

## MODELS OF URBAN DEVELOPMENT: EXAMPLES IN BOLOGNA

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**Abstract.** The research identifies and describes the evolution rules used for the maintenance and regeneration of urban spaces, searching in the city growth patterns emerged in the course of its historical development and characterized by the transformation processes that develop on socio-economic forces that do not conform to urban "pre-defined" planning policies. These researches are of great interest for the parts of territory created by recent developments of the city which need a redesign aimed at the regeneration of places and redefinition of territorial systems, with the recovery of a sense of membership and community living.

Therefore the study of some historical "ways" of re-definition of the urban fabric of Bologna is of great interest. The study of the implementation of the Portico of Banchi in Piazza Maggiore, a masterpiece of Vignola in the second half of the sixteenth century, shows an early example of urban intervention of completion and re-building, defining a mode of intervention that Bologna will adopt and use as a strategy of intervention for the next four hundred years.

The study of parallel evolution of the Portico of Banchi, of the plain part of the Portico of San Luca and Alemanni, shows the general development strategy of the city by the overlap of new items to the existing building and offers significant incentives to conceive new ideas for the present.

These modes of development let entire urban sectors maintain a specific identity in their evolution. This identity has been lost in successive urban plans which didn't care about historical developmental characters, violating the rules of expansion of the historic town and obstructing the continuity and the interweaving of new buildings with existing ones.

The research identifies and describes some evolution rules that can be used for the maintenance and regeneration of urban spaces by searching in the city growth patterns emerged in the course of its historical development characterized by transformation processes that develop on socio-economic forces instead of "pre-defined" planning policies.

The case studies are selected among the transformations that witness an evolution model used by the city as a strategy of intervention in the subsequent developments. In these cases the study and reading of an urban block focuses on the intrinsic values of the places that the city has preserved and handed down, identifying and developing the urban features that respond to different economic, social and morphological conditions without conforming to predetermined expansion plans. In conclusion the city has summed the solutions in a coherent and sustainable development.

The study of these evolutionary models highlights the mobility of the urban blocks creation and development, identifying some characteristics of the sites closely linked to the territory and its spatial, temporal and sociological dimensions.

The research is part of a panorama of studies on

the local "Portico" (arcade) in Bologna. Arcades are reviewed in this research as basic elements of coherent strategies of "regeneration" of urban places. These strategies responded to different needs and requirements, which led to uniform and sustainable urban solutions. These strategies offer design ideas - in terms of methods and ways - of great interest for those parts of land created by recent developments of the city without a coherent urban connotation and without effective topogenesis. These parts of the city need a redesign aimed at the regeneration of places and redefinition of territorial systems, with the recovery of a sense of membership and community living. Therefore the study of some historical "ways" of "re-definition" of urban fabric of Bologna is of great interest, because it scans and searches those particular development steps generated by singular events and evolutionary models.

In this evolutionary framework of the urban fabric of Bologna, the research investigates the cases of the Portico of Banchi and the Portico of San Luca and Alemanni.

Portico of Banchi in Piazza Maggiore (the town's main square) is a masterpiece of Vignola of the second half of the sixteenth century. The study of his implementation



Figure 1. Upper: overlapping between the current state and the the Heritage of Santa Maria della Vita (ground floor); bottom: overlap between the current state and the parcels identified by the Pontifical Cadastre of 1831 (ground floor).

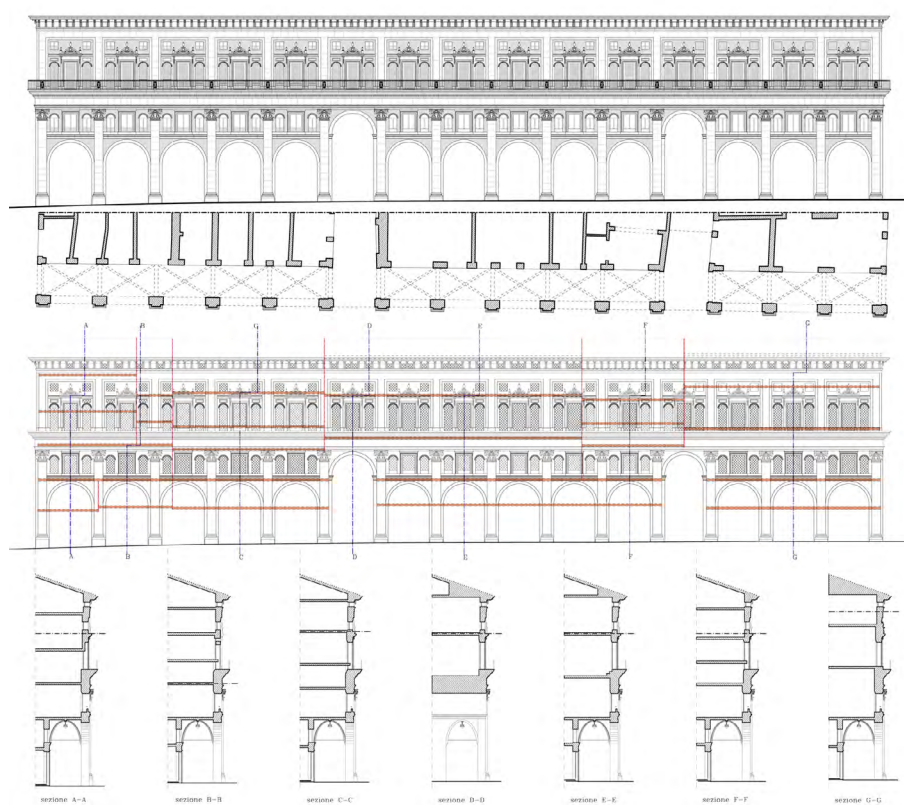


Figure 2. Portico of Banchi: surveying of façade and interaction between the façade and the buildings on the back.



Figure 3. Portico of Alemanni:

- a. Blaeu, 1663, perspective map with a small strip showing the Portico of Alemanni;
- b. Blaeu, 1663, strip detail;
- c, d, e: densification of the buildings on the maps of 1850, 1900 and 1932;
- f: axonometric overlapping.

shows an early example of urban intervention of "completion- reorganization". Especially the reorganization of the areas behind the arcades with a predominantly commercial destination, establish a mode of intervention that Bologna will adopt and use for the next four hundred years.

The sense of this urban transformation is more understandable after a summary of the main aspects of the growth of Bologna in previous centuries. The 13th century is the period of greatest development of Bologna, with an expansion of the city outside the medieval town implemented through the formation of "boroughs" -borghi-, and favored by the attractiveness of religious orders building complexes.

In the city the building fabric is characterized by constant and continuous use of the building porch type. The Municipality exercises its activities with rules requiring the construction of buildings with a porch.

The porch is transformed from a mere functional element for the residence in a common element of construction continuity and becomes one of the peculiarities of Bologna, where it has more widespread in comparison to every other city with about 38 km of development measured in the twentieth century.

A spread that covers both the secondary and main roads of the building fabric of medieval construction, but which is absent in the 15th century in the old Roman Grid, the *Castrum*, where many markets and business activities were located.

In 15th century urban policy in Bologna focuses on the transformation of the urban environment by resetting the existing, in a process of demolition, reconstruction or remodeling of old or degraded buildings. The area of Piazza Maggiore, the Palazzo del Podestà, the regularization of road grids are just a few examples of the city's renewal, which is based on pragmatic and sensitive political actions. These actions focused on cleanliness, health and urban decor instead of aiming to a neo-classical program or ideal, as in other places. In the 16th century the approach to "demolition – rebuilding", typical of the 15th century, is replaced by a more prudent "reorganization" of the construction. The facade of the 'Banchi' by Jacopo Barozzi da Vignola of 1547-50 is a work of renewal that shows this new mode of intervention.

The eastern side of Piazza Maggiore, was characterized by the "quadrilatero" (quadrilateral of streets) of trade, which contrasted with the monumental buildings of the other three sides. Thus it was necessary to give to Piazza Maggiore a more defined architectural form and a more functional image to papal visits and public ceremonies.

The study of the "quadrilatero", which is considered the real shopping center of Bologna, highlights several important operations - from small to large scale

- apparently disparate, but always designed in response to market and trade development.

The urban block is divided into three distinct blocks, identified from Piazza Maggiore and Orefici, Pescherie Vecchie, Clavature, Musei, Drapperie and Ranocchi streets, which are formed by buildings erected on the gothic lot, with parcels oriented orthogonal to Piazza Maggiore near the square itself, and orthogonal to the roads in other areas.

The comparison between the existing plants and the historical material, including the Gregorian Land Registry, shows little typologic changes, which mainly consist in unifications and elevations, scarcely ever in changes of the orientation of the lots. The buildings near Piazza Maggiore have different volumes which led to different ways of aggregation with the facade, while the back is characterized by the presence of buildings independent of each other, perpendicular to the streets, with various heights and dimensions.

The part that was once used as headquarters "Ospedale della Vita", now owned by the municipality, is an exception because it has been preserved almost intact and therefore is characterized by a greater homogeneity among its constituent parts.

In the oldest part of the old hospital, characterized by significant elevations of the floors and by a main body provided with a planimetric "H" shape, are located the Oratory of Santa Maria della Vita and the Church of Santa Maria della Vita, with central plant, built in 1687/90 by G.B. Bergonzoni. The Church is located next to the Clavature and Pescherie market and is a "passage" between the two mentioned streets, Clavature and Pescherie.

The study of historical materials shows that there were few changes from the Register of Heritage of Santa Maria della Vita in 1601 and shows that most buildings have maintained their use similar to the intended use of origin: even today in fact, several social and charity associations are based here.

Shops face the streets, while activities belonging to the "third sector" as we would call it today such as banks, foreign exchange, hospitals, are settled in the most important buildings. Through time Quadrilatero developed an organized and coherent set, an "integrated whole" that can contain different activities: the whole block is a "large shopping center" that evolved over the centuries through actions and subsequent deposits.

The construction of the Portico of Banchi transforms the image of the various activities which had to be requalified by connecting them to the city, and at the same time, by keeping on the small-scale the different characteristics also in terms of architecture. The coating of pre-existing architecture is balanced by the connection with the ancient fabric through



Figure 4. Portico of San Luca:

a: Portico of San Luca in "Bononia Docet Mater Studiorum" of the 18th;  
b: The old road before the construction of Porch (Map of "Sacenti");  
c: the Porch in the "Plant Scaenographica" of Duchet, 1572;  
d, e, f: densification of the buildings on the maps of 1850, 1900 and 1932;  
g, h: different buildings on the Porch.

large arches that vary the step of the portico. The facade's large windows are a functional choice that guarantees the illumination of the deep rooms originated by the overlapped construction.

The front then becomes the symbol of an entire urban block underlying the facade itself, that was built on earlier buildings to give them order and meaning, changing the scale of the buildings without altering the measurements. It's a great "economy" intervention, which chooses the completion and reorganization of the existing instead of demolition-construction, and demonstrates the ability to solve different problems by maintaining all the functions and not separating them as it often happens today.

The operation has been financed in a very "modern" way by a retreat of capital investment in real estate and the main actor is not the Municipality, but the Hospital of Santa Maria della Vita, owner of most of the houses located in the area.

In the second case, the study focuses on the development of urban areas near the Portico of San Luca and Alemanni, strong signs conceived between the seventeenth and eighteenth century outside the city walls, and explores different kinds of city development through the "densification" of the built fabric.

The most striking aspect of these extra-urban arcade structures is their urban uniqueness: Portico becomes a design principle, it's incorporated in a main building with several floors, which has other functions in addition to coverage of the pedestrian walkways. At the same time it determines the new urban organization of adjacent areas according to some fundamental issues: the economy, the reference to a "standard" and a construction method.

The study of parallel evolution of the Portico of Banchi, of the plain part of the Portico of San Luca and Alemanni, shows the general development strategy of the city by overlapping the new items to the existing buildings and offers significant incentives to conceive new ideas for the present. These modes of development let entire urban sectors maintain a specific identity in their evolution. This identity has been lost in successive urban plans which didn't care about historical developmental characters, violating the rules of expansion of the historic town and obstructing the continuity and the interweaving of new buildings with existing ones.

It is significant how Bologna, still surrounded by a wall of the seventeenth century, began to expand in the countryside: to East with the Alemanni Portico (1619-1631, from Porta Maggiore to the suburban church of Santa Maria degli Alemanni, extended in 1665 to the Casa dei Mendicanti di San Gregorio), then to West with San Luca Portico (begun in 1674, from Porta Saragozza to the Marian Shrine of San Luca, 666 arches and about 4 km). Even outside the Walls, the Porch itself is the main element of urban continuity: the Porch creates continuity between the urban fabric downtown and the suburban roads and unifies the path. The city expansion is carried out simply by connecting the already built places with the Portico, the most common functional structure of the city, which equips the path and clearly materializes the path's layout.

The financial aspects are interesting for the balance between public and private sectors because the owners of the soil on which the porch is created can build 'behind' and 'above' the porch itself. The choice

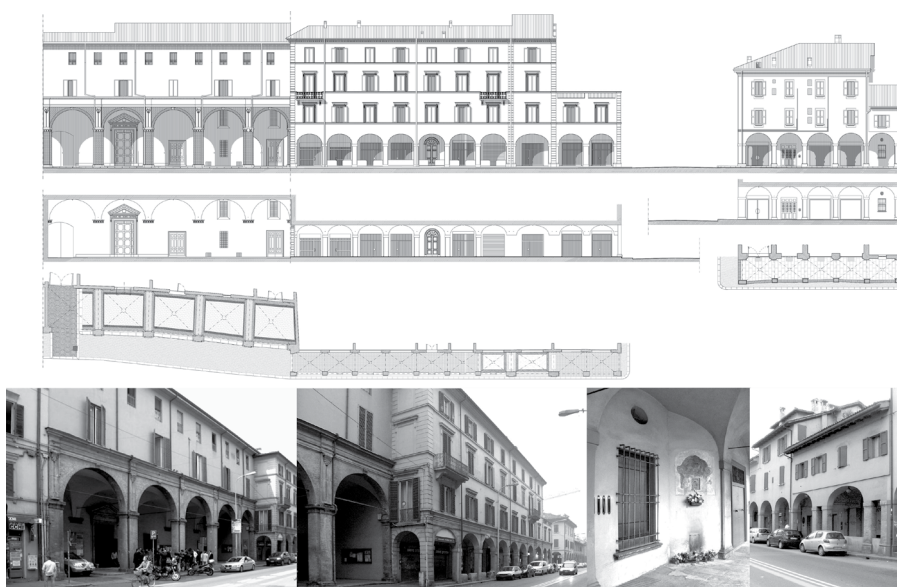


Figure 5. Portico of Alemanni before the Church of Santa Maria degli Alemanni: surveying of the current state.

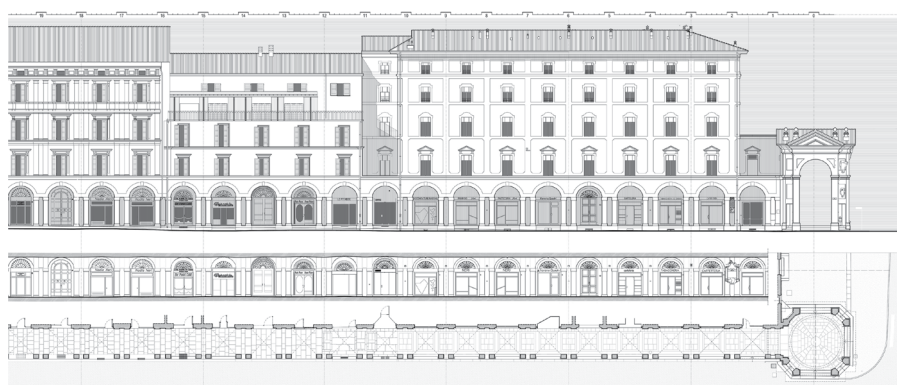


Figure 6. Portico of San Luca façade: the first arch called "Arco Bonaccorsi".

determines the subsequent evolution of the fabric built on / adjacent to the porch.

Consequently, the porch is transformed from initial connection of already built sites in a generation element of urban form and in an attractive element for new construction outside the walls, where development is characterized by a progressive densification of the built environment.

The creation of these ramifications leads to a real interaction between city and land, as demonstrated by maps of Bologna of the late eighteenth century which show how places are perceived in relation to the road, which is seen as a fundamental place. The urban form is characterized by two linear structures of arcade systems complemented by small settlements scattered throughout the countryside and connected to the road they are accessed from.

The first and uncontrolled urban development outside the walls will take place around these elements, which still are the regulatory centers of the urban system outside the center, as we still perceive and use it. Referring to the genesis of these cases, the age of Counter-Reformation leads to a religious extraordinary building activity, Sanctuaries are being renovated, expanded and enriched with art works, especially those devoted to Virgin Mary. Even the access roads are improved to encourage pilgrimages. This phenomenon is recorded throughout Italy and in Bologna the Portico of the Alemanni, built by the Carmelites between the city and port of the Church between 1619 and 1631, is emblematic.

In the seventeenth century also began an ambitious building program to revive the devotion to the sanctuary of St. Luke. After the construction of the fifteen Mysteries of the Rosary Chapels which mark the ascension path, the plain part of the porch was built from 1674, while in 1715 also the hillside part was completed.

The historical analysis of the subsequent evolution of

the urban fabric that underlies the arcade is aimed to identify the various stages through which the building fabric has achieved the present physical substance, in order to reconstruct in retrospect the course.

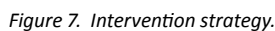
The historical analysis is necessary to understand the specific characters of these organisms which can not be categorized by schematic building types since they were determined by a spontaneous process of renovation, extension and elevation which is not explicitly related to an urban design.

The study method was then set on the convergence of historical research, archival research, direct and indirect survey, aimed at the composition of a synthetic cognitive framework that can fully describe a strongly characterized urban complex, with recognizable formal identity as urban image part. Survey, drawings and photographs try to represent the image, supplemented by subsequent processing and conceptual graphics that complete the analytical framework, providing evidence of connection between reading and design, and consequently, providing means of analysis and intervention on the existing town.

The survey has its own character and a specific method. The results of the survey should, in fact, represent not only the geometric form of the object, but also identify and describe the set of values and relationships between them. The survey was conducted, therefore, each time selecting methods and techniques of functional relevance to the individual actually investigated.

The goal is to go beyond the limits of analytical tools of urban form based only on "formal stereotypes" of past forms. We have tried to highlight, on a visual and perceptive level, the "rules of the game" of these parts of the city by considering the city's continuous evolution of image.

As for the case studies it's time to overcome the charm of their unique architecture, which led to



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