

Residential building types in Italy before 1930: the significance of local typological processes

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Abstract. *I tipi edilizi residenziali in Italia fino al 1930: permanenze e derivazioni dai processi tipologici locali.* La maggior parte del tessuto edilizio dei quartieri progettati in Italia dalla seconda metà dell'Ottocento ad oggi è costituito dalla casa plurifamiliare ad appartamenti o 'casa in linea'. La casa in linea dei primi quartieri di espansione rappresenta la codificazione del tipo plurifamiliare nato nella città antica dal riuso dell'edilizia monofamiliare medioevale, attraverso fenomeni di rifusione e sopraelevazione. Per questo, esaminando in comparazione i quartieri residenziali di città italiane progettati e realizzati dalla metà dell'Ottocento ai primi decenni del Novecento si rilevano, insieme a caratteri comuni nel tessuto e nell'edilizia, accezioni particolari e differenziazioni locali, nella struttura, nella distribuzione e soprattutto nel sistema di aggregazione della casa in linea, dovute alla permanenza e continuità di processi tipologici autoctoni ereditati dalla città antica. La ricostruzione dei processi tipologici locali diventa indispensabile per giungere al recupero del progetto riferito all'esperienza edilizia storica dell'area culturale di appartenenza, in stretta connessione e continuità con la cultura dei luoghi. L'analisi si sviluppa nella comparazione dei processi tipologici di tre città italiane, Genova, Roma, Milano.

Key Words: building types, apartment buildings, historical cities, Italy

Most of the residential areas constructed in Italian cities since the middle of the last century consist of apartment buildings. These purpose-built, multi-family buildings evolved from the multi-family houses that had been created in the old cities by converting existing medieval one-family houses.

The residential areas built between the middle of the last century and c.1930 show local differences in structure, layout and, above all, the way in which the buildings are aggregated, reflecting the continuity of local typological processes inherited from the old cities. Each city also has its own type of urban fabric and building design, and these

too reveal the continuity of a local typological process. The origin of each process has conditioned the utilization and form of subsequent building developments.

Since the end of the Second World War, building design has become more and more detached from this gradual evolution, with the result that buildings tend to be the same everywhere, and everywhere out of keeping with older buildings. Any attempt to halt this spreading anonymity will have to start from an analysis of the local typological processes of each city, in order to discover exactly what gives them their historical continuity.

This paper compares the typological

processes of three Italian cities: Genoa, Rome and Milan. It examines, first, the physical form of the medieval cities; secondly, the multi-family buildings derived from the restructuring of the medieval houses; thirdly, the buildings designed in the second half of the nineteenth century; and fourthly, those designed in the first 30 years of this century.

The medieval cities

Caniggia's studies of typology (Caniggia, 1986) show that the original Roman fabric still survives in many ancient Italian cities. A typical feature of this Roman fabric was the town house, or *domus*, a building type consisting of an enclosed plot of land with a house in one part of it that influenced the way in which buildings were used in medieval times, and conditioned subsequent building developments. Most Italian cities have had two main phases of development. The first, in the medieval period, was spontaneous, and consisted of adding one-family houses to the existing *domus*-type houses. The second, from the middle of the nineteenth century to around 1930, was based on a planned layout of apartment buildings that derived from the restructuring and amalgamation of houses in the medieval cities. There was, therefore, a typological process common to Italy as a whole, with local variations reflecting the development of the original building structures and fabric.

The medieval fabric of Genoa is based on the single-room building, a pseudo row house derived from the development of the *domus* into *insulae*, or street blocks (Figure 1a). A street or alley ran through the original *domus* enclosure, with one-room independent houses on each side of it, backing on to the houses in the adjoining plot. Figure 1b shows the result of this process, with three *domus* plots developed into blocks of houses. The main feature of these houses is that, unlike the typical row house, they have three, not two, walls in common with adjacent houses and front directly onto the street, with no yard or garden.

The typical Genoese pseudo row house has

a frontage of 4-7m and is 5-8m deep. In its most evolved form, still common in the old town, the ground floor has two separate entrances: a large doorway leading to a shop or workshop, and a small doorway opening on to a staircase leading to the living quarters, called *caminata* in old documents, on the first floor, and bedrooms on the second. The first staircase, perpendicular to the frontage, runs along the adjacent party wall, while the one to the second floor is parallel to the frontage and is built against the rear wall (Figure 1c).

In Rome, the development into *insulae* can be seen in the central areas of the medieval city, while in what were then the outer areas, such as Trastevere, the *domus* survived in the medieval courtyard house, which was remodelled into row houses during the fifteenth and sixteenth centuries (Figure 1d). Here the process was different from that in Genoa: the *domus* plot was divided longitudinally into independent building lots, with a main street in front and side streets (Caniggia, 1986). Row houses were built first along the main street and subsequently along the side streets, thus forming the typical medieval Roman block (Figure 1e).

As in Genoa, the row house in Rome, 5-6m wide and 10-12m deep, divided into two rooms, was for a single family; and again had a shop or workshop on the ground floor, with living and sleeping quarters on the first and second floors. There is usually a one-ramp staircase in the front room, either perpendicular to the street and against a party wall or parallel to the street and against the far wall (Figure 1f).

In Milan, the *domus* persisted in the medieval courtyard house (Caniggia, 1986). This consists of an enclosure 12-18m wide by 18-30m deep. The portion occupied by the building initially consisted of one room, but another room was added later to accommodate increasingly varied housing functions. This was contiguous to at least one side of the enclosure, its position dependent on the terrain and orientation. The entrance was normally in the enclosure wall, fronting the main street (Figure 2a). As needs grew,

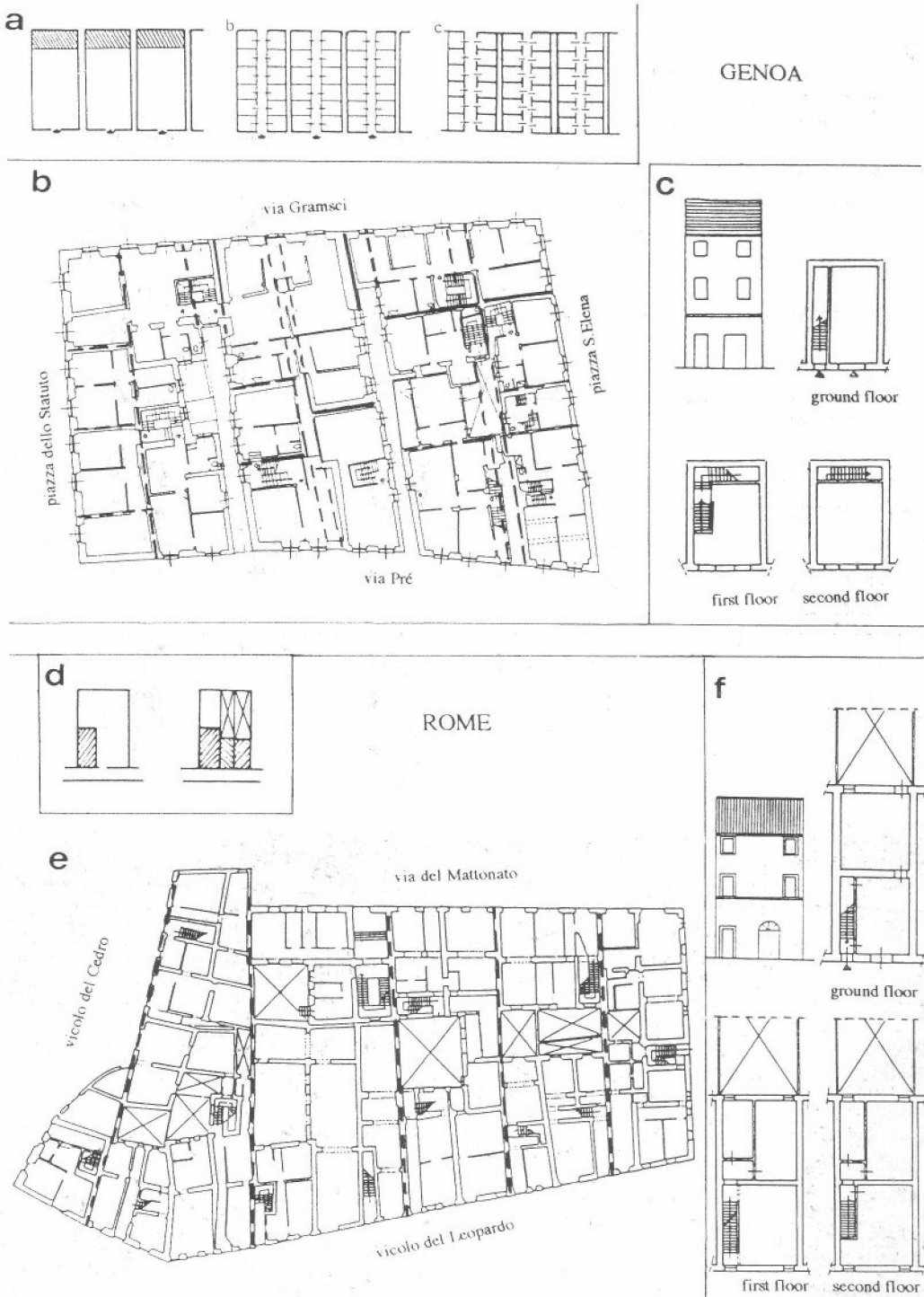


Figure 1. (a) Multi-family conversion of *domus* plot, Genoa; (b) Genoa Pré, medieval fabric with continuance of block formation; (c) Pseudo row house, Genoa; (d) Medieval courtyard house remodelled into row houses, Rome; (e) Medieval fabric of Trastevere, Rome, showing continuance of original *domus* type; (f) Roman row house.

Sources: a,b,c - Corsini (1996); e - Masi and Olivieri (1989).

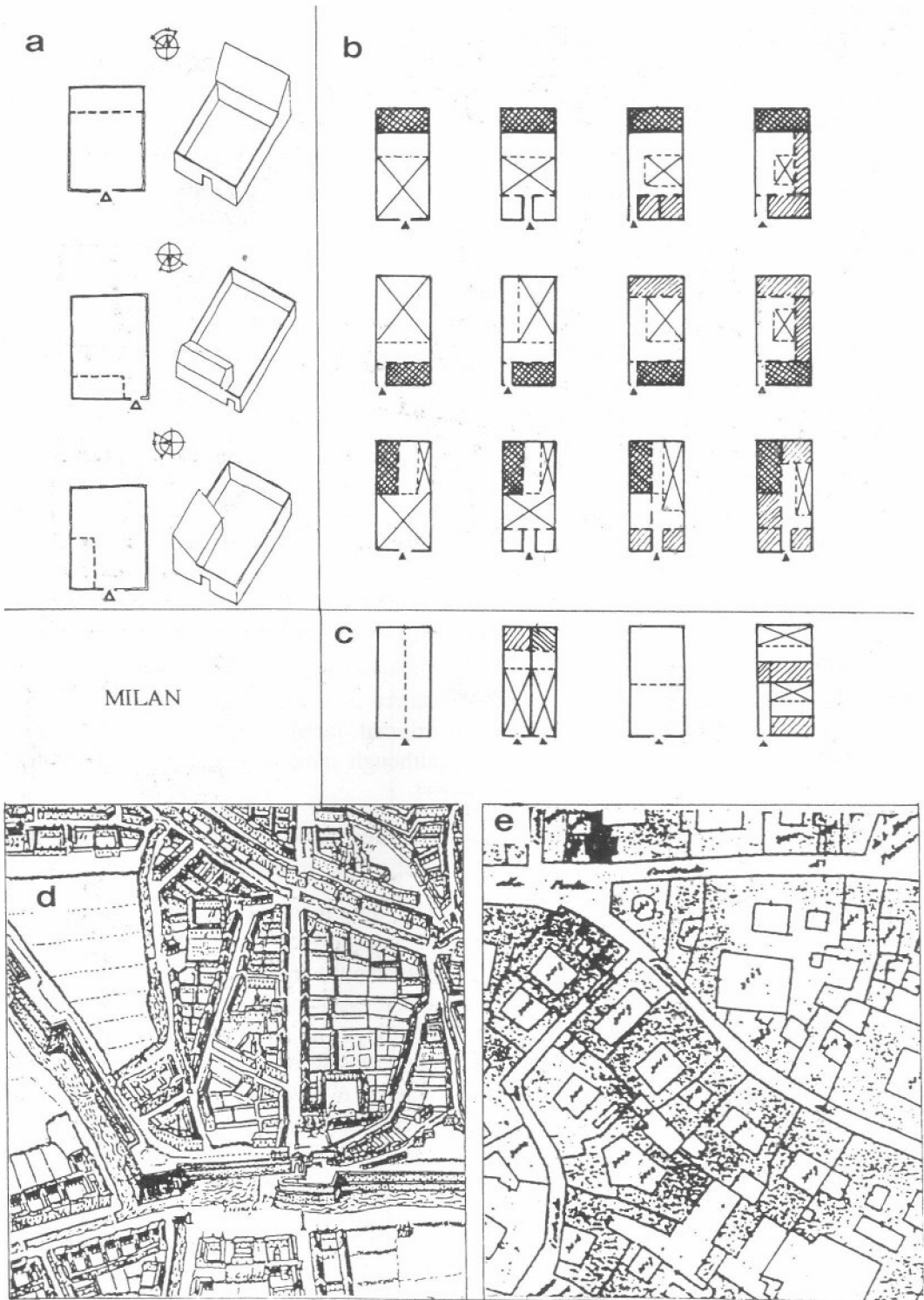


Figure 2. Milan: (a) Three types of courtyard house; (b) Successive building phases in the plot of the courtyard house; (c) Subdivision of the courtyard house plot; (d) Fabric of the courtyard house, from the map by A. Barateri (1629); (e) Cadastral plan (second half of nineteenth century). Sources: a - Caniggia (1986); d,e - Gambi and Gozzoli (1982).

further buildings were added against the enclosure wall (Caniggia, 1970) (Figure 2b). In a period of intensive urbanization, the plot was often divided, either lengthways or crossways, and the number of buildings was doubled while maintaining the features of the courtyard house on a smaller scale (Figure 2c). The street block of the old city was formed by aggregating courtyard houses (Figure 2d,e).

From medieval houses to multi-family buildings

With the exception of occasional planned extensions in the sixteenth and seventeenth centuries, the medieval cities remained essentially unchanged until the early part of the nineteenth century (Caniggia and Maffei, 1984). Accommodation for the growing population was provided by converting one-family houses into multi-family dwellings rather than by building new houses around the medieval centre.

This conversion was done in one of two ways: either by dividing the house into apartments (with one on each floor; extra floors were often added), or by restructuring and amalgamating adjoining houses so that each apartment had the same floor area as a one-family house. One result was that the single-ramp staircase now became a double-ramp staircase.

In Genoa, the first type of conversion was more common, with the pseudo row houses extended upwards (Figure 3a). In Rome, a two-room dwelling was commonly created on each floor, and another two storeys were usually added (Figure 3b). In Milan, the usual method was to extend the building into the courtyard area, often, when the plot was large, with the creation of additional staircases. The apartments were usually of two rooms, with access from external landings (Figure 3c).

The Genoese multi-family building retained much of the character of the medieval structure. No matter what position it occupies in the street block, it usually has a three-bay layout, with a double-ramp

staircase in the central bay and one or two apartments on each floor (Figure 4a). Each apartment has a central entrance hall, with the living rooms and bedrooms looking onto the street and the bathroom and kitchen at the rear. The last two rooms are either windowless, or have small windows opening on to ventilation shafts.

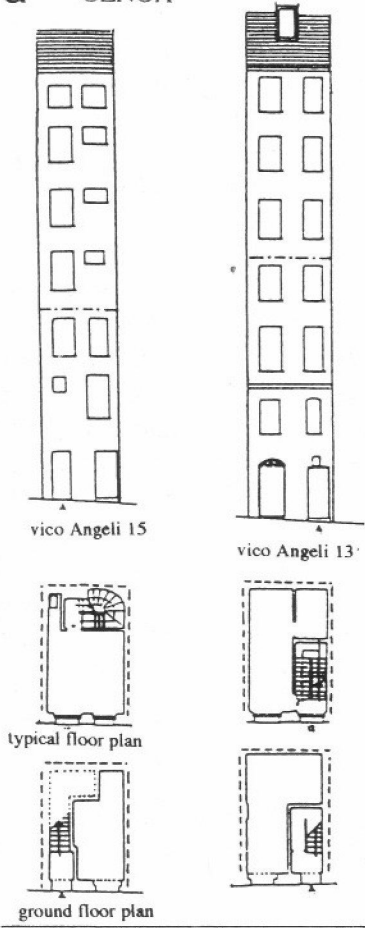
The method commonly adopted in Rome was to amalgamate two or more adjoining row houses while retaining their layout and structural features. The typical apartment is two rooms deep, with a double frontage and a yard or open space at the rear. The more important rooms are at the front, with the kitchen and bathroom giving on to the yard (Figure 4b).

The Milanese courtyard-type multi-family building was created by restructuring and amalgamating two adjoining courtyard houses. In some cases the two courtyards were retained, in others they were amalgamated into a single courtyard, with staircases leading off (Figures 5a,b). The original façades were sometimes retained, although some were completely redesigned.

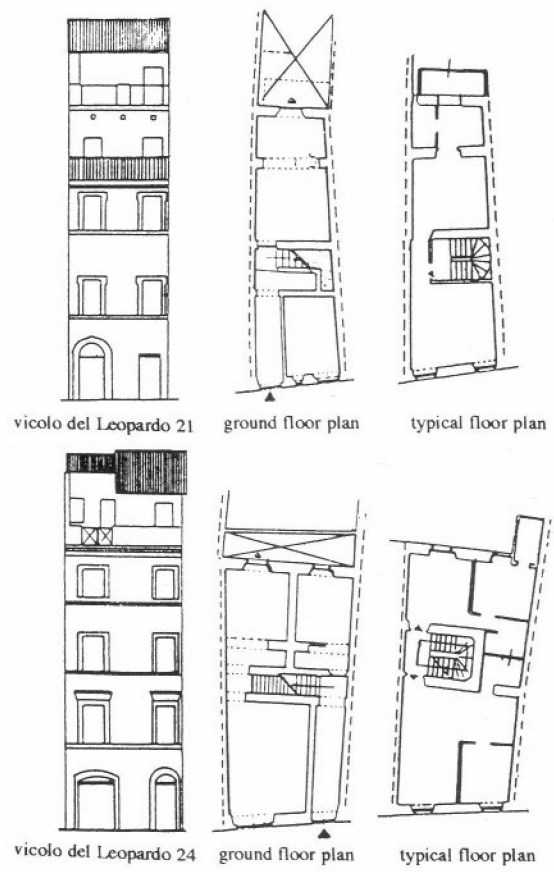
Planned urban expansion in the second half of the nineteenth century

The apartment buildings designed for the planned urban expansion that took place between the middle of the nineteenth century and c.1930 follow the characteristics of the buildings in the old cities; purpose-built structures were based on the building forms that had evolved in the medieval city and had been systematized in the seventeenth-century city, incorporating both planned and unplanned elements. The structure and layout are in keeping with the evolution of the multi-family building from medieval times onwards, but the plan and façade of the sixteenth and seventeenth century *palazzo* are copied: the façades have the typical rhythmic feeling, created through the regular spacing of the windows - some of them fake, as they correspond to an internal dividing wall between apartments - while the floors are conceived as a hierarchy, with a ground

a GENOA



b ROME



c MILAN

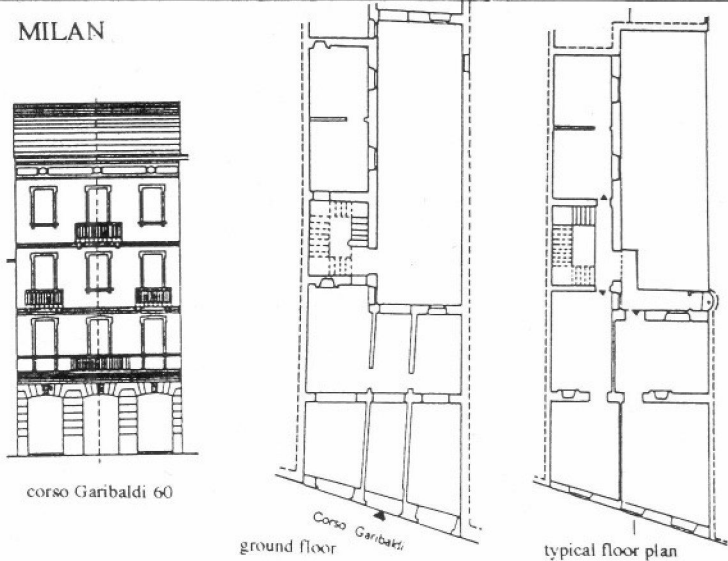
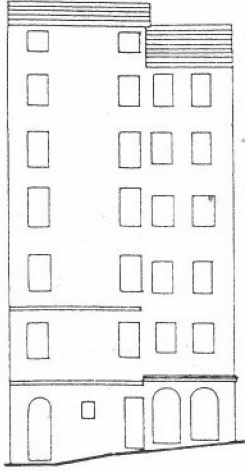
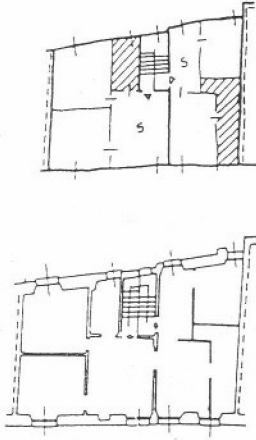


Figure 3. Conversion of one-family houses into multi-family buildings: (a) Genoa Pré; (b) Trastevere, Rome; (c) Milan - courtyard house. Sources: a - Corsini (1996); c - Lippa (1993).

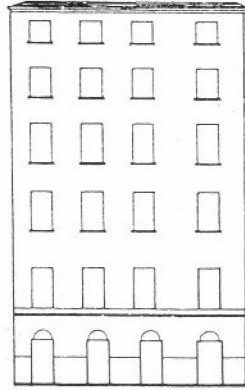
a GENOA



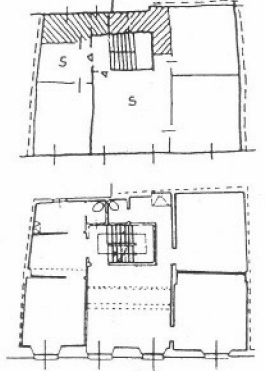
vico Dora 4



typical floor plan

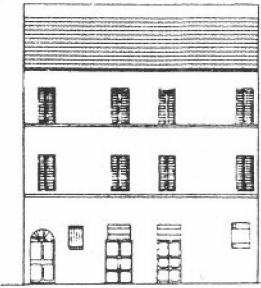


vico Bottai 1

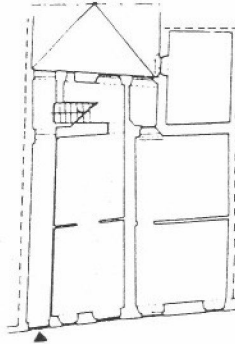


typical floor plan

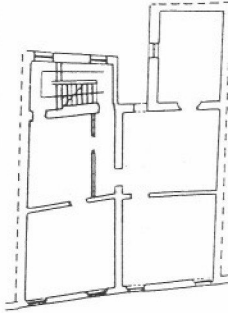
b ROME



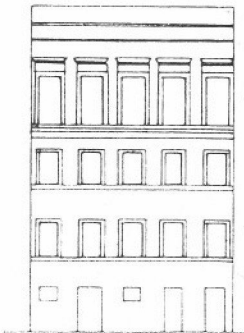
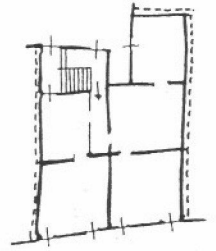
vicolo del Leopardo 10



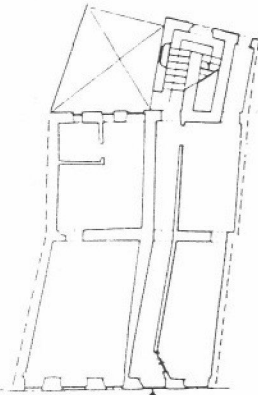
ground floor plan



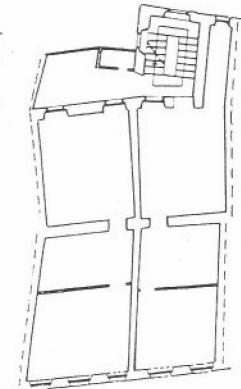
typical floor plan



vicolo del Leopardo 2



ground floor plan



typical floor plan

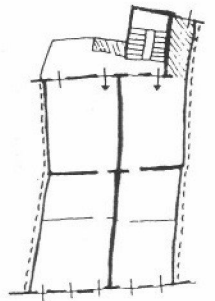
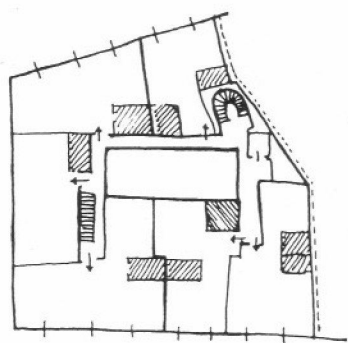
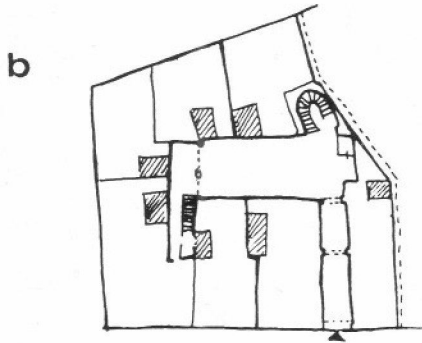
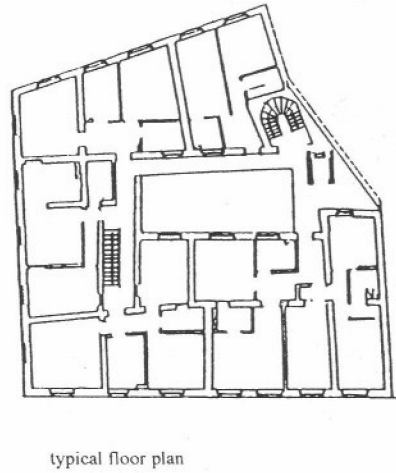
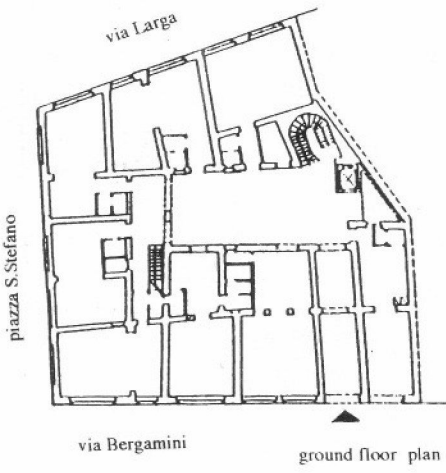
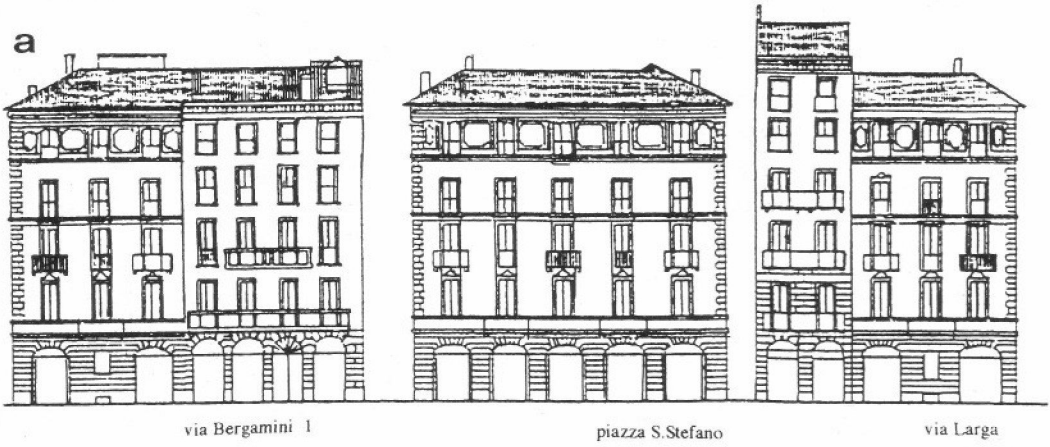


Figure 4. Multi-family buildings created by amalgamating one-family houses: (a) Genoa; (b) Trastevere, Rome. Source: Corsini (1996).

MILAN

a



▨ kitchen and bathroom

Figure 5. Milan: (a) Multi-family courtyard building derived from aggregation of two adjoining courtyard houses; (b) Layout analysis. Source: a - Lipa (1993).

floor, three or four residential floors and a top floor, which acts as a structural link, connecting with the roof in various ways.

The new buildings in each city, however, have distinct features, deriving from the way in which the medieval house had evolved locally. In Genoa, the apartment buildings are detached and situated in plots arranged along streets radiating from the old city, echoing the planned streets of the sixteenth and seventeenth centuries, such as *Strada Nuova* and *Strada Balbi* (Figure 6a). For both corner and full-front apartments, the principal feature is the retention of the three-bay layout that evolved in the old city, with the entrance hall in the central bay, the more important rooms at the front and the kitchen and bathroom at the rear (Figure 6b,c).

The grid pattern in Milan (Figure 6d) is distinctive because of the way in which the street block is composed. This is by the aggregation of courtyard buildings in which the function of the courtyard is to provide light and access. The result is a palazzo-type layout, often accentuated by the axiality and symmetry of the way in which the staircases are positioned (Figure 6e,f). There is a continuous landing on each floor. The apartments have single frontages on the courtyard or double corner frontages, served directly by the staircase.

In Rome, the urban fabric is modelled on the historical block as standardized in the sixteenth-century planning of *Campo Marzio*. This historical block is reproduced in size, orthogonal plan and plot pattern, with the entrances from the street and the divisions of the façade giving the impression of one-family row houses (Caniggia and Maffei, 1984). Other features retained from the row house are the type of access, the double-bay structure and layout and the double frontages on the street and yard (Figure 7a,b).

Planned urban expansion from 1900 to 1930

The grid pattern, often with streets running diagonally, as in Rome, is the most common plan for the areas built in the first 30 years of

this century. A general feature of this period was the way in which urban planning tended to assume some of the characteristics of building design, and vice versa.

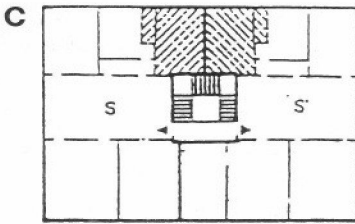
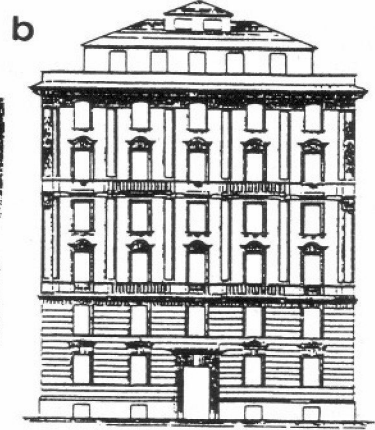
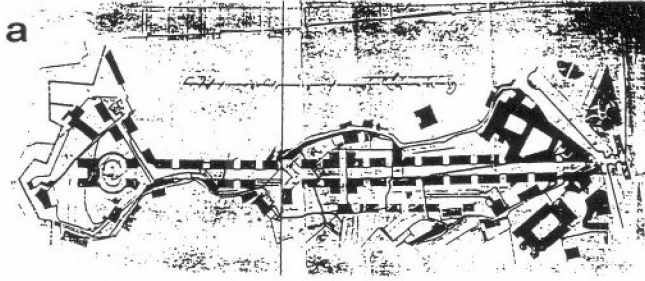
In Genoa, the grid pattern of the *Foce* area, planned at the end of the nineteenth century and built in the first decades of the twentieth, is laid out on pre-existing axes such as *Via della Libertà* and *Via della Minerva* (Figure 8a). The street blocks here, like their predecessors, consist of double series of lots, with a common boundary running down the middle, facing on to different streets. Each lot contains one apartment building, with one staircase serving two or more apartments, either corner or full-front, on each floor (Figure 8b). The apartments retain the typical three-bay layout, with a central entrance hall (Figure 8c).

During the first part of this century in Rome, it was common for the design of the urban fabric and the design of the individual buildings to be integrated, with the result that the street block appears now as a single building. Historically, the street block consisted of a series of lots, each with its own individual building, whereas by the early twentieth century it had become a single unit with one continuous building (Figure 9a). Instead of private yards or gardens, there was now a single large court with communal green spaces, from which led the various staircases (Figure 9b,c).

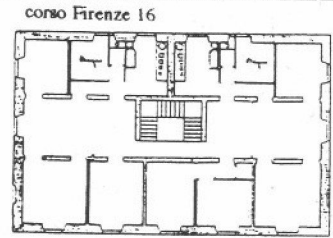
The grid pattern in Rome often includes focal squares from which streets radiate, with the result that street blocks could become unduly large. To avoid this, they are divided into two or three sub-blocks, each with its own courtyard. Here too the façades combine to give the appearance of one building, instead of each building having its own distinct façade (Corsini, 1993).

In Milan, a residential area was designed as a form of large courtyard, surrounded by and occupied by courtyard buildings, often with symmetrical layouts and façades (Figure 10a). The buildings themselves were constructed around a central courtyard, with two or more staircases and continuous landings on each floor (Figure 10b). The

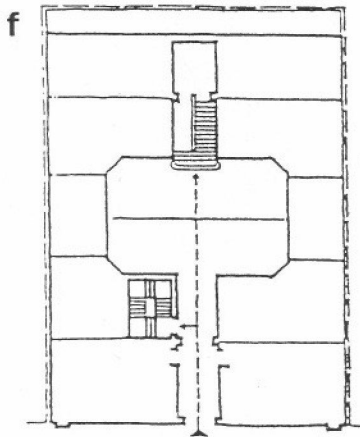
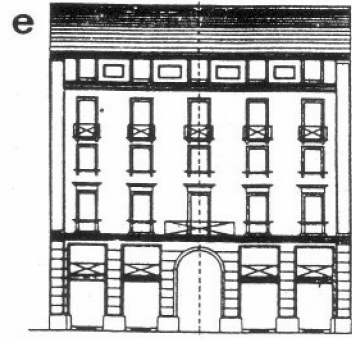
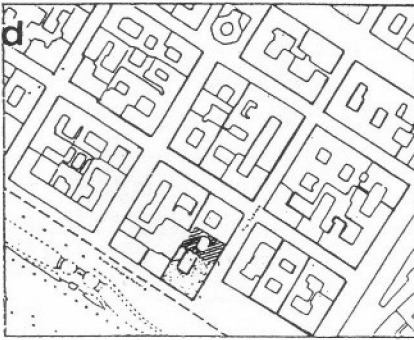
GENOA



typical floor plan



MILAN



ground floor

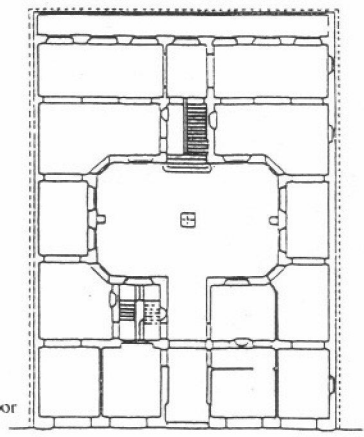
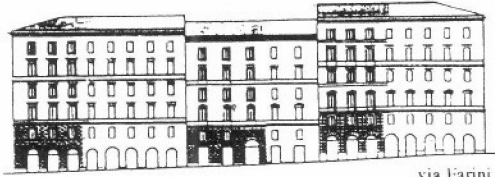


Figure 6. (a) Via Assarotti (1860), Genoa - planned urban expansion along axes radiating from the old city; (b) Corso Firenze 16, Genoa (1880) - a planned apartment building; (c) Layout analysis, Genoa; (d) Grid pattern of the Lazzaretto district, Milan (1885); (e) Via Tadino 6, Milan (1887) - a planned courtyard building; (f) layout analysis, Milan. Source: d,e,f - Corsini (1996).

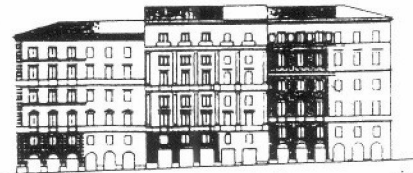
ROME



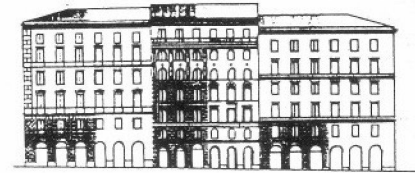
via Farini



via Pr.Amedeo

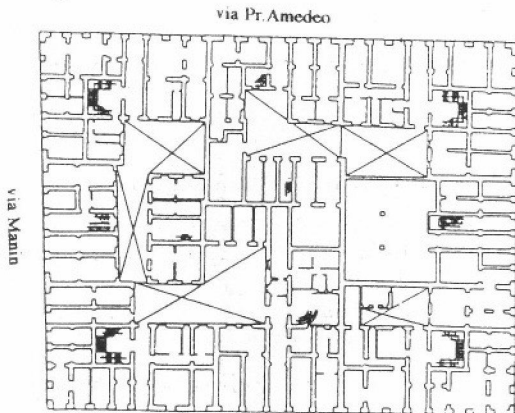


via Gioberti



via Manin

a

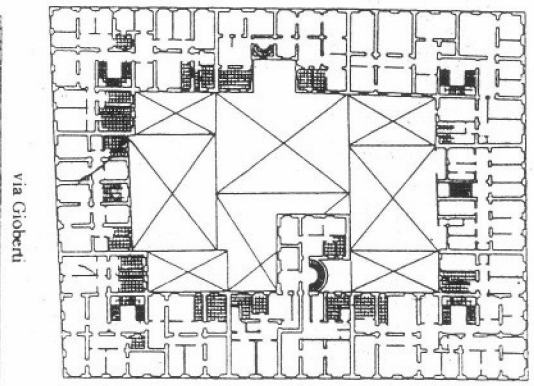


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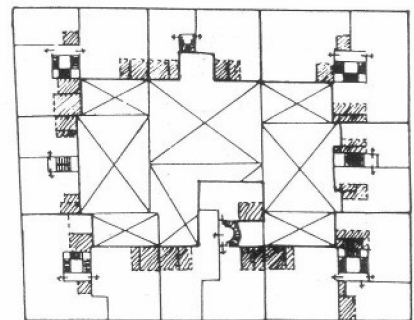
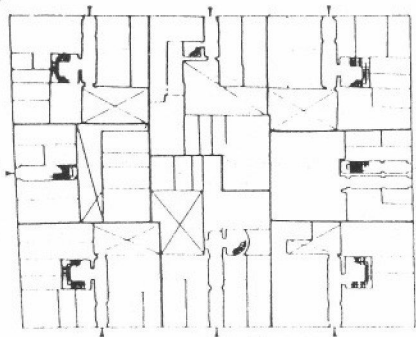
ground floor plan



via Gioberti

typical floor plan

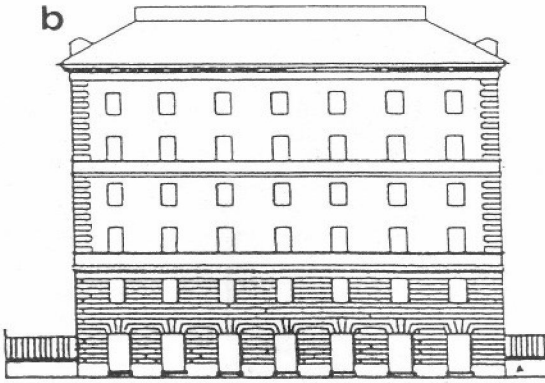
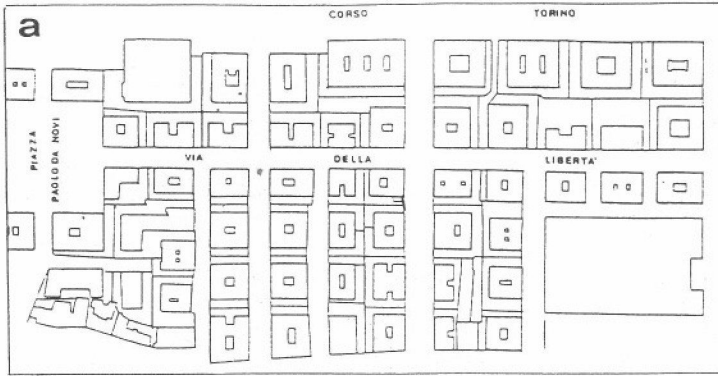
b



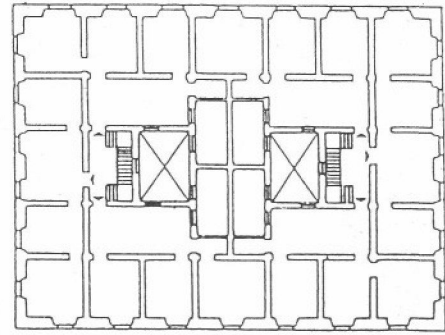
▨ kitchen and bathroom

Figure 7. Rome, Esquilino (1876): (a) Plan and elevation of street block between Via Manin, Via Principe Amedeo, Via Gioberti and Via Farini; (b) Analysis of ground floor and standard floor layout. Source: a - AA. VV. (1977).

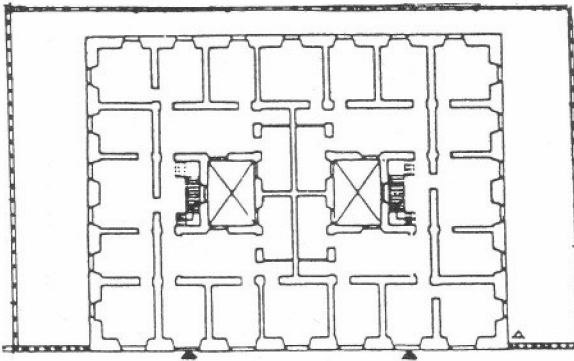
GENOA



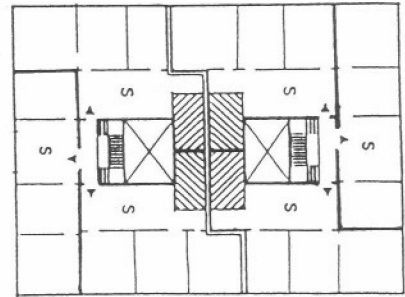
via della Libertà 19-21



typical floor plan



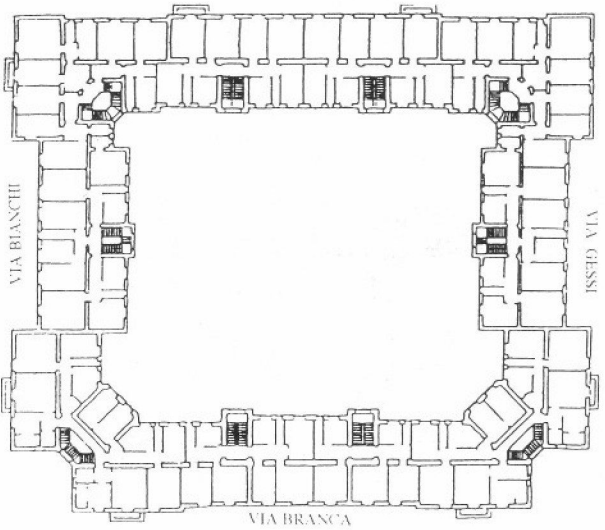
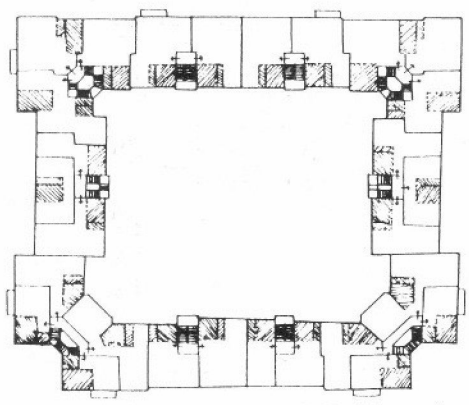
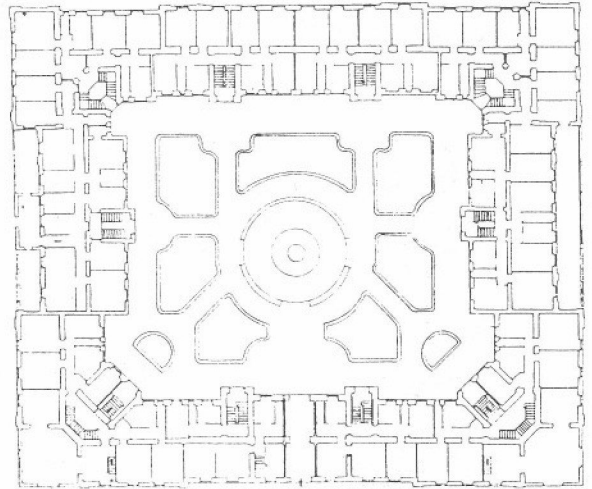
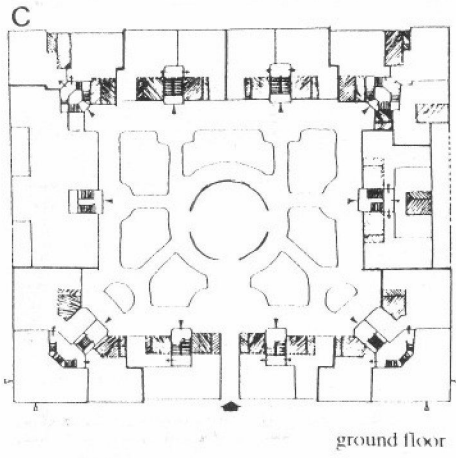
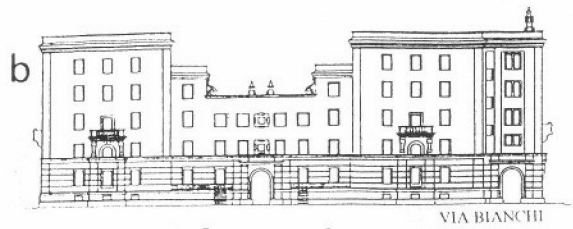
ground floor



bathroom

Figure 8. Genoa: (a) Grid pattern of Foce district, planned at the end of the nineteenth century; (b) Via della Libertà; (c) Analysis of layout.

Source: Corsini (1996).



▨ kitchen and bathroom

Figure 9. Rome: (a) Testaccio district; (b) Plan and elevation of street block between Via Branca, Via Bianchi, Via Vespucci and Via Gessi; (c) Analysis of ground floor and standard floor layout. Source: a - AA. VV. (1984).

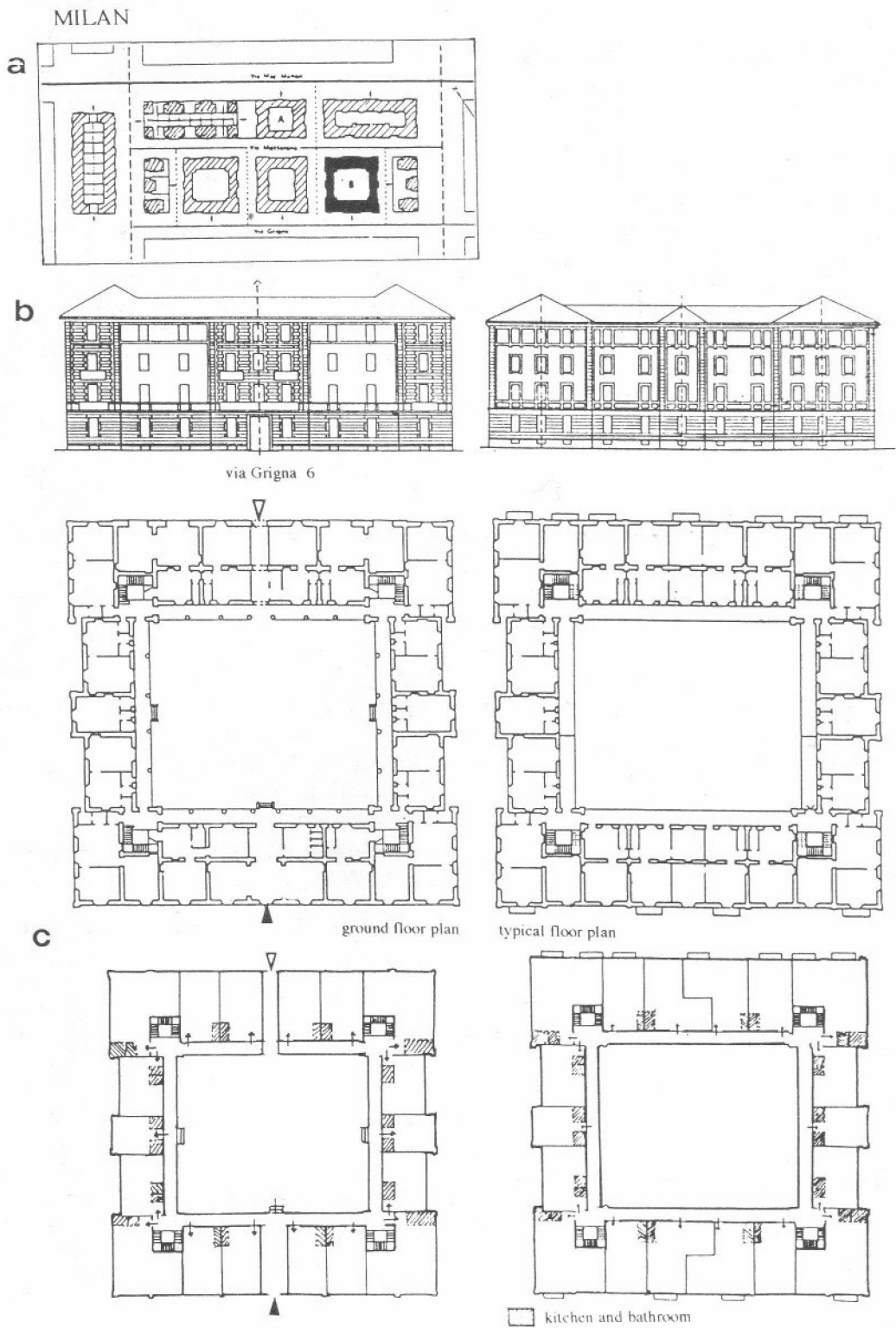


Figure 10. Milan: (a) Mac-Mahon district (1909); (b) Mac-Mahon apartment building; (c) layout analysis. Source: a,b - Lipa (1993).

apartments retained their traditional composition: two or three bays, double frontages, with living room and bedrooms along the street and kitchen and bathroom facing the courtyard (Figure 10c).

Conclusion

This analysis of the evolution of domestic architecture in Genoa, Rome and Milan clearly shows the continuity of distinct local typological processes. Such an analysis, involving the reconstruction of how buildings evolved in a given area, eventually giving rise to the apartment buildings that predominate today, is an essential tool for providing historical continuity when planning future developments.

From the reconstruction of the typological process, we can discover the rules and laws through which the urban landscape developed and to which any new design must be related. These rules govern the place of a building in the urban fabric - the relationship between building and plot, building and street, building and its location in the street block - and the architecture of the building itself - its type, plan, structure, façade, components and materials. The more closely a development follows these rules, the better it will fit in with existing buildings; forming, in turn, the basis for future variations.

Note

Where the source of an illustration is not given in

the caption, the illustration is previously unpublished and is by the author.

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