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'Circular' architecture and urban change
The renewal of specialised buildings in cities in crisis

Nicola Marzot

Introduction

The continuing financial/economic crisis seems to implicitly confirm the inability of our town planning/construction rules and regulations – which championed the concept, planning and management of modern-day cities, whilst delegating their materialisation to the business world – to manage redevelopment during the prolonged phase of transition that was triggered by the debacle of financial capitalism, responsible for its final stage of development. In support of a thesis that is only paradoxical at first glance, it should be stressed that the circumstances of which we are unwilling witnesses have merely exasperated the scale of a process that had already been triggered by industrial capitalism, at least from the second half of the 19th century on: the treatment of cities and their constituent elements as if they were markets, reducing them to a place where the demand and supply of goods, resources and services meet. While bourgeois cities, in their early phase, had already recognised the emblematic value of places of exchange – raising fairs, markets, department stores, stations and ports to an unprecedented architectural dignity as manifestations of society's new values – the latter were now entirely unfettered from any kind of symbolic link, within emerging manufacturing systems, between urban space and civil society. Studies examining the shape and form of modern cities have highlighted this dangerous departure (Aymonino, 1978). At a practical level, the fully developed industrial city was no longer legitimised by its excellence in 'making', which could translate into a resulting 'knowing how to make', but rather by

the 'speaking' that formulates laboratory hypotheses – founded on the language of mathematics, which is by definition anticipatory – regarding the environment, both natural and manmade, for which both individuals and the collective community are destined. Based on a strictly scientific approach, such hypotheses become deterministic models of behaviour to be applied to reality, prejudicially conditioning it, with the clear aim of verifying its ability, after the event, to explain how reality itself works, adopting such models as constituent laws. Nevertheless Positivism, which aspires to applying the principles of the natural sciences to the study of the 'social body', seems aware of the effects that such a choice entails: the lack of reciprocal recognition between individuals and their products, which are no longer 'socially constructed' (Caniggia and Maffei, 2017). While at an academic level such an approach implies the mere reformulation of the initial hypotheses, starting the process all over again *ab initio*, in practice it involves the accumulation of solutions without a beneficiary, creating expectations of profitability that are destined to prove unrealistic, with the risk of condemning the entire system to collapse. The raising of the status of goods to a 'spectacle', goods that are not only objects but buildings as well, becomes the preventive measure used by capitalist culture in attempting to avoid the abovementioned danger. The market, in its role as a place of exchange, not only decrees the validity of the initial hypotheses, indirectly confirming the self-legitimising nature of the production process, but necessarily also becomes the factor conditioning behaviour in order to make it consistent with our expectations. Just as products are no longer socially constructed, becoming 'goods', the laws regulating and underpinning the relationship between space and society are freed from the reciprocal ties that bind 'subjects' and 'objects', founding their legitimacy on the existence of a supposed universal rationalism, i.e. one that is no longer founded on the past. In such circumstances, General Town Plans – which it is no coincidence first emerged with modern cities – become the instrument that moulds both entrepreneurial forces and local authorities, establishing their roles and spheres of reciprocal influence *ex nihilo*, thus founding *ex lege* the culture of capitalism, without its categories being the product of a 'tentative' formulation pre-empting the concept given to them by law (Schmitt, 2017). The result is an 'upside-down world', where the conditions of belonging and identity, upon which the management of the public good should be founded, do not derive from

the previous construction of political consensus expressed in mutually agreed terms and 'spatialised' by the concept of type, and instead are merely hypothesised and verified after the event. More than a century after Town Plans instituted it, financially-based capitalism merely exasperates the dichotomy between subjects and objects, basing itself on the independence of Technique – through infrastructural decisions on an unprecedented and herculean scale, which champion the role originally attributed to the Plan, *de facto* legitimising it – in its ability to manage a territory. This occurred by formulating hypothetical scenarios of community behaviour that were reciprocally alternative, compared against each other in order to choose the most realistic where real evidence was lacking. To this end, the so-called 'financial bubble' has basically confirmed that the hypotheses regarding the behaviour of citizen-consumers could not be verified, i.e. they were founded on expectations that did not derive from current phenomena. The paradoxical aspect of the crisis that has hit financial capitalism is, above all, the fact that it managed to construct an entirely artificial world, featuring an unlimited supply of tangible and intangible goods, despite the lack of a plausible demand for them that could legitimise such a world, convinced that this world would, in any case, be inhabited. This mistaken perspective, which has proved unreliable, is now revealed in all its embarrassing nudity, a *sub specie* of an alienating 'atopia', pervasively fed by the spectacular increase in vacant buildings and areas waiting to be redeveloped, where the outcome of the fairytale fed by creative finance merges with the last vestiges of the previous post-industrial decline, thus generating an embarrassing re-edition of Piranesi's *Campus Martius* (Piranesi, 1762). Faced with such a desolate situation, we need 'another way of thinking' (Fusaro, 2017) that can deconstruct the principles upon which new capitalism is based. To this end, process-based typology seems not only to offer a realistic explanation of what has happened, but also the hoped-for prospect of emerging from the continuing impasse in which we find ourselves, through the development of the concept of 'crisis'. Indeed, if we look at the history of territories (Muratori, 1967), we can see that crisis is not only fed by a conflict between alternative worlds manifesting irreconcilable values, or induced by natural calamities that force us to create new urban models. It is, above all, the result of the gradual defection of those who, no longer identifying themselves in a community plan, of which they were the functioning representation during a

previous phase, and in its respective objects, no longer adhere to that bond of belonging manifested by building type in its various different scales, becoming receptive to new hypotheses of community through the construction of new territories. A famous precedent of this is the Roman Empire's gradual process of disintegration, which over time created various different 'Romance' civilisations, manifestations of a new Europe of peoples.

The dialectic relationship between basic buildings and specialised buildings

Process-based typology has managed to show the continual development of the process whereby man develops his space through the constant dialectic relationship between the form of cities and the settlement phenomenon at different structural scales: from territories to cities, from the urban fabric to the individual building plot. From this perspective, the role of 'type' is decisive, identifying itself as a link that symbolises the conventional relationship between construction methods and behaviours, codified in architectural language, and the experimental link between 'subject' and 'object' obtained by empirical means. All this can be perceived within particular conditions of space and time that are historically determined, beyond whose benchmark horizon the stability of this link falters and ends up in crisis. No matter how necessary, the value of type is temporary. It is founded on a more general process of legitimisation that develops with the continuous translation of the encounter between 'body' and 'environment' on a phenomenological level and between 'man' and 'world' on a representational level, an analogical reflection of the former. This justifies the supremacy of 'making' over 'acting', of 'capacity' over 'ability', demonstrating the fact that every process of finalisation is determined by an over-riding need for orientation, where the latter is uncertain in that it is conditioned by our perception of the environment. It is no coincidence that such an experience has to do with Gnoseology, while reflections on the environment in its essence, i.e. freed from any value-based conditioning, is the role of Ontology (Ferraris, 2012). To this end, the interpretation of basic buildings confirms how phases of conservation, featuring the application of type, and phases of transformation, featuring its absence, alternate. Furthermore, process-based typology has, for some time

now, debated the meaning of this latter privation, ending up describing two different causes in detail. In one, we see the disintegration of the abovementioned symbolic link and, as a result, type 'resolves' itself, demonstrating obvious dyscrasias in the relationship between behaviours and corresponding spaces, returning them, as they drift away from each other, to an embarrassing condition of relative isolation, which manifests itself in a return to its origins. The latter causes a transitory, vaguely 'initiatory' nomadism within a landscape made unique by the crisis of that very symbolic bond. It is no coincidence that we recognise in such circumstances the failure of the values of a particular historical era. In the other cause, the absence is justified as a necessary requirement for the fine-tuning of values, through that particular 'tentative' form of experimentation that, by trial and error, seeks out its own constituent rules, gradually delving deeper into its own 'making' (Pareyson, 1988). Process-based typology's intuitive leap, which clearly distinguishes it from any other kind of approach, even within architectural fields, is therefore the way it has found arguments to support the existence of a deep-rooted connection between crisis and recovery, i.e. between the landscape of ruin and experimental activity of total relevance to contemporary life. Through an entirely original formulation of anthropological premises, process-based typology has demonstrated how the symbolic link, of which 'type' is a functional memory, is latent in the original relationship between what is manifested and unprecedented, in that it exists before we appear on the scene, and that which is found as we orient ourselves in that same scene (Marzot, 2017). Such a result is confirmed by the interpretation of specialised buildings. It is no coincidence that the term expresses the process whereby institutional architecture derives from residential buildings, where the latter open themselves up to experiments on their own 'bodies', once the conventional typological connection between construction and the behaviour that typified them in a previous phase is lost. This requires a series of changes that gradually adjust their 'yield' to meet new expectations, where both prove inextricably linked by an experimental relationship of mutual involvement obtained through empirical means. Thus the naive Rationalist prejudice that presumes the existence of man and his needs to be the origins of the objects designed to satisfy them (equating humanity with innate essence even further) is proven once more to be a fallacy, as is that of Positivism, which presumes a deter-

ministic connection between subject and object, equating the former to the animal world and the latter to the natural world, thus reducing their reciprocal behaviour to a mechanical, i.e. instinctive, reaction, *de facto* de-legitimising the decision-making ability of each process of self-determination. Instead, process-based typology has managed to thoroughly argue the opposite as well, i.e. that at the end of a specialised building's lifecycle, once it loses the symbolic connection that operated within it *ab initio*, it offers the possibility of being 'reprogrammed' – once it has been freed from any value-based preconceptions – similar to what has been discovered in genetics regarding the possibility of returning a specialised biological tissue to its original totipotent cellular condition. The 'circular' relationship between basic buildings and specialised buildings thus confirms how – through a constant claiming of vacant building stock, freed of any form of value-based conditioning and restored to a rediscovered state of 'nudity' – not only do we set up the conditions for entirely reformulating the relationship between subject and object, but we also find confirmation, above all, of the total reversibility of manmade processes.

The dialectic relationship between the public and private sphere

The conclusions that process-based typology has reached regarding the meaning of specialised buildings makes an essential contribution that settles the debate regarding the semantic use of terms that Modernity has prejudicially interpreted as autonomous spheres of influence, whose relationships are only reciprocally regulated by the categories of Law, bringing the debate back to the sphere of Politics (Schmitt, 1988). This is done by demonstrating how institutional architecture gradually derives from a process whereby basic buildings become specialised that, once they have lost their original role, are open to an experimental phase that creates the right conditions for carrying out collective functions. It follows that the concept of 'public' is founded on the unceasing accumulation of a wealth of expertise developed tentatively, i.e. through a process of trial and error initiated by the private sector that questions its own presumptions, with the aim of reaching a level whereby we share experience that corresponds to an understanding of the world that is greater than what can be reached through individual experience. As Agamben perceptively observes, it

is during this phase, characterised by a lack of social norms, or *Anomia* (understood as the lack of law, merely because the law is subject to a process of verification and inception), that we see the gradual emergence of the 'common', i.e. that which, in being mutually agreed and shared, can legitimately constitute the foundation of the 'community of the future' (Agamben, 2001). It is through the construction of the Common Good – a now hackneyed expression that can easily be used to justify dangerous rhetorical digressions (Marzot, 2016) – that we foster the rise of those 'historical-cum-social' values that evolve from the construction process and are embodied by the constructed 'body' that institutional architecture is asked to manage. It is therefore the work carried out on basic buildings that puts itself forward as the true testing ground for the power that institutes a community through its constructed forms, of which the instituted and incarnate form of specialised buildings is the ultimate result. It follows that the typological connection between Practice and Theory, placed at the heart of the transmissibility of a culture through the construction of a manmade space designed for it, is structurally the vessel of intentional will, but above all it follows that such an intentional will is the result of a political will that has been systematically adopted with the development of tentatively constructed forms that are, in turn, vessels of tangible and intangible values that can only be reciprocally distinguished in conventional terms. In this way, type preventively 'spatialises' that social, economic, political and cultural order that Law later formalises. Process-based typology translates that same concept using linguistic categories. Thus type – as a 'sign' that links a building (i.e. the 'signifier') to a usage (i.e. its signified) – through specialised buildings reasserts itself as the intentional representation of a will – mutually agreed through the acceptance of a value or a conventional link defined by the 'language code' – that translates a common behaviour, derived from the original connection between 'body' and 'environment' and its gradual conceptualisation through the comparison of alternative outcomes. In this way, type expresses the symbolic connection implicitly recognised by those who have subscribed to the community pact, between an empirical custom, through which a common project is finalised, and its implementation with the construction of an artificial environment that will suit the consistent development of such a project.

Table 1

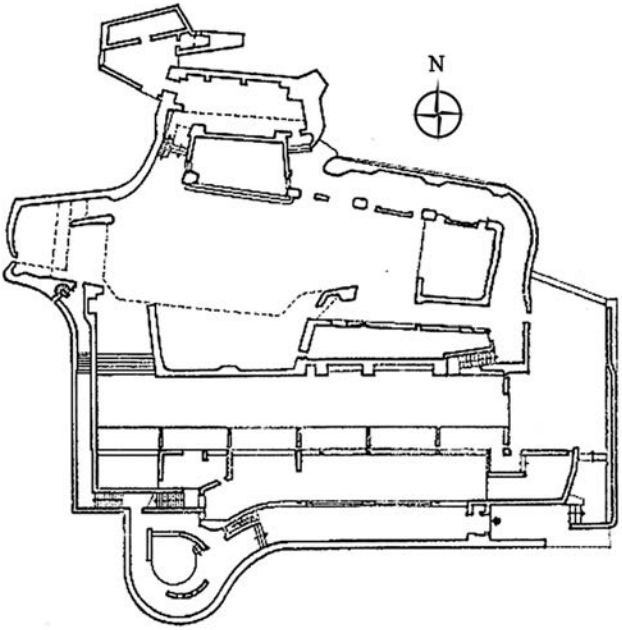


*Figure **A**: Campi Bisenzio (Florence), the motorway church of San Giovanni Battista by Giovanni Michelucci, 1963.*

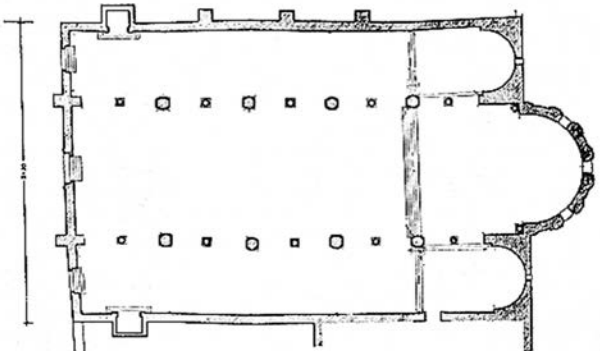


*Figure **B:** Caorle (Venice), the Byzantine-Romanesque cathedral, 11th century.*

TABLE 1. *A comparison between an intentionally designed modern building and an old church.*

TABLE 9

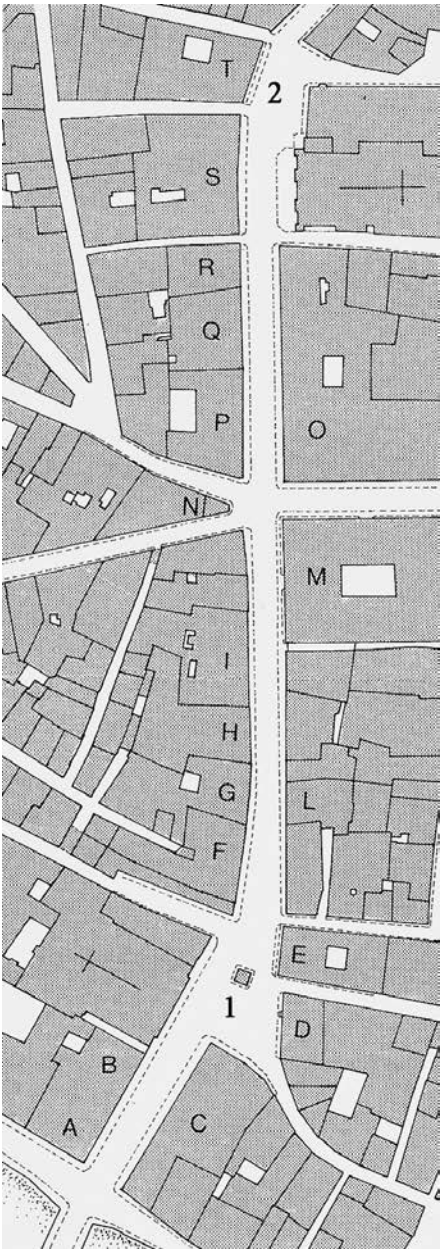


*Figure **A**: Florence, the Renaissance renovation of Via Tornabuoni*

1-Piazza Santa Trinità
2-Piazza Antinori

A- Palazzo Piccioli
B- Palazzo Gianfigliazzi
C- Palazzo Spini-Feroni
D- Palazzo Buondelmonti
E- Palazzo Bartolini Salimbeni
F- Palazzo Minerbetti
G- Palazzo Giaconi-Strozzi del Poeta
H- Palazzo Commenda da Castiglione
I- Palazzo Gherardi-Uguccioni
L- Palazzo Cambi del Nero
M- Palazzo Strozzi
N- Palazzo del Duca di Normandia
O- Palazzo Corsi
P- Palazzo Viviani della Robbia
Q- Palazzo Corsi (formerly Tornabuoni)
R- Palazzo Larderel-Giacomini
S- Palazzo Beccanugi
T- Palazzo Antinori

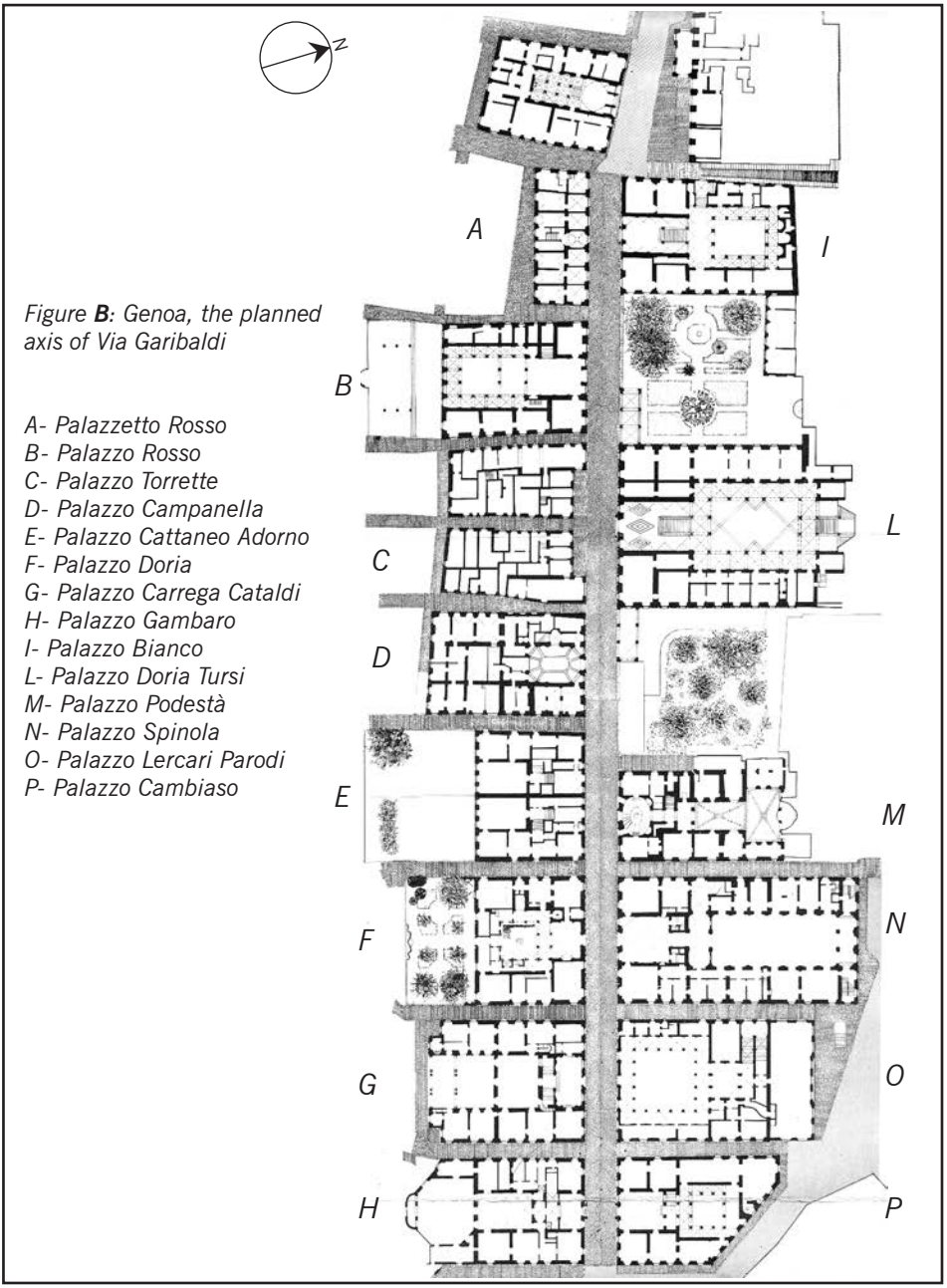


*Figure **B**: Genoa, the planned axis of Via Garibaldi*

A- Palazzetto Rosso
B- Palazzo Rosso
C- Palazzo Torrette
D- Palazzo Campanella
E- Palazzo Cattaneo Adorno
F- Palazzo Doria
G- Palazzo Carrega Cataldi
H- Palazzo Gambaro
I- Palazzo Bianco
L- Palazzo Doria Tursi
M- Palazzo Podestà
N- Palazzo Spinola
O- Palazzo Lercari Parodi
P- Palazzo Cambiaso

TABLE 9. *Serial groupings of palaces.*

2.2. Organisms as a correlation of usage and distribution systems

The grouping of cellular spaces in terms of distribution.

2.2.1 The compositional system of serial specialised building

Serial specialised buildings are directly descended from today's most widespread residential basic building, the in-line house, and maintain a number of features that are typical of this type of construction, to the point where it influenced the formation of all later buildings found in its process of development. The grouping of cells begins with a double-depth section with four frontal cells, with distribution passageways at the rear of the building – which is on its pertinent area – and it usually contains secondary rooms and ancillary areas, while the main rooms are usually in the section along the matrix route. Serial specialised buildings usually have one single function and use, and therefore the staircase is immediately moved from the central position, typical of in-line houses, to a peripheral position that doesn't interfere with horizontal passageways. Moreover, with the increase in the number of cells grouped along the front, a secondary staircase is added that is usually different in design compared to the main staircase and placed at the other end of the building.

Indeed, secondary staircases can be identical to the winder stairs found in houses, while the main staircase takes on a more complex design with three or more flights and a more complicated layout. Another common element is the lift, which meets the need to make it easier to access the greater number of floors as found in specialised buildings, as compared to houses. It is placed near the stairs, so that there is only one distribution space on every floor combined with the staircase and this surface area is usually increased in order to create a source of light and ventilation from the rear.

In shifting the **main staircase** to a peripheral position, potential nodalities and anti-nodalities are created in a serial layout, so that the rooms near the staircase have particular, unique functions compared to those of the series, which depend on their particular position, just as those located in the anti-nodal area can be bigger and have a particular function.

A typical situation concerns rooms earmarked as storage areas for the peripheral rooms of the anti-nodal area, while waiting rooms or reception rooms are located as near to the main entrance as possible. Even bathrooms can be in a nodal or anti-nodal position depending on what role is envisaged for them, as those set aside for the public may be more nodal than those reserved for members of staff and/or residents.

The developmental process that led to an increase in the number of sections grouped down a building's depth caused the gradual loss of the hierarchy of facades and, as a result, the distinction between the greater or lesser importance of the use of the rooms in the two external swathes typical of in-line housing. The two building sections can even be swapped, in that they tend to become of equal importance, given that the gradual increase in depth does not allow the serial grouping of the building within the urban fabric but tends to isolate the building in its lot so that, as a result, the two facades remain of equal importance.
The gradual increase in grouped cells along the front of a building leads to a higher number of users per floor, and therefore the size of the distributional element – the corridor – grows in proportion. That is why, from a certain size up, the structure and use of a building needed to match specific structural sections, thus creating the subsequent steps in the typological process. After all, each type has its own ideal size and scalar expansion occurs in order to have a greater correspondence between form and use.
The clear interpretation of serial specialised buildings confirms the validity of the use of double windows per cell, as in in-line housing, with however the loss of the hierarchy of such windows typical of housing. Instead of having large windows for sitting rooms and smaller ones for bathrooms, a pair of windows of the same size are located to the sides, near the walls. Thus, in this case also, rooms inside the cell can be divided up in the maximum number of ways – one single room; one small room and one large room; or two similar-sized rooms – and, at the same time, can serialise the image in line with the serialisation of its functions. Thus we get the same serial facade with the introduction of four identical windows along the cellular front, which however leave the wall space

near the vertical wall in place: the uniform nature of the wall space between the windows stops us from interpreting indirectly the cellular system and therefore the structural load-bearing system.
Most serial specialised buildings can be grouped subsequently into categories that grow according to a rationale that considers the relationship between structural elements and distributional elements and, as a result, considers them in terms of the greater complexity of their layout. They are models specifically used to design buildings as a useful compositional template for deciding the type of building that should act as the basis for the design project when defining its particular function.

They are, in any case, categories derived from the interpretation of historic buildings of which we will later compose sample templates that can help us understand their evolution, and it is useful to stress that most modern-day service buildings follow a layout that is directly or indirectly traceable to one of the templates we will be analysing. It was telling to observe how, at recent editions of the Venice Architecture Biennale, the vast majority of buildings presented in the various sections – from skyscrapers to the most complex specialised buildings designed by teams of designers – can always be traced back to these templates, regardless of their authors' intentions. No matter how subversive, their intentions cannot cause a building to fail to meet the needs for which it is designed and it must therefore adhere to the rules of practicality that are essential for its successful use.

TABLE 27

A] DOUBLE-SECTION TRIPLE-STAIRWELL BUILDINGS

These represent the first leap forward in specialisation from in-line houses, with a change in position of the staircase. The staircase becomes more complex, with a greater number of flights compared to those found in in-line houses, and usually occupies an entire cell of the rear section so as to accommodate the lift and a passageway to the rest of each floor that is wider and suited to the greater number of users that result from the building's specialisation. The ground floor can still play a role associated with the street outside, and prove more open to the public compared to other floors, and for that reason may have different entrances compared to the rest of the building. For the same reason, it may prove necessary to add a special floor serving the ground floor with the creation of a **mezzanine**, of moderate height, that opens out on the ground floor and can only be reached from it.

Ancillary floors are very similar to the mezzanines of palaces and are therefore derived from them when it comes to their conceptual structure. They usually have a partial surface area compared to the floors they serve, lower ceiling heights and staircases that are closely linked and limited to connected floors, different from those of the building as a whole. The building as a part of the urban fabric may have a passageway on the ground floor allowing the use of its pertinent area for a single purpose and no longer for the private use of single

residents as in housing. This addition can create difficulty in locating the backstairs that, in a moderate cell grouping (four or six), can make the position of the backstairs too central, thereby competing with the main staircase.

Such a specialised building does not grow in terms of the number of floors compared to the residential equivalent, remaining limited to five or six floors because it is usually integrated in a uniform and synchronic urban fabric and the total size remains in proportion with the surface area of individual buildings. What we see in the typological process is a gradual increase in the size of such buildings following an increase in the size of building sections that, in turn, increase the total surface area. Such an increase in volume can reach as much as eight to ten floors and then decrease in height with the further increase in surface area, which will tend to involve multiple grouped sections with complex hierarchies that never result in particularly tall buildings.

B] Triple-section triple-stairwell buildings

Table 28

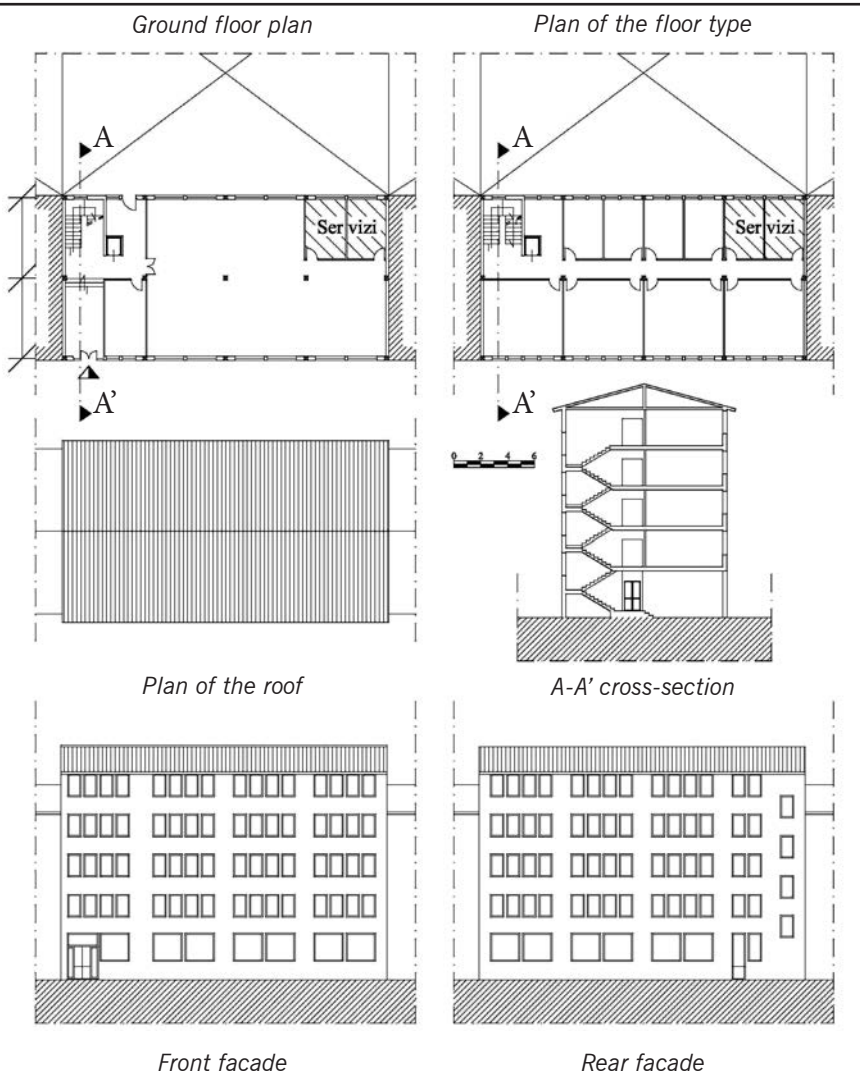
The inner passageway is located in a structural element of its own of half-cellular size (2.50/3.00 metres); the grouping along the front grows from four to six/eight cells and, as the front lengthens, a number of alterations in the layout can occur. Indeed, the main staircase may be moved, as well as the backstairs from the rear to the central section, with a first step towards equality in the use of the main sections. If the building is still in a serial aggregate within the urban continuum, access to the ground floor and the front along the street create a hierarchy among the two building sections. If the building is isolated in its own building lot, this results in the total **equality of facades.** In this case, the result is the existence of two further fronts on the short ends that become the **head** or **tail** of the building or of the group of buildings.

Table 29

Head and tail are conditions of nodality and anti-nodality that influence essential alterations in the composition of the part of a building that finds itself in an isolated position within the urban fabric. At its head, there is a shifting of the entrances of the last cell from the serial front, and the central section will allow the rooms inside to become larger. The serial pitched roof of the central section may, at its head, be encompassed in the pitched roof of the two side sections, turning around on itself. At the tail, we see the compositional strengthening of the maximum seriality, as if the building could still group together with other buildings so that the two side sections have a blind front and are covered with a roof whose gables slope towards the main fronts. The interior – usually set back – has two visible pitches.

The position of the central section's main staircase is placed in the centre, while the **backstairs** are placed in a peripheral position, with the

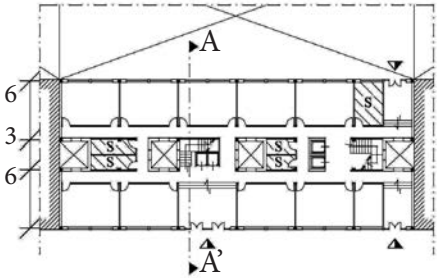
TABLE 27



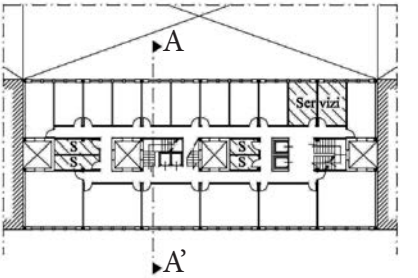
This is a building that originates from the in-line house type, built on a lot along the road front with a pertinent area behind it and grouped serially on two sides.

TABLE 27. *Serial specialised buildings: Double-section (6-6 metres) triple-stairwell buildings with a four-cell front.*

TABLE 29

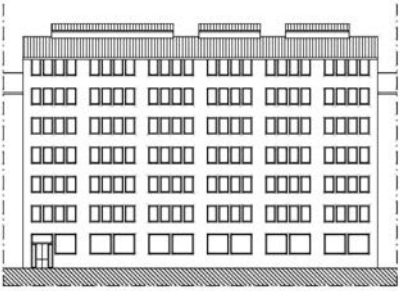


Ground floor plan

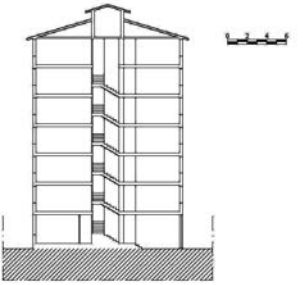


Plan of the floor type

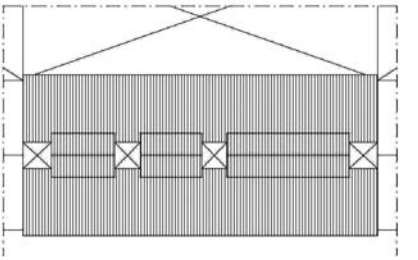
Front facade



Rear facade



A-A' cross-section

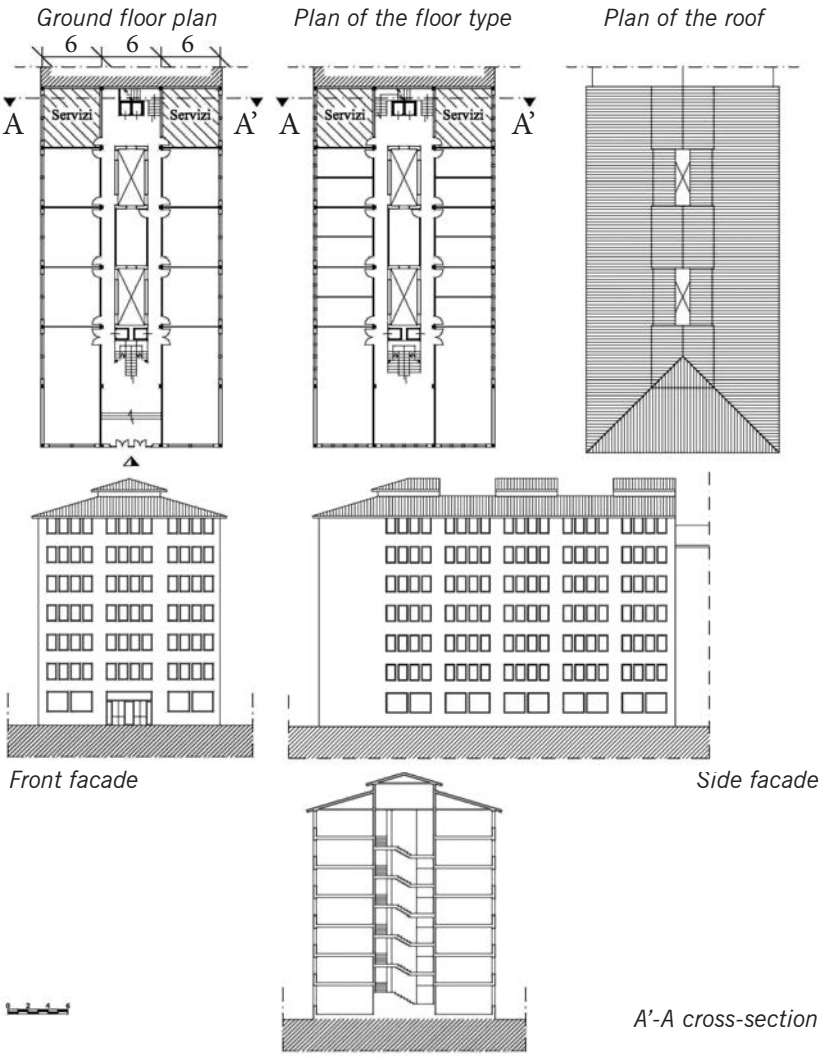


Plan of the roof

This building originates from triple-section residential buildings with utility areas, stairs with different hierarchies and shafts providing light and ventilation in the central structural bay. Though they are of the same size, the two facades have different places in the hierarchy, due to the different outlook, road front and pertinent area.

TABLE 29. *Serial specialised buildings: Triple-section (6-3-6 metres) five-stairwell buildings.*

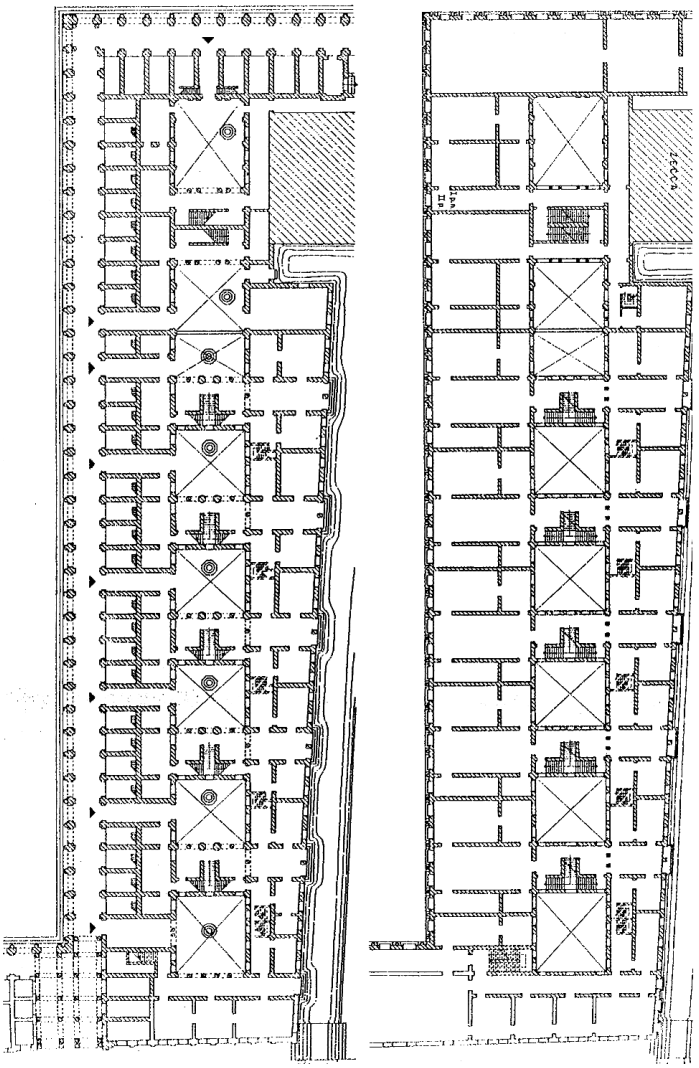
TABLE 31



This kind of building tends to stand on its own in the urban fabric, at least on three sides, one of which becomes the head and the other two are of similar use. The staircases occupy different places in the hierarchy: one is nodal while the other is anti-nodal.

TABLE 31. *Serial specialised buildings: Triple-section (6-6-6 metres) five-stairwell buildings with a head.*

TABLE 37



This building is a typical example of a triple-section five-stairwell building whose first floor layout (right) is easy to interpret. The portico along the front of the ground floor increases the number of passageways.

TABLE 37. *Venice, Procuratie Nuove, 1583.*

3.1. Serial specialised buildings

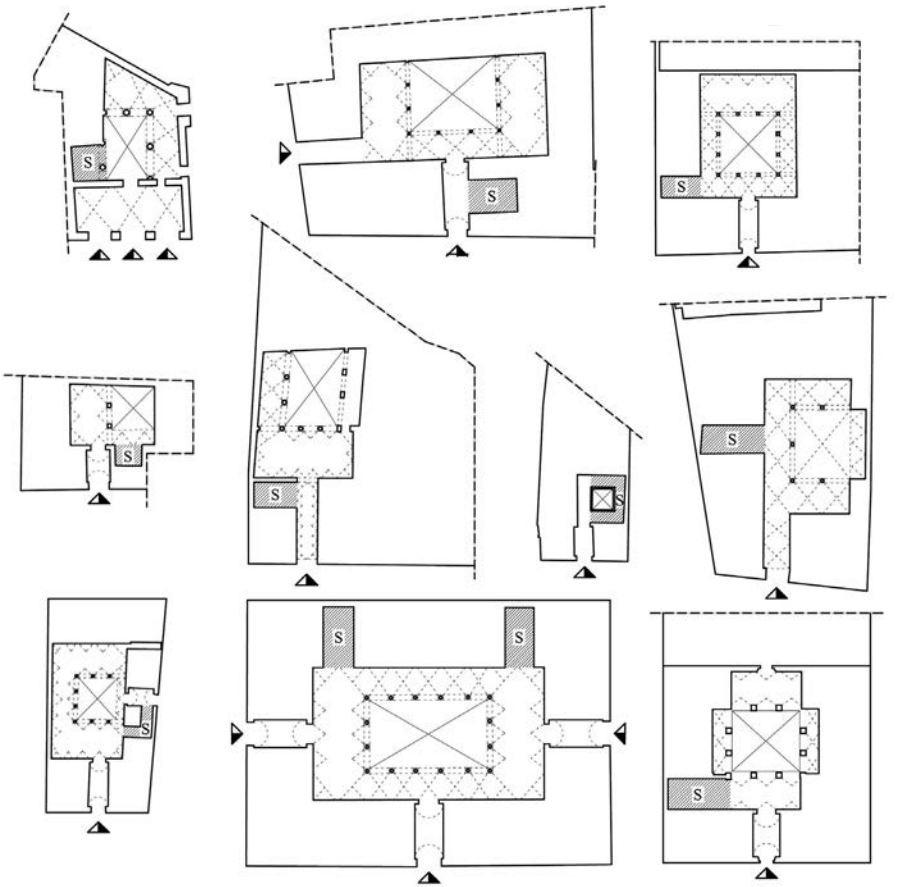
3.1.1 Specialised buildings derived from a building type: palaces

The interpretational fact sheets listing the compositional components of palaces feature ten Florentine buildings constructed in the 14th and 15th centuries, and the diagrams we include illustrate the floor plan, the relationship between spaces, rooms and vertical and horizontal passageways and, as regards their elevations, the compositional axes of their facades. As mentioned earlier, palaces are specialised residences typical of the upper class that, in their evolutional history, gained the compositional components in Florence that were to remain decisive for the further developments of their typological series, with gradual modifications that were increasingly specialised. In *La Casa Fiorentina nella Storia della Città* (G.L. Maffei, Venice, 1990), we stressed how the early medieval mercantile courtyard house descended from the *domus* fabric typical of the Florentine colony in Roman times. This house was the first step in specialisation that specifically concerned commerce carried out on the street, leaving the private part of the building around the inner courtyard, just as the original *domus* was arranged around the atrium. The general establishment of this building type between the 13th and 14th centuries determined the subsequent construction of the Renaissance palaces that characterised the city in the 1400s. They were designed buildings whose architects and builders are known and who, despite their individual characteristics, produced buildings that were generally uniform and perfectly in keeping with their surroundings. Their floor plans and elevations clearly demonstrate the differences derived from morphological circumstances and the various different urban locations of their building plots, nevertheless they can all be traced back to a concept of specialised housing that perfectly

matched the aristocracy's requirement for public representation and can all, in any case, be traced back to an architectural language that was equally typical of, and specific to, Renaissance Florence.
Summarising tables that compare the floor plans of the ten palaces examined have also been compiled, on the same scale, so as to highlight the different proportions of their component parts depending on the size of each palace.
Two Tuscan public palaces – the Bargello in Florence and Palazzo Pretorio in Pistoia – were compared to each other using the same criterion. The component elements, which derive from the matrix of the aristocratic house of the time, are made typical here too and only vary in size, which is logically due to differences in their urban location.
We then present three fact sheets concerning palaces of the 17th and 18th centuries from different cultural areas: two of which were designed by Galeazzo Alessi – one in Milan and the other in Genoa – while the third is Palazzo Corsini in Rome, designed by Ferdinando Fuga. In the first two examples, the interpretation of the palace type in its geographic variants highlights the issue of the export of typical specialised buildings models. Indeed, the designs of one architect show how the same typological model could be adapted to suit very different urban situations. The third fact sheet, illustrating Palazzo Corsini in Rome, is an example of the continuity of the compositional components typical of this typological series, which were nevertheless adapted whilst remaining consistent with the characteristics of the Roman cultural area.
The last fact sheet illustrates the Reggia di Caserta. An interpretation reveals how, despite the building's extraordinary size, the passageways and areas for use are absolutely identical to those of the palaces analysed earlier. The large-scale repetition of component parts is merely a problem concerning the need to house an entire royal court and is solved by constructing a palace fabric around four large courtyards. These generate the hierarchy necessary to locate the main halls – the grand staircase, the chapel, the theatre and the royal apartments – in the central wings, while the remaining halls are serialised in the secondary wings and ancillary floors. In interpreting the overall compositional plan of the Reggia, we could put forward once again the fact sheet compiled for the basic urban organism in Table 39b published in *Composizione Architettonica e Tipologia Edilizia 1- Lettura dell'Edilizia di Base* (G. Caniggia, G.L. Maffei, Venice, 1980) in that it perfectly represents the same morphology and an identical overall structure.

Table 1

A TABLE COMPARING THE SIZES OF THE FLOOR PLANS OF THE BUILDINGS LISTED IN PREVIOUS FACT SHEETS, ON THE SAME SCALE



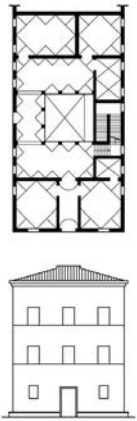
Legend

S *Vertical passageways*

Entrances

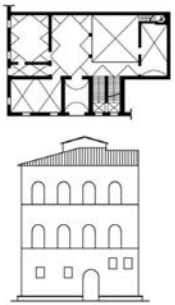
TABLE 3

A TABLE COMPARING THE INCREASING SIZE OF FLORENTINE PALACES, SHOWING THE FLOOR PLANS AND FACADES



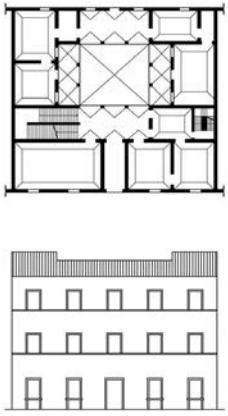
THREE WINDOWS

BARTOLINI-SALIMBENI *(1518-1523)*



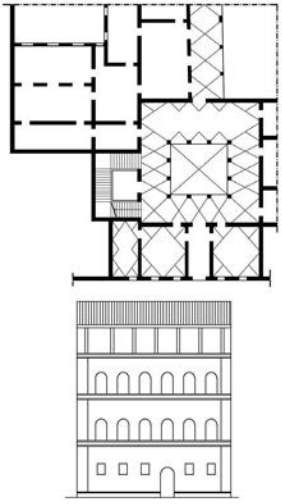
FOUR WINDOWS

CORSI-HORNE *(15th century)*



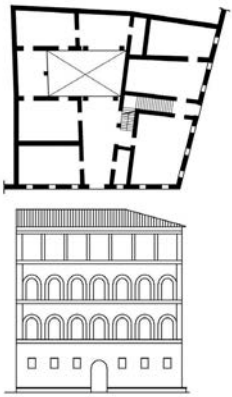
FIVE WINDOWS

DA FIRENZUOLA-GIUGNI *(1566-1577)*

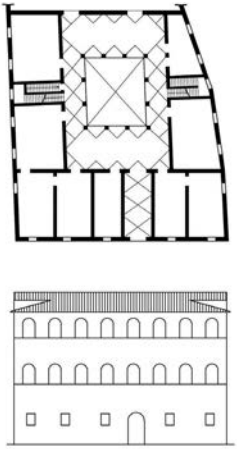


SIX WINDOWS

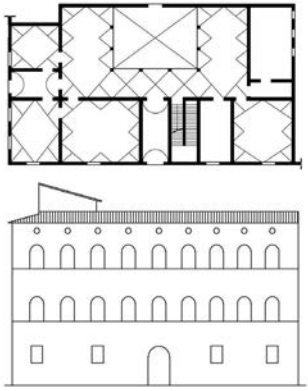
NICCOLINI *(1548-1576)*



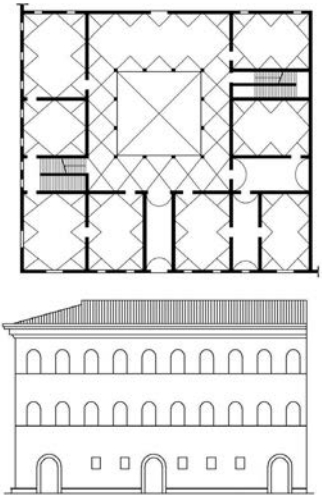
SEVEN WINDOWS
GUADAGNI *(16th century)*



EIGHT WINDOWS
BUSINI-BARDI *(1420-1430)*



NINE WINDOWS
PAZZI *(1458-1469)*



TEN WINDOWS
MEDICI *(1445-1462)*

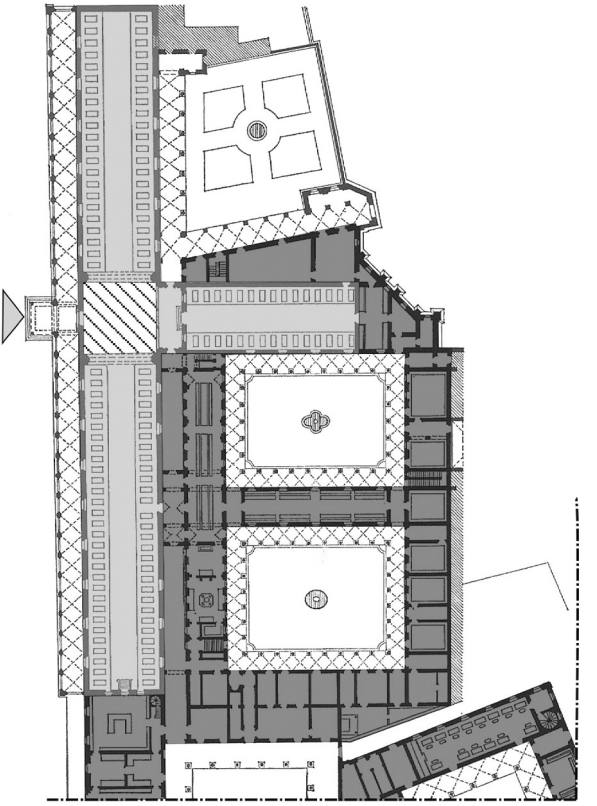
(From 'Il Processo Tipologico del Palazzo Fiorentino', a degree thesis by Laura Bastianini, the University of Florence's Department of Architecture, 2009/2010 academic year)

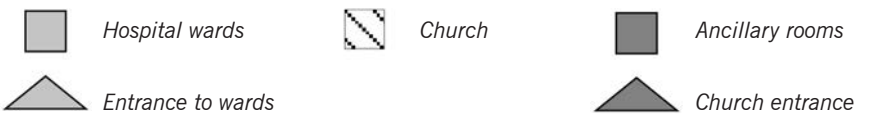
Fact Sheet 1

THE INTERPRETATION OF COMPOSITIONAL COMPONENTS
Collective residences: Hospitals

Rome, Santo Spirito in Sassia

This hospital was already open in 1204 and was extended and renovated (1473-78) by Pope Sixtus IV. It followed the oldest hospital regulations known.



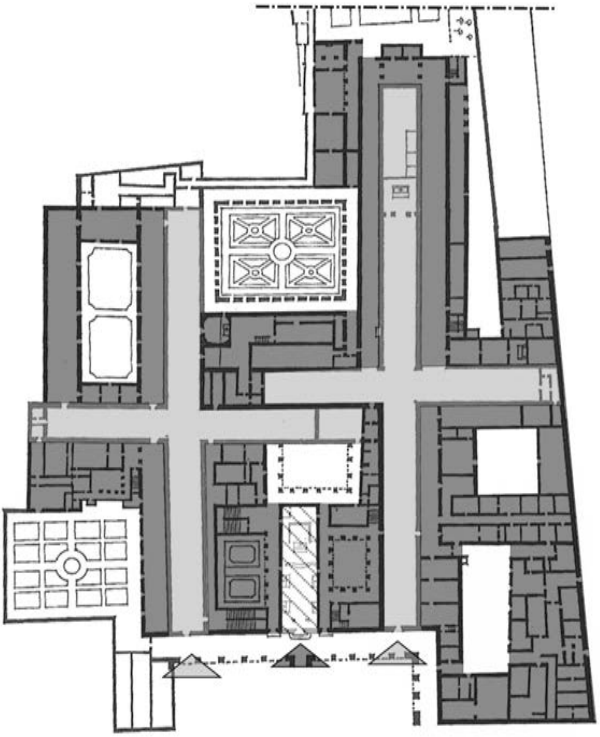


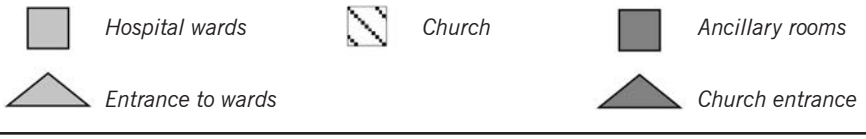
Fact Sheet 2

THE INTERPRETATION OF COMPOSITIONAL COMPONENTS
Collective residences: Hospitals

Florence, Santa Maria Nuova

A hospital founded by Folco Portinari in 1288, it covered two fronts of the road just outside the city walls of 1170. Its current layout features two large cross-shaped wards built at different times for men and women on the two sides of the church, located in the middle. Bernardo Buontalenti's renovations in the 16th century concerned the cloisters, the church and the outside portico.



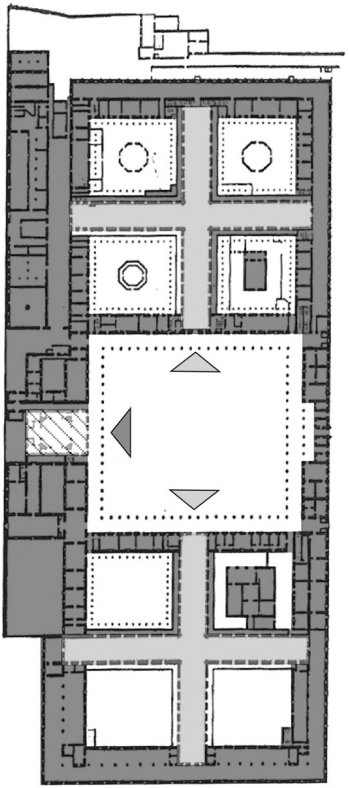


Fact Sheet 4

THE INTERPRETATION OF COMPOSITIONAL COMPONENTS
Collective residences: Hospitals

Milan, Ospedale Maggiore

Designed by Antonio Filarete, construction work began in 1457 and was continued by his successor, Cristoforo Solari, in 1465. Construction was completed in 1624 by Francesco Richino. It was the first municipal lay hospital.



3.2. Specialised nodal buildings

3.2.1 Buildings with a single longitudinal axis

The first examples shown here are a number of old basilica-type halls, in that they can be considered the typological ancestors of single-axis longitudinal buildings in this specialised series: the Basilica of Pompeii and Rome's Basilica Ulpia with a single, predominantly rectangular nave. In contrast, the Caesareum of Cyrene – with its three-aisle basilica and quadriporticus at the entrance – is the morphological prototype of Romanesque churches.

In the next table, we have chosen to show one-, three- and five-aisle churches that, though contemporary with each other, differ due to their geographic location.

Our chart then shows the intrinsic relationship that exists between the growth in size and complexity of buildings in this series, with a particular focus on the structural implications that follow when attempting to solve the problem of how to cover the main room, in that this becomes increasingly complicated as the size of the surface area increases.

We have listed ten churches with a single longitudinal axis, found in central Italy and dating from different eras, in order to interpret their compositional components, both in terms of layout and size, from their floor plans, facades and each one's section, which helps us understand the distinctive characteristics typical of their architectural structure.

We then go on to compare three buildings, in order to understand the relationship between their different shape and their corresponding propor-

tions, placing their floor plans on the same scale. These are San Salvatore in Brescia, Sant'Ambrogio in Milan and San Petronio in Bologna. The different eras in which they were constructed, as well as their diatopy, have led to differences that gradually became greater due to the different size of the three buildings.
In the last two tables of this series, we have included examples of buildings that had particular importance and were adopted far and wide in particular moments in history and that, however, did not have any evolutionary outcome. These are typical examples of 'short-necked giraffes', as Gianfranco Caniggia called them, in that their potential did not suit the mechanisms of evolution.
Thus, the first table lists three examples of churches with a cross-shaped floor plan where the longitudinal line extends in two directions at right angles to each other, as if a building with a central plan had extended itself with four aisles to form a cross. What emerges is a combination of *martyria* with a central plan and the three-aisle *anastasis* of the East, and it is for this reason that the first two examples are fifth-century buildings found in Syria and Turkey, while the third is the church of San Ciriaco in Ancona that, following a succession of construction and extension phases, took on this type of layout between the 10th and 13th centuries.
The second table shows three complexes that are examples of another type of building that proved to be an important stage in the development of this series: twin basilicas, which also developed in the East and were widely imitated throughout the Mediterranean in the 4th and 5th centuries, only to be abandoned later. Their structure, nevertheless, remained a model for subsequent developments in buildings belonging to this series.

Fact Sheet 9

THE INTERPRETATION OF COMPOSITIONAL COMPONENTS

Multi-axis buildings with a central floor plan

Montepulciano (Siena), the Basilica of San Biagio, 16th century

Historical background: Constructed on a plain at the foot of the medieval city from 1518 to 1545, the building was designed by Antonio da Sangallo the Elder.

The floor plan: The 'Greek cross' floor plan consists of a central square and four identical wings of the same height, with a barrel vault ceiling supporting a high circular tambour with windows. The frescoed dome is extradosed with a skylight. At the back, a semi-cylindrical section contains the sacristy. Two bell towers sit on either side of the main facade: the completed one has storeys in different architectural orders – Doric, Ionic and Corinthian – placed one above the other in order of importance.

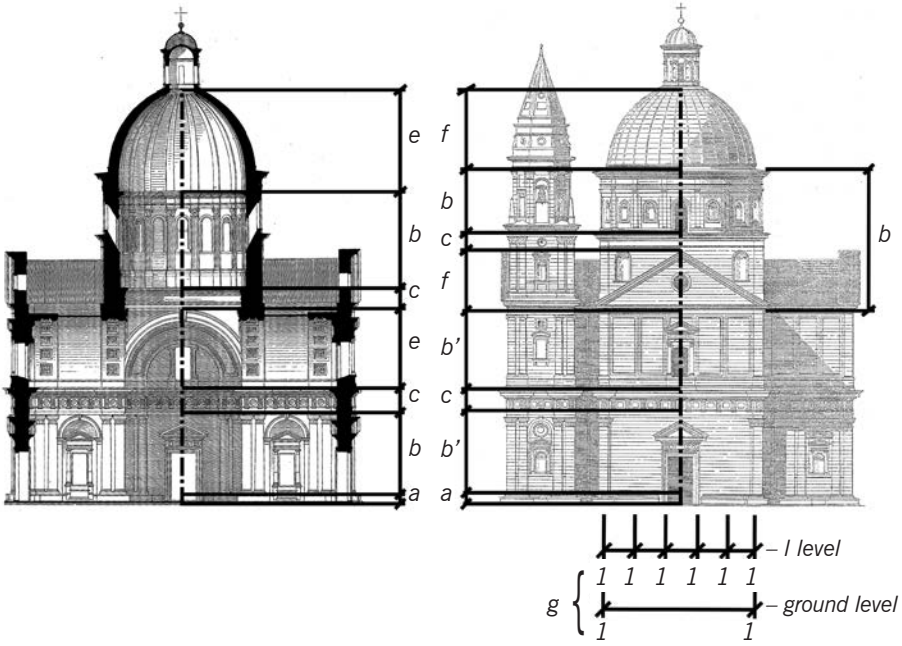
The exterior: The travertine marble facades feature corner lesenes that mark the pier on the ground floor on top of which, after an ornate cornice, a panelled pier coincides with the vaulted roof inside and ends with a tympanum with central rose window that coincides with the roof of the cross's four arms.

The interpretation of the structural parts of the architectural layout

a – *base*
b – *pier*
b'/b''– *interior piers*
c – *crowning cornice*
c' – *intermediate fascia*
d – *attic*
e – *ceiling*
f – *roof*
g – *the structure of the facades: panels with a 1-2-2-1 (lesene, column, column, lesene) / 1-1-1-1 (lesene, lesene, lesene, lesene) pattern*

The interpretation of formative axes

x – *main axis*
x' – *secondary axis*
y – *access routes*


e
b
c
e
c
b
a
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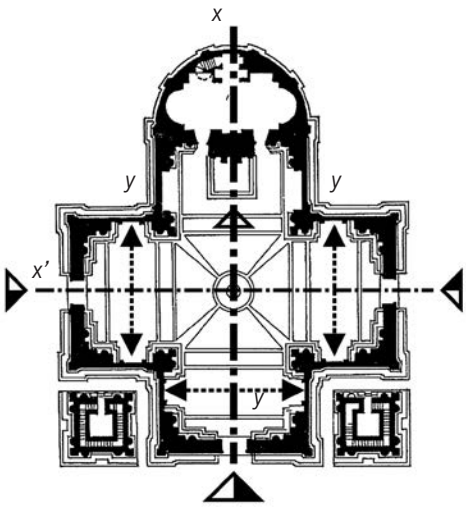
b'
c
b'
a
b
– I level
1 1 1 1 1 1
g
– ground level
1
1


x
y
y
x'
y

Critical Glossary

Nicola Marzot

- **Access routes**

  These are the horizontal or vertical routes that distribute the internal parts of a building. For example, staircases, cloisters, corridors, etc. are all examples of access routes. Similarly to planned building routes, they highlight the hierarchy that exists between passage routes and those distributing the layout inside a complex within the economy of the building type. In this case, as ever, they form through transitional thresholds that are clearly less important than those deriving from relationships with the city, placed in the order of a progression of reciprocal hierarchies.

- **Anti-nodal staircase**

  An anti-nodal staircase is a secondary vertical connection, usually reserved for internal use. Anti-nodal staircases are those set aside, for example, for servants in aristocratic palaces or for the fire escapes of modern-day buildings.

- **Architectural language**

  Architectural language is a code of elements that help us understand the links between the various different components of a building. As such, it is typical of a particular geographic area in a particular chronological setting.

Architectural language is the manifestation of a particular place's architectural culture at a particular moment in time and, as a result, it encapsulates the fundamental values of that society, involving the acceptance and spontaneous subordination of its members. It experiences a crisis when it ceases to be a language that is common to all, i.e. when the intention of the operator prevails over the ability to identify buildings as phases in an evolutionary process belonging to a manmade culture.

- **Attic**

  This identifies the floor utilised under the roof.
  In the past, it could feature a loggia for service purposes.

- **Base**

  This is the section upon which a building rests. In construction and architectural language, it is represented by an underlining that identifies the ability to support the vertical structure.
  The base is the first step when man manipulates his environment, turning the ground into a plane used for a particular purpose.

- **Building section**

  This term identifies the open or closed interior area – supported by one or more structural bays, complete with vertical and horizontal load-bearing partitions – whose layout can create either serial or nodal solutions, depending on their reciprocal similarities or differences.

- **Crown**

  In architectural language, this identifies the connecting element between the pier and roof.
  Like every element of architectural language, the crown appears in different forms, in practice, depending on the cultural area and historical era in which it is built. In palaces, it usually features a decorative band (a cornice).

- **Distributing section**

  This term identifies the part of a building designed to distribute its rooms.