THE FORMAL KINSHIP OF ARCHITECTURE AND URBANISM: DESIGN IN THE ITALIAN RENAISSANCE, MANNERISM, AND BAROQUE

by

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ABSTRACT

The Formal Kinship of Architecture and Urbanism:
Design in the Italian Renaissance, Mannerism, and Baroque.

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This thesis investigates and defines the nature of the esthetic associated with historical styles in general, and examines in some detail the operation of an esthetic upon the works of architecture and urbanism in each of the three periods which are its area of concern.

Some historical background for each period is presented, the esthetic arising from those events is described, and specific architectural and urbanistic projects are examined which seem to be representation of the periods. The works of architecture and urbanism will be seen to react in similar ways to changes in the Italian society.
TABLE OF CONTENTS

INTRODUCTION

RENAISSANCE

I. Introduction ................................................. B2
   Events of the Times ....................................... B2
   The Renaissance Esthetic ................................. B6

II. The Renaissance Esthetic in Architecture .............. B12
   Church Design ............................................. B12
   Palace Design ............................................. B18
   Function vs. Ideal Form in Renaissance Urbanism .... B20

III. The Renaissance Esthetic in Urbanism ................. B24
   The Ideal City ............................................ B24
   Existing Italian Cities ................................. B26
   Esthetic–will and Functional Need in Renaissance Urbanism .. B30

MANNERISM

I. Introduction ................................................. C2
   Events of the Times ....................................... C2
   The Mannerist Esthetic ................................... C6

II. The Mannerist Esthetic in Architecture ............... C10
   Andrea Palladio ........................................... C10
   Michelangelo .............................................. C16
   Projects by other Italian Mannerists ................. C20

III. Mannerist Urbanism ....................................... C28

BAROQUE

I. Introduction ................................................. D2
   Events of the Times ....................................... D2
   The Baroque Esthetic ...................................... D6
   The Relationship of Baroque Architecture and Urbanism .................................................................. D6

II. The Baroque Esthetic in Architecture ................. D12

III. The Baroque Esthetic in Urbanism ...................... D20
1 Vitruvius De architettura libri X Vol. I

The Formal Kinship of Architecture and Urbanism:
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Architecture and urbanism react in similar ways to changes in the structure of human societies. There is a formal link then between the two that can be traced to a pervasive esthetic which is associated with each historical style in the arts.

It is necessary to qualify the terms "architecture" and "urbanism". I will not for the purposes of this thesis attempt to give a personal qualitative definition of these terms. My personal definition, based upon a mid-twentieth century milieu, would be irrelevant to this thesis. As we look at specific projects from fifteenth, sixteenth and seventeenth century Italy, the realm of architecture will be considered to include simply the production of artifacts (buildings) each of which relates only to itself. When buildings begin to relate beyond themselves to each other in groups and to the larger scale framework of the city, then we will have entered the realm of urbanism.

To find a qualitative definition of architecture, we must look back to the source of what will be seen as an esthetic standard, the evolution of which occurs in the trilogy of styles with which we are concerned. That standard is based upon the Roman author Vitruvius. Vitruvius' De architectura libri X was written during the reign of Augustus and was the only Roman literary work on architecture to survive into the Renaissance. He defines architecture thusly:

"Architecture consists of Order...and of Arrangement...and of Proportion and Symmetry and Decor and Distribution."¹

With reference to the planning of temples:

"The planning of temples depends upon symmetry: architects must diligently understand the method of this. It arises from proportion...Proportion consists of taking a fixed module, in each case, both for the parts of the building and for the whole...It (the temple) must have an exact proportion worked out after the fashion of the members of a well shaped body..."²

The writings of Vitruvius plus the remaining Roman architectural works became the basis for an esthetic standard which was accepted by all Renaissance architects and, as we shall see, urbanists also.
3. L. Bruce Archer, "Aesthetics and Logic" Design Magazine, seven articles 1963-64

What is an esthetic? Speaking in general terms, it is a way of doing things which is calculated to affect the senses and/or stimulate the intellect. With regard to architecture and urbanism it is the system of preconceived values which the designer uses in form making, operating always toward the ultimate goal of sensual or intellectual stimulation. L. Bruce Archer makes the distinction between two broad divisions of esthetics: 1) descriptive esthetics, which deals with the evaluation of things to determine whether or not they meet certain accepted standards of excellence, and 2) ethical esthetics, which deals with the setting of standards, the determining of what the right and wrong way of doing things shall be. It is this second category, ethical esthetics, with which we are primarily concerned in this thesis. How does the ethical esthetic react to change in human societies?

Today we reject the concept of the Platonic ideal, the perfect truth which exists independently of mankind, and recognize that esthetics is an evolving thing—that standards of value can and do shift with time. Esthetic values, moreover, change with historical style. At certain periods in our history men have felt that they had grasped hold of fundamental esthetic truths which would remain absolute, immutable, and valid for all times. When this has happened, however, disillusionment lay not far ahead. With the disintegration of the political, social, and religious points of view which underlay the esthetic, there has come the death of historical styles, and men have begun each time to seek a new order whose validity would hold in light of new developments. As Pevsner says, "A style in art belongs to the world of the mind." As the state of mind which characterizes a society changes, so must esthetic standards change to be relevant to that society.

Thus the mannerism of sixteenth century Italy may be seen as a questioning of the old Vitruvian standard, the credibility of which had been shaken by political, social, scientific and religious events of the late fifteenth and early sixteenth centuries. And just as Mannerism was the reaction to the old standard, Baroque was the formulation of a new one. To the Mannerist, an excellent building was one which stimulated the intellect through its unacceptability by the existing standard. The Baroque designer sought excellence by using many of the same
formal devices as the Mannerist, but his criterion for success had now become acceptability to the tenants of a standard which was new.

The individual designer's system of preconceived values which he uses in form making comprises his personal esthetic. The esthetic is a pervasive belief which will influence the act of giving form, whether it be in a building, a civic space or a whole city. When key similar characteristics can be discerned in the personal works of many men, and these characteristics seem to be tied to the political, social and economic events of a certain time period, we then will say that their work constitutes a historical style.

In approaching the concept of style, we should beware of an overreliance upon a strict chronology or an over emphasis upon the hidden mysteries of who influenced whom in this or that work, as is standard procedure for art historians. As designers and not historians, we can analyze specific projects primarily upon the basis of form, form being the physical manifestation of an idea. It is the idea behind the work which is important to us, and this can best be seen through a study of the form. Thus we should not be concerned if some of the work of a period is inconsistent with the tenants of the style name which is associated with that century. We can thus accept a Renaissance or Baroque plan as such regardless of whether it was produced in the fifteenth, sixteenth, seventeenth, or eighteenth centuries. The anachronisms and inconsistencies which chronologists tend to push aside can now be dealt with through a designer's approach to style.

I have chosen the three historical styles of Renaissance, Mannerism and Baroque because they represent a certain completeness: the whole cycle of change in an almost classic continuum. First, the Renaissance represents the sudden and confident birth of new ideas with an attendant naivete. Its theorists felt that they had found answers, absolute truths of universal validity of the type discussed earlier. Mannerism was the period of inevitable disillusionment, of iconoclasm and experimentation which followed the disintegration of the beliefs underlying the old order. Finally, the Baroque was the new order arrived, a new esthetic standard which seemed responsive to the changed state of society. In these three periods we can observe the changes in esthetic which follow the political, social, religious, and economic development of the whole society, and test the thesis that architecture and urbanism should react in similar ways to the change. No other period in
Western history is such a clear cut and well-documented example of this complete cycle of change. I have chosen Italy because it was the cultural center of Europe, and it was there that the change of style was initiated in all three cases.

As we begin to examine specific architectural and urbanistic examples in succeeding chapters, we will see an evolution from the essentially static Vitruvian standard to a new one based upon movement. This can be shown in capsular form by an examination of two significant formal trends which we will see developing:

1) A movement from the circle to the oval. The Mannerists took the circle, a form rich in Humanist symbolism and highly regarded in the Renaissance, and distorted it, using it in a non-static way. The distorted form was the oval which, in addition to having an axial quality, seems unfulfilled, always on the point of change. For the Mannerists the excitement of the oval was its unacceptability to the existing standard of the circle. When people began to think of the oval as an acceptable form, then the new Baroque standard had arrived.

2) Replacement of spaces designed to be seen from a single static point by spaces to be viewed while moving. Mannerism used the strongest possible spatial contrast in their rejection of the static space associated with the Vitruvian esthetic standard of the Renaissance. They produced spaces which would be described as tunnel-like. Stating their case as strongly as possible, the Mannerists forced people to keep moving within spatial boundaries that were rigidly defined. Baroque designers accepted the idea of movement and began to articulate experience along the path of travel through a consideration of vista and sequence. The idea of movement had become one of the criteria for acceptability by the newly formulated Baroque esthetic standard.

We will now move into chapters which will discuss each style in more detail. Some historical background will be presented for each period, the esthetic which was a response to those events will be described, and specific architectural and urbanistic works will be discussed.
1 Webster's Approved Dictionary

2 C.H. King A History of Civilization p. 506

3 Ibid, p. 506
   J. Burckhardt The Renaissance in Italy p. 298, 550
   H.D. Sedgwick A Short History of Italy p. 182


7 Ibid, p. 508

8 L. Salvatorelli A Concise History of Italy p. 223
I. INTRODUCTION

Events of the Times (circa 1400-1500)

The emergence of the historical period "Renaissance" occurred with the development of a new state of mind through a re-examination of the universe and man's place in it.

The word "renaissance" means a new birth, and in this case it refers to the rebirth of interest in the classical cultures of Greece and Rome. First of all, the ancient attitude regarding the phases of life itself was reborn. This earthly life became both important and pleasant, and the Renaissance man felt that he deserved a full share in its satisfactions. This was in contrast to the medieval point of view which looked upon life in the next world as of such overriding importance that this corporal life was significant only insofar as it contributed to salvation in the after-life.

As the classics had done, the Renaissance placed a new emphasis upon individual autonomy. It was believed that each human being should personally seek out the truth in religious and philosophical matters. An ethos of self confidence existed—confidence in the individual self and in the intelligence and abilities of mankind. Optimism was the dominant note: man is capable of dealing successfully with the affairs of this life through the rationalistic approach to problem solving.

According to King, there were two reasons why the men of the Renaissance began to believe more confidently in the value of this life and in the capacity of human intelligence:

1) Increased exposure and wider experience. The Crusades of the Middle Ages and the increased interchange of ideas through the movement of traders in the awakened economy had given men a wider view of the world and exposure to ideas other than those of the Medieval Church dogma.

2) Authoritative corroboration of their own philosophical leanings. The menace of the Ottoman Turks advancing upon the city of Constantinople had driven many Greek
9 H.D. Sedgwick *A Short History of Italy* p.242,243


J. Trevelyan *A Short History of the Italian People* p.174

11 *Op.cit.*, Burckhardt

Chapt. IV, Part V

12 *Op.cit.*, King p. 510

13 R. Wittkower *Architectural Principles in the Age of Humanism* p. 15

14 *Op.cit.*, Burckhardt

Chapt. V Part III

*Op.cit.*, King p.510

15 Ibid, p. 512

16 *Op.cit.*, Wittkower

17 Ibid, p. 24,25

18 Ibid, p. 27

19 Ibid, p. 27

20 *Op.cit.*, King p. 615
scholars from the city even before its fall in 1453. Many of these men migrated to Rome, a onetime center of classical learning, and brought ancient manuscripts with them. The Greek language, little known in the West during the Middle Ages, was studied feverishly, and soon substantial libraries of Greek and Latin authors had been amassed. Study of the ancient manuscripts provided the authority needed to confirm the truth of man's great capabilities and importance, his greater stature in the scheme of things.

The new Italian philosophy, called Humanism after the term "humanitas" from one of Cicero's manuscripts, emphasized the basic goodness of human nature. Man was considered to be created in the image of God, so therefore he must be intrinsically good. This basic goodness needed guidance, however, to reach its higher stages of development. Hence, the value of education, especially an education based upon a study of classical culture. Lest I give the impression that the idealism of the Humanists was universal, I mention here another man whose works had considerable later influence: Niccolo Machiavelli. In The Prince he presented the doctrine that the end justifies the means. Maintaining a more cynical view of mankind, he encouraged enlightened rulers to treat the rights of individuals as expendable for their own good. Though Machiavellianism would be an important tool of sixteenth century despots outside of Italy, the philosophy of Humanism was the real force shaping the art of Renaissance Italy.

The study of Greek mathematicians led to the view that the entire universe is a system of rational harmonies which adhere in its totality to the rules of mathematics. This had important implications for the esthetic of the Renaissance, as we shall see.

The image of the Godhead underwent a change in emphasis from the Son who suffered on the cross for mankind to the panto-sovereign whose essence was the peace and rational harmony of the universe. In accordance with the new view of man's importance, the theorists of the Renaissance believed that the perfect harmony of the macrocosm was echoed in microcosmic form in the body of man. They believed also that the earth was God's footstool, and that it had been created specifically for the habitation of man. Furthermore, the sun, planets and stars were created to light the earth, and their heavenly courses were arranged for that purpose. Man, then, was God's central creation, the focal point of all the universe.
22 Ibid, p. 223
23 Ibid, p. 223
   A.Korn History Builds the Town p. 54

26 See T. Hamlin Architecture through the Ages (p. 334, 335) for description of conditions in Florence, as an example of this.


   B. Fletcher A History of Architecture on the Comparative Method p. 668


31 See p.C2
In the twelfth and thirteenth centuries, Italy's cities had begun to awaken after the decline of the Middle Ages. Reasons for this include the efficiency of Italy's agricultural production, which allowed some of the population to be free from the soil, and the increasing activity along the trade routes. Northern Italy became in the early Renaissance the great center of European commerce, and the richest of her cities was Venice. Great banking families rose to prominence and gained a tyrannical political control over the major cities of Italy, with the exception of Rome and, for a time, Florence. Each city strove not only to maintain its own autonomy, but also to extend the power of its influence over its neighbors for economic gain. This led to constant and bloody internal feuding and prevented the possibility of any sort of pan-Italian political unity.

The period of the Renaissance was one of a flowering of all the arts in Italy. There seemed to be a new artistic awareness on the part of everyone, including laymen as well as those who called themselves artists. Men of creativity seemed to be surrounded by crowds of their neighbors, who were filled "with ardour for living, for expression, for money making, for glorifying their city." Foremost among these enlightened laymen were the new businessmen patrons who paid for the artists' work with money from vast new fortunes earned in banking. The Church was no longer the only client for the talents of artists, and an increasing amount of the work done during the Renaissance was secular in nature. Probably the best known of these new patrons were Cosimo dei Medici of Florence and his grandson, Lorenzo dei Medici ("Lorenzo the Magnificent"), also of Florence.

One of the most significant inventions of the times was the perfection of a technique for printing using moveable type by John Gutenberg and John Fust at Mainz, Germany about 1450. This had a profound effect upon scholasticism in general, and very soon would be a contributing factor in the rise of religious questionings of a seriousness unprecedented in Christendom. The Bible and other works could now be produced in large quantities, and ordinary men outside of the Church would be able to read and interpret for themselves. The full effects of this increase in investigative freedom would be felt in the next century.

The Renaissance Esthetic

The first obvious sign of the emergence of a new style in the arts was an appearance of a widespread preference for form based upon classical precedent. Appearing
N. Pevsner An Outline of European Architecture p. 290, 291

33 P. Murray The Architecture of the Italian Renaissance p. 8

34 See Wolfflin Renaissance and Baroque

35 Ibid, p. 58

See all part IV

37 L.B. Alberti De re aedificatoria Vol.VII p. 12


39 Vitruvius De architectura libri X Vol.III p. 13
first in literature with the works of Petrarch, Dante, and Bocaccio\textsuperscript{32} and then spreading to the visual arts was a scholasticism based upon as rigorous as possible a study of the classical way of doing things. In Italy, the importation of Gothic ideas had been both slow and late, and the new move toward classical forms was perhaps seen as a return to the ideals of their forefathers, and a clearing away of the wreckage of what they considered to be the barbaric centuries between themselves and the grandeur of ancient Rome.\textsuperscript{33}

To the Renaissance thinkers the place of man, as we have seen, was held securely in static equilibrium as all of creation revolved in peaceful harmony about its human centroid. This static quality, as Heinrich Wolfflin pointed out,\textsuperscript{34} was to become a dominant and consistent element in the Renaissance esthetic. "Renaissance art is the art of calm and beauty...which sought permanence and repose in everything."\textsuperscript{35} Its aim was a state of fulfillment, of perfect being, and it produced spaces designed to be viewed from a single static point.

The most perfect compositions were held to be the result of ideal proportional relationships, which, as Wittkower pointed out,\textsuperscript{36} were tied in with the mathematical harmony of the macrocosm. Consider, for example, Alberti's famous definition of beauty:

"I shall define beauty to be a harmony of all the parts, in whatever subject it appears, fitted together with such proportion and connection, that nothing could be added, diminished or altered but for the worse..."\textsuperscript{37}

All parts, then, should fit within a rationally integrated system of proportion within which each element has its absolutely fixed size and shape, and the result should be a completely harmonious whole.

What was to be the basis for a system of ideal proportioning? The writings of Vitruvius provided the answer.\textsuperscript{38} He had introduced his third book on Temples with certain now famous remarks upon the proportions of the human figure, which he said should be reflected in the form of temples:

"For without symmetry and proportion no temple can have a regular plan; that is, it must have an exact proportion worked out after the fashion of the members of a well shaped body... In like fashion the members of temples ought to have dimensions of their several parts answering suitably to the general sum of their magnitude... If a man lies on his back with hands and feet outspread, and the center of a circle is located in his navel, then his hands and feet will touch the circumference: a square can also be produced in the same way... the height of a body from the sole of the foot to the crown of the head being equal to the span of the outstretched arms."\textsuperscript{39}
40 See p. B4

41 Op. cit., Wittkower p. 15
p. 21

42 Francesco da Martini
Tratto di architettura civile
e militare di Giorgio
Martini

43 See p. B16

2a, 2b, 2c, 3


46 Op. cit., Wittkower p. 27

47 Ibid., p. 27

48 See p. B4
The Renaissance theorists interpreted the Vitruvian image as further proof of two fundamental truths in which they had already come to believe:

1) There is something very special about man. As we have seen, man was already seeing himself as the center of the universe. Now, it came to be believed that man's body was the most perfect physical manifestation of the universal harmony, that it was perfectly illustrative of the microcosm-macrocosm relationship for which the form of the temple should strive as well as the form of the perfect city. We can see this belief illustrated clearly in the sketches of Francesco di Giorgio da Martini in which he derives first the form of a "composite" church plan and then a column capital from the thorax and head of a human figure. Vitruvian type figures begin to appear in the notes and manuscripts of many Renaissance men, including Leonardo da Vinci, Fra Giocondo and Francesco Giorgio, as well as da Martini.

2) There is something very special about the circle. To the Renaissance theorists the circle was already considered to be the most perfect of geometric figures. Alberti began his second book with a eulogy of the circle: he declares that Nature herself enjoys the round form above all others as is proved by her own creations such as the globe, the stars, the trees, animals and their nests, and many other things. The discovery of the Vitruvian image provided authoritative confirmation of the circle, and secondarily the square and all other regular polygons which are derived from the circle, as the most perfect geometric configurations imaginable. The qualities attributed to God were given geometric definition through the circular form. It and its three dimensional expression, the sphere, in Wittkower's words, "echoed and at the same time revealed the perfection, omnipotence, truth and goodness of God". The circle with its center was thought to describe man's place in the universe as well.

See also p. 332


52 Ibid, p. 25


54 See R. Wittkower Architectural Principles in the Age of Humanism p. 7
II. THE RENAISSANCE ESTHETIC IN ARCHITECTURE

Church Design

Renaissance architecture, including that of churches, has often been described by art historians as a style of worldliness. Nikolaus Pevsner, for example, has called the characteristic centralized Renaissance church plan "not an other-worldly but a this-worldly conception." He states that by standing at the center and viewing the church, the spectator "becomes himself the measure of all things," and thus "the religious meaning is replaced by a human one."^50

Rudolf Wittkower, however, describes this interpretation of the Renaissance church as "simple - not to say naive,"^51 and devotes much effort to the refutation of the worldliness nation. Wittkower argues that the Renaissance church as it was seen by the theorists of the fifteenth century was in fact an embodiment of the qualities of God rather than a statement of human autonomy.^52 His case is well documented and convincing, and it would appear that for the architect of the Renaissance at least, religion was still an important influence in the design process.

The first Renaissance architect discussed here will be Leone Battista Alberti, because in his writings and design one can get a complete picture of the Humanist conception of ecclesiastical architecture. Alberti believed, as stated in his treatise,^53 that the church was the most important building type. It should be the noblest ornament of the city, and its beauty should surpass imagination. Its form should have a purifying, redeeming effect upon the beholder, arousing piety and producing the state of innocence which is so pleasing to God. Its geometry should be serene, absolute, immutable, and entirely lucid, embodying a man created harmony which would be "a visible echo of a celestial and universally valid harmony."^54 The geometry of the ideal church then was to be a microcosmic expression of the qualities of the macrocosm.
Pazzi Chapel, Florence
Brunelleschi 1429

Sfa. Maria degli Angeli, Florence
Brunelleschi 1434

San Sebastiano, Mantua
Alberti 1459

55 See p. B10


Alberti was explicit concerning the geometry of the ideal church form. In the seventh of his ten books on architecture, after the previously mentioned eulogy of the circle, he mentions nine basic plans for churches. Apart from the circle itself, Alberti lists the square, the hexagon, octagon, decagon, and dodecagon, all figures derived from the circle. In addition to these six forms he also adds three more, whose elements are rectangular and derived from certain multiples of squares. These nine basic forms, he stated, could be enriched by chapels, producing configurations which are similar in that the corresponding parts on the circumference have exactly the same relationship to the focal point in the center. Alberti's philosophical preoccupation with the centralized, geometric plan is clear. Moreover, according to Wittkower, the new church forms embodied to him a sincere religious feeling just as did the Gothic Cathedral for the Medieval builder.

The church prototype of the Renaissance then was to be based upon the circle. The first executed project which showed the new centralizing tendency was Brunelleschi's Pazzi Chapel, done in 1429 and facing into the cloister of Santa Croce in Florence. This miniature building, described by Banister Fletcher as "Byzantine in conception, Gothic in construction, and classical in decorative detail," was to inspire many later buildings. Its centralized plan is covered in part by short barrel vaults, but chiefly by a rib-vaulted dome on pendentives and capped by a lantern. Smaller domes on pendentives cover the altar recess and the central portion of the portico.

Another of Brunelleschi's churches, Santa Maria degli Angeli (1434), was of completely centralized geometry and would have been the first such church of the Renaissance had it not been discontinued before its completion. This church was to have been octagonal with eight peripheral chapels and covered by a dome. It is thought to have been influenced by the round Roman temple of Minerva Medica.

Near the end of his life, Alberti himself tackled the problem of the centralized church. He designed San Sebastiano at Mantua in 1459. This was the first Greek Cross plan of the Renaissance, a shape doubly rich in symbolism, both the traditional symbolism of the Cross and the new Renaissance values associated with the circle. In San Sebastiano, the nave has completely disappeared, and the crossing has become an enlarged square with quadripartite vaulting, three side chapels and an entrance vestibule opening off the fourth side.
San Spirito, Florence
Brunelleschi, 1436

Leonardo da Vinci
Church Designs


Tempietto Rome
Bramante 1504

60 Op. cit., Wittkower p. 17
Longitudinal churches were not to disappear through the whole fifteenth century, but one new type appeared which represented a significant departure from the Romanesque or Gothic plan types. It was first seen in Brunelleschi's San Spirito, designed in 1436. Here Brunelleschi made the transepts identical to the choir, ran an aisle around all three, and placed a dome over the crossing, thus producing the "composite" church type, which is longitudinal in overall form but with centralized eastern parts.

The composite plan appears again in the sketches of Leonardo da Vinci. Although he never received an actual architectural commission that we know of, it is not surprising that the interests of this "uomo universale" should turn to the problem of church design. Most of his architectural sketches, however, reveal his preoccupation with plans which are purely centralized. The plans and perspectives from his sketch book show several types of complex central plans, and exteriors which reveal clearly the spatial concept from the outside. Leonardo's churches show a heretofore not highly developed sense of gradation of elements, a system in which the dominant central dome is repeated with progressively less strength at its corners and in the chapels.

In one of Leonardo's drawings we see a pure unadulterated cube form the main body of the church, with the inscribed circle of the drum and four attached semi-circular chapels. From the perspective one can see that the domes were to have been hemispherical. Although Leonardo never had the chance to execute any of his designs, it is this sketch which bears an almost remarkable resemblance to a church which was actually constructed later, Santa Maria della Consolazione near Todi by Cola da Caprarola. The built church is not a copy, however, but, according to Wittkower, may have actually been executed from a plan by Bramante, illustrating the closeness of the views of Leonardo and Bramante on architecture.

Donato Bramante's work is sometimes considered to be the high point of Renaissance architecture, especially his projects for St. Peter's and the Tempietto. This latter commission came from Ferdinand and Isabella of Spain as a memorial to mark the spot where tradition had placed the martyrdom of St. Peter. This little temple with its hemispherical dome is considered by many to be the most perfect embodiment of Renaissance design ideals, and was used as a standard by many later architects by which to judge their own works. Originally it was Bramante's intention
Design for Montorio Courtyard, Rome
Bramante 1508

Plan for St. Peter's, Rome
Bramante 1506

Central Plan Churches
Sebastian Serlio

62 See p. D18
See also J. Ackerman
Michelangelo p. 94

63 See p. B22

64 See p. B24
65 See p. B24

66 S. Serlio Quinto libro
d'architettura
to reorganize the whole space of the Montorio courtyard so that the tiny centralized church would have stood in the center of a larger circular cloister. But this was never executed.

The St. Peter's project was commissioned by Pope Julius II in 1506, and Bramante chose the Greek Cross type plan, as Alberti and others had done before him. He envisioned a great hemispherical dome to cover the central crossing of a plan that was so completely symmetrical that it is not certain which of the apses was intended to hold the altar. Construction of the church was begun according to Bramante's plan, but modifications were later made by Michelangelo.\textsuperscript{62}

The Pope's acceptance of the centralized proposal was an amazing decision considering the strength of tradition in favor of longitudinal churches, the liturgical disadvantages of centralized planning,\textsuperscript{63} and the immense religious significance of the St. Peter's project. It shows how persuasive must have been the symbolism associated with this type of plan.

The popularity of the central plan concept can be seen in the work of many other Renaissance architects, among them Antonio Filarete\textsuperscript{64} and Francesco di Giorgio da Martini,\textsuperscript{65} to be discussed later with regard to Renaissance urbanism.

A review of many of the shapes acceptable to the Renaissance can be seen in Sebastian Serlio's treatise\textsuperscript{66} of the early sixteenth century. He recommended twelve basic shapes, nine of which were completely centralized. He began with the circle because it is, he said, more perfect than the others. Besides two circular plans, he recommends the pentagon, hexagon, octagon, the square with inscribed octagon, the square with inscribed circle and circular chapels, the Greek Cross, and the oval. This last type, though derived from the circle, is significantly warped to give an axial quality, and is therefore a foreshadowing of things to come.

Renaissance Palace Architecture

Palace design, much more so than church design, was dependent upon the exigencies of site. Seldom did the Renaissance palace architect get the chance to work with an unencumbered, complete freedom-granting site, but was usually forced to respect existing streets and buildings as unchangeable realities. For this reason and some others, the pure ideal plan geometry of churches is seldom seen in Renaissance palaces. The Church had pre-emptory powers, if needed, to carve a great piazza as the setting for a new edifice, but even the most prosperous of merchant families could seldom exercise this kind of power in the laying out of their residential projects.
• Palazzo Riccardi, Florence
  Michelozzo 1444-60

• Palazzo Strozzi, Florence
  da Majano 1489

• Palazzo Farnese, Rome
  Sangallo (later Michelangelo) 1530

Cancelleria, Rome
Bramante 1486-98

Op.cit., Wolfflin p.91
Oftentimes growth by accretion produced some plan irregularities which were not the intentions of the original architect. For example, a later addition to the north side of the Riccardi Palace in Florence irregularized what was before a symmetrical plan. Sometimes, as in the case of the Cancelleria in Rome by Bramante, a new palace would actually surround and engulf an older existing structure.

All of this tended to limit the number of "pure" palace plans which were executed. It seems that the more mundane residential buildings inspired less idealism in terms of planning concept. Still, a "typical" plan type can be described, and would be like that of the Strozzi Palace in Florence. It is rectangular and symmetrical with the living spaces surrounding a central open space, or "cortile." The main living compartments are on the second level, called the "piano nobile," and are reached by a stair from the cortile. In Rome, the huge Palazzo Farnese by Sangallo is similar in form to the Strozzi, although the scale is larger.

The Italian palace which most strongly shows the centralizing tendency is the Palazzo Farnese at Caprarola (near Rome). It was begun in the early 1520's by Antonio do Sangallo the younger and Peruzzi, and finished by Vignola. Its pentagon shape as well as the circular inner courtyard were fixed by the earlier architects, and were probably influenced by the defensive function of the palace—the pentagon being the favorite type of fortress plan at that time. Here, in the open countryside we see a palace plan which exemplifies the formal ideals set forth in church architecture.

I see three reasons why generally the Italian Renaissance palace fails to adhere to the concept of central planning as strongly as does the ecclesiastical architecture of the time:

1) Irregular sites and clients without the power to change these conditions
2) Haphazard growth
3) Failure of domestic architecture, as a more mundane building type, to inspire the idealism which religious architecture did.

The centralizing tendency is, of course, still present but is generally expressed with less lucidity in palace architecture.

Function vs. Ideal-form in Renaissance Architecture

The centralized domed church has always been regarded as the climax of Renaissance architecture. Here theory and practice were in perfect accord. More
69 Ibid., p. 5

70 Op.cit., Wittkower
than any longitudinal building the central-plan church was the embodiment of unity, peace, serenity, infiniteness, and static-being. The correspondence between exterior and interior was complete, and the spatial concept could be read from any angle.

But it is no secret, nor was it in fifteenth century Italy,\(^{69}\) that the central-plan church is unsuitable for the Catholic liturgy. Without a nave it is difficult to achieve the feeling of import and solemnity which an altar-bound priestly procession is supposed to have. And in a centralized church where are the worshippers to be seated? How can one separate the clergy from the laity? Where is one to place the altar? If the altar goes in the center, then an esthetic problem arises as to which of the two main features is the more important and should dominate—the dome or the altar. It is obvious then that the centralized church was going to be a difficult prototype to live with. This was known beforehand; and yet by 1500 we see central-plan churches occurring with considerable frequency all over Italy.\(^{70}\) Why was the clergy willing to tolerate such inconvenience? There can be no other answer except to say that they too, along with the artists of the time, were mesmerized by the beauty of the circle and its symbolism.
Sforzinda
Antonio Filarete 1460-64

Town Plans
Francesco di Giorgio da Martini 1500

S. Lang "The Ideal City from Plato to Howard"

A. Filarete Tractat über die Baukunst


Op. cit., Lang

P. Zucker Town & Square p. 102
III. THE RENAISSANCE ESTHETIC IN URBANISM

The Ideal City

Easily the most influential of the Renaissance urbanist-theorists was Antonio Filarete, a Florentine who was also known as a sculptor and architect. His ideal city of Sforzinda was brought into being between 1460 and 1464 while he was engaged in the service of Francesco Sforza of Milan, for whom the city is named.

In allegorical novel form he described at length the form of his ideal city as well as many of its major buildings. Sforzinda was the first star-shaped city of the Renaissance, its form being determined by the intersection of two squares inscribed in a circle. Eight major and eight lesser streets radiate from the central square. Around this square are located the major buildings of the town, the ducal palace and Sforzinda Cathedral. Originally a tall tower was planned for the center of the square, but this was later removed. The reference point of the Sforzindan skyline then would have been the four tall minarets of the cathedral.

In his treatise, Filarete goes into considerable discussion of the magical and astrological meanings which the plan form has. The astrology was forgotten by other designers, but the form was not: it seemed to fulfill the Renaissance desire for unity, harmony, and static being. Sforzinda became the archetypal ideal city plan of the Renaissance.

Among those who followed the lead of Sforzinda was Francesco di Giorgio da Martini. In his treatise on civil and military architecture he presented a number of town plans, all radio-concentric in form. He designed for hill sites as well as flat ones, using a spiral road to lead upward to the town center at the peak of the hill (conveniently enough, the particular hill involved always happened to be perfectly symmetrical and regular of surface). He used octagons and circles for the periphery walls of his towns and compared the central square to the navel of the human body. Francesco di Giorgio's plans are primarily two-dimensional; that is, according to Lang and Zucker, he was first of all toying with geometric patterns
Ideal Town Plan
Vasari II Giovanni 1598

77 P. Cataneo L'Architettura
Venice 1554

78 Vasari II Giovanni Citta ideal del Cavaliere Vasari
Florence 1598

79 See. p. C10-C16

80 V. Scamozzi L'Idea dell Architettura Universale
Venice 1615

Palma Nuova
Vincenzo Scamozzi 1598

City Plan
Vincenzo Scamozzi 1615

Ideal City
Fra Giocondo 1500
and only secondarily trying to solve problems of the real world three-dimensionally.

Radio-concentric plans begin to appear with considerable frequency in the late fifteenth and sixteenth centuries. Pietro Cataneo, for example, produced large numbers of town plans in varied detail, all based upon regular polygon forms. His plans included a special fortified citadel for the absolute ruler of the city, and its form was polygonal like that of the larger town entity. Another designer, Vasari II Giovanni, produced an ideal city plan which was very similar to those of Francesco di Giorgio.

There were only two physical realizations of the Renaissance "citta ideale," the towns of Palma Nuova and Granmichele. Palma Nuova was the first and was built in 1593 as a Venetian outpost. Its design was by Vincenzo Scamozzi, a pupil of Palladio. Its importance is not any form innovation, though it was an unusual nine-sided polygon, but simply that it was the first Renaissance ideal town to be actually built. Another of Scamozzi's projects which we have is a later town plan in which the control square and outer fortified polygon are linked with an orthogonal street pattern. Granmichele, the other executed Renaissance town, was not built until one hundred years after Palma Nuova (1693). It was built for Carlo Caraffa to replace the destroyed town of Occhiola near Catania.

The whole Renaissance attitude toward the ideal relationship of architecture and urbanism may be seen fully in the one small sketch (about 1500) of a monk named Fra Giocondo. He drew a perspective of slightly more than half of his ideal city. In it he shows a circular town with streets radiating from a circular square in the middle of the city. Occupying the center of the square is a centrally planned domed building, presumably a church. The spatial organization of the church is that of the city in smaller form, just as both may be seen as microcosmic expressions of the celestial and universally valid harmony of the universe. As the square is the focus for the strictly radial organization of the city, so is the dome the focus for the centrally planned church.

The Renaissance Esthetic in Existing Italian Cities

If one uses the term precisely, there is no Renaissance city in Italy. Palma Nuova and Granmichele are on a scale to be more properly called "towns," and
Florence
Foundling Hospital Florence
Brunelleschi 1421-45

Piazza della Santissima Annunciatata
Florence

Piazza at Loreto

Piazza di ss. Giovanni e Paolo
Venice

82 Ibid, p. 141
83 Ibid, p. 8
the changes which occurred in Florence, Venice, Rome, Milan, etc. were merely patches of Renaissance order upon a fabric which was still Medieval. These were some very bright patches after all, but the system of order was generally confined to one urban place at a time, which were almost without exception "squares" associated with a church. There were no comprehensive plans for reshaping large parts of the city according to Renaissance esthetic ideals.

There is difficulty even in classifying squares as to historical period: Medieval, Renaissance, etc. Rather, in most cases one does better to try to identify areas of influence in the evolution of a particular urban space. The most famous "Renaissance" squares of Italy were, formally, the result of a gradual growth from the Middle Ages to the Renaissance as they took on with time the characteristics which made them the heart of their cities. Renaissance influence can be seen in the following areas:

1) Desire for spatial unity and regularity. In Medieval planning space is a resultant. It is that negative quantity left over after the buildings have gone up. But in the Renaissance space is thought of as a positive element with a form-will of its own. Space shapes buildings instead of vice-versa. The Piazza della Santissima Annunciata in Florence is the first obvious example of this. Brunelleschi's space concept, begun to be realized by the facade of his Foundling Hospital, was powerful enough to mold the forms of the adjacent buildings in centuries following. In the piazza at Loreto we see the regularizing influence of the Renaissance on two sides (facade of the Jesuit College and Apostolico by Bramante, Sangallo) in contrast to the irregularity of the old Medieval buildings opposite. On the fourth side is a Baroque church facade. This could not be called a Renaissance square, but the influence of the Renaissance regularizing tendency is immediately apparent.

2) Unity and regularization of facades. In the Middle Ages each house had its own facade. Renaissance additions to squares were usually faced with arcades, repeating the same motif and rhythm with several buildings sharing a facade.

3) Use of fountains, statuary, flagpoles, etc. as space organizers. In the Middle Ages such structures were treated as individual, free-standing objects without relation to the square as a whole. Zucker uses the term "nuclear" to describe the square which, in spite of irregular and various building forms, has been unified and given a focal point by the careful placement and scaling of a statue, fountain, or other monument. Three examples are: Piazza di ss. Giovanni e Paolo in Venice,
84 See p. B16

85 Op. cit., Trevelyan
Chapt. XVI p.148, p.182-193
Piazza della Signoria in Florence, and the Piazza del Santo in Padua.

Beyond such broad and non-specific generalizations as these, it is difficult to identify any typical form type for the civic squares of Renaissance Italy, because most of these spaces have their development frozen in a state of hybrid form. So much "reality" has impinged upon what might have been the ideal, that the ideal never really materialized. It almost did, to a degree, in Bramante's plan for the Tempietto space.84 If his ideas for conversion of that space to a small circular piazza had been executed, we would have had a "pure" Renaissance city space (actually only a cloister, though) in Rome. It generally takes more than one man to expedite an urban spatial concept, and in this case there was no second man. There was actually one round square built, the Piazza del Mercato in Lucca, which, unusually enough, does not have a church, but this is the only example that I have found for the Italian Renaissance civic square, and its roundness was due to the shape of the old Roman circus which it replaced.

So, in order to see expressions of the urbanistic esthetic ideals of the Italian Renaissance, one must look to the theorists and to the completely planned new towns of Palma Nuova and Granmichele.

Esthetic-Will and Functional Need in Renaissance Urbanism

As is always the case with ideal forms, the radio-concentric town plan of the Renaissance was a solution in search of a problem. But the urbanist, in contrast to the idealistic architect who had to do battle with the functional needs of the church, had a few cards stacked in his favor. The politics and military technology of the time were friends of the radio-concentric town plan.

Not until the nineteenth century did Italy experience the political consolidation and unification which was beginning to occur in other European countries by the fifteenth century. Italy remained fragmented into various city-states, each with a sphere of influence which it was perpetually trying to extend at the expense of its neighbors.85 This internal bickering plus occasional threats from the North, such as Charles VIII's French invasion of 1499, made the use of fortifications a foregone conclusion in city design. In 1453, the whole of Europe felt the impact of the invention of gunpowder when the Ottoman Turks used cannon for the first time in the successful siege of Constantinople. Until this time, city dwellers had
Op.cit., Ackerman,
Michelangelo Chapt.V p. 45-53
felt secure behind their walls and moats which had protected them from Medieval attack. Now suddenly the use of cannon had brought a quantum jump in assault technology which obviated the defenses of a continent. Now it was impossible to build walls of sufficient height and breadth to give full protection to the city dwellers within. Suddenly there was widespread interest in the fortification of cities, with various painters, architects, etc. announcing their expertise as military engineers. Many such men as Leonardo and Francesco di Giorgio sought employment from the rulers of Italian cities on the basis of their military design skill. The new defensive system which developed was to protect the city from a longer distance away by building fortified outposts guarding the routes of access to the city proper. And it was in the design of new towns to fill this outpost function that the Renaissance esthetic found a perfect outlet for its energy. The centralized plan type, the child of Filarete's completely non-military form genesis, could yield immediate access and control to all of its parts from the central square - a distinct advantage in time of crisis. If need be, a central tower with cannon could protect the periphery. The corners of the outer polygon could be provided with bastions, giving complete crossfire protection to all parts of the city wall. All things considered, the radial city provided the most compact and easily defensible configuration possible—a most fortunate coincidence of practical need and esthetic ideal. It is to this coincidence which we owe the execution of Palma Nuova as a Venetian outpost, and eventually Granmichele by Carlo Caraffa a century later.

2. Ibid, Chapt. XXVIII, XXIX

3. Ibid, Chapt. XXIX See p. 650 (map)


6. F. Artz From Renaissance to Romanticism p. 114

   Op.cit., Trevelyan p.244
I. INTRODUCTION

Events of the Times (circa 1500-1600)

The coming of the sixteenth century brought with it many disturbing and unsettling elements in the political, social, and religious life of Italy, and of Europe as a whole.

In 1517 a German monk, Martin Luther, nailed to the door of the church at Wittenberg a list of ninety-five topics which pointed up, by the author's intention, areas of the Catholic Church in need of reform. There was a certain timeliness of Luther's act. The people of Wittenberg, and indeed all of Germany, were already aroused by two principle areas of offense by the Church: 1) the moral and financial corruption of the clergy and 2) the obstacles which they claimed had been erected by the clergy between man and God. Luther's protest was met with great enthusiasm: in Germany, city after city and province after province began to question the right of the Pope to oversee their religious lives. The result was unprecedented religious conflict which left no part of Western Europe unaffected, and which led eventually to the tragic Thirty Years' War of the next century (1618-1648). Although the Protestant revolt took no significant hold in Italy, no doubt its questioning of the hitherto unquestionable must have stirred considerable uneasiness there.

The Catholic reaction came with the initiation of the Counter Reformation which began about 1540 and was made official at the Council of Trent in 1545, and with it came a period of lessening academic freedom. In 1542 the Inquisition was reintroduced; in 1543 literary censorship. The new Church saints were the men who were implementing the goals of the Counter Reformation: St. Ignatius Loyola, St. Charles Borromeo, St. Phillip Neri. The oppressive hand of the Counter Reformation was felt everywhere.

The city of Rome was entered and pillaged by German troops in 1527. They ruined and humiliated the city, and drove out most of the scholars, writers, and artists from this center of what had been of late a focus of Renaissance activity. In the meantime Italy fell more and more under the influence of the Spanish Hapsburgs, a bitter
8 Op. cit., King p. 615

    p. 447, 454
    Op. cit., Trevelyan
    p. 245, 246, 178


12 Goethe Faustus

penetration which eventually ended in the indirect tyranny of backward Spain over most of the Italian provinces, especially in the South.

A little later, in 1543, Copernicus destroyed the old view of the universe. The learned men of the Renaissance either had not been aware of, or else had chosen to ignore the work of the Greek Aristarchus who had proclaimed the heliocentric theory eighteen centuries before. But Copernicus, a Polish astronomer, revived and amplified the theory, and his work could not be ignored. He challenged the intellectual perspective of the times with his claim that the earth was, in fact, only a small planet among the several which were moving around the sun. His work, and that of other scientists of the time greatly disturbed the faithful, both Catholic and Protestant.

These were not the only troubles which Italy was experiencing. At the same time, taxes rose. The Ottoman Turks increased the frequency of their raids upon the Italian coasts. Brigandage and lawlessness were on the increase: there were more duels, more murders, rapes. These were not just the offenses of an alienated few against society, but often the diversions of persons of culture. Northern Italy experienced a period of comparative stagnation in its economy as the trade routes which had made its great banking houses rich shifted to the North Atlantic.

As the influence of Spain grew in the Italian cities, the nobles became more haughty and aloof from the bourgeoisie and intellectuals. The stiff Spanish code of behavior taught the nobles to look down upon the professions, trades, banking, etc. It also looked upon artists, musicians and writers as servants, and thus made the conditions of patronage less pleasant for men of creativity.

The world seemed insecure. Men felt that their destiny was determined by forces over which they could have no control, or understanding. Much as in the legend of Dr. Faust, men had become aware of their own finitude as they sought after knowledge. Confident all the while that events and discoveries would only tend to confirm their views, the men of the Renaissance had laid the intellectual groundwork for scientific advances and socio-religious questionings which were shaking the foundations of the Renaissance point of view in the early sixteenth century. Uncertainty and ambivalence were widespread; ambiguities and complications came to be accepted as a part of life.
14 From one of Michelangelo's sonnets. See Artz From the Renaissance to Romanticism p. 120


N. Lynton World Architecture p. 246

16 Ibid, Lynton p. 116

17 Op. cit., Wolfflin p. 15

See also Introduction by P. Murray p. 9

18 See p. C10 for the two trends in Mannerist Architecture

19 Op. cit., Wolfflin p. 17, 18

20 F. Wurtenberger Mannerism p. 83, 84

21 P. Murray - Introduction to Renaissance & Baroque by Wolfflin p. 11, 12


25 See p. B8
"...Led by long years to my last hours, too late, O World
I know your joys for what they are. You promise a peace
which is not yours to give."  
Michelangelo

The Mannerist Esthetic

The essential notes of Mannerism throughout its course in all the arts were individualism and experimentation. The diversity of effort makes it difficult to identify common elements. Each artist and designer was seeking to express a very personal style. In fact, before it came to symbolize a whole stylistic approach, the Italian word "maniera" meant simply "personal style." It began as a term of derision, much like "Gothic" or "Baroque," and the works of Mannerism were long looked upon as the stage into which the Renaissance degenerated, even by such art historians as Heinrich Wolfflin. However, Mannerism is now regarded as a valid and necessary period of invention and experimentation, out of which eventually arose the Baroque.

In sixteenth century Italy, classic culture was seen with less and less reverence. It was not that the Greek and Roman achievements attracted less attention than before, but that the artists ceased to regard them with the almost childlike wonder of the past. The same basic decorative vocabulary (columns, capitals, architraves, pediments, etc. in the case of architecture) was kept as in the Renaissance, but the spirit was different.

As opposed to the static calm of the Renaissance, the artists of Mannerism loved conflicts, tensions, antitheses, and paradox. According to Peter Murray, the essence of Mannerist work was its "extreme internal tension," which was peculiar to it. This tension was expressed as old forms were twisted, broken, left incomplete, deformed and put together in unprecedented and shocking ways. That which was tortured was considered the more exquisite. Nothing was fashionable unless deformed. Design became an exercise in the building up of calculated surprises. The Mannerist consciously disregarded the basic rules of tradition in order to evoke psychological responses, such as surprise, uneasiness or shock.

There was a move toward more tense proportional relationships. The inherently static circle was replaced in favor by the oval, a hybrid form more suited to the ambivalent Mannerist way of thinking, and one which seemed to be held in check by an uneasy set of tensions. As the Renaissance had done for the circle, the theorists
26 Op. cit., Wurtenberger p. 84

See also p. 9 of Introduction by Peter Murray

28 N. Pevsner An Outline of European Architecture p. 340


30 Ibid, p. 83
of Mannerism tried to attribute the quality of anthropomorphism to the oval form. Lomazzo attempted to show that the elliptical architectural plan was related to the human form, and Zuccari tried to establish a formal link between the oval building and the female body. The square, another inherently calm form was superceded in favor by the oblong rectangle. Forms became more linear and tense. In psychological terms, the fulfilled and static were replaced in favor by the unfulfilled and evolving.

The period of Mannerist experimentation was a time of serious searching, groping for new answers as the old beliefs were being overturned by science and philosophy. The Mannerists recognized, some of the naivete of their predecessors. They had been forced to accept the changes and uncertainties as well as the excitement which always comes with new scientific discoveries. The simplistic and self-confident Renaissance point of view was looked upon as hardly credible anymore. Its forms therefore should not be held up as perfect and inviolate. The same thing could be said of the classics, and the Mannerist proceeded to express himself without respect for formal precedent of any kind. His search for something new, a new order which would be valid in light of the changes which were occurring, could not be hampered by a naive reverence for old forms.

It was not easy for all the people of sixteenth century Italy to accept and appreciate the works of Mannerism. Wurtzenberger tells us that the style was, in fact, one which was associated with the intellectual class almost entirely. The middle class and the townsmen, in Wurtzenberger's words, "played hardly any part in its exaggerated mental acrobatics." I suspect that this is perhaps true of all historical styles in their initial stages, and possibly one reason for Mannerism's failure to gain wide popularity among the lower classes is the fact that it did not stand still long enough for them to understand it.

Mannerism was not just a polite questioning of that which had been, but was often a conscious rending apart of the precepts of the old order. In the classic trilogy of styles which is the area of concern in this thesis, Mannerism represents the crisis point, the time of flux between two less uncertain periods.

32 Op.cit., Wittkower
Part III pp. 51-68

33 Ibid, pp. 51-55

34 S. Ackerman Palladio
p. 20,21


36 E. Kaufmann Architecture
in the Age of Reason p.11

II. THE MANNERIST ESTHETIC IN ARCHITECTURE

What is historically called Mannerism in architecture is divided into two tendencies: 1) the work, dominated by a Michelangelian ethos, which eventually became Italian Baroque, and 2) a more rigid classicism associated with the Vitruvian Academy and led by Andrea Palladio. First I will discuss the leader of this second movement.

Andrea Palladio (1508-1580)

The design of Andrea Palladio, though usually classified as Mannerist, was founded upon a base of Humanist philosophy. Students of Palladio’s work and his life, including Wittkower and Ackerman, emphasize the importance of Palladio’s relationship with Giangorgio Trissino during his early years. Trissino was an all around Humanist (”uomo universale”) with an encyclopedic knowledge, a somewhat anachronistic man of the mid sixteenth century in that he was a dogmatic classicist. He tried to revive the Greek Epic, and introduced Greek type tragedy into Italy. He even tried to create artificially a common Italian language based upon Helenized spelling and pronunciation. In opposition to the popular trends, Trissino rejected the Tuscan language in favor of Greek and Latin as the language of scholasticism. A friend and patron to the young stone cutter Palladio, Trissino took him to Rome three times to study the ancient remains. It was his aristocratic and dogmatic brand of Humanism which formed the ideological basis of Palladio’s later work. Wittkower: "The classical studies which he began under Trissino remained Palladio’s lifelong preoccupation, and his art cannot be dissociated from the Humanist training in this circle..."35

Palladio, although more classical in the execution of architectural detail than the Renaissance designers had been, held a conception of the ideal-form, or, as Kaufmann calls it, "gestalt-ideal," which was essentially the same as that of Alberti.37
Cll

Villa Thiene at Cicogna
Villa Sarigo at Miega
Villa Poiana at Poiana Maggiore

Villa Badoer at Fratta, Polesine
Villa Zeno at Cesalto
Villa Cornaro at Piombino

Villa Pisani at Montagnana
Villa Emo at Fanzolo
Villa Malcontenta

Villa Pisani at Bagnolo
Villa Rotonda
Geometrical Pattern of Palladio's Villas

Villa Rotonda (Capra), Vicenza
Palladio 1567

38 See p. B20
39 See p. B20

40 Op. cit., Wittkower p. 64
J. Ackerman, Palladio p. 161
As we have seen, the palace of the Italian Renaissance was seldom a pure statement of theoretical form. Even those palaces which were symmetrical in external form, such as the Pallazzo Farnese in Rome were actually quite irregular in the layout of rooms. Complete symmetry was always the ideal, but theory and practice were not united fully until the "Mannerist" works of Palladio. He regularized and systematized the villa plan (the villa being a palace located in the country, with gardens) beyond what had been done by his Renaissance predecessors.

As Wittkower shows, most of Palladio's villa plans adhere more or less closely to one basic pattern. Once he had derived a configuration for the problem "villa", he used it again and again with variation according to the specific needs of each commission. As the eleven sketches at the left show, the prevalent type of Palladian villa plan is one with the main space on axis and close to the center of the plan. There are two or three bedrooms of various sizes at the sides, and between them and the main hall is space for staircases and small spare rooms. The most typical type of plan is the general arrangement of rooms in the Villa Thiene at Cicogna, built during the 1550's. The rooms are defined by a large rectangle divided by two longitudinal and four transverse lines.

Palladio went even farther in applying harmonic proportional ratios, applying them to the plan as well as the facade. Not only were the floors and walls of individual chambers sized according to mathematical rules, but adjoining rooms were sized in careful relationship to each other.

Although the Villa Thiene is perhaps the most typical of Palladio's villa plans, most art historians seem to consider the Villa Rotonda (also called the Villa Capra) at Vicenza to be the most perfect exemplification of Palladian design principles. The plan of this villa is almost completely symmetrical, even to the extent that the entrance portico is repeated on all four sides. The central hall is surmounted by a dome with light ports, and four entry passages radiate from this central space to the four porticoes. This proved to be one of the most influential of Palladio's buildings, and three copies are known to exist in England alone. The work on the Villa Rotonda was completed by Palladio's pupil, Vincenzo Scamozzi, who altered the shape of the dome and raised the attic from the original design.
Palazzo Thiene, Vicenza
Palladio 1545-50

43 J. Ackerman Palladio p.126

Ibid, p. 126

See p. C20

Il Redentore, Venice
Palladio 1577-92

46 J. Ackerman Palladio p.130

See p. B12

A. Palladio Book IV of Quattro Libri preface

S. Giorgio Maggiore, Venice
Palladio 1565-1610

Chapel at Maser
Palladio 1579-80
In addition, Palladio designed several palaces of the cortile type, among which are the Palazzo Chieracati, and the Palazzo Thiene, both at Vicenza, and the unexecuted House for Sig Mocenigo.

In his ecclesiastical projects, Palladio shows some Mannerist tendencies as well as his strong Humanist background. Palladio was well over fifty when he began to build churches. Ackerman suggests that scarcity of patronage was probably the reason for this delay, as Palladio was, from his writings, a pious man.43

Palladio's II Redentore reveals some of the uncertainty of the time in its vacillation between central plan and longitudinal plan. The architect was asked to submit two models, one round in form and the other rectangular. According to Ackerman, the round church was at first selected, and then abandoned after a vigorous dispute, just before construction was to start.44 The final plan, as executed, foreshadows, along with Vignola's plan for II Gesu,45 the coming of a new kind of church: one in which the two elements of dome and nave interact. The plan of II Redentore was different from the composite plan of the Renaissance, in that its eastern parts were not symmetrical. The transepts were kept extremely short, and the choir extended beyond what had previously been the normal length. This was, by contemporary norms, a peculiar and unusual plan. This church and the San Giorgio Maggiore church reveal an earnest effort by Palladio to find new shapes for a rejuvenated liturgy.46

The round church at Maser shows, coexisting with Palladio's desire to discover forms appropriate to liturgical needs, a strong taste for the round form in churches. This small church was one of Palladio's last projects, and is basically a circular space with chapels radiating from three sides and an entrance portico on the fourth. The dome is a hemisphere without a drum and has a small lantern. It would appear then that Alberti's directions for the perfect temple47 still hold some validity for Palladio, and he confirms this in the last of his four books on architecture.48

"...and we, who know not false gods, in order to observe decorum in the form of temples, will choose the most perfect and excellent, which is the circle; for it alone is simple uniform, equal, strong, and adapted to its purpose. Thus we should make our temples circular...most apt to demonstrate the Unity, the infinite Essence, the Uniformity, and the Justice of GOD..."

50 Ibid, p. 425

51 J. Ackerman The Architecture of Michelangelo

52 Ibid, p. 2

53 Ibid, p. 7
This passage reveals Palladio's strongly Humanist approach to architecture. And, as we might expect, there is a strong centralizing tendency in his architecture, along with some more Mannerist attempts to find new answers in church plans. Philosophically and in terms of form, however, Palladio was looking backward to the Renaissance and the Classics more than he was searching for new ordering principles in architecture. Because of this, he was somewhat out of step with his time. The future in Italy belonged to the followers of Michelangelo.49

Michelangelo (1475-1564)

Often called the "father of the Baroque,"50 Michelangelo Buonarroti was the dominant figure in the other strain of Mannerist work which eventually evolved into the mature Baroque style. During his lifetime, the influence of Michelangelo as a sculptor, painter, and architect was tremendous, his followers many. This was probably due not only to his talent, which was then acknowledged to have no equal, but also to his personality and temperament, which seemed to define the ethos of the whole period. He was a stormy, violently emotional man, and a stout individualist who demanded more creative freedom and autonomy from his patrons than most artists had done in the past. His personality seemed full of contending opposites, of conflicts and contradictions.51

It was not unusual, as we have seen, for men to relate architecture to the human body. Michelangelo's concept of the simile was different, however, from that of Renaissance theorists, in that he looked upon the body as a dynamic entity with parts which move and function in service of the whole. To the fifteenth century theorist, the body was a static thing to be analyzed, as it lay frozen in a Vitruvian stance, into a system of mathematical ratios. But to Michelangelo the body was a moving, changing, functioning unity composed of nerve and muscle systems, which was not to be thought of in terms of just external appearance in static poses.52 This attitude led him to reject ideal proportion and absolute size requirements. Michelangelo rarely indicated scale or measurements on his drawings, never worked to a module, and avoided the compass and ruler until the last minute in the design process.53 His proportioning was admittedly subjective.
Biblioteca Laurentiana, Florence
Michelangelo (1523-52)

Sforza Chapel in S. Maria Maggiore, Rome
Michelangelo 1560's

54 Ibid, p. 21
55 Ibid, p. 35
57 J. Ackerman The Architecture of Michelangelo p. 134
58 See p. C28

S. Giovanni de Fiorentini
Michelangelo 1559
One of the difficulties in analyzing Michelangelo's architectural work is that there was almost always a restricting condition, some predetermined and unchangeable factor in the design. There were either existing foundations to build upon, existing buildings which could not be removed, a half finished building to be completed, or an existing building to transform for a new use. So, therefore, we do not get completely pure Michelangelan buildings. It is still possible, however, to get a picture of Michelangelo's spatial and decorative biases from his architectural projects.

It is suggested by Ackerman\(^5^4\) that perhaps Michelangelo actively sought out design commissions which did contain restricting preconditions to limit and challenge his imagination. We cannot be completely sure that this is true, but in the case of the Laurentian Library in Florence it is known that Michelangelo turned down at least one other less inhibiting site.\(^5^5\) The present library was built over existing monastic quarters, and its plan form necessarily adhered to the old foundations. Whether or not Michelangelo took this site because he liked the form which the building would take, we do not know, but, in any case, he produced the first major building since the Middle Ages which compelled the visitor to move.\(^5^6\) There is no static vantage point from which to view the whole interior. The focal point has been replaced by a long axis. There is a strong spatial contrast as the visitor moves along the axis up through the tall, shaft-like vestibule and the lower, very long reading room. The Laurentian Library is the first expression of what Ackerman calls the "kinetic spirit" of Michelangelo's Mannerism.\(^5^7\)

In the plan for the Sforza Chapel in Santa Maria Maggiore, Michelangelo executed variations of the central plan type. Its length and its width are equal, as in a Greek Cross, but the crossing has been moved from the center toward the entrance, denying the possibility of radial symmetry. The plan of the chapel walls as well as the profile of the dome are an unprecedented segment of an oval in shape, a highly incomplete form. These curves are dissonant, and imply becoming rather than a state of being.

Michelangelo's taste for the oval can be seen in other projects, both as a decorative motif and in plans. Ovals are used again and again in the decoration of the Laurentian ceiling and in the entrance to the Palazzo Farnese. An oval pavement design was used to unify the three buildings project of the Capitoline Hill.\(^5^8\) The oval is used in the plan of the chapels of San Giovanni dei Fiorentini, and again in the interior room of an executed project which took much of Michelangelo's time,
1 Cl\(^2\) Michelangelo 1564-68


59 Ibid, p. 173

60 Ibid, p. 173

1560 Porta Pia Gate, Rome


62 J. Ackerman The Architecture of Michelangelo p.39

63 See p. D8

1523-52 Vestibule of Laurentiana


1564-68 Conservators' Palace at Campidoglio, Rome
Michelangelo 1564-68

65 Ibid, p. 203

S. Andrea in Via Flaminia, Rome Sta. Anna dei Palafrenieri, Rome

Vignola 1554 Vignola 1573
the tomb of Julius II. If executed, this tomb would have been the first building since antiquity to take the oval form.\textsuperscript{59}

In the design of architectural detail, Michelangelo displayed a freedom and disrespect for formal precedent which has become a hallmark of Mannerism.\textsuperscript{60} In the fortified gate of the Porta Pia in Rome, one of his last projects, he placed a segmental arch within the lower pediment, broke the segmental arch by removing its center, and lifted that curved portion high above to the top of the gate. In Hughes' words,\textsuperscript{61} "It is an audacious piece of sculptor's architecture." One of Michelangelo's best known details is the insertion of the columns into niches in the vestibule of the Laurentian Library. Although, as Ackerman points out,\textsuperscript{62} this was a device to make the walls conform to the limits of the existing foundation, it is probable that a Renaissance architect, such as Bramante, would have resolved the problem in some other, less startling, way.

Michelangelo was the first to introduce the use of the giant scale which would become an important part of the mature Baroque style. As we shall see later,\textsuperscript{63} this had some important implications for urbanism. His first use of the giant order was on the Conservators' Palace facade at the Capitoline Hill. Here the whole of the facade was contained within a single order of big Corinthian pilasters resting on pedestals and supporting an entablature scaled to the total building height. In his concern for big scale, Michelangelo presaged the Baroque more even than many of the Mannerist designers who came after him.

**Projects by other Italian Mannerists**

In the three major ecclesiastical projects of Giacomo da Vignola, we can see the reintroduction and evolution of axiuality.\textsuperscript{64} His first church was a small one, Santa Andrea in Flaminia in Rome designed for Pope Julius II in 1554. This is the first built example since the Roman tombs of a building with an oval dome. What he has done is to take a square building with pendentive dome and stretch it along one axis to give a kind of extended central plan. The next step would be to extend the oval shape to the plan, and this is what was done in one of his last projects, Santa Anna dei Palafrenieri, begun in 1573 and completed by Vignola's son. The space here was also covered by an oval dome.

Vignola's other church, though not last chronologically, represents the final act in the return of axiuality. It is the longitudinal church of Il Gesù in Rome (1568). This was one of the most influential churches of Mannerism,\textsuperscript{65} and was copied many
Palladio and Scamozzi
1580

II Gesu, Rome
Vignola 1568

LONGITUDINAL SECTION LOOKING S.

Teatro Olimpico, Vicenza
Palladio and Scamozzi  1580


67 See p. D16


71 E. Bacon Design of Cities
   p. 84


73 See p. B26

times both in Italy and in other countries. Its influence as well as its form were
due largely to its position as the mother church for the Jesuits, the militant, newly
formed implementors of the Counter Reformation. A nave was needed to seat a
large congregation, and all of them were to be able to hear a sermon, an important
part of the new religious service. Thus, the nave was held wide and covered with
a barrel vault for acoustical reasons. The transepts are stubby, and a circular
dome covers the crossing.

According to Pevsner and Wurtenberger, there was the tendency for
Italian Mannerists to intensify the expression of movement and axiality to the point
of producing tunnel-like spaces in many instances. This creates what Pevsner
calls a "magic suction effect," which tends to pull the visitor along irresistibly.

One previously mentioned example of this kind of space would be the Laurentian
Library. Another would be the gallery at the Palazzo Ufizzi in Florence by Vasari
connecting the Piazza della Signoria with the River Arno. It consists of two tall
wings of the Palace and the shaft-like space between them. As an important feature
of the Piazza, linking the larger civic space with one of the "forces of the region," this
gallery properly belongs to the realm of urbanism as well as architecture. The
Cathedral at Mantua also tends to be perceived as a tunnel-like space, according
to Pevsner. This church by Giulio Romano has a trussed-over nave with mono-
tonously repetitive Corinthian columns and straight entablature. The interior is
Early Christian in feeling, and its rhythm is "irresistable." Another interesting
example is the stage background in Palladio's Teatro Olimpico done by his pupil,
Vincenzo Scamozzi. Here the devices of optical illusion were employed to
give the impression of several Ufizzi-like streets leading away from the stage.

With reference to examples such as those above, Pevsner even goes so far as to assert
that this "tendency to enforce movement through space within rigid boundaries is
the chief spatial quality of Mannerism." It is as if perhaps the Mannerist archi-
tects were intentionally making a formal overstatement of their break with the static
ideal of the Renaissance in order to get the point across. In their zeal to proclaim
their break with the spatial concepts of the immediate past, they have contradicted
its rules in the most forceful and extreme manner possible.

In addition to this extreme elongation of spaces, other peculiar things were
happening to building plans. One of the most famous Mannerist palaces is Peruzzi's
75 See p. D6


77 Ibid., p.238

78 Ibid, 141.
Massimi in Rome. Here he curved the whole front facade in order to recognize the street which had previously existed as one of the site boundaries. This was a foreshadowing of what would be an increased urbanistic concern on the part of Baroque architects.\textsuperscript{75}

The Renaissance mind would have found very disturbing the plan form of the Villa Madama at Rome by Raphael and others. The main facade was to have been a sweeping segment of a circle in plan (less than a semi-circle). The circle was sliced and left, open ended and incomplete. In addition, its round form seems incongruous with the orthogonal layout of the rooms behind. However unpleasant such forms might have been in the Renaissance, these kinds of dissonances and incongruities were perfectly acceptable and desirable to the Mannerist.

The Villa Giulia, according to Peter Murray,\textsuperscript{76} was probably influenced by the Villa Madama. It is the most famous of Vignola’s villa projects, which he did with the help of Amannati, Vasari, Michelangelo, and even Pope Julius II. It is thought that the house itself is by Vignola and the gardens by Amannati.\textsuperscript{77} In any event, we see again a cleavage of the circular form, leaving a composition in plan which seems open-ended and incomplete. The two main facades of the House do not seem related, and again a round facade screens interior spaces which are orthogonal. The form of the House is repeated in the garden pavilion. Both of these buildings set up an axis which is carried through the entire garden, but movement along this axis is thwarted in the middle by the sunken area, and the visitor must move off axis to continue, even though the axis remains clearly perceptible. This kind of conflict was what the Mannerist designer was seeking.

A conscious attempt to shock the visitor can be seen in the details of Giulio Romano’s Palazzo del Te at Mantua. As Peter Murray stated,\textsuperscript{78} the whole building “is full of surprises and contradictions which are obviously intentional and which, furthermore, were intended to appeal to a highly sophisticated taste since most of the established rules of architecture are deliberately flouted in such a way that the educated spectator is intended to feel a thrill of delicious horror.” For example, in the courtyard wall, certain of the triglyphs have slipped below the line established by the bottom of the architrave as if dislodged by an earthquake. Some of the keystones of the window arches appear to have slipped down into the space of the arch itself, thus contradicting the impression of stability which the keystone of an arch
Palazzo del Te, Mantua
Giulio Romano  1526

Courtyard wall at Palazzo del Te

Garden facade at Palazzo del Te
is supposed to give. In the garden facade of the main house, Romano has composed a disturbing arrangement of columns and pilasters, which although organized, gives the first appearance of being chaotic. The design is both subtle and consciously asymmetrical, and requires for its appreciation a sophistication of taste which is not common among non-intellectuals in any era.
Plan of Uffizi Gallery, Florence
Vasari 1560

Campidoglio, Rome
Michelangelo 1564-68

79 S. Lang "The Ideal City from Plato to Howard"
Architectural Review
August '52 p. 90-101

80 J. Ackerman Palladio p. 112

81 See p. B26
82 See p. C10
83 See p. C22


85 Ibid, p. 84

87 See p. C22


89 Ibid, p. 146
III. MANNERIST URBANISM

There is actually very little work to examine in this area, but what was done will serve to point up the direction which urbanism was taking in sixteenth century Italy.

Although Palladio stressed the connection between building and vista and advocated wide streets in cities, he was still interested in small parts and did not think of the city as a whole. Perhaps the only work which might be related to Palladio at all in terms of urbanism would be that of his pupil, Vincenzo Scamozzi. In the handling of architectural detail Scamozzi was less rigidly classicistic than his master had been, but the radio-concentric city plans which he produced were very much in keeping with the Trissino-Palladio brand of Humanism.

The Ufizzi Gallery in Florence has already been mentioned as a project belonging to the areas of both architecture and urbanism. According to Bacon, it was the purposeful act of Cosimo de'Medici. He wanted to cut through the jumbled area between the Piazza della Signoria and the River Arno, and commissioned Giorgio Vasari to execute the Gallery as both a practical and symbolic link between the town center and one of the "forces of the region which sustains the city." Seen in this way, the space does not seem anti-climactical as some have suggested.

The nature of the space has already been discussed.

Probably the most important project of Mannerist urbanism is the work done at the Piazza di Campidoglio by Michelangelo. He began in 1538 on the orders of Pope Paul III to try to bring order to this hill which was the seat of secular government in Rome. According to Paul Zucker, what Michelangelo produced was an almost perfect transition into Baroque urbanism.

The final form of the square was trapezoidal. Some writers have pointed to this as an example of what was to become Baroque illusionism. The visitor tends to perceive the sides as being straight, and this makes the Senator's Palace appear to
be closer than it actually is. This is true, but we cannot be entirely sure whether
Michelangelo preferred to use the trapezoidal shape or not, because it was actually
predetermined by the angle of the existing Conservator's Palace. 90

The square's strong axial quality and the sense of climax at the Senator's Palace
had to be intentional, however, and these qualities were to become important aspects
of the matured Baroque esthetic. 91 The facades of the two side buildings were held
low by Michelangelo, and had loggias opening directly onto the ground level of
the square. He then proceeded to do what he could to make the Palazzo Senatori
appear taller. The ground floor was clearly demarcated as a base element with the
application of a more rusticated stonework and a distinct line above it. A double
set of monumental stairs was erected to emphasize the main entrance at the second
floor level. Michelangelo also designed a new central tower to replace the asym-
metrical Medieval one. All of this tended to emphasize the role of the Senator's
Palace as the climax element in the movement along the axis set up by the new
flanking facades and stairway from the bottom of the hill.

To further unify the Piazza, Michelangelo designed an oval pattern for the
pavement with its long axis coincident with that of the square as a whole and with
its centroid at the previously placed equestrian statue of the emperor Marcus Aurelius.

Another of Michelangelo's projects which has some implications for urbanism
was the Porta Pia structure, 92 which was designed much taller than would have
been necessary for it merely to serve its function as a gate. It can be seen both
as a symbolic entrance form for the visitor entering the city and also as a vertical
point of emphasis to climax the movement along the Via Pia within the city itself.

These examples, though few in number, serve to illustrate the general trends
in urbanism. The classicist group of designers, which had been led in architecture
by Palladio, would tend to perpetuate the radial city form, and "Renaissance"
cities would continue to be designed for some time. As an example of this, Gran-
michele, a previously mentioned example of a radio-concentric town which was
actually built, 93 was not completed until the late seventeenth century (1693)
when the Baroque was firmly established in all of the countries of Europe.

The other, more widely accepted, trend in urbanism was led, as Mannerist
architecture was, by Michelangelo. It had completely rejected the static in city
planning and was already well along in its development toward the mature Baroque.
BAROQUE
1 Op.cit., King p. 654

2 Ibid, p. 654

3 See map p.296 J.P. Trevelyan
   A Short History of the Italian
   People p.275 also Salvatorelli
   A Concise History of Italy
   p. 438-443


5 Ibid, p. 633

6 Op.cit., Burckhardt p.456,
   pp. 279, 280

I. INTRODUCTION

Events of the times (circa 1600-1700)

Although the first part of the seventeenth century was an interlude of relative calm, this soon changed, and the middle of the century saw a period of war. Initially the conflicts were of a religious nature, but soon they began to take on the character of nationalistic wars. France, England, Spain and the Low Countries were emerging as national entities. Germany, though remaining politically fragmented, was developing some feeling of nationalism among its peoples. Only Italy remained as a completely non-unified area, still retaining the city-state polity of the Renaissance, with many areas still held under the hegemony of Spain. Outside of Italy, kings proclaimed rule by divine right and built new national armies for maintaining control and extending national interests.

The Catholic Church was busily engaged in attempting to repress the various Protestant movements. Germany had become largely Lutheran and suffered bitterly during the fighting of the Thirty Years' War. In France, the internal wars against the Huguenots were as much political as religious, and were important in removing the barriers to the formation of the absolute monarchy there. Henry VIII had engineered the secession of England from the realm of Papal control by setting up the Anglican Church. And, in the meantime, Calvinism had spread out from its origins in Switzerland. The tendency operating throughout these movements was toward the division of Europe into basically a Protestant North and a Roman Catholic South. Italy and Spain remained unwaveringly loyal to the Papacy, and France remained loyal too, but not without internal struggle and ambivalence on the part of political leaders.

The foundations of modern science and academism were being laid. For the first time a "world sense" began to appear—the amazing vanity of this earth, its peoples, nations, oceans, was becoming known. Men were abandoning classical


10 Op.cit., Burckhardt
   Chapt. V, part VI


12 Op.cit., Burckhardt
   pp. 547-550
authority and relying rather upon their own research. Dissections of the human body by Vesalius (1543) had revealed fallacies in the work of Galen. The work of Galileo (1632) was immensely important as he confirmed Copernicus' theories of 1543. Boyle formulated his laws of gas expansion; Harvey discovered the circulation of blood (1616), Brahe and Kepler began to discover laws governing the motion of heavenly bodies (1580-1609); Leeuwenhoek invented the microscope; Pascal formulated the concept of infinity in mathematics. And then later came the giant of science, Sir Isaac Newton (1642-1727). After inventing a new math to treat of the processes of movement and change (which he called the calculus), he formulated the Newtonian Synthesis, a comprehensive outline of the behavior of physical bodies as they interact through the pull of gravity. It was an exciting period of scientific discovery and the overturning of old beliefs. How would men of religion react to such times?

It was difficult to retain faith in traditional religious beliefs with so much change taking place, but men adapted their attitudes to make room for both the discoveries of science and the basic tenants of Christianity. Some did not adapt, however, and after 1660 there was a noticeable increase in secularism and skepticism. The men of the Renaissance had felt so confident in their discernment of the truth that there was no doubt but that further learning would tend to confirm their concept of mankind and the universe. The discoveries of science had tended to disrupt and destroy this picture of things, however, and adjustments had to be made to allow religion and science to coexist. One way of adjusting was the abandonment of attempts to rationalize salvation and religion in general. Religion became more mystical. The salvation experience was now thought of as a more emotional and mystical experience through faith, and not something to be understood in terms of reason. The drama of salvation was even greater in light of man's decreased stature in the scheme of things. The element of faith, belief with a more subjective and emotional basis, increased in importance. One could not explain or understand the nature of salvation in terms of science, so therefore it was best not to try, but to accept it through faith and appreciate the miraculous nature of the religious experience. In matters of the spirit, one should rely upon feelings rather than rationale.
13 Op.cit., Wolfflin chapter on movement

14 World Architecture T. Copplestone, ed. p. 265


See also Artz, p. 181

18 See p. C28


Aspects of the Baroque Esthetic

The developed Baroque showed a maturing and sophistication of the Mannerist tendency toward dynamism. The act of design became one of expressing movement in all of the arts. The tense proportional relationships favored by the Mannerists held their popularity, as the more elongated forms of oval and extended rectangle were well suited to the Baroque desire for movement. Axiality was retained from Mannerism and intensified, and it is a truism that the linear quality always implies movement, whether in science, mathematics, or art. Perhaps the quality of movement in art could have been in direct response to the scientific emphasis upon the dynamics of existence, upon change and function rather than morphology.

There seemed to be an element of the dramatic in everything men did, which was reflected in art. The stage itself increased in importance with the invention of opera in Italy and with Shakespeare's rendering of the dramatic tragedy as a popular and dignified art form in England. Whether these developments affected the stage-like quality of the political and religious events which were occurring, we do not know, but now architecture and even the city came to be thought of as a backdrop for theater-like pageantry and display.

As the theater dealt with images and illusions, so did the other arts. Illusion was considered to be more beautiful than reality. The Baroque designer mastered the techniques of optical illusion in order to gain the desired experience, just as science was demonstrating that reality perceived by the senses does not necessarily agree with what a deeper analysis might show.

As emphasized by Wolfflin in his early book on the Renaissance and Baroque there was a change in scale. Beginning with Michelangelo's use of the giant order at the Capitoline Hill, there was a new preference for bigness of scale. The ancient ruins were now admired not for their proportion or detail, but for their grandeur and colossal aspect. This is not to say that intimate and intermediate scales were ignored, but that in addition to these was overlaid a new level of concern with the really big.

The Relationship of Baroque Architecture and Urbanism

It is generally accepted that the Baroque church, and Baroque architecture in general, represents a unification of the visual arts. It has even been asserted
St. Andrea al Quirinale, Rome
Bernini 1658-70

S. Carlo alle Quattro Fontane, Rome
Borromini 1638-41

S. Ivo della Sapienza, Rome
Borromini 1642-50
that the total package must also include Baroque music for the experience to be complete. Certainly architecture, painting and sculpture were no longer autonomous disciplines in the church and palace, and worked together toward an effect which was more striking than that which could be achieved by architecture alone.

In much the same way, Baroque architecture and urbanism are related in a sort of symbiosis. The Baroque architect, more than his Renaissance predecessors ever had, began to give deference to the larger scale concerns of urbanism. The urbanist (who was often also an architect) considered in turn the effects of public space upon buildings and how to best take advantage of and enhance existing structures. As evidence of the new concern, consider some of the devices used by Baroque architects to relate their buildings to the larger framework of the city:

1) Manipulation of scale - The development of the giant order was a means of long distance communication, of making facade read from the furthest extremity of a piazza or from a distant point along an avenue. The element of time and change of vantage point was usually considered, through successive changes in scale as the visitor moves closer and closer to the building. This gradation of scale can be seen in Bernini's facade for St. Andrea al Quininale, in which there are three scales ranging from the giant to the much smaller one of the decorative treatment around the door. All three were designed to be read at certain distances, and the presence of the largest scale indicates an architect-urbanist's concern for more than the immediate space in front of the facade.

2) Allowing the building exterior to recognize a corner site. This is seen in S. Carlo alle Quattro Fontane by Bonomini. The corner was lopped off and a niche with decorative emphasis and fountain was placed there to call attention to the corner. The building facade has recognized the street, as Peruzzi's Massimi Palace (Mannerist) had done earlier in a different way. It holds one of the four fountains at the intersection of Via Pia with the Strada Felicce.

3) Curving facade to complete an existing open space. This can be seen in another of Borromini's churches, S. Ivo della Sapienza in Rome.

4) Designing a facade as a backdrop for a civic monument. An important part of Pope Sixtus V's plan for Rome was the placement of four obelisks at the terminal points of the movement system. One of these was positioned in front of the existing
Piazza del Popolo
with Rainaldi's twin churches 1700

S. Maria Maggiore, Rome
with Sixtus V's obelisk

St. Agnese, Rome
Rainaldi 1652

Piazza Navonna, Rome


26 Ibid, p. 133-135

27 See p. C28

church of S. Maria Maggiore. After this was done, both Bernini and Carlo Rainaldi submitted designs for the regularization of the church facade. Bernini's design, in spite of his tremendous prestige, was not chosen largely because it was thought that Rainaldi's facade would render the obelisk more visible.25

5) Design of buildings to be climax elements in a system of movement. Rainaldi's facade for S. Maria Maggiore was thought also as a suitable screen to climax the movement along the axis which had been set up by the obelisks.26 We have seen this concern earlier in Michelangelo's treatment of the buildings for the Capitoline Hill.27 Here, he held the two flanking facades low and kept their entrances at ground level. This, plus the monumental stair, tall facade, and tower of the Senator's Palace made this latter building appear all the more imposing and climactic.

6) Dome placement. In S. Agnese in Rome Rainaldi let the nature of the square (Piazza Navonna) determine the general configuration of the building's parts, and especially the placement of the domed space. The shape of the Piazza Navonna, which followed that of the old Roman Circus, allowed the building to be seen at a distance only at oblique angles, and to be viewed from only a short distance in front. Placement of the dome near the front of the church allowed it to be seen from all parts of the square and provided a vertical point of emphasis for the whole space. Later, Bernini, in the placement of the central fountain and obelisk of the Piazza, moved this focal point slightly off the central axis in order that the full effect of S. Agnese' curved facade could be retained. In this square and its church we see clearly the kind of reciprocity of concern between architecture and urbanism which characterized their symbiosis.

7) Another interesting, and unique, example of a Baroque architect expressing urbanistic concerns in his buildings is the twin church project by Rainaldi for the Piazza del Popolo in Rome. He felt that two churches exactly alike would enhance the Piazza as a gateway kind of space. He therefore designed two churches which were identical in appearance, though somewhat different in plan due to site conditions. The entire justification for these two churches, S. Maria del Miracoli and S. Maria di Monte Santo, was the role which they played in the larger design structure.28


Madonna di S. Lucca, Bologna Dotti 1723-57


St. Carlo alle Quattro Fontane, Rome Borromini (second plan)

33 See p. D8

34 Op. cit., Hamlin p.426

St. Andrea al Quirinale, Rome Bernini 1658-70
II. THE BAROQUE ESTHETIC IN ARCHITECTURE

The typical large Baroque building was the stage setting for a drama. Pomp, pageantry and display became an increasingly important part of the lives of the rich and the workings of the church. Baroque architecture, especially church architecture, usually bears the attribute of "emotionalism." Baroque detail became a matter of increasingly free modification of the classic forms, in Talbot Hamlin's words, "to make them sensitive to every possible nuance of emotional expression." Perhaps the architecture might be thought of as an externalization of the drama and excitement of the salvation experience. The altar, the mystical center of the church, was given the most lavish decorative treatment. It was, in fact, built up as the climax point of the church's interior. The irregular disposition of ornament reinforced the system of movement and climax, which were basic parts of Baroque composition.

The tense proportional relationships are seen in architecture both in plan shapes and in decorative motives. Although the central plan church was not to disappear for some time, an increasing number were now oval.

There was an increasing use of curved lines, both in facades and in plans. The undulating facade seemed always on the point of change, moving, and this was, of course, desirable. Borromini's church of S. Carlo was the first to use this device, and soon so many others were curving too that this feature is one of the first to be thought of when Baroque is mentioned with regard to architecture. As we have seen, this can be, and often was, used to relate to the space around the building.

The new emphasis on motion led to a study of the relations between rooms and spaces in buildings. But no longer was harmony the goal. Contrasts were used to create an interesting and dramatic sequence—contrasts in plan shape, in volume, in lightness and darkness, and in the type of interior finish. Square rooms alternate with round. Rooms and vestibules that are dim contrast with spaces where light is a blaze.
Palazzo Barberini, Rome
Maderna, Borromini, Bernini 1628–33

Villa del Pigneto, Rome
da Cortona 1620's
from large windows. Rooms of grey stone or white plaster are contrasted with the richness of carved wood and the brilliance of gold in the rooms which follow.

Special treatment was given to stairs. Their placement and design assumed a new importance. New monumentality for stairs was needed to provide a suitable stage for the ceremonial coming and going of important people. It would seem that hillside sites were often preferred because of the possibilities offered for interesting and monumental stairways. In the Barberini Palace, for example, (Maderna, Borromini, Bernini) one experiences a dramatic sequence as one passes from the deeply recessed entrance, reached through a series of arcaded vestibules, and then up a complicated monumental staircase to a garden on an upper level behind. Also an even larger grand staircase winds from the entrance vestibule to the Grand Solon of the floor above, and there are, of course, several other smaller staircases.

The plan of the Barberini is no longer the compact, introspective type of palace plan which had been so popular in centuries past. Although the cortile type plan was not to disappear, there was still a noticeable increase in the tendency to create plans with outward extensions. Pietro da Cortona's Villa dell Pigneto near Rome is another example of a non-compact type palace plan which has been situated on a slope. A series of monumental stairways and landings take one to the great central niche which is the main entrance. The villa facade itself seems like a theatrical screen to provide an appropriately dignified background for the patterns of ceremonial movement going on before it.

The Baroque desire for interesting sequential effect was so strong that everything else in palace design was secondary. There was little concern for functional relationships, little attempt to make the palace facilities easily serviceable. Privacy did not exist. Bedchambers, more monumental than comfortable, often doubled as hallways to other rooms. Kitchens were usually kept out of the way on the ground floor, and far removed from the dining spaces. But the inconveniences apparently were tolerable to the rich who inhabited these palaces. If anyone complained it was perhaps only the multitude of servants who were required to keep the building functioning.
37 *Op.cit.*, Wolfflin p.91


As pointed out by Wolfflin,\textsuperscript{37} one of the most significant architectural changes was the return to favor of the longitudinal plan for churches. Although the centralized plan continued to hang on, especially in Northern Italy, there was more and more pressure to return to the use of nave. According to Wolfflin,\textsuperscript{38} Vignola's Mannerist church of Il Gesu became the archetypal Baroque plan. Its progeny in the Baroque period were many both inside Italy and in other parts of Europe, partially because of its position as home church for the Counter Reformation, and partly because it just happened to be what many people would be looking for. The longitudinal Italian Baroque church was different from that of Gothic architecture (providing one does not consider the Duomo of Florence as a truly Gothic plan) in that it contained two interacting elements: a dome and a dominant axis. The dome now served as a spatial magnet, its height and luminosity drawing the visitor along an axial path into its presence. The use of the barrel vault in Il Gesu turned out to be a popular device in later churches also, probably for several reasons: 1) its acoustical advantages in the Jesuit preaching service (this was the primary reason for its use by Vignola);\textsuperscript{39} 2) its suitability of surface for painting; and 3) its strong directional quality.

Some examples of Baroque churches using the elements of the dome and axial extension are shown to the left.

The most striking example of the tendency back toward longitudinal churches was, of course, Maderna's addition of a nave to St. Peter's Cathedral. This cannot be explained in purely liturgical terms, since the clergy had been managing here with the central plan and was continuing to do so in churches all over Italy. It must be attributed in great part to the change in esthetic from the static to the dynamic. Maderna chose to use a barrel vault to cover the nave and smaller domes over the side chapels. It is interesting that the nave he designed was not very long in proportion to the size of the older, centralized portion. Perhaps this was an attempt to retain some of the magnetism of the domed space, so that its influence can be felt as one enters the nave.

St. Peter's also provides the most colossal example of the previously mentioned change of scale, both in its facade and in the evolution of its plan. The facade, taken as a whole, is huge and flat to the point of being overwhelming. Its tremendous
St. Peter's, Rome
Maderna's facade 1606-12

St. Peter's, Rome
Bramante's plan 1506

St. Peter's, Rome
Michelangelo's plan 1546
order could be read from half a mile away. There is one downward step in the scale, but perhaps another step should have been articulated as in Bernini's St. Andrea al Quirinale, because it seems that most people have difficulty in relating the human body strongly enough to the facade to perceive its full size. The change of scale which came with the Baroque can also be seen in a comparison of Bramante's plan for St. Peters with that of Michelangelo. In Bramante's plan, the space is broken up, articulated into more autonomous areas than in Michelangelo's plan. The four chapels at the corners echo the cruciform shape of the big crossing and somewhat mitigate the impact of that central area. Michelangelo, however, decreased the size of the subsidiary crossings to the point where they hardly count. There is an increased heaviness, a beefing up of the whole plan which tends to harden the impact of the big crossing. The interior piers are now so large that each could contain the entire church of St. Carlo alle Quattro Fontane.

Conclusion to Baroque Architecture

Architecture in the Italian Baroque had become an event, the expression of directed movement and a background for display. Through the exploitation of the resources of painting and sculpture to supplement its own powers, architecture sought and attained a state of dynamism in physical form.
See p. D6


L. Mumford The City in History Harcourt, Brace, and World, N.Y. 1961


Ibid, p. 122

III. THE BAROQUE ESTHETIC IN URBANISM

In seventeenth century Italy there was, as stated earlier in this thesis increased evidence of urbanistic concern on the part of architects. As Bacon stated, "The design vitality began to spill out of the building into the streets of the city around it." There came to be a new awareness on the part of everyone of the problem of the city as a unified thing, and of the togetherness of architecture and urbanism as a means of developing that unity in a physical way.

In the Baroque a new value was placed upon city planning. One reason for this must certainly have been the fact that the Medieval towns had undergone a period of growth, both economically and in terms of population, which brought with it the usual problems of crowding, increased traffic, difficulty of movement, etc. The kind of growth which characterized Medieval towns and which had persisted during the Renaissance (sometimes called "organic") had left a highly irregular network of streets connecting major civic spaces only in a haphazard sort of way. The movement system of a Medieval city could be described as labyrinthine, and has also been called, perhaps with some bias, "chaotic." This pattern seemed to function well for local people who knew the city well and could negotiate circuitous routes to their destinations without getting lost. But with the increase in traffic, both of pedestrians and wheeled vehicles, the narrow, winding streets functioned less and less well. This was especially true in Rome, not entirely because of local population growth, but also due to the continual flow of religious pilgrims to visit St. Peter's and the six other votive churches scattered over the city.

Outside of Italy, the increase in the activities of the military made evident the need for new consideration of street patterns. Troops marching in formation found it difficult to maintain order in the twisting, turning and narrow passages of the Medieval city. Also the transporting of wheeled cannon was slow and inconvenient.
S. Giedion Time, Space and Architecture p.133
It was the idea then which was the real force in the structuring of Baroque Rome, not despotic power. This idea was an expression of the Baroque esthetic. The space concept of Baroque city planning is analogous but not identical to the concept of space in Baroque architecture. In fact, according to Zucker, this space concept "may be compared...with the concept of space in a painting by Rubens, in a sculpture by Bernini, or the interior of a Baroque Church." Then one would expect to see, as specific urban projects are examined, the qualities of dynamism (implying consideration of the time element: sequence, climax, etc.), drama and illusionism, and monumentality of scale.

During the Baroque in Italy, urbanism was clearly centered in the city of Rome, just as Baroque architecture had been. The instruments of the urbanist, as Sixtus V's plan for Rome will show, were squares and axes with their architectural and sculptural reinforcements.

Pope Sixtus V and Baroque Rome

In 1585 when Sixtus V ascended to the Papal throne, Rome was a sprawling, disorderly city, taking up about one third of the space enclosed by the ancient wall of the emperor Aurelius. The population of Rome was still relatively small, considerably less than ten percent of what it had been a millennium before. Zucker gives these figures for the population of Rome: 35,000 in 1458; 55,000 in 1526; 80,000 in 1580, or the time of Sixtus V; and about 124,000 in 1691. Aside from Michelangelo's three building group at the Capital, there were no contemporary attempts to relate buildings and spaces in a design sense. The rest of the city (perhaps I should say "town") was the crowded, jumbled Medieval pattern interspersed with a few churches, vineyards, and ruined ancient monuments.

In spite of its small size and disorderliness, Rome was nevertheless a very important city. Ever since the late Renaissance it had been the focal point of Italian culture, with few native-born artists but with the power to attract the best from other cities. And, except for those periods known as the "Babylonian Captivity" and the "Great Schism" when the Popes had resided at Avignon, Rome had been and continued to be the undisputed capital of world Catholicism. So, naturally the popes began to consider how the city might be improved in order to be a more fitting capital for
Plan for new avenues in Rome
Pope Sixtus V 1585-90

56 See p. D20


58 C. Tunnard The City of
Man p.78 Charles Scribner's Sons N.Y. 1953
Christendom. They were especially aware, too, of the competition from other European cities in the sense that Rome was the physical and spiritual nucleus of the Counter Reformation and as such should present a more impressive appearance than the cities of Northern Europe. Rome, as said earlier, was the goal of great numbers of religious pilgrims who came to visit the seven votive churches to receive pardon for their sins. This was all the more reason why Rome needed the imposition of an orderly movement system upon its environment of chaos, and it was largely in deference to the needs of these pilgrims that Sixtus V's plan for the city found its form.

Sixtus V's system began with the Porta del Popolo in the northern wall of the city. Converging upon the small piazza there were three existing streets: the westernmost (Via Ripetta) leading directly to the Porta Ripetta at the Tiber River, the center street (now the Via del Corso) penetrating into the heart of the city to the general area of the Capital, and the easternmost (Via del Babuino) leading in a straight line to the area which would become the Piazza di Spagna. To these existing streets, Sixtus envisioned the addition of a fourth leading directly from the Piazza del Popolo past San Trinita dei Monti, intersecting the Strada Pia and moving still in a straight line until reaching a terminal point at the church of Santa Maria Maggiore. Not all of this fourth street was built, however, only the part between the two churches, which is called the Strada Felice. The Strada Pia was already in existence, leading from the Dioscuri to Michelangelo's Porta Pia structure which climaxed its movement at the northeast wall. From the piazza of Santa Croce in the extreme southeast corner of the area within the Aurelian Wall, another new street was to lead, also in a straight line, from Santa Maria Maggiore to San Giovanni in Laterano west of Santa Croce. From this point another new route was to lead to the Coliseum.

It was Sixtus' intention then to link together most of the major churches of Rome and the Coliseum with the main entrance points in the city wall. He organized his plan on the basis of certain pieces of existing architecture and existing squares associated with these buildings and city gates. His plan has been called in some measure a response to the popular desire for easier access to the various points of pilgrimage in the city. It was a response to public wishes, but was also generated by a simple desire to bring about order, and, moreover, a Baroque kind of order to the city of the Papal See. He established this order by connecting vital points with great axes,
60 Ibid, p. 117
61 Ibid, p. 138
62 Ibid, p. 136
63 Ibid, p. 129
"lines of design energy" as Bacon calls them, which established spatial tensions between existing points.

The new channels of movement not only related existing buildings and spaces to each other and to the city as a whole, but also provided a framework to work within later and an impetus for the design of new buildings to enhance the movement experience within the whole structure. In time, new buildings and facades went up, and existing squares were more firmly articulated to serve the larger system.

The reign of Sixtus V lasted only five years, and the actual physical accomplishment at the end of his life was small. As a physical beginning of his system of order, Sixtus hit upon the idea of erecting Egyptian obelisks (of which Rome already had a number) at key terminal points along the movement system. In his lifetime he saw the erection of the obelisks at the Piazza del Popolo, the west end of Santa Maria Maggiore, the front of San Giovanni in Laterano, and in front of St. Peter's. A later obelisk was erected before San Trinita dei Monti. With the erection of the obelisks the idea of order had been implanted, and the idea was powerful enough to continue to shape the forms of buildings and piazzas long after Sixtus' death.

Sixtus also was the overseer, along with his architect-engineer, Domenico Fontana, of the bringing of water to the parts of Rome which he wanted developed. The ancient aqueduct from the Alban Hills was repaired and used to supply the area of the new Strada Felice. To symbolize the bringing of water, he erected a great fountain, the Aqua Felice, halfway between the Porta Pia and his own Quirinal Palace. Sixtus also erected four fountains at the corners of the intersection of the Strada Felice and Via Pia, one of which was eventually incorporated into the facade of San Carlo alle Quattro Fontana. Bacon suggests that the four fountains and their screens were erected to provide a symbolic foreground to frame the impressive views in all four directions at this intersection. In any case, the new water supply was part of a series of Papal inducements to get people to move into the area and build along the new streets.

After the death of Sixtus V in 1590, the power of the idea lived on, and new structures were erected which complemented and reinforced his movement system. The Piazza del Popolo (which will be discussed later) was enlarged and surrounded by structures defining its form. The church of San Givolama degli Schiavoni was built...
64 Ibid, p. 145


67 Ibid, p.120

as a terminus, along with the Porta di Ripetta, of a connecting street from the Piazza di Spagna. The Spanish Steps were built which acted as a substitute for the fourth, unbuilt street radiating from the Piazza del Popolo by linking the higher terminus of the Strada Felice with the lower plane of the Via Balbuino. Two later projects already mentioned were the dual churches of Santa Maria del Miraroli and Santa Maria di Monti Santo by Carlo Rainaldi, and the regularization of the facade of Santa Maria Maggiore, also from a design by Rainaldi. In both cases, the final form of the architecture was largely due to a consideration of their roles in the larger movement system. In the realization of Sixtus' plan we can see clearly the kind of interaction between architecture and urbanism which characterized what I have called a "symbiotic" relationship—one which operates to the advantage of both partners and results in a working unity which is stronger in effect than that which could be attained otherwise.

As Bacon emphasizes, the topography of the city played an important part in the final character of Baroque Rome. It has been suggested that the city of Rome seemed predestined with its hills and valleys to become eventually a city of Baroque-style vistas and sequence. Sixtus' streets were cut uncompromisingly across the terrain, tense and straight in plan, stretching without interruption between anchor points. The process of movement along these streets, however, was one of rising and falling. A series of changing vistas, of distant views of the architectural termini of the system, and the terrain all combined to produce the kind of sequential experience which was definitely Baroque in conception and scale. The emphasis here, as it was in Baroque architecture, was upon the time element and movement in time. The Baroque spatial configuration, as seen in both architecture and urbanism, might be described as the articulation of experience along an axial path of movement. We will see more of this in an examination of some specific civic spaces.

St. Peter's Piazza

This huge public space evolved its form from the influence of what Bacon calls "a point in space as an organizing force," the obelisk erected by Sixtus being that point. Bernini conceived of the square as being basically two parts, according to Bacon's account of its development, and three parts according to Paul Zucker.
St. Peter's Piazza, Rome
Bernini 1650-

69 Ibid, p.149
70 See p.C28

71 Op.cit., Zucker p.152


74 See p. D10
There was to be the piazza retta immediately before Maderna's church facade and the piazza obliqua, which would appear as an ellipse, though actually constructed as two half circles with an oblong rectangle between. Bacon discusses Bernini's intention to close the piazza obliqua with a continuation of the colonade, leaving only two small entrances. This would have precluded the possibility of an axial extension of the square. Zucker states that a third element, the Piazza Rusticucci, was a part of Bernini's plan and was to have been an extension of the long axis set up by the other two and the Church itself. The Piazza Rusticucci was to have been a collecting point which would direct visitors along the axis toward the Church. The piazza obliqua, with Sixtus' obelisk as its centroid, and its long axis perpendicular to the direction of travel, was to serve as an "arrest" to the movement set up by the spaces on either end, and it is this tendency toward "arrested movement" which Zucker sees as the hallmark of mature Baroque space as opposed to the earlier purely directional work of Michelangelo at the Capital.

The piazza retta is an example of Baroque illusionism. Its plan shape is trapezoidal with the wide end toward the Church. This was probably an attempt by Bernini to mitigate the effects of what he considered to be a too-wide Maderna facade. The visitor tends to perceive the colonades of the piazza retta as being straight, and thus the facade appears closer and somewhat narrower than it actually is.

Bernini used changes in elevation to emphasize the organization of the square. The piazza obliqua slopes gently downward to the obelisk at its center, and the piazza retta rises in slightly inclined terraces and long steps to the portico of the Church. As Giedion points out, the onlooker awaiting a Papal blessing can overlook the great congregation and at the same time see everything which takes place on the terraces immediately before the church.

**Piazza del Popolo**

This square was in existence before the reign of Pope Sixtus V, and had served as a receptacle for those visitors to Rome who came by way of the Via Flaminia, as the majority had done during the centuries since the decline of ancient Rome. The original trapezoidal shape, with Rainaldi's two gateway churches, contained a pure, directional type of movement and dispersed its forces into the various parts of the city through the three radiating channels.
75 Ibid, p. 149
In its final form, based upon the designs of Guiseppe Valadier about a century and a half after Rainaldi's churches, the obelisk of Sixtus V became the organizing element. Two flanking exedras were designed to enclose an oval with its long axis perpendicular to the flow of movement, and the obelisk at its centroid. On the east side Valadier designed a great stairway and ramp leading up to the Pincio Gardens, and the west side eventually was connected by a new street to the Tiber River. This created a well defined cross axis, an "arrest" of the type Zucker discusses. Zucker does not mention the final form of the Piazza del Popolo in his book, however, as one of the squares which are expressive of the Baroque kind of movement. Perhaps this is because the chronology does not fit: Valadier did his work approximately a century after the Baroque period is supposed to have ended. But the conception is Baroque; the final form of the square is that of a Baroque space, regardless of the fact that it was executed in the early nineteenth century. This points up some of the difficulties of trying to define "style" in terms of a rigid chronology. One can give approximate dates as a reference point, but it is a mistake to expect projects which are actually built to always fall within a set of dates. Just as there have always been many projects built which do not seem to conform to the tenants of the particular style of the times, there will also be projects which seem to be beautiful examples of a particular historical style (such as Valadier's plan for completing the Piazza del Popolo) but which are anachronistic.

Piazza of San Ignazio

The small Jesuit church of San Ignazio was begun in 1626 by Orazio Grassi, and its facade was erected by Algardi in 1649. The little piazza in front of the Church is basically a closed space completely dominated by the Church facade, and the shape of surrounding houses was determined in relation to the Church. The small triangular building across from the Church front contains apartments, but it is actually more like a free standing stage screen designed to counter the Church facade. Baroque illusionism is employed in the concealment of the incoming streets within the niches at the north corners of the square, making it seem closed on that side. At first it appears that the axiality which we have come to associate with the Baroque is not strongly expressed here. But, when one looks at the Church plan and the plan
Section of Rome, showing St. Ignazio

Piazza di Spagna, Rome

76 See p. D30

of the Piazza together, it becomes apparent that both are part of the same axial sequence of space—that this small square is like an extension of the Church interior. It becomes very much an outdoor room of the Church and is a part of the axial composition of spaces which includes both architecture and square. This is another example of how architecture and urbanism work together in the Baroque.

**Piazza di Spagna**

The Piazza di Spagna by Alessandro Specchi and Francesco di Santis represents a climax in the Roman development of grand and stagelike effects in the Baroque. Here the urbanist has exploited nature for esthetic reasons and to serve the practical needs of the city. The 137 steps of the Scala di Spagna, as mentioned earlier, provide a link in the movement system of Baroque Rome which compensates for the failure to extend the Strada Felice to the Piazza del Popolo. Although the center line of the steps is slightly turned from that of Santa Trinita dei Monti and the obelisk at the top of the hill, this was an accommodation to surrounding structures and tends to be much more perceptible in plan than in three dimensions. So, the axial feeling, if not the literal straightness of center lines, is present. Certainly this square, with its monumental stairs and piazza integrated, is a dramatic example of the Baroque love of movement, dramatization, and monumentality.
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