution stage by stage of the aedicula principle, as up to the present the subject has not been studied. Here we can only note that in the first half of the seventeenth century characteristic examples of the fully developed type are to be found in Milan, for instance in Fr. Maria Ricchini’s entrance to the Ospedale Maggiore (after 1625) or in his façade of S. Giuseppe.\textsuperscript{98} Meanwhile this type of structure had also begun to extend southwards. The most important document is for us Girolamo Rainaldi’s design for the façade of S. Lucia in Bologna, the construction of which never advanced beyond the first stages (Figs. 58-60).\textsuperscript{99}

This design represents already an elaboration of the simple aedicula motive which was not actually executed till thirty years later, when S. Maria in Campitelli was constructed by Carlo, his son. In it the arrangement of the orders represents a graduated increase in value from the simple pilaster, through the projecting pilaster and the half-column to the three-quarter-column. Girolamo was a Roman; but as a

The proposed statues were unfortunately never executed. The idea of placing sculpture between columns seems to have come from Luagni’s façade of SS. Vincenzo ed Anastasio, where the statuary was equally never executed. The motive of the recessed columns is finally used by Fuga in the façade of S. Maria della Morte in Rome. This façade is very near to Ammannati’s S. Giovanni Evangelista, and is an interesting example of the revival or survival of tendencies of the Cinquecento in the Settecento.

\textsuperscript{90} It was Wolfflin, \textit{Renaissance und Barock}, 1st ed., 1888, pp. 84 ff., who first drew attention, and in a masterly way, to this development. See also Giovannoni’s classical work: \textit{Chiese della seconda metà del Cinquecento in Roma}, in \textit{L’Arte}, 1912, pp. 179 ff. As we are here concerned with the general line of development only, we need not deal with the variations it presents, which can easily be demonstrated.

\textsuperscript{91} D. Frey in \textit{Wiener Jahrbuch für Kunstgeschichte}, III (1924), p. 29.

\textsuperscript{92} For the history of the construction see Hoffmann in \textit{Wiener Jahrbuch für Kunstgeschichte}, 1934, p. 52. The construction was begun before 1619, but the façade was only completed after 1650. Preliminary stages can be seen in Pellegrino Tibaldi’s altars in Milan Cathedral of about 1585, where the same principle is already fully developed with different fanciful variations.

\textsuperscript{93} This project of 1623 was first published by A. Foratti in \textit{Comune di Bologna}, 1932. Passeri, \textit{Vite...}, ed. Hess, 1934, pp. 216 ff., speaks of the church.
result of his activity during many years in Parma and Piacenza, not only does much of his architectural detail derive from North Italy, but he also took over the North Italian conception of façade composition and united it with the Roman principle of mass grouping. It cannot be denied therefore that Carlo Rainaldi was faithful to the tradition inherited from his father, although he developed still further the typically Roman idea of a severely logical composition, simultaneously with the Full Baroque conception of mighty forms and great plasticity.

The combination in S. Maria in Campitelli of the North Italian aedicula with the Roman conception of mass concentration bore unexpected fruit. The very individual and unique façade conceptions of the great architects of the Full Baroque period could not be adopted as popular prototypes. A more achievable type of façade appeared for the first time in Rainaldi's S. Maria in Campitelli, with the aedicula conception in a Roman guise, where the vertical impulse and rich mass articulation reflect the tendencies of the middle of the century. After the construction of this church, the same type of façade appeared repeatedly in Rome, with individual simplifications of the design, and from there it spread throughout Italy and Europe. In such a building as the church of Johann-Nepomuk by the brothers Asam in Munich (1733-46) we see its final and late Baroque development.

The Interior of S. Maria in Campitelli

The enlargement scheme of the first church (Fig. 40) stands in a clearly defined line of development. From the fifteenth century onwards the old problem of combining a central dome with a nave had been solved in two fundamentally different ways. According to one conception the two different spatial units were fused into an organic entity, in other words they were based on one and the same principle — be it the principle of sequence, or of mass combination, or the dynamic principle — while according to the other conception their divergent character was preserved by making them simply contiguous without any organic interconnection.

The organic principle can be traced from Brunelleschi's S. Spirito up to Scamozzi's plan for the cathedral in Salzburg and from S. Andrea in Mantua to the Gesù and the great number of buildings which derive from it. The second principle, by which the two fundamental structural forms remain isolated, was perhaps developed for the first time by Michelozzi in the Annunziata in Florence, and was often employed later in those cases where a dome had to be added to a previously existing nave. This solution, however, was no mere makeshift; it represents, on the contrary, a definite

94. For instance S. Apollinare, S. Caterina della Ruota, SS. Trinità in Via Condotti. Rainaldi himself employed at a much earlier date a simplified form of the same type in small churches. In the Chiesa del Carmine in Ascoli Piceno, the façade, which was constructed in 1651 after a design by Rainaldi, represents two aediculae on different planes (Fig. 61). In the same town he erected much later, in 1679, the small uncompleted façade of S. Angelo Custode (Fig. 62), the completed form of which would have been necessarily such as Hempel describes it (op. cit. p. 74). Here again he had planned two aediculae, the inner one of columns, the outer one of pilasters; as the façade, however, is very narrow there is no compartment between the two orders.

95. Compare, for instance, S. Caterina in Casale Monferrato (eighteenth century) or the cathedral in Syracuse. The façade of S. Maria ai Scalzi in Venice (Architect Sardi, 1683/9) is a good example of the developed aedicula type with typical North Italian classicist features.
architectural outlook as can be seen in works all of a piece such as S. Maria della Pace in Rome or Antonio da Sangallo’s designs for S. Tolomeo di Nepi. 96

If the organic unification of a complex conformation of space may be justly regarded as an inheritance from the Gothic, one may equally see the classical principle in the separable juxtaposition of individual units of space. 97 This is more or less evident in the ground plan. But if we consider the elevation or, in other words, the optical impression, we are faced with complexities. It is the “Gothic” conception which can be clearly and immediately apprehended on entering the church, and the “classical” conception which is in comparison complicated and full of unexpected surprises. For in this latter type of design we pass up the nave into an open domed space, of the form of which the planning of the nave gives us no indication. It is to this type of design that Rainaldi’s proposed enlargement of S. Maria in Campitelli obviously belongs. It is characteristic of him that he unites two incongruous forms of space and thereby creates a structure rich in optical effects.

The columns. According to the ground plan of the enlargement scheme the function of the columns is a peculiar one. The isolated columns support the crossing arches, yet at the same time four out of these eight columns continue the line of the nave and direct the spectator’s eye towards the choir. This is particularly apparent to anyone looking up the church from the entrance. But this dynamic Baroque conception would be only one part of the whole phenomenon. In proportion as one approaches the region of the dome, not only will the completely new form of space entail a re-orientation but one will also perceive that the four columns placed in the angles of the crossing piers stand in an absolutely different relation to the wall, although their functional significance as supports of the crossing arches is identical. These columns on the transverse axis are placed in rectangular niches, while those on the long axis are detached and stand in front of a level wall surface; they thus not only fulfil a structural function but simultaneously express a longitudinal line of direction.

Here we must turn for a moment to the general question of the disposal of the columns in a domed interior. The idea of the early Renaissance, during the second half of the Quattrocento, was, in accordance with classical prototypes, to support the arches of the crossing on four columns placed in rectangular niches in the piers of the dome: a significant example of this arrangement is to be seen in S. Bernardino in Urbino. 98 The second possible arrangement, placing the columns in front and away from the piers of the crossing, can already be seen in Bramante’s early designs for St. Peter’s. A great many subsequent buildings were erected in accordance with one or the other of these two principles. In Rome itself it was not till the end of the sixteenth and beginning of the seventeenth century that as a result of North Italian influence churches were erected where the crossing was supported by columns, for

96. The drawings in the Uffizi for this church were published as designs for S. Giovanni de’ Fiorentini in Rome by D. Frey, Michelangelo-Studien, 1920, pp. 67ff. The right attribution of these ground plans we owe to Giovannoni, Saggi..., loc. cit., pp. 111ff.
97. L. H. Heydenreich, in Mitteilungen des Kunsthistorischen Instituts in Florenz, 1931, pp. 282 ff., in his article on the Annunziata in Florence, was the first to discuss the two forms of structural grouping.
98. Traditional attribution of the building to Bramante. Ground plan in Giovannoni, Saggi..., 1931, pp. 58/9, fig. 27.
Fig. 63 — Rome: SS. Trinità de’ Pellegrini, by Paolo Maggi. 1614

Fig. 64 — Rome: S. Adriano, by Martino Lunghi the Younger. c. 1656

Fig. 65 — Bologna: S. Pietro
Fig. 66—Monte Compatri: Cathedral. South Transept by Carlo Rainaldi; Nave by G. B. Soria

Fig. 67—Monte Compatri: Cathedral. Bay between old Nave and Carlo Rainaldi's Domed Extension

Fig. 68—Ground Plan of S. Salvatore, Bologna, by Magenta. 1605-23

Fig. 69—Monte Compatri: Cathedral. View from Soria’s Nave into Carlo Rainaldi’s Dome

Fig. 70—Bologna: S. Salvatore (View toward Dome), by Magenta
instance Mascherino's S. Salvatore in Lauro⁹⁹ or Paolo Maggi's SS. Trinità de' Pellegrini (Fig. 63).¹⁰⁰

But besides these simple and unambiguous arrangements of the columns of the crossing, there exists yet another possibility, namely to combine the two principles—the columns in niches and the free-standing columns—in one and the same crossing. One of the earliest examples of this conception is in Genga’s S. Giovanni Battista in Pesaro, and it is significant that the construction of this church was begun in 1543.¹⁰¹ Thereafter a small number of buildings were erected which incorporate the same idea (Fig. 65), and where again columns with the same structural function are related in different ways to the wall. These were followed by still more complicated designs, as is the church of S. Adriano in Rome by Martino Lunghi the Younger,¹⁰² where the crossing arches of the oval dome are supported on the side of the nave by columns and on the side of the apse by pilasters (Fig. 64).

The Cathedral in Monte Compatri. The same problems which were presented by the proposed enlargement of S. Maria in Campitelli, had to be dealt with by Rainaldi in his earliest building, the Cathedral in Monte Compatri (Figs. 66, 67, 69).¹¹¹ Here it was already a question of enlarging a small country church and Rainaldi’s solution was even then on the same lines as the enlargement plan of S. Maria in Campitelli, some decades later. The domed extension is simply attached to the older nave by means of a narrow bay, which by creating a deep shadow between the two buildings only serves to accentuate the complete independence of the two units of space.

In this church the disposition of the isolated columns in the domed interior is very informative. The eight identical columns which support the crossing arches correspond more or less to the design of SS. Trinità de' Pellegrini. But Rainaldi was not satisfied here with the columns merely placed at angles before the crossing piers but has in each case combined every pair of columns with another pair in the form of a cross, in which each of the two columns on the same axis has a different function: the column which stands out in the church and supports the arch corresponds to a column which has no similar structural function and which is half recessed in the wall.¹⁰³

⁹⁹. The building was partly erected under Mascherino after the fire of 1591 up to 1600. Regarding Mascherino see Golzio in Dedalo, X (1929/30), pp. 164-94. The history of S. Salvatore has recently been described by Astolfi in Rassegna Marchigiana, XI (1933), pp. 210 ff. P. Rotondi (in the same volume, pp. 274 ff.) attributes too much importance to the influence of S. Salvatore upon S. Maria in Campitelli.
¹⁰⁰. Titi, Descrizione delle pitture, sculture..., Rome, 1763, p. 103, gives the year 1614 as the date of the completion of the church interior.
¹⁰¹. See Vasari, ed. Milanesi, VI, pp. 320 ff.
¹⁰². The redecoration of the church may have been finished about 1656. See the inscriptions: Forcella, Inscrizioni..., di Roma, II, No. 152/3.
¹¹¹. Of the greatest importance for Carlo Rainaldi was the Cathedral of S. Pietro in Bologna (Fig. 65). A pair of coupled columns—very similar to those in S. Maria in Campitelli—are placed under the arch of the crossing and indicate a longitudinal orientation. On the corresponding place before the apse there is only one column, standing in an angle between two walls. About the history of the construction of S. Pietro see: Cantagalli, in Comune di Bologna, 1934, pp. 48 ff.
¹⁰³. Mandl in Thieme-Becker, XXVII, p. 578, rightly recognized that Rainaldi’s domed portion and choir were added to the older nave of G. B. Soria. The fact that there was an earlier and a later period of construction can be seen with singular clearness even from the exterior of the building (Fig. 66). But I do not think Mandl is right in dating Rainaldi’s portion as late as the sixties. One finds in the outside wall of the transverse (closed from inside) a window in the "Palladio-motive" exactly in the same style as was used by the father, Girolamo Rainaldi, in S. Teresa in Caprarola (completed 1650). This early motive alone, which Rainaldi never used in his later years, proves that Monte Compatri is one of his earliest buildings.
¹⁰⁴. The half columns have equally a counterpart in the corners of the transept so that one has here a ground plan which differs only from that of the church of the Madonna di Biagio in Montepulciano through the existence of the isolated columns.
The rich complexity of this dome interior is not due merely to the large number of columns but also to the conflicting way in which they are disposed. For here equal elements are united in a compact group and are yet made to fulfill divergent functions.

The elements of the present ground plan of S. Maria in Campitelli. It has always been recognized that in the ground plan of the building as finally completed we may see two different structures which have been thrust together (Fig. 57). The anterior and larger structure consists of the oblong main building with three chapels on each side. Both in size and significance the chapels differ completely, the middle chapels being richly adorned with columns and so predominant in size that they give the impression of a transept flanked on each side by a small chapel. This impression is most strongly confirmed by the interior elevation (Figs. 72, 73), for the vaulting of the “transept” is almost as high as the barrel roof of the nave, while the dark flanking chapels are so low that between them and the main cornice there is room for “choretti.”

The smaller structure consists of the domed interior preceded and followed by a bay on each side, out of which open four small chapels, closed by doors. Fundamentally then the ground plans of the two structures represent similar designs, although it must be at once emphasized that the actual visual impression of the building would never lead one to surmise it. Nevertheless the fact remains that Rainaldi built up both forms from the same basic elements and that it is only because of his particular treatment of the wall that this is imperceptible. The common denominator in the ground plans of both parts of S. Maria in Campitelli can be seen in the State Archive project of 1661 for the churches on the Piazza del Popolo (Fig. 11).

The project in the State Archives. The ground plan of this project can be regarded in two ways. On the one hand it can be seen as a Greek cross, of the type of St. Peter’s, but with the important difference that the side chapels do not open onto the transept. It is this very alteration which makes possible the alternative way of considering the plan: as the two small chapels on each side open only onto the long axis one has the impression of a row of three chapels on each side, with a transeptlike dominating central feature. On the top of the centralized conception of a Greek cross is as it were superimposed the idea of a nave crossed by a predominant transverse line and flanked by side chapels.

But it does not follow from this that the design of S. Maria in Campitelli is a direct transposition from the project in the State Archives for the churches on the Piazza del Popolo. There was another and more immediate source of inspiration.

S. Salvatore in Bologna. From the second half of the sixteenth century onwards rectangular churches had been erected in which the nave was accentuated by a central transverse line. Magenta’s S. Salvatore in Bologna is an example of an edifice in which this tendency is definitely evolved (Figs. 68, 70). In this case the derivation
from the classical bath is still obvious. The evolution of the conception can be traced through Michelangelo's S. Maria degli Angeli, Pellegrino Tibaldi's S. Fedele in Milan, down to S. Salvatore.

The main hall of a classical bath (tePidiarium) was used for passage both in the longitudinal and the transverse sense. But because the three bays were always made identical in size the crossing of axial lines is not perceptible in the ground plan. It is apparent only in the elevation of the building, where the high vaulting of the central bays contrasts with the low doorways of the rooms left and right (Fig. 71). Magenta was the first to reinforce these differences in the elevation by corresponding variations in the ground plan.

The similarity between S. Salvatore and S. Maria in Campitelli is not confined to a fundamentally identical conception of the transverse line. In S. Salvatore also a domed interior is attached to the nave. But in this church the structure is based on the organic principle previously mentioned. For the dome is here an integral part of the articulation of the whole building, and does not form a completely new and independent unit, as it does with Rainaldi.107

The significance of the transverse line. The crossing of the nave midway by an accentuated transverse line must be interpreted in the same way as the "cross of directions" in the central type of building. The line of orientation in the nave is broken: on entering the church the eye is immediately drawn to the transverse line and the crossing of the axial lines confronts one with a complicated situation. This checking of the longitudinal line by a transverse line is the most effective means for creating in the structural form as such an impression of unrest. It is yet another manifestation of that conception which we have already defined as the "principle of ambiguity."

It is hardly necessary to point out that this complication of the line of direction is strongly opposed to the "classical" standpoint. But it depends on the scheme of wall decoration if and to what extent the confusion of axial lines inherent in the structural form shall be still further accentuated.108

107. The relation between S. Salvatore and S. Maria in Campitelli was already noticed by A. E. Brinckmann in the latest edition of the Handbuch für Kunstwissenschaft (Baukunst des 17. und 18. Jahrhunderts in den romanischen Ländern).

108. The history of the transverse line across the nave has as far as I know never received proper attention. The question deserves a special and close examination. Only some points can here be noticed. In the one-nave type of church from the end of the sixteenth century onwards the accentuation of the transverse line is not a rare feature. On Roman soil one could instance S. Brigida, S. Egidio in Trastevere, S. Francesco di Paola, etc. Rainaldi himself followed the same principle in the interior of the small church of S. Maria del Sudario (see below). The placing of a larger middle chapel between two smaller ones can be seen for example in an interesting ground plan, of 1593, for S. Maria della Scala in Rome (Uffizi, Dis. Arch. 6735). Girolamo Rainaldi's church of S. Teresa near Caprarola represents a unique solution of the problem. The accentuation of the transverse axial line across the center of the nave is effected by an interior structural arrangement derived from the Palladio motive. It is evident that the design of this church has been influenced by that of Pellegrino Tibaldi's SS. Martiri in Turin (laying of the foundation stone in 1577), where the same motive is twice repeated. Monumental double pilasters stand in the middle of the wall of the nave, thereby dividing the nave into two great quadrangles. The interior of Longhena's Chiesa degli Scalzi in Venice is a very interesting contemporary parallel to S. Maria in Campitelli. I do not believe that the conception of this church was uninfluenced by Rainaldi's work, although the construction of the Chiesa degli Scalzi is generally dated 1646-1689 (Giulio Lorenzetti, Venezia e il suo estuario, 1926, p. 429, dates the beginning in the year 1660. Ground plan in Gurlitt, Geschichte des Barockstils, p. 312).

There is a very close relation between Rainaldi's conception and Juvara's first great design for S. Filippo Neri in Turin. See plan and section in A. E. Brinckmann, Teatrum Novum Pedemontii, 1931, pl. 221.
The system of decoration in S. Maria in Campitelli fulfills two completely different functions: it represents at once a dynamic concentration upon the choir and an accentuation of the conflict inherent in the shape of the building (Figs. 72-74). In contrast to the designs inspired by the hall of the classical bath, such as S. Salvatore in Bologna, there are no columns in Rainaldi’s nave but only plain pilasters; isolated columns are only found in the “transept” and in the back part of the church. If instead of the large middle chapel on each side of the nave we could imagine the walls as evenly articulated, e.g., in a succession of four small chapels, the design of this church would correspond to that of the “enlargement scheme” with the single difference that we would have here a richer columnar decoration of the domed part of the building. Instead of one column to indicate the axial line double columns are now placed on the long axis, so that by this strong emphasis on the line of orientation the eye is forcibly led to the apse. This dynamic concentration, typical of Full Baroque and completely absent in buildings such as S. Salvatore, is counteracted by the facts already mentioned, namely that the foremost part of the building gives us no indication of the form of the domed space behind and leaves us therefore in uncertainty, and also that the relation between the columns of the crossing and the wall is a varying and divergent one.

These complications are still more accentuated by the development of the transverse line. It must be noticed that the two large chapels correspond in breadth exactly to the bay before the dome, so that in each case the barrel vault is of the same height. Furthermore the depth is the same, and the decorative scheme is identical both as a whole and in detail from the isolated columns to the coffered arches adorned with rosettes, and from the doors and the “choretti” to the circular lintels of the windows. Indeed, even the third column, which placed at right angles supports the crossing of the dome, is repeated again in the chapels, where it is made to bear the triangular pediment. On entering the church, however, it is at first practically impossible to realize this repetition of design, for one sees one wall of each of the two large chapels displayed in full, while the bays connected with the dome are very much foreshortened.

The striking ornamentation of the “transept” and its gilded vaulting strengthens the impression of a transverse line across the nave. But the further one penetrates into the interior, the more noticeable becomes the relation between the columns of the chapels and those of the bay and the clearer becomes the identity in design between chapel and bay. This repetition of the same complex of decoration in both parts of the church produces the impression of a single vast entity of which the structural shape as such gave no indications. We become conscious of the fact that in the elevation both parts of the church are dominated by one and the same principle. All the more marked is the counterpoise of the two large chapels on each side to the dynamic concentration of lines upon the choir.

Simultaneously with this realization of the identity of chapel and bay, one becomes aware of another feature, namely that two identical units are placed in completely incongruous positions: the column that in one place supports a crossing arch, is in another made to support a pediment, and so on. In a building on classical lines, the same elements in the interior decoration are always employed in the same sense, and the decoration in consequence produces an unequivocal and restful impression.
Fig. 71—Project by Francesco da Sangallo for Restoration of the Baths of Diocletian. Long Wall of Tepidarium

Fig. 72—Section of S. Maria in Campitelli, by Carlo Rainaldi
**Fig. 73**—*Rome: S. Maria in Campitelli (View toward Choir), by Carlo Rainaldi*

**Fig. 74**—*Rome: S. Maria in Campitelli (View from Choir), by Carlo Rainaldi*

**Fig. 75**—*Rome, S. Maria della Scala: Chapel Altar, by Girolamo Rainaldi. 1606*
Fig. 76—Design by Carlo Rainaldi for Title Page of Cod. Barb. lat. 4411. 1633

Fig. 77—Project by Carlo Rainaldi for Alteration of Façade of St. Peter’s, and for the Towers. 1645

Fig. 78—Project by Girolamo Rainaldi for Alteration of Towers of St. Peter’s. 1645
Fig. 80—Project by Bernini for Façade of St. Peter's, 1645

FIG. 81—Design by Carlo Rainaldi for S. Marcello. 1682
In Rainaldi’s conceptions, on the other hand, the same elements are given divergent functions, producing the impression of a confusing elaboration.

The results to which this examination of the interior leads us confirm the conclusion to which we had already been brought by the analysis of the façade. Here, as there, the design represents an indissoluble combination of Baroque dynamic conceptions with elements of an ambiguous character. As we have in Michelangelo’s Ricetto a static structure which derives its conflicting character from the ambiguity in the treatment of wall, order, and molding, so here, in S. Maria in Campitelli, Carlo Rainaldi evolved a means of uniting a dynamic structure with another, ambiguous, architectural conception.

The Development of Carlo Rainaldi

The analysis of S. Maria in Campitelli serves to prove that the classical tendency which appeared suddenly in the style of Carlo Rainaldi in 1662, which is revealed in the churches of the Piazza del Popolo and in S. Andrea della Valle, and can be traced back to the influence of Carlo Fontana is in reality only a short interlude in Rainaldi’s long artistic career. In order to illustrate briefly the lines along which his work developed we have selected some material which is either completely new or which has only been insufficiently published.

We may first turn to a drawing which is not directly concerned with architecture. At the request of Cardinal Barberini, Carlo Rainaldi in 1633—therefore very early in his career—made drawings of those hospitals and quarantine buildings which had been erected in Rome during the plague scare in 1629-32. This proof of papal solicitude would be of historical and topographical interest only, if the same volume did not contain two independent drawings by Rainaldi. We shall only mention one—the title page (Fig. 76)—which was certainly not made in accordance with some outside suggestion but represents a completely original conception of the artist. The idea, however, which was worked out here by the twenty-two-year-old Rainaldi was none other than that same type of façade, deriving from the triumphal arch, which he elaborated twenty years later in the design for S. Agnese (Fig. 15), thirty years later in the Vatican project for the churches on the Piazza del Popolo (Fig. 4), and finally repeated with new variations in the façade of S. Maria in Campitelli (Fig. 52).

In the architectural drawing of the title page the ambiguity in the design of the compartments is very noticeable; the inner columns, being united in base and capital with the outer columns, must be regarded as enframing the outer compartments, yet at the same time the same columns through their relation with the cornice and pediment are made to enclose the central blank cartouche.

We have already endeavored to show that the impression of ambiguous movement in this style of architecture arises from the dual function of inner orders, and that it is not therefore a question of subjective interpretation on the part of the onlookers,

but of objective indication in the architectural design itself. We have seen elsewhere that this architectural characteristic was first fully developed in Giuliano da Sangallo’s Cappella Gondi in 1506, and it is now evident that Rainaldi carries over into the seventeenth century, and develops further, the tradition of those sixteenth century architects who because of their “ambiguous” structures, so different from the “simple” structures, of both Renaissance and Baroque have been called mannerists.

Even when it was a case of making alterations to an already existing building, Rainaldi pursued the same line. When Innocence X, in 1645, took up actively the problem of the towers of St. Peter’s, Carlo Rainaldi was one of those who came forward with projects for the towers and suggestions for modernizing the façade (Fig. 77). The proposed alterations submitted by the various architects were all made with a view to counteracting the excessive breadth of the existing Maderno façade (Fig. 79). The most important part of Rainaldi’s scheme was to have consisted in the enclosing of the central motive of four columns in an aedicula with segmental pediment. The other alterations which are shown in his design, such as the separation of the lower structure of the towers from the façade, removal of the last outer compartment of the attic on each side and its replacement by scrolls, etc. are designed to the same end, namely, to diminish the impression of breadth and to emphasize the vertical movement. But the alterations suggested by Rainaldi have also another result: because of the projection of the cornice above the columns supporting the segmental pediment, these columns are deprived of the neutral character they possessed when they merely enframed the compartments, and new and ambiguous relations are therefore introduced into the façade.

It is very informative to compare Rainaldi’s solution with that of Bernini (Fig. 80). The latter attained the same end, that of increasing the height of the façade, by placing the outer compartment with the blank windows further back. This real shortening of the façade which results in an effective separation of the façade from the towers, made it possible for him to leave the rest of the façade untouched. By this inspired solution, Bernini removed just that part of Maderno’s façade which spoiled the consistency of the graded wall units. The composition of Bernini’s façade, which now consisted of only the group of eight mighty columns, is of elementary clarity. The problem,
therefore, of accentuating the vertical impression of the façade, is solved by the two artists in ways which represent two completely divergent architectural presuppositions. During his later years Rainaldi was concerned with two extensive schemes which throw great light upon the final stages of his development. He put forward designs for the façade of S. Carlo al Corso and that of S. Marcello. The design for the former, which was made towards the end of the sixties, is very closely connected with a design by Martino Lunghi, who up till his departure from Rome had charge of the construction (Fig. 82). Lunghi intended to erect a façade flanked by two towers and deeply recessed and very richly adorned with columns. In so far as the columns were to have been disposed on three planes the design would have been approximately that of SS. Vincenzo ed Anastasio by the same master. The towers with their columns were to be clearly differentiated from the façade itself. Rainaldi proposed an alteration which would have destroyed the clarity of Lunghi’s simple and unequivocal design. In Rainaldi’s design the trio of columns cannot simply be regarded as a three-plane projection of the same motive. Through slight variations in the original design the columns are involved in an intricate net of relationship. The two foremost columns in each trio combine with the two columns on each side of the main entrance to form an entrance hall with six columns. The projecting effect therefore of the trio of columns is counteracted by the divergent line of the ring of columns round the entrance hall. But this is not all. The two back columns in each trio correspond symmetrically with the columns in the tower so that these four columns together have to be regarded as the enclosure of the side porch. Yet in spite of this connection towards the middle, the tower columns are also part of a consecutive row and belong integrally to the articulation of the side towers.

Through these features the principle of ambiguous movement becomes effective in the third dimension. It is interwoven with another principle, that of plane differentiation, which appears in the façade if it be taken as a whole. If seen thus, the façade can be easily divided into three zones, lying one behind the other, consisting respectively of six, and again six, and finally two columns; these columns, though heterogeneous in function are placed on the same level and consequently

115. Vienna, Albertina.
116. The history of the construction first in Nogara, SS. Ambrogio e Carlo al Corso (Chiese di Roma illustrate, No. 3). See also Passeri, ed. Hess, 1934, p. 226. Martino Lunghi was in charge of the building till about 1656/60 (died in Viggid December 15, 1660). But the engraving showing Lunghi’s plan for the church was published before 1640, which can be proved by the fact that Francesco Biglia, to whom the engraving is dedicated, was “primicerio dell’Arciconfraternità” until 1640. All later architects in charge of that building worked on the basis of Lunghi’s engraving. On the sheet which is preserved in cod. Chig. P VII 10, f. 21 (Fig. 82) Alexander VII in March, 1665, orders that the obstructing buildings at the back be pulled down and the street shortened, so as to make room for the back part of the church. Between 1660 and 1665 Carlo Fontana superintended the construction. In 1672 the whole building was finished except the façade. Possibly Rainaldi’s design might be dated as late as this year. The façade was only erected in 1682-4 after plans of Cardinal Omodei by Menicucci.
117. In Lunghi’s project every column stands on a plane which is clearly differentiated from the plane of the next column. In the façade of SS. Vincenzo ed Anastasio the planes of the trio of columns are not separable, one plane, so to speak, overlaps the other; through this the three columns form one entity of great plastic value. A hitherto unmentioned design by Lunghi which is preserved in the Roman Archivio di Stato (cart. 85, R. 493; 807 x 382 mm.—two examples differing very slightly one from another—Fig. 84) is an earlier plan for S. Carlo than the engraved one. The design of the façade in this drawing derived from northern Italy in so far that it shows a very distinct separation of planes. From here Lunghi’s development is clearly traceable past the engraved design up to the Roman features of SS. Vincenzo ed Anastasio.
have to be regarded as equivalent in value. It is obvious that the composition of this façade which surpasses that of S. Maria in Campitelli both in the richness and the depth of the columnar grouping, results in a still more extreme complexity and an intensification of the ambiguous character.

Rainaldi’s particular conceptions which are revealed in the sketch for the façade of S. Carlo al Corso, are still more strikingly developed in the design for the elevation of S. Marcello (Fig. 81). The project must date from about 1682 and was probably made in concurrence with Carlo Fontana, who with his design on classical late Baroque lines easily won the day. The first point which must be noticed here is that Rainaldi in this sketch again starts with the idea of two aediculæ. But the breaking-up of the planes of the façade is carried much further than in S. Maria in Campitelli. The cylindrical inner aedicula is enclosed in the hollow of an outer aedicula. Not only this, but still closer analysis shows that here, just as in S. Carlo, every order has a dual function: for the columns as well as being essential parts of the particular structural system just described, must also be regarded as a rhythmical articulation, along one plane. It is only if we so regard the design that the columns supporting the two small accessory domes (which are logical spatial substitutes of the outer attached compartments of S. Andrea della Valle and S. Maria in Campitelli) can be said to be rhythmically related to the outer columns of the aediculæ. These on their side are connected with the two central columns of the building by the character of the cornice in both stories; for the cornice instead of following the contour of the wall is brought forward so as to unite the inner and outer aediculæ on a projecting plane. The back columns of the inner aedicula together with the front columns form the oval-cylindrical alcove, but at the same time they form the boundary on the inner side of the wall compartments, which are framed on the outer side not by columns but by pilasters. Thus, throughout the whole design an effect of ambiguity is created by the linking up along one plane of orders belonging in reality to quite separate and distinct groupings.

The design for S. Marcello is the most important example of Rainaldi’s later style. At the end, however, of his career in the service of the Church he was responsible for yet another building, but of such modest proportions that it gave him very little scope for the development of his ideas; namely the little church of S. Maria del Sudario (Figs. 85, 86), for which there exists a design in Rainaldi’s own hand. Here again he carries out his familiar principle of ambiguity by so designing the façade of the church that it would seem to include the first section of the buildings on either side: this is effected by the outer pilasters surmounted by a broken entablature and by the attic extending beyond the pediment. The actually

118. For the façade of S. Marcello see Couden-hove-Erthal, op. cit., pp. 53 ff. In this connection I wish to draw attention to the fact that Carlo Fontana in his scheme followed Lunghi’s first project for S. Carlo al Corso (Fig. 84) very closely. Sedlmayr in Kritische Berichte, 1931-2, pp. 146 ff., tries to prove that Fontana derived his project from Lunghi’s façade of SS. Vincenzo ed Anastasio. This is obviously wrong.

119. In cod. Chig. P VII 9, f. 94. It is probable that this drawing dates from about 1658, which was approximately when Rainaldi got the order for rebuilding the old church. But Rainaldi’s plans were carried out only in the second half of the eighties. The church was finished in 1687. See Hempel, Rai-

naldi, p. 71.
Fig. 82—Ground Plan of S. Carlo al Corso, by Martino Lunghi the Younger
existing two-story façade has been based on Rainaldi's design but differs from it in essential points.

A review of Rainaldi's development during half a century entitles one to say that throughout his whole lifetime he adhered to the principle of intersecting Baroque structure with ambiguous elements. Although his later designs for S. Carlo al Corso and S. Marcello reveal contemporary Roman taste by accentuating the orders plastically, by elaborating the depth through the position of the walls as well as by stressing the vertical lines, the designs are mere exaggerations of this principle and in no way comparable in quality with his masterpiece, S. Maria in Campitelli.

(Translated by Christina Bevan)