

UDC 711

Carlo Andrea Biraghi¹, Michele Caja², Sotirios Zaroulas³¹PhD candidate, ²PhD Associate prof., ³PhD architectPolitecnico di Milano, ABC Department, 32 Piazza Leonardo Da Vinci, Milano 20133, Italy
e-mail: carloandrea.biraghi@polimi.it, michele.caja@polimi.it, sotirios.zaroulas@polimi.it

URBAN BLOCKS AND ARCHITECTURAL TYPOLOGY IN THE MILANESE CONTEXT

Abstract: *The paper concerns the analysis of a large number of urban blocks in the central area of Milan. It has been developed during the last year (course of: “Elements of Architectural typology”, prof. Michele Caja, coll: Carlo Biraghi and Sotirios Zaroulas). The theoretical elaborations by Aldo Rossi constitute the basic reference to this analysis. Moreover, some recent experiences are also considered, such as the research carried out by Steven Holl “The alphabetical city”. So, in addition to the four types of urban blocks that Aldo Rossi suggests – a block of houses surrounded by open space, a block of houses connected to each other and facing the street, a deep block of houses, and the houses with closed courts – it is suggested here some sub-categories of houses, such as the “L”, the “H” house, or the “T” house, etc. In addition to a greater knowledge of the city of Milan, this operation has contributed significantly to the construction of the architectural project. In fact, the analysis offers the occasion for a greater familiarity with the terms of typo-morphological analysis and with the concept of block, which constitutes the minimum urban portion, and for this reason the basis for a study on the relationship between the city and its architecture.*

Keywords: *city of Milan, urban block, urban house, building classification.*

1. Introduction

The analysis of a large number of urban blocks in the central area of Milan and in particular those situated on the north-east axis (corso Venezia, corso Buenos Aires, via Padova) is the theme of this paper. It is about an exercise, which has been developed during the first semester of the academic year 2017-2018 (course of: Elements of Architectural typology, prof. Michele Caja, coll: Carlo Biraghi and Sotirios Zaroulas). The initial phase consisted in the redrawing of the lots, which form each block, identifying the various typologies of the buildings, and in studying the relationships between constructed areas as well as between buildings, streets and the internal courtyards. At a second phase the work proceeded to the typo-morphological classification of the single houses. The aim was to recognize and to get to know how an urban block is composed, the different typologies of buildings and through the classification to organize the acquired knowledge and to reach general conclusions about the examined buildings. In fact, the importance of the classification lies in its consideration as a significant operation for the understanding of the city (Grassi, 1967). Particularly, the study of a specific city with its own building typologies and its architecture analysis is able to frame more general and fundamental questions, (such as the relationship between built and unbuilt urban areas) and to become therefore a valid contribution to the process of the project. Moreover, the aim was to study an area of the city which is able to involve an analysis of a variety of types of urban blocks.

The area of the analysis is associated with the northeast urban axis, which starts from piazza San Babila square and continues till the point where the ring of the railways crosses via Padova. It is correlated with the development of the design of the city in its various historical moments and the different types of the city (the historical centre, the part of the city with the nineteenth century expansion beyond the Renaissance walls, the part of the ex-industrial suburb) that characterized the specific urban area (figure 1).

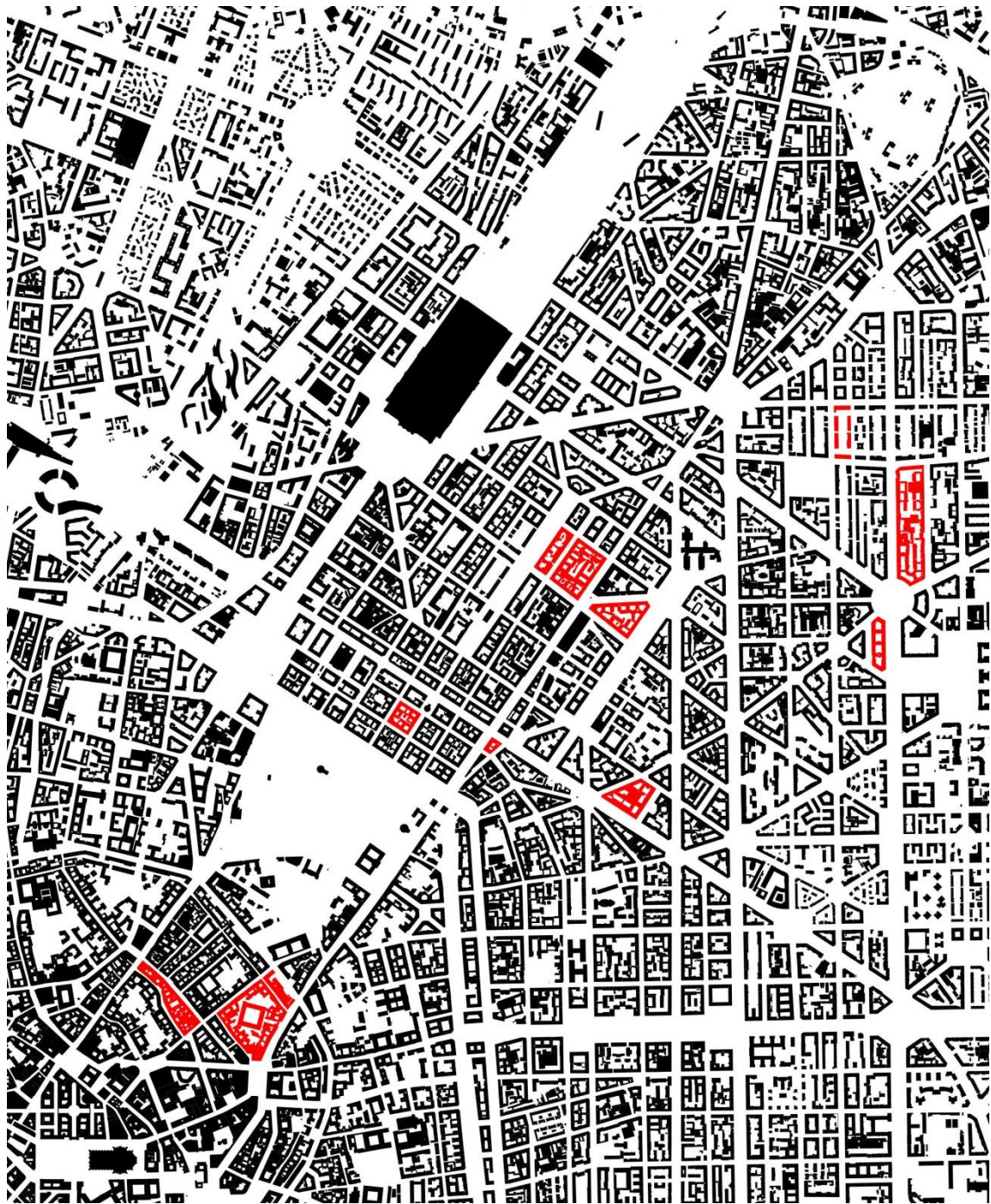


Figure 1. General plan with the selected blocks for the classification

2. Methodology-theoretical background

The analysis is based mainly on the theoretical elaborations of Aldo Rossi and particularly his considerations of the knowledge of the city and its architecture as a necessary step for the process of the project. In this vision, the urban studies of the French social geographer Jean Tricart are considered as fundamental by Rossi for a more comprehensive reading of the city.

Tricart proposes a classification of the urban blocks, and consequently of their parcels, according to the different way they occupy the ground, that is according to the different typologies of buildings. Moreover, another important theme on which Tricart directs attention is the relationship between the lots of the urban block and the occupied ground by the inhabited real estate; that is between property and constructed area. He highlights that there were also moments

in the urban history of a saturated use of the ground. In other words and as it has arisen from solid constructing practices over time, a rational use of the ground requires a balanced connection between constructed and not constructed areas.

The theoretical elaborations of Steven Holl were a further reference to our analysis. The most interesting part of the work lies on the fact to be engaged in a clear study on the theme of housing and on a determinate city. The introduction of a letter-like form criterion allows the creation of subcategories of classification. So, in addition to the four types of urban houses that Tricart and Rossi proposed – a block of houses surrounded by open space, a block of houses connected to each other and facing the street, a deep block of houses, and the houses with closed courts – Holl elaborated a further number of sub-categories of houses, such as the "L", the "H" house, the "T" house, or the "U" house, etc. according to their form and their resemblance to the letters of the alphabet.

It permitted in this way the integration of the classification suggested by Tricart and to proceed to a more comprehensive analysis of the building typologies, particularly in the case of more complex forms of buildings.

There are also some more recent studies to have treated the theme of typology such as the Swiss architects and scholars from ETH of Zurich, Emanuel Christ and Christoph Gantenbein. The two volumes published by them (Christ and Gantenbein: 2012, 2015) are not only an effort to continue to deal with the term of architectural typology by inserting it in the teaching of architectural project but even a theoretical contribution in an era of globalization. In the first volume and through a collection of modern buildings of different cities around the world they look into typology as a principle of universal values.

Their analysis, especially the second volume, is based on Raphael Moneo's article on typology (Moneo, 1978). What Moneo optimistically highlights in this text is that even if typological research seems to have reached a dead end, typology is an inherent question of architecture and for this reason it is necessary for the architects to look back on the concept of the type.

3. Analysis

The analysis was focused on four different kinds of classification according to the different criteria adopted: A form-based classification, a classification based on the dimension of the blocks, another one related to the order of the parcels and a classification which refers to the plan of the buildings, following in this way the theoretical elaborations of Jean Tricart and Aldo Rossi (figure 2, 3, 4).

3.a Analysis of the blocks – the form-based classification

There were selected three types of basic geometric forms – triangular, rectangular, trapezium – as they were generated by the layout of the street grids. The aim of this classification is to highlight the fact that the form of the Milanese urban blocks is determined by both urban transformations and planning operations.

From this perspective Enrico Guidoni describes very concisely the mechanisms that modified the European city and its blocks through centuries: "they formed the network, eroded away to a greater or lesser degree, remaining from the fragmentation of relationships between city and society, street and dwelling, public and private". In the same way, in the historical centre of the city of Milan the form of the blocks is the result of an overlapping of different plans and consequently of different types of city. While in the most recent parts they are the outcome of the planning process. In particular, the triangular and trapezoidal form of the blocks, which derived from the system of round squares and radial streets, was drawn by the 19th century planners for this part of the city.

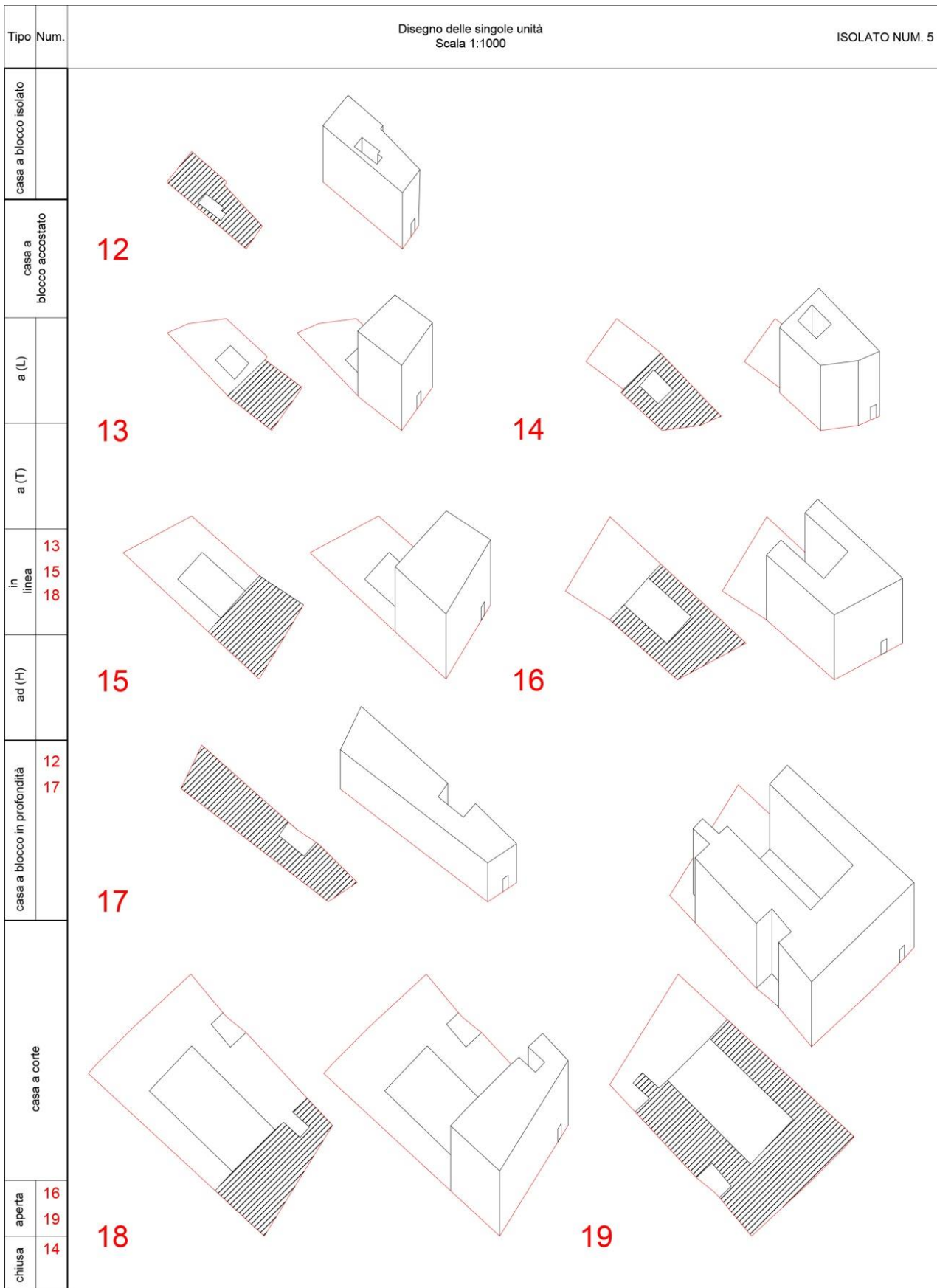


Figure 2. Exercise elaboration sample

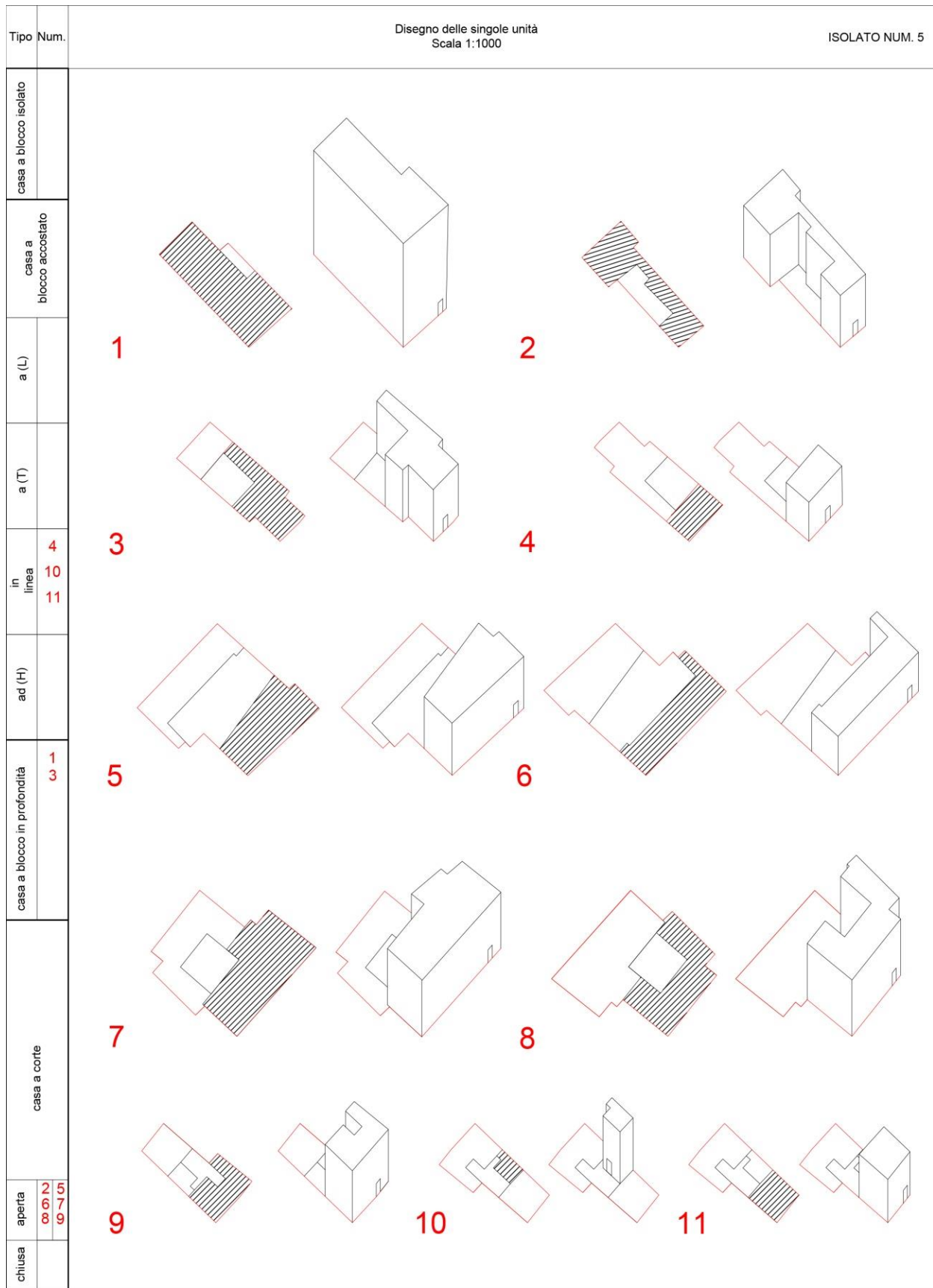


Figure 3. Exercise elaboration sample

3.b Analysis of the blocks – the dimension based classification

The analysis regards three different types of blocks that allowed us to make considerations about the dimension of the urban blocks in the city of Milan. For example, a small block coincides with a number of parcels sufficiently enough to host three or four streets around it. It coincides also with the dimension of Palazzo Marino – one of the most important examples of the Milanese Renaissance architecture and the current seat of the municipal government – the isolated building which could also be considered a type of the block surrounded by open space.

As for the larger one, which is being analyzed here, it represents because of its dimensions a kind of urban block into another block, a closed courtyard inside another courtyard. The building with the close courtyard is the archiepiscopal seminary of Milan. As Aldo Rossi pointed out (Rossi, 1975), in the historical centre of Milan, there were the monasteries and generally the ecclesiastic institutions to determine the development of certain parts of the city. It happened also, even if in a lesser degree, into the inner part of the medieval walls. The block we examine in this part of the analysis exemplifies this phenomenon, that is, the privilege of occupying a whole block, a practice that was widespread in many cities in the sixteenth and seventeenth centuries (Guidoni, 1978).

3.c Analysis of the blocks – the per-parcel classification

As for this classification there were selected some of the most representative blocks so as to illustrate how the urban Milanese blocks were formed by the aggregation of more parcels. In particular, the case of urban block formed by only a single order of parcels is a rare phenomenon for reasons of economy of the urban space. Nevertheless, in proximity to the medieval walls there were formed blocks of a sole order derived from just the parataxis of properties one next to another. Furthermore, their form is also the result of the presence of the canal with which the artisan activities they hosted in their ground floor strictly correlated.

A further much diffused type of aggregation is that one of two orders of parcels. In this case two properties are placed one after another and the buildings are positioned on their boundaries allowing an area of open space between them.

There have also been noticed situations with a central open courtyard and with the aggregation of more orders of parcels that create larger blocks. The principle of the aggregation remains the same and what changes is the formation of larger blocks with the presence of open spaces inside the block, which is used as semi-public spaces or even as green areas.

3.d Analysis of the blocks – the topographic classification

Rossi refers extensively to the tradition of the French geographers (Tricart and Demangeon) who introduced the topographic classification. The criterion for this kind of analysis is the position of the house / the inhabited real estate and the relationship with the street and open spaces, as the courtyard and the garden.

3.d.1 Block of houses surrounded by open space

The attempt here was to concentrate the attention to this particular type of the block and houses. The selected block is formed by houses which are not simply volumes dispersed into the green but by houses in clear relationship with the streets, able to form a block surrounded by open space indeed. What emerges from this type of block and from a greater relationship with the street is a greater order of urbanity and a more complex order of architecture of the buildings.

3.d.2 Deep block of houses

This typology of residential buildings is distinguished by their sense of the economy in the use of the ground and by the common aspects it presents in different situations and cities (Grassi, 1980). This type of houses is connected with the artisan character of some areas of the city of Milan. In fact, they are mainly the ownership of an exit to the great commercial road. Nowadays,

this type of building constitutes a rare typology in the city of Milan. However, they still can be met in the area of Navigli and, in a minor degree it is possible to be encountered as fragments from a former design of the block, because of the transformation of the urban blocks that followed the World War II. In particular the block analyzed in our case appertains to a specific part of the city in proximity with the area of the medieval walls and the network of canals. For this reason it is related to the artisan activities and the water transport. It can also be noticed that many times the built area does not occupy the whole elongated lot but only the part facing the street (Figure 5).

3.d.3 Houses with closed courtyards

This particular type seemed to be the most typical of the city of Milan. The study of Cino Zucchi regards the specific character of the Milanese phenomenon, (Zucchi, 1989); this residential typology and its forms are so diffused that can be met both in ex-industrial districts and in the palazzi in the historical centre of the city. Its singularity lies in the fact that it has been formed over time a complex space between the public life of the city and the private one of the house. The courtyard is characterized by different architectural elements and it is the place that hosts both the private life of the house and the collective or professional activities. It is necessary at this point to emphasize that with this part of the analysis the aim is to focus upon the difference between a house with a courtyard and a block with a courtyard and the confusion which is often created between these two types of blocks: the first one is the aggregation of houses with closed courtyards while the second is formed by the aggregation of different building typologies around a courtyard.

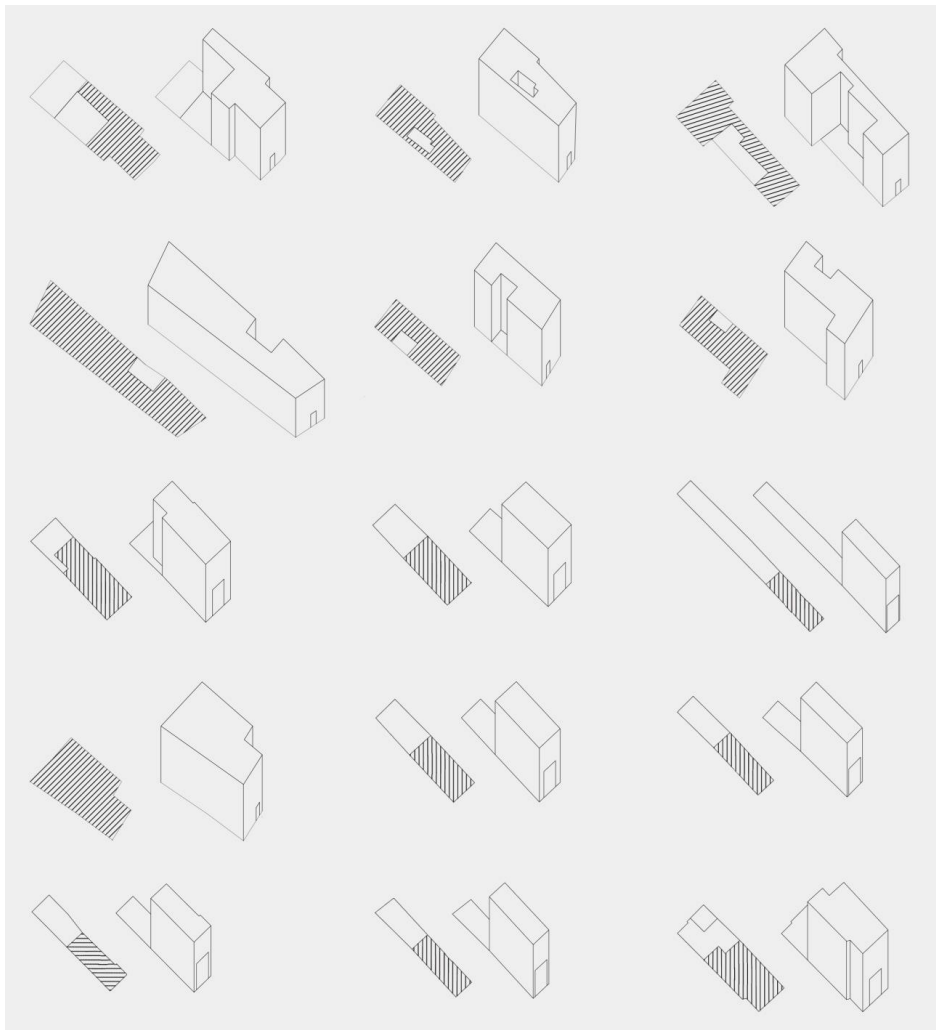


Figure 4. Matrix of houses built on elongated lots



Figure 5. Urban block between A. Manzoni e P. Verri Str.

4. Conclusions

Our analysis was based on a certain number of studies that determined our work and the academic teaching activities during the last years and it was also an effort to integrate and to update our theoretical background with recent publications and theoretical elaborations.

The aim was a better knowledge of the city of Milan and of its architecture. In detail, it was the redrawing and the study of each block that led to the identification of the relationships between built and not-built areas. Moreover, a fundamental aspect of the analysis was the identification of the singular characteristics of the urban blocks and the consideration of the building typologies analyzed, as a result of the singular position of the building and its relationship with the specific part of the city.

The contribution of the analysis to the teaching activity was twofold: firstly, it was made use of the fundamental theoretical notions for an urban analytical study, such as the relationship between the lot and the built-up area or between the irregular lots and the building types. Moreover, the analysis offered the occasion for a greater familiarity with the terms of typomorphological analysis and with the concept of block, which constitutes the minimum urban portion, and for this reason the basis for a study on the relationship between the city and its architecture, between the shape of a certain part of the city and its building types.

And secondly, organized knowledge created a basis able to be also employed by the students for the construction of the architectural project. In fact, the analysis can be seen as a study of a manualistic character that considers this operation of classification as the structure of the architectural project (figure 6).

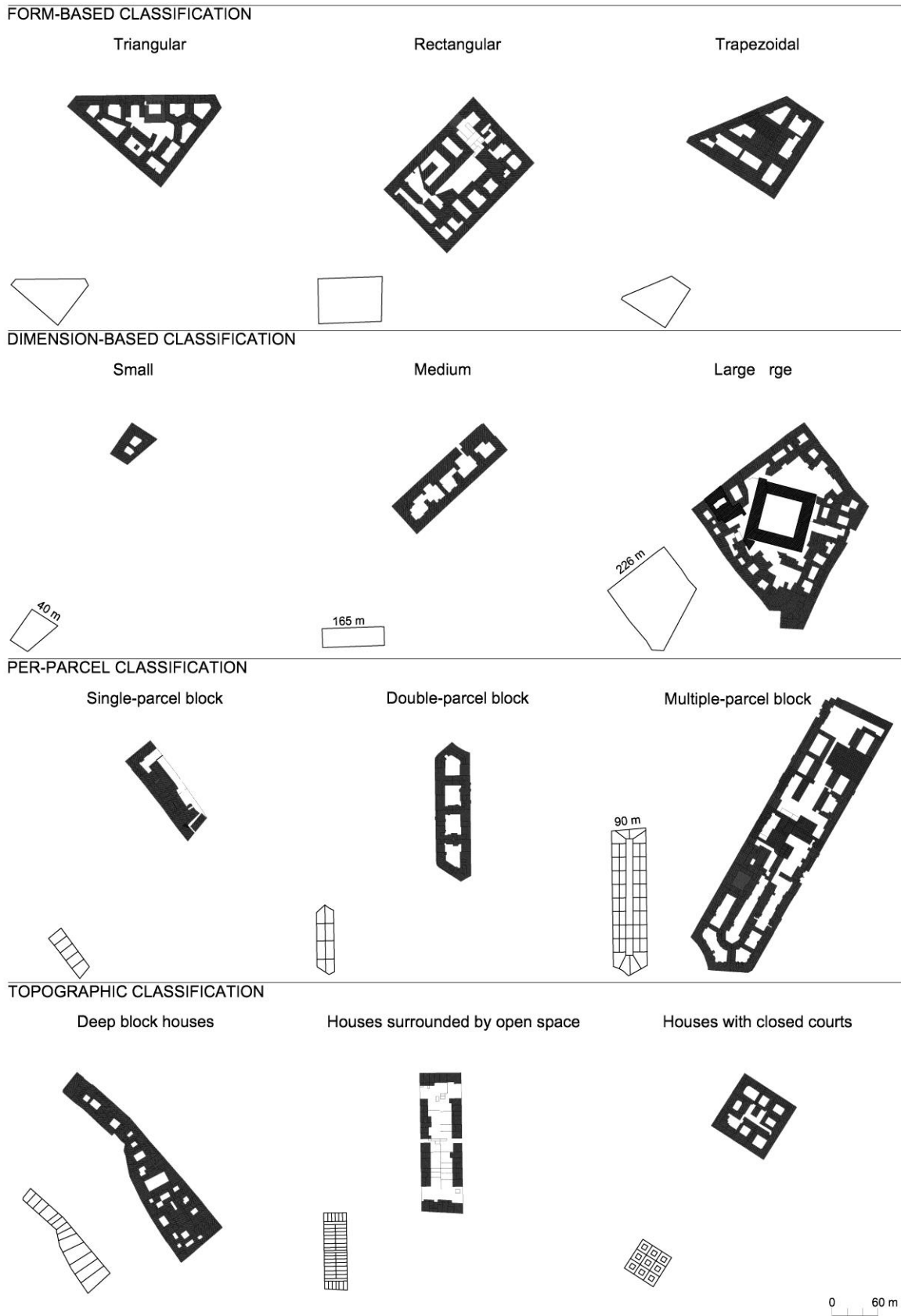


Figure 6. Classification of the blocks

References

1. Aymonino C., Brusatin M., Fabbri G., Lovero P., Lucianetti S., Rossi A. (1970). 'La città di Padova. Saggio di analisi urbana', *Roma: Officina*.
2. Christ E., Gantenbein C. (2012). *Review n. II. Typology: Hong Kong, Rome, New York, Buenos Aires*, Zurich: Park Books.
3. Christ E., Gantenbein C. Easton V. (2015). *Review n. III. Typology: Paris, Delhi, São Paulo, Athens*, Zurich: Park Books.
4. Holl, St. (1980). 'The alphabetical city, Pamphlet architecture 5': New York - San Francisco: *Princeton Architectural Press*.
5. Grassi, G. (1967). 'La costruzione logica dell'architettura', *Padova: Marsilio*.
6. Grassi, G. (1980). 'Caratteri dell'abitazione nelle città tedesche', in *L'architettura come mestiere e altri scritti*, Milano: Franco Angeli. 11-25.
7. Guidoni E. (1978). 'Street and block from the late Middle Ages to the Eighteenth century', *Lotus international*, 15 (June), 4-19.
8. Moneo R., (1978). 'On typology', *Oppositions*, 13 (summer), 22-45.
9. Rossi, A. (1975). 'Il concetto di tradizione nella architettura neoclassica milanese', in Bonicalzi R. (ed.) *Aldo Rossi. Scritti scelti sull'architettura e la città*. (Torino: Città Studi edizioni) 1-24.
10. Rossi, A. (1982). 'The architecture of the city', translated by Diane Ghirardo with an introduction by Peter Eisenman, Cambridge, MA/London: MIT Press. 1st edition in Italian (1968) *L'architettura della città*, Padova: Marsilio.
11. Tricart, J. (1963). 'Cours de Géographie Humaine.' *Fasc. II – L'habitat urbain* (Paris: Centre de documentation universitaire). Italian edition (1998). *Corso di geografia umana. Vol. II. L'habitat urbano*, edited and translated by Mara De Benedetti, Milano: Unicopli.
12. Zucchi, C. (1989). 'L'architettura dei cortili milanesi (1535-1706)', *Milano: Mondadori Electa*.