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The real and the ideal in Roman architecture

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2015-07-29
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The italics here are mine, for the point is basic to this whole thesis. The mediaeval concept of truth is an exception to the Italian attitude, and from the Renaissance onwards the Italian architect turns his back upon truth, and focusses his attention on appearances. For this reason he abandons geometrical proportion, and reverts to arithmetrical (or metrical) proportion.

> Of course metrical proportions were also used during the Middle Ages.....and geometry played an important part in Renaissance aesthetics.... During the Middle Ages metrical proportions were used as a practical expedient and never, or hardly ever, as an integrated principle to which all the parts would conform..... During the Renaissance, by contrast, metrical proportion was the guiding principle of order which would reveal the harmony between the parts and the whole. It is for this reason too that architects of the Renaissance, and not of the Middle Ages, fully embraced Vitruvius' wellknown module system which was the only way of guaranteeing a rational numerical relationship throughout a whole building. [26]

Now, as Vaccaro [27] has pointed out, the graphic properties of a projected figure on the retina remain constant even with a variation of viewpoint, while the metric properties under such conditions will vary considerably. In other words, mediaeval geometrical proportions were valid for buildings as seen in three-dimensional actuality, whereas Roman and Renaissance arithmetical proportions were valid only for idealized two-dimensional projections. The relationship to the Renaissance single-point perspective, and to the static, frontal viewpoint, is immediate and obvious; and the relationship of the theory of proportion and facadism emerges clearly.

The saving grace of Italian theories of proportion is the stressing of architectural unity.

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26. Ibid.

27. G. Vaccaro, "Harmony of Forms in Space and Time," trans. by D. Wilson, Architects Year Book:6, London, Paul Elek, 1955, p.12.

The leit motif is the relationship of part to part and part to whole, and this theme runs through all the developments of the theory, and finds its ultimate expression in the Crocean philosophy of aesthetics which underlie much of contemporary Italian art and architecture.

REALITY AND THE IDEAL.

"What moves us, inspires us, incites us is not satisfaction, but curiosity, wonder, endless search for ideal perfection. Such ideal perfection cannot be limited by necessity or contingency. (by functional needs); it must of necessity ignore and transcend the practical." [28]

Around this text Italian architects have woven their timeless story of achievement and failure. It has stimulated them to high flights of originality, it has cultivated a sensitivity to the nuances of form, it has injected boundless vitality into the history of Italian architectural development; but it also must be held accountable for the diversion of Italian creative energies into the stream of irresponsibility. "In Italy", writes Geoffrey Scott, "nothing is commoner than to find an architectural display wholly disproportionate, and even unrelated, to the social purpose it ostensibly fulfils." [29]

This may be regarded as the triumph of taste over the sordid shackles of utilitarianism, the eternal soul of man asserting itself in a manifesto of stone: or it may be regarded as a pathetic misdirection of talent. The picture of Italian achievement is clear,

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28. Herbert Read, "The Architect as Universal Man," Architects Year Book:7, London, Elek Books, 1956, p.8.

29. Geoffrey Scott, The Architecture of Humanism, London, Constable and Co., 1914, p.26.

but the interpretations are conflicting: is the Italian architect a David valiantly fighting the giant of materialism, or is he Don Quixote, tilting at windmills, and never coming to grips with reality?

Whatever the interpretation, however, one thing is clear. The Italian architect strove towards perfection, and in this search for the ideal he ignored and transcended the practical. Where practical limitations proved intransigent, and stood between the designer and his ideal goal, he sought out fields where these limitations could be set aside. We have already seen evidences of this in the many instances where he has designed for paper ideal rather than physical reality: and there are many other instances where he devoted his energies to the solving of problems of his own creation, ideal problems which by eliminating necessity prognosticated an ideal solution. "Hence it became the fashion to draw out visionary schemes of princely dwellings, and even of whole city quarters for the setting of these..." [30] Thus we have the ideal palace of Vasari and the ideal church of Leonardo da Vinci, Filarete's Citta Stellare, Francesco di Giorgio Martini, who left copious designs, most of them variations of two fundamental types, the radial and the rectangular, Cattaneo's geometrical town plans, and the ideal plans of Lorini, Vasari the younger, and Scamozzi, "Sempre ispirati a regolarita' e simmetria." [31]

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30. G. Vasari, Vasari on Technique, trans. by S.L. Maclehose, London, Dent & Co., 1907, quotation from the notes by G. Baldwin Brown, p. 139.

31. C. Chiodi, La Citta' Moderna, Milan, Hoepli, 1935, p.13.

These abstract exercises in design had parallels in other fields, particularly during the Renaissance. Burckhardt, for instance tells us of letters, written to all conceivable persons and parts of the world as exercises in ideal correspondence, and ideal speeches for imaginary occasions. [32]

Ideal plans were by definition paper exercises, not to be exposed to the harsh realities of actual execution. In one field, however, ideal conceptions were possible of realization. The creation of designs for the stage, although disciplined by dramatic considerations, were nevertheless freed from the conventional shackles of structure and plan, and we have a long tradition in Italy of architectural stage design, including Palladio's Teatro Olimpico at Vicenza, and the vast architectural fantasies of Guiseppe Bibiene and G.B. Piranesi. These architectural stage sets, divorced from practical necessity, become yet another manifestation of the search for ideal form, unrelated to reality.

These stage sets being transcendental, are not inhibited by actuality. It is significant that it is in the more transcendental aspects of contemporary design, the exhibition and the shop, that Italian architects of today have made their most valued contribution.

PLANNING IMPLICATIONS.

The conflict of a plan solved within the limits of a practical attitude, particularly in the matter of utility, and an elevation solved within the framework of an ideal formal preconception, was inevitably one with consequences both upon the aesthetics of the facade, and the efficiency of the plan. We have examined in some

32. J. Burckhardt, The Civilization of the Renaissance in Italy, trans. by S.G.C. Middlemore, Vienna, Phaidon Press, p.122.

detail the results of the conflict upon the facade: let us now therefore turn to an examination of the Italian plan.

I have already indicated the main lines of the problem, in my analysis of Rome, and I have shown how it was possible to approach the problem in two basic ways: firstly, to solve the plan functionally, and the elevation formally, and not attempt to relate the two, which leads to the screen facade and the columnar screen, as we have interpreted those terms; secondly, to compromise, to a greater or lesser degree, the functional validity of the plan to achieve a correlation with the preconceived formal expression. These two methods of approach are fundamental to the Italian design procedure: the third method, which is the seeking for a pleasing and appropriate formal expression of the functionally-derived plan, does not appear to appeal to the Italian designer "forever in love with form" as Furneaux Jordan has put it. It is inevitable that when, in the process of compromise which constitutes design procedure, priority is always given to formalistic considerations, planning aberrations will abound.

There are fundamental formal preconceptions which characterize Italian architecture throughout its historical development, and which each have important implications in the field of planning. It would be profitable to study some of the pre-occupations with form, which may be classified under the heads of visual order, symmetry, monumentality and symbolism. This classification is of course arbitrary, in the sense that the various sub-divisions can be shown to overlap; but it is a convenient classification, as it illuminates certain problems of facade: plan relationships.

Ernesto Rogers, in seeking the eternal verities of Italian architecture, suggests that "geometry sums up the variety of the themes of art and limpidly represents its poetic content." [33] This concept of geometry as the overriding discipline in architecture becomes the mechanism for achieving visual order. The Italian always strives not only for underlying but also apparent order, and picturesque informality has never been an Italian trait. Proportion is an important aspect of this search for apparent order.

In only two periods of Italian history has this discipline of geometry been abandoned, once in the Baroque, and latterly in the organic movement centred upon post war Rome. In both these cases the formalism of preconceived plastic form has been substituted as a straitjacket to legitimate functional planning. This geometry frequently implies a regular beat of windows, giving an undifferentiated elevation to what may be a differentiated plan, as in the Cancellaria, where the same windows march across the facade of palace and church; or in the new municipal market building in the Parioli district of Rome, where internal partition walls have to be cut obliquely to permit the opening of undifferentiated and uncorrelated fenestration; or in Gardella's famous flats in Milan, where the even beat of windows results in an unscreened bathroom window which extends from floor to ceiling.

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33. G.E. Kidder Smith, Italy Builds-l'Italia Construisce, foreword by Ernesto Rogers, London, Architectural Press, 1955, p.10.

One of the results of this demand for apparent order is the insistence on symmetry. This symmetry is usually external symmetry, the symmetry of facades rather than the meticulous symmetry of plans. Pevsner talks of the blank windows and similar contrivances which force into outward symmetry what could not be matched inside; and this consequence we shall study later. This approximate symmetry nevertheless implies a degree of control of the plan which militates against functional efficiency; and the total symmetry which Palladio introduced, the "systemization of the ground.plan,"as Wittkower [34] euphemistically calls it, further sacrificed efficiency and utility to formalistic ends. As Viollet-le-Duc trenchantly put it so long ago, but so aptly, it is very unreasonable of the architect

> to neglect to pay attention to the superficial dimensions of apartments so as to fix the height suitable to each of them; to light small chambers or passageways by windows having the same dimensions as those used for large apartments; to make lateral corridors obstruct all the light from one of the faces of the building; staircases cut across the middle of window openings; mezzanine stories at the expense of large windows, so that a given architectural style, ... may not be interfered with. [35]

Viollet-le-Duc was writing of the Renaissance, but his criticism of planning aberrations caused by formalistic concepts is applicable to the whole range of Italian architecture, and not least to the Architecture of the present day.

The question of symmetry is linked with the desire for monumentality, as our analysis of Rome has made clear. Both Summerson and Wittkower have commented

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34. R. Wittkower, op. cit., (Architectural Principles) p. 63.

35. E. Viollet-le-Duc, Rational Architecture, trans. by G.M. Huss, New York, Macmillan and Co., 1895, p.281.

on the relationship of the concept of monumentality to the plan form. Summerson first establishes the fundamental monumental character of Italian building, and then discusses the disadvantage of plan-articulation where monumentality is desired; [36] Wittkower states the same point this way "In contrast to French and English, most Italian monumental architecture is cubic and conceived in terms of a solid three-dimensional block." [37]

This cubic form is basic to Italian architecture, and public buildings, farmhouses and apartment houses are all moulded to this form. The result is a cramping of planning, a profusion of inner courts, and a complexity of circulation which mars Italian planning to the present day.

The aspect of symbolism also effects planning. Let us take as an illustration one example. The centrally planned church was the ideal to which many Renaissance architects, from Alberti onwards, directed themselves. These central forms derive from symbolic considerations, Alberti eulogizing the circle as Nature's perfect form, Francesco di Giorgio and Palladio regarding the circle as the form symbolic of, and therefore appropriate to, God. In fact, "the geometrical definition of God through the symbol of the circle or sphere has a pedigree reaching back to the Orphic poets. It was vitalized by Plato (and) it was given pre-eminence in the works of Plotinus...." [38] This symbolic form was however not related to the liturgical requirement

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36. J. Summerson, op. cit., p.208.

37. Wittkower, op. cit., (Architectural Principles), p.66.

38. Ibid., p.26.

which resulted in the frustration of most of the important projects for centrally-planned churches, and the subsequent alteration of those that were built, in a way that destroyed the centralized concept. [39]

It is interesting to see how the Renaissance architects strove consistently to achieve a form at variance with the one really functional determinant of the church plan. For formal considerations they fought a hard and completely unrealistic battle, a battle which in terms of classical forms must necessarily fail.

THE SCHISM OF INTERIOR AND EXTERIOR.

"In Renaissance architecture - often but not always...," writes Posener, the relation between inside and outside of a building is consciously suspended. One may even say that the relation between form and content is so so suspended." [40] Our study of the screen facade, the columnar screen, and the abstract facade adds up to the inevitable conclusion that this schism between inside and outside is characteristic not only of the Renaissance, but of Italian Romanesque, Gothic, Baroque and much twentieth century architecture.

Italian buildings always present to the eye complete architectural statements, when seen from a single point of view. These statements are often incompatible one with the other, and their acceptance

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39. Wittkower comments: "It is no exaggeration to say that all the Renaissance centralized buildings received accentuated high altars at the time of the Restoration. In many cases long choirs had even been added to the building (S. Maria di Loreto and S. Anna dei Pala Frieni in Rome, S. Stefano in Milan)."

Wittkower, op. cit., (Carlo Rainaldi).

40. J. Posener, "Architecture and the Visual Arts," Architects Year Book: 7, London, Elek Books Ltd., 1956, p.25.

is only possible if one can, with Geoffrey Scott, equate vision with feeling, and discount the equation between seeing and knowing. The disunity between front and side of an Italian building, or between inside and outside, cannot affect the aesthetic unity of a single viewpoint vision which sees each aspect in isolation, and which is unaffected by the knowledge of their essential relationships. Vision informed by knowledge, however -- and surely what we see is affected by our experiential background -- must the the inherent incongruity, that is, the artistic disunity of the whole. In terms of Italian premises, if we can reduce the argument ad absurdum, it should be possible to solve an aesthetic problem by pretending that the various portions each belonged to a different building; and as only knowledge -- which must be discounted -- insists on a relationship, the problem of unity is dismissed. Too often, in Italian design, the solution defines its own problem, an untenable artistic position.

Now Pevsner would have us believe that this schism is even applicable to that epitome of the multiple viewpoint, the French Gothic cathedral, claiming that "inside the cathedral we cannot and are not meant to understand the law governing the whole. Outside we are faced with a frank exposition of the complicated structural mechanism." [41]

This is not, as it first seems to be, a case of schism between interior and exterior, as we find it in Italy. Here we see the exterior first, (Pevsner calls it "the stage apparatus behind the scenes," but the word "behind" is misleading) and when we go inside we carry with us the memory of the mechanics; this memory makes

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41. N. Pevsner, op. cit., p.78.

the interior intellectually comprehensible. The Italian schism is absolute and incomprehensible; the exterior has meaning until one has seen the interior, and then the incompatability is realized.

Apart from the question of lack of correlation between the facade and the interior, from the point of view of both character and dimensions, there is the wider issue of the unpredictability of the internal space from the evidence of the external massing. Martienssen has called this the Architecture of Excavation, which she defines as "designing a building in terms of its interior volumes with little or no reference to external masses and their elevations." [42] She discusses such architecture in ancient Egypt, particularly the rock-cut temples of Abu Simbel, and refers to the examples at Petra; her main concern however is the architecture of the Baroque. She shows no link between the ancient and Baroque concepts, but connections can and must be traced. Martienssen fails to establish the link -- which in fairness is not necessary to her thesis -- because of her pre-occupation with the plan, and her neglect of the section. Her statement:"For the dome is one architectural feature that continues to express itself externally..." [43] is ill considered. The dome of the Salute, to which she specifically refers, is also architecture of excavation, because the false dome visible externally does not coincide spatially with the inner dome. This, as we shall see, is characteristic of Renaissance domes and indeed of sections generally.

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42. H. Martienssen, "The Nature of Baroque: The Architecture of Excavation," S.A. Architectural Record, August 1950, p.179.

43. Ibid.

and is an attribute which may be traced back to the Baptisteries of Pisa and Parma.

Bruno Zevi, [44] recasts the schism in new form. He develops the thesis that architecture is primarily (although not exclusively) a matter of space contained. The facade and walls constitute the container (his analogy is 'package' or 'box'), and we are warned not to confuse "the value of the box with the value of what it contains." He continues:

> In many cases, container and contained are mutually interdependent, as in a French Gothic cathedral or in the majority of genuinely modern buildings, but this cannot be taken as a rule, because it is not true of a vast number of buildings, notably those of the Baroque period. Frequently, in the course of the history of architecture, we find buildings which show a clear discrepancy between container and contained.... [45]

Zevi then proceeds to analyze S. Peters in terms of its inner and outer space. Here he has misgivings and, while maintaining that we cannot see inner and outer space together, he admits that "it is also true that this gap is to a certain extent closed by a 'fourth dimension' of time employed in seeing the edifice from successive points of view." [46] He concedes that "works of unitary conception are marked by a coherence, interdependence, and, it might almost be said....", here the words are wrung reluctantly from him, "an identity between interior space and volume" [47] This clear sighted judgement is

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44. Bruno Zevi, Architecture as Space, trans. by Milton Gendel, New York, Horizon Press, 1957.

45. Ibid., p. 24.

46. Ibid., p. 51.

47. Ibid., p. 52.

undermined, however, by a concession which he doubtless feels compelled to make, if he is to validate the bulk of Italian architecture as works of artistic unity. He says: "In a building erected during different periods or by different architects, where one has created the interior and another the facades, the distinction and antithesis established (in S. Peters) may be legitimate." [48] How, one is prompted to ask, is it that the difficulties under which the design was created can ipso facto impart unity to a work of art otherwise patently lacking this quality? And is it not a fact that the very nature of the building which can be built facadeless -- one cannot conceive this of a building like the Ronchamp chapel -- mitigates against its having an identity between inside and outside?

We must note the acknowledged affinity between Zevi and Geoffrey Scott on the question of Space. Zevi admits that Scott's interest in space is incidental to his thesis, which is not surprising, because although Scott thinks in terms of isolated inner space and outer volume, his love is not for the contained but the container. Both Scott and Zevi are forced to concede the inevitability of facadism in terms of this schism.

Zevi attempts to defend the Baroque facade, claiming that while it might be arbitrary from the point of view of the building it fronts, it was logical from the point of view of the urban scene. The implications of siting upon the whole question of facadism will be dealt with later; but at this stage, if we concede the extension of architecture into urbanism, then we must grant the wall a double function. It is, in Zevi's

48. Ibid., p.51.

terms, container to both inner and outer space, and modulates them jointly. On joining town-planning's army, the wall cannot desert from architecture. In one special sense it can become the very link of inner and outer space.

In contemporary architecture, and to a lesser degree in Gothic architecture, the wall was dematerialized and made transparent. It served both as a screen defining inner space, and a membrane permitting the penetration of outer space. Such spatial continuity has seldom been achieved in Italian design of any period, and it is this solidity of the facade, its opacity, which has been a major contributory cause of the suspension of inside-outside relationships. The nearest approximation to space continuity from without to within, in Italian design, is in the use of open arcades, both functionally, as in the cortile, or decoratively, as in the arcaded gallery. Here the outer space is enmeshed in the peripheral fabric of the building, but fails to penetrate to the inner space. It is comparable to the space modulation of the peripteros, which while achieving its purpose of binding building to site, yet has no effect upon the space of the cella. In modern Italian architecture the outrigging of balconies and screens seems to play much the same role; yet significantly, the balconies are backed in the main by blank walls, and the penetration of space is only skin deep.

I have considered it necessary to discuss Zevi's theories in some detail, firstly because they throw considerable light on the problem of the schism of interior and exterior in Italian architecture; and secondly, because the ambiguity of attitude which one of Italy's leading intellectuals and critics displays in the entire issue

is symptomatic of the malaise of facadism which has, and continues to, beset Italian architecture. This attitude to facadism results from the Italian's dichotomy of vision. Let me make one last point, to illustrate this. Fokker, in discussing S. Andrea in Agone, notes that 18th century and modern critics

> judged the towers on their relation to the mass of the drum and dome. No architect of the seventeenth century, whether he belonged to the movement of the Baroque or was an adept of the Academic School, would have dreamt of combining the features of a facade with those of a dome. The facade was the exterior of a church as seen close by from the street or the piazza on which it stands; the dome was the mark reminding one of the existence of the church at a distance, forming part of a panoramo of the city. [49]

This statement represents ideal theory, not actuality. In trying to sketch S. Andrea, the present writer could find no viewpoint where the facade and the dome did not impinge and react upon each other -- and the compositional failure from this point of view is marked. It takes a special kind of vision to shut one's eyes to part of the building, and look at a selected portion in isolation. This special "bifocal" vision must be a necessary part of the Italian architect's attitude, because so many of his buildings rely upon it and it is this ability to see in isolation rather than in relationships which underlies the whole schism of interior and exterior.

THE IMPLICATIONS OF THE SITE.

There are two principal ways of relating a building to its surroundings. The first is to make the building free-standing, visible from all sides; the second is to place the building so that its flanks are contiguous with, or at least closely hemmed in by, its neighbours. There

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49. T.H. Fokker, op. cit., v.1, p.170.

are two principal ways of looking at a building. The first is to see it from a fixed and static viewpoint; the second is to see it from a variety of successive viewpoints. The siting of a building, if not fortuitous, is determined by what its desired relationship to its surroundings is to be, and how the architect wishes it to be looked at. Conversely, where no choice of siting is possible, then the site itself determines these two important factors.

These factors, in turn, help to determine the form and character of the architecture. A building on an open site, unless designed to be seen from a static viewpoint which is frontally located, tends to be a sculptural accent within the space in which it stands. Its important quality is its three-dimensional form. Such buildings in Italy are the Temple of Vesta in Rome, the Baptistery at Pisa, the Consolazione at Todi, and the Torre Velasca in Milan. Where such free-standing buildings are designed to be seen frontally, they lose in sculptural interest, while attention is focussed more closely upon the facade, as in the temple of Mars Ultor; the Palazzo Farnese; S. Pietro; St. Andrea della Valle; and the administration block of the Stazione Termini. When buildings are totally or partially hemmed in on closed sites they become walls to the space, part of the enclosure which defines street or piazza. As Zevi puts it, the facades of a building "no longer constitute the limit of the interior space of the building, but of the interior space of the street or square, and are thus to be categorized in terms of the urbanistic void they help create." 50

50. Bruno Zevi, op. cit., p.282.

Here, the design emphasis ceases to be on three dimensional form, and is placed firmly upon the two-dimensional plane of the wall. This is equally true of the facades seen obliquely, from a moving viewpoint -- Palazzo Rucellai, Palazzo Massimo alle Colonne or S. Maria i mpitelli -- as it is of those seen frontally -- S. Miniato al Monte, The Pazzi Chapel, or S. Maria della Pace.

Because of the manner in which the Italian towns developed, because of their pattern of historical growth, congestion is the normal consequence. The result of this congestion is the predominance of the closed site; and the free-standing building is a decided rar , particularly the free-standing building designed to be seen from the multiple, moving viewpoint. Generally, it is safe to conclude that Italian buildings are located on closed and congested sites, which open up to streets or piazzas on the main front. Generally, they are designed to be seen frontally, from a single viewpoint. It is true that in actuality they are not always seen that way, but ideally, because of the implications of arithmetical proportion, and because of the discipline of one-point perspective, they are best seen frontally. The Italian designed for ideal conditions, not reality; he was never deflected from his theoretical ideal by what Mumford has called the obdurate facts of site; and his forms and proportions were determined by his paper elevation, not the reality of the actual viewpoint. It is not until Milizia that we get some hint in Italian theory of proportions empirically related to comfortable angles of vision.[51]

51. Milizia says: "Experience teaches us, that if a vertical object makes an angle of forty five

Two exceptions must be noted. The first of these is that in the Baroque the oblique view and the multiple and changing viewpoint were often deliberately designed for. The second special case is that of the Middle Ages, where a sort of compromise between the free-standing and the enclosed building is achieved. Two sides of the building, the facade and one lateral elevation, are frequently exposed to an L-shaped piazza: the remainder of the building merges with the heterogeneous ancilliary buildings associated with it. The three-dimensional form of the building is revealed, but the building is not free-standing in the full sense of the term. The Gothic cathedrals of Siena and Orvieto conform to this pattern. They are seen from the side as well as the front, and the three-quarter view is designed for. However, the portion of the piazza on to which the main facade fronts is of greater importance and dimensions than the lateral piazza, and there is a definite emphasis upon the frontal view.

If we sum up these various conditions o siting, we must conclude that the majority of them are favourable to the facade concept, rather than to the development of three-dimensional form.

51.(Contd.)
degrees, we can look at it from below with perfect convenience....." whereas, as he explains, twenty degrees is too low and seventy degrees too high, "therefore these inconvenient extremes should always be avoided." (p.XXXIX).

And elsewhere: "The elevations of the facade should be proportioned to the size of the space from whence it is to be seen." (p. XI). F. Milizia, op. cit.

APPENDIX 5 - ILLUSTRATIONS.

COLUMNAR SCREEN FACADES.

1. Duomo, Pisa; arcaded front. Drawing by G. Herbert, after Joseph, Geschichte der Architektur Italiens. (12th and 13th centuries).
2. Scuola di San Rocco, Venice; free-standing columns. Drawing by G. Herbert, after Moore, Character of Renaissance Architecture. (1515-1549).
3. S. Maria in Campitelli, Rome, C. Rainaldi; free-standing columns, Drawing by G. Herbert, after Joseph, Geschichte der Architektur Italiens. (1657).
4. Offices and Flats, Milan, Figini and Pollini; free-standing concrete framework. Carpanelli, Come si Construisce Oggi nel Mondo, p. 76 (20th century).
5. Flats, Saluzzo, Cesare Acrome; 'outrigging' of balconies, fins and pipes. Drawing by G. Herbert. (20th century).

FACADISM AND THE SCREEN FACADE.

Frontispiece: P. Riccardi, Florence, Michelozzo; change of detailing on rear elevation. Photograph by G. Herbert (1444 - 1460).

6. Duomo, Siena; screen facade. Drawing by G. Herbert, after Joseph, Geschichte der Architektur Italiens. (Mainly 14th century).
7. P. Ducale, Venice; change of materials on lesser facade. Photograph by G. Herbert. (14th century).
8. S. Francesco della Vigna, Venice, facade by Palladio; screen facade. Photograph by G. Herbert. (1572).
9. S. Giorgio dei Greci, Venice, the Lombardi; screen facade. Drawing by G. Herbert, after Fletcher, A History of Architecture on the Comparative Method. (1538).

10. S. Lorenzo, Florence; alternative facades projected by Michelangelo. Frey, Michelangelo Buonarroti, pl. III, IV. (16th Century).

11. S. Carlo alle Quattro Fontane, Rome, Borromini; section showing screen facade. Perotti, Borromini, pl. 6. (1640 -1667).

12. Faculty of Theoretic Nuclear Physics, Sao Paolo, Gio Ponti; detachment of the facade. Guarnati, Aria d'Italia, 8: 1954 p. 138 (1953).

ABSTRACT FACADES.

13. Baptistery, Florence; pattern of marble facings. Drawing by G. Herbert. (11th century).

14. P. Barbieri; panelling of facade. Palladio, ii, 1937, fig 12.

15. Flats, Rome, Moretti; pattern of facing materials. Drawing by G. Herbert. (20th Century).

16. P. Gardazori, School of Scamozzi; facade pattern unrelated to plan. Drawing by G. Herbert, after Palladio, ii, 1937.

17. Flats, Rome, Ugo Luccichenti; facade patterm unrelated to plan. Drawing by G. Herbert. (20th century).

18. Flats, Rome, Ugo Luccichenti; abstract facade to a regular repetitive plan. Drawing by G. Herbert. (20th century).

REALITY AND THE IDEAL.

19. Scenographia, Giovanni Maria Bibiena; fantasy. Bruni, Disegni di Architettura: Galleria degli Uffizi, 2: pl. CXXV.

PLANNING IMPLICATIONS.

20. P. Farnese, Rome, Sangallo and Michelangelo; false windows to service court, blank windows across staircase, small rooms with many windows, large rooms with few, access to various chambers inconvenient. Letarouilly, Edifices de Rome Moderne, 2: pl. 117.

THE SCHISM OF INTERIOR AND EXTERIOR.

21. P. Pandolfini, Florence, after Raphael; section showing facade unco-ordinated with inner compartments. Stegmann and Von Geymuller, The Architecture of the Renaissance in Tuscany, p. 12. (1520).

22. S. Pietro, Rome, Michelangelo et al; section through one of the lesser domes. Drawing by G. Herbert, after Moore, Character of Renaissance Architecture, (16th century).

23. S. Pietro, Rome, Michelangelo et al; plan showing inner space. Zevi, Architecture as Space, Fig 2.

24. S. Pietro, Rome, Michelangelo et al; plan showing outer space. Zevi, Architecture as Space, Fig 3.

THE IMPLICATIONS OF THE SITE.

25. Vigevano (left), Como (centre), Cremona (right); plans showing the relationship of building to site. Dodi, Elementi di Urbanistica. Figs 240, 1, 2.

26. Campidoglio, Rome, Michelangelo (left), S. Ignazio, Rome, facade by Algardi (right top), S. Maria della Pace, Rome, Pietro da Cortona (right bottom); unified concepts of building and site. Chiodi, La Citta Moderna, p. 86. (16th - 17th. century).

27. S. Michele, Lucca; plan showing relationship of building to piazza, and section indicating asymmentrical emphasis. Drawing by G. Herbert.

28. S. Michele, Lucca; views from points 1 and 2 indicated in the plan, figure 27, showing differential facade treatment to front, side to main piazza, and side to minor piazza. Drawing by G. Herbert.

29. P. di Caprarola, Vignola; plan showing axial relationship of garden to each facet of the facade. Dami, Il Giardino Italiano, pl. XLIX.

30. Sabaudia (left), S. Die (right); comparative plans showing enclosed and free standing building. Dodi, Elementi di Urbanistica, Figs 5, 6.



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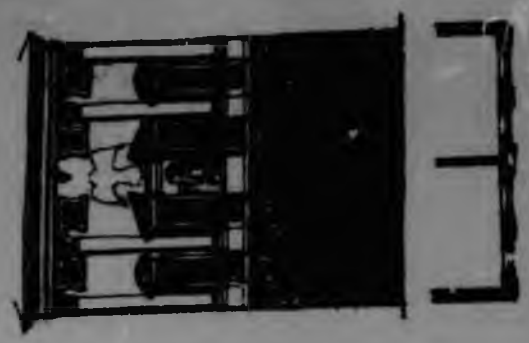

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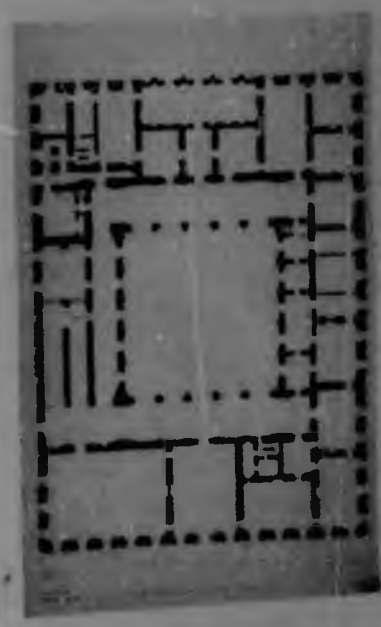

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THE REAL AND THE IDEAL
IN ROMAN ARCHITECTURE

BY
GILBERT HERBERT.

S U M M A R Y.

Preface: The dialectics of Architecture.

Chapter One: An Approach to the Interpretation of Architecture.

Attitudes to architecture; the various disciplines which govern the creation of a work of architecture; the nature of an architectural attitude; the practical attitude; the formalist attitude; scope and limitation of the study.

Chapter Two: The Practical Attitude of the Romans.

Roman materialism in many aspects; the materialist heritage; literary sources of the practical attitude; the nature of the architectural problem as an incentive to the practical attitude.

Chapter Three: Practical Characteristics of Roman Architecture.

Building materials; Roman walling; Roof trusses; Vaulting; feats of engineering; services; technical achievements; planning.

Chapter Four: The Roman Formalist Attitude.

Formalism and order; the literature of formalism; origins of formalist theory; formalism and standardisation; symbolism; symmetry.

Chapter Five: Formalist Characteristics of Roman Architecture.

Monumentality; symbolic forms; symmetry; proportion; art and decoration.

Chapter Six: Conflict and Resolution.

Programme, structure and expression; the overlay of apparent structure; decoration and structure; the use of the new decorative vocabulary; the scenic tradition; the baroque element in Roman design; the illusion of reality; the problem of the plan; antithesis in Roman Architecture.

Appendix One: The continuity of Italian Design.

Appendix Two: Some practical aspects of Renaissance Architectural Theory.

Appendix Three: Structure and Decoration.

Appendix Four: Illusionism in Italian Architecture.

Appendix Five: Facadism in Italian Architecture.

PREFACE

> When the work of art is also, as in architecture, a work serving a utilitarian purpose, then the form of the art will be further affected by its function. Admittedly the same function - for example, to provide a convenient shelter for a family of human beings - may be served equally well in a variety of ways ...; nevertheless, the functional purpose does set limits to the creative freedom of the artist. It introduces another element into the dialectic of that particular art, though function may be regarded as an aspect of reason, reflection, utility, etc., whose dialectical opposites are unreason, impulse, imagination, etc.; and an art like architecture, in so far as it is an art, is a synthetical resolution of just these contradictions.
>
> Herbert Read, Art and Society

This thesis is a dialectical study of the architecture of Ancient Rome, by which term is meant the architecture of the Roman Republic and Empire, produced under Rome's influence, whether by Romans or others, mainly during the period from the consulship of Sulla to the death of Diocletian.

Previous studies of Roman architecture, in so far as they interpreted the character of the architecture produced, tended to emphasize one or other of the opposing elements of the dialectic contradiction. This thesis considers that it may be the very anatomy of the contradiction, and the manner in which its resolution is attempted, which determines the character of Roman architecture. A new interpretation is attempted, in a Hegelian process of thesis, antithesis and synthesis.

It is postulated that there are two principal opposing tendencies, the practical and the formalist. These tendencies are isolated and analysed independently; and then the main characteristics of Roman architecture are considered as the resultant of this interaction of forces.

Roman architecture has many facets, and turns its various

faces to different observers. It may be seen as the continuation of the Greek tradition, or as the forerunner of Christian art; it is considered by some to be imitative, by others to be exemplary of progressive invention; it may be classified as stern and utilitarian, or as rich and ostentatious; it is criticized on the one hand for its authoritarian standardization, and castigated on the other for its licence and abuse of classical norms. It is, apparently, an architecture of paradoxes, for each of these views can be argued with reason and conviction. Roman architecture is all things to all observers: but it is these things in relationship, not in isolation. There are many separate threads in the fabric of Roman architecture: the weaving of these threads into a coherent and integrated pattern is the purpose of this thesis.

Author Herbert G
Name of thesis The real and the ideal in Roman Architecture 1960

PUBLISHER:
University of the Witwatersrand, Johannesburg
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